SECOR

SECOR INTERNATIONAL INCORPORATED
7730 Southwest Mohawk Street
Tualatin, Oregon 97062
503-691-2030 TEL / 503-692-7074 FAX
www.secor.com

letter of transmittal

attention: Mr. Eric DeBerry

date: April 4, 2008

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922.43 Permit No. 500.015

re: Discharge Monitoring Report – March 2008

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of SECOR International Incorporated on March 15, 2008. Grab samples were collected by discharging water from sample ports on the process piping directly into laboratory prepared containers. The sample containers were sealed, labeled, placed in a cooler with ice and transported to the project laboratory. The effluent samples were analyzed for pH (US Environmental Protection Agency [EPA] Method 150.1/9040A), HEM Oil and Grease (EPA Method 1664), and benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8021B). Laboratory analysis was performed by Test America Laboratories in Beaverton, Oregon. A copy of the laboratory analytical reports is attached.

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015, dated 2 October, 2007. The discharge monitoring report (DMR) is being submitted as the self-monitoring report and is attached. All parameters monitored were within the limits listed in the facility's discharge permit.

If you have any questions regarding the enclosed DMR, please feel free to contact the above at (503) 691-2030. Thank you.

signator: Norman Swanson/Jessica Eckart, R.G.
title: Staff Scientist/Project Geologist

NS/JE:dc

cc: Mike Noll, Noll Environmental, Inc.
Grant Sprick, Arcadis

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CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: 4/15/2008

SAMPLING PERIOD: March 2008

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
2/14/2008	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664A	ND mg/L	4.85	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	EPA Method 150.1/9040A	6.71 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 5	0.75 mg/L	N/A	
Totalized Reading	Field	31,336,428		NA	N/A	Field Reading 14, 614,400

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting gales information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 4/3/08

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

March 21, 2008

Jessica Eckart
Secor
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 03/15/08 10:30. The following list is a summary of the Work Orders contained in this report, generated on 03/21/08 15:18.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRC0474	Portland Terminal	0922

TestAmerica Portland

Christina Woodcock

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Final	PRC0474-01	Water	03/15/08 09:00	03/15/08 10:30

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRC0474-01 (Final)		**Water**			**Sampled: 03/15/08 09:00**					
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8030654	03/19/08 11:09	03/20/08 09:33	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)			*88.3%*		*70 - 130 %*	"			"	

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRC0474-01 (Final)		**Water**				**Sampled: 03/15/08 09:00**				
Oil & Grease	EPA 1664	ND	-----	4.85	mg/l	1x	8030542	03/17/08 16:00	03/17/08 17:48	

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRC0474-01 (Final)		**Water**			**Sampled: 03/15/08 09:00**					**H**
pH	150.1/9040A	**6.71**	-----		pH Units	1x	8030540	03/17/08 10:10	03/17/08 10:40	

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8030654 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8030654-BLK1)									**Extracted: 03/19/08 11:09**					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/19/08 21:14	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 85.4%*			*Limits: 70-130%*	"							*03/19/08 21:14*	
LCS (8030654-BS1)									**Extracted: 03/19/08 11:09**					
Benzene	EPA 8021B	19.5	---	0.500	ug/l	1x	--	20.0	97.7%	(75-125)	--	--	03/19/08 19:52	
Toluene	"	20.0	---	0.500	"	"	--	"	100%	(80-120)	--	--	"	
Ethylbenzene	"	20.4	---	0.500	"	"	--	"	102%	(80-130)	--	--	"	
Xylenes (total)	"	61.2	---	1.00	"	"	--	60.0	102%	"	--	--	"	
o-Xylene	"	20.5	---	1.00	"	"	--	20.0	103%	"	--	--	"	
m,p-Xylene	"	40.7	---	1.00	"	"	--	40.0	102%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 87.7%*			*Limits: 70-130%*	"							*03/19/08 19:52*	
Matrix Spike (8030654-MS1)					**QC Source: PRC0429-01**				**Extracted: 03/19/08 11:09**					
Benzene	EPA 8021B	20.1	---	0.500	ug/l	1x	0.0630	20.0	100%	(65-144)	--	--	03/19/08 23:04	
Toluene	"	20.4	---	0.500	"	"	ND	"	102%	(70-135)	--	--	"	
Ethylbenzene	"	20.7	---	0.500	"	"	ND	"	103%	(65-145)	--	--	"	
Xylenes (total)	"	61.7	---	1.00	"	"	ND	60.0	103%	(60-145)	--	--	"	
o-Xylene	"	20.9	---	1.00	"	"	ND	20.0	105%	"	--	--	"	
m,p-Xylene	"	40.8	---	1.00	"	"	ND	40.0	102%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 89.6%*			*Limits: 70-130%*	"							*03/19/08 23:04*	
Matrix Spike Dup (8030654-MSD1)					**QC Source: PRC0429-01**				**Extracted: 03/19/08 11:09**					
Benzene	EPA 8021B	19.3	---	0.500	ug/l	1x	0.0630	20.0	96.0%	(65-144)	4.51%	(20)	03/19/08 23:31	
Toluene	"	19.5	---	0.500	"	"	ND	"	97.5%	(70-135)	4.42%	"	"	
Ethylbenzene	"	19.8	---	0.500	"	"	ND	"	99.0%	(65-145)	4.39%	"	"	
Xylenes (total)	"	59.0	---	1.00	"	"	ND	60.0	98.4%	(60-145)	4.47%	"	"	
o-Xylene	"	19.9	---	1.00	"	"	ND	20.0	99.4%	"	4.97%	"	"	
m,p-Xylene	"	39.2	---	1.00	"	"	ND	40.0	97.9%	"	4.21%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 89.4%*			*Limits: 70-130%*	"							*03/19/08 23:31*	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8030542 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8030542-BLK1)							Extracted: 03/17/08 12:20							
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	03/17/08 17:48	
LCS (8030542-BS1)							Extracted: 03/17/08 12:20							
Oil & Grease	EPA 1664	33.6	---	5.00	mg/l	1x	--	33.6	100%	(78-114)	--	--	03/17/08 17:48	
Matrix Spike (8030542-MS1)					QC Source: PRC0128-04		Extracted: 03/17/08 12:20							
Oil & Grease	EPA 1664	33.1	---	5.00	mg/l	1x	0.400	33.1	98.8%	(78-114)	--	--	03/17/08 17:48	
Matrix Spike (8030542-MS3)					QC Source: PRC0128-04		Extracted: 03/17/08 12:20							
Oil & Grease	EPA 1664	32.5	---	5.00	mg/l	1x	0.400	32.5	98.8%	(78-114)	--	--	03/17/08 17:48	

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8030540 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8030540-DUP1)					**QC Source: PRC0474-01**				**Extracted: 03/17/08 10:10**					
pH	150.1/9040A	6.69	---		pH Units	1x	6.71	--	--	--	0.299%	(25)	03/17/08 10:40	

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	03/21/08 15:18

Notes and Definitions

Report Specific Notes:

H - Sample analysis performed past method-specified holding time.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRC0474

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jessica Eckart	Site Contact: Norman Swanson	Date: 3/15/08	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Christina W.	Carrier:	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site: 0922	☐ 2 days			
P O # Do not invoice Conoco Phillips	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
FINAL	3/15/2008	900	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☒

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: **Totalizer Reading: 14,614,400**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	SECOR			TA-P	3/15/08 1030
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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TestAmerica Sample Receipt Checklist

Cooler Tests

Received by: (section A) Date 3/15/08 Time [illegible] Initials [illegible]

Unpacked by: (section B) Date 3/15/08 Initials [illegible]

Logged-in by: Date 3/15/08 Initials [illegible]

Work Order No PRC0474
Client: Secor
Project Portland Terminal

Temperature out of range
___ Not enough Ice
___ No Ice
___ Ice Melted
___ W/in 4 Hours
___ Other _____

***ESI Clients (see Section C)

Cooler Temperature (IR): 2.6 °C plastic glass NA (oil/air samples, ESI client) Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated: _____
X None

Container Type:
1 #Cooler(s)
___ #Box(s)
___ None (___ #Other: _____)

Coolant Type:
___ Gel Ice
X Loose Ice
___ None

Packing Material:
X Bubble Bags
___ Styrofoam Cubbies
___ None (___ Other: _____)

Received from:
___ TA Courier
___ Senvoy
___ UPS
___ Fed Ex
X Client
___ TDP
___ DHL
___ SDS
___ Mid-Valley
___ GS/TA
___ GS/Senvoy
___ Other
___ _____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? ~~not provided~~	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank _____ °C not provided

All preserved bottles checked Y N NA (voas/soils/all unp.)
All preserved accordingly? Y N (see NOD) NA (voas/soils/all unp.)

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers

Comments: _____

PM Reviewed _____ (Initial/Date)

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503-691-2030 TEL / 503-692-7074 FAX
www.secor.com

letter of transmittal

attention: Mr. Eric DeBerry

date: May 5, 2008

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922.43 Permit No. 500.015

re: Discharge Monitoring Report – April 2008

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of SECOR International Incorporated on April 17, 2008. Grab samples were collected by discharging water from sample ports on the process piping directly into laboratory prepared containers. The sample containers were sealed, labeled, placed in a cooler with ice and transported to the project laboratory. The effluent samples were analyzed for pH (US Environmental Protection Agency [EPA] Method 150.1/9040A), HEM Oil and Grease (EPA Method 1664), and benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8021B). Laboratory analysis was performed by Test America Laboratories in Beaverton, Oregon. A copy of the laboratory analytical reports is attached.

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015., dated 2 October, 2007. The discharge monitoring report (DMR) is being submitted as the self-monitoring report and is attached. All parameters monitored were within the limits listed in the facility's discharge permit. Please note that the discharge Totalizer was replaced on 25 March, 2008, a new correction factor of 31,419,128 has been established.

If you have any questions regarding the enclosed DMR, please feel free to contact the above at (503) 691-2030. Thank you.

signator: Norman Swanson/Jessica Eckart, R.G.
title: Staff Scientist/Project Geologist

NS/JE:dc

cc: Mike Noll, Noll Environmental, Inc.
Grant Sprick, Arcadis

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CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: 15 May, 2008

SAMPLING PERIOD: April 2008

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
4/17/2008	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664A	ND mg/L	4.72	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	EPA Method 150.1/9040A	6.59 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 5	0.75 mg/L	N/A	
Totalized Reading	Field	32,035,128		NA	N/A	Field Reading 616,000

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting gales information, including the possibility of fine and imprisonment for knowing violations.

Signature: Jean W. [illegible] Date: 5/9/08

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

April 22, 2008

Jessica Eckart
Secor
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 04/17/08 15:55. The following list is a summary of the Work Orders contained in this report, generated on 04/22/08 16:06.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRD0621	Portland Terminal	0922

TestAmerica Portland

Christina M. Woodcock

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FINAL	PRD0621-01	Water	04/17/08 09:20	04/17/08 15:55

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0621-01 (FINAL)		**Water**			**Sampled: 04/17/08 09:20**					
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8040767	04/21/08 12:03	04/21/08 18:27	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)			*124%*		*70 - 130 %*	"			"	

Christina Woodcock, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL^	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0621-01 (FINAL)		**Water**					**Sampled: 04/17/08 09:20**			
Oil & Grease	EPA 1664	ND	----	4.72	mg/l	1x	8040762	04/21/08 15:00	04/21/08 18:15	

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0621-01 (FINAL)		**Water**			**Sampled: 04/17/08 09:20**					
pH	150.1/9040A	6.59	-----		pH Units	1x	8040688	04/18/08 07:44	04/18/08 07:50	

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040767 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040767-BLK1)													Extracted: 04/21/08 12:03	
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/21/08 17:23	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 99.7%*		*Limits: 70-130%*	"								*04/21/08 17:23*	
LCS (8040767-BS1)													Extracted: 04/21/08 12:03	
Benzene	EPA 8021B	22.1	---	0.500	ug/l	1x	--	20.0	110%	(75-125)	--	--	04/22/08 11:04	
Toluene	"	21.4	---	0.500	"	"	--	"	107%	(80-120)	--	--	"	
Ethylbenzene	"	22.1	---	0.500	"	"	--	"	110%	(80-130)	--	--	"	
Xylenes (total)	"	66.8	---	1.00	"	"	--	60.0	111%	"	--	--	"	
o-Xylene	"	22.3	---	1.00	"	"	--	20.0	111%	"	--	--	"	
m,p-Xylene	"	44.6	---	1.00	"	"	--	40.0	111%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 91.3%*		*Limits: 70-130%*	"								*04/22/08 11:04*	
LCS Dup (8040767-BSD1)													Extracted: 04/21/08 12:03	
Benzene	EPA 8021B	20.4	---	0.500	ug/l	1x	--	20.0	102%	(75-125)	8.05%	(20)	04/22/08 11:37	
Toluene	"	19.8	---	0.500	"	"	--	"	99.1%	(80-120)	7.82%	"	"	
Ethylbenzene	"	20.4	---	0.500	"	"	--	"	102%	(80-130)	7.60%	"	"	
Xylenes (total)	"	62.4	---	1.00	"	"	--	60.0	104%	"	6.85%	"	"	
o-Xylene	"	20.9	---	1.00	"	"	--	20.0	105%	"	6.39%	"	"	
m,p-Xylene	"	41.5	---	1.00	"	"	--	40.0	104%	"	7.08%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 92.0%*		*Limits: 70-130%*	"								*04/22/08 11:37*	

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Christina Woodcock, Project Manager

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BEAVERTON, OR 97008-7132
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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040762 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040762-BLK1)								Extracted: 04/21/08 13:30						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	04/21/08 18:15	
LCS (8040762-BS1)								Extracted: 04/21/08 13:30						
Oil & Grease	EPA 1664	40.6	---		mg/l	1x	--	40.0	102%	(78-114)	--	--	04/21/08 18:15	
LCS Dup (8040762-BSD1)								Extracted: 04/21/08 13:30						
Oil & Grease	EPA 1664	37.6	---		mg/l	1x	--	40.0	94.0%	(78-114)	7.67%	(18)	04/21/08 18:15	

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040688 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL^	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8040688-DUP1)					QC Source: PRD0603-01				Extracted: 04/18/08 07:44					
pH	150.1/9040A	7.32	---		pH Units	1x	7.42	--	--	--	1.36%	(25)	04/18/08 07:50	

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/22/08 16:06

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Christina M. Woodcock

Christina Woodcock, Project Manager

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TRD0621

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jessica Eckart	Site Contact: Norman Swanson	Date:	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Christina W.	Carrier:	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			
(503) 692-7074 FAX	☐ 2 weeks			SDG No.
Project Name: 0922 Portland Terminal	☐ 1 week			
Site: 0922	☐ 2 days			
P O # Do not invoice Conoco Phillips	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
FINAL	4-17-08	0920	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☒

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: **Totalizer Reading:** 616,000

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	SECOR	4-17-08 1500		TAP	4-17-08 1500
	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAP	4-17-08 1555	Peggy	TAP	4/17/08 1555
	Company:	Date/Time:	Received by:	Company:	Date/Time:

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TestAmerica Sample Receipt Checklist

Received by: *(section A)* Date: 4/17/15 Time: 1555 Initials: JI

Unpacked by: *(section B)* Date: 4/17/15 Initials: JI

Logged-in by: Date: 4/17/15 Initials: JI

Work Order No. PRD0621

Client: SCC7

Project: Portland Terminal

Temperature out of range:

___Not enough Ice
___*No Ice*
___*Ice Melted*
___*Win 4 Hours*
___*Other:*

***ESI Clients *(see Section C)*

Cooler Temperature (IR): 2.4 °C plastic glass NA *(oil/air samples, ESI client)* Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

____Gel Ice

X Loose Ice

____None

Packing Material:

X Bubble Bags

____Styrofoam Cubbies

____None (___Other:_____)

Received from:

X TA Courier

____Senvoy

____UPS

____Fed Ex

____Client

____TDP

____DHL

____SDS

____Mid-Valley

____GS/TA

____GS/Senvoy

____Other:

_____

B

Sample Status:

(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided

All preserved bottles checked Y N NA *(voas/soils/all unp)*

All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Reviewed: _____ *(Initial/Date)*

COP0016374

Hillsboro Landfill, Inc.

3205 SE MINTER BRIDGE ROAD HILLSBORO, OR 97123

PERMIT # 101217OR

Tracking Number 11936

PERMIT TO DISPOSE OF NON-HAZARDOUS MATERIALS

This permit authorizes disposal of Customer's waste materials in accordance with the Industrial Waste & Disposal Services Agreement dated *2/4*.

EXPIRES: 8/13/08

GENERATOR: CONOCO PHILLIPS

DESCRIPTION: *SPENT CARBON AND BOOMS*	**TONS:** *10*
☐ SPECIAL WASTE ☐ CS ☐ C&D ☒ CLEAN-UP	
LOCATION: *PORTLAND, OREGON* *5528 NW DOANE AVENUE*	**COUNTY:** *Multnomah*
CONTACT: *ROBERT TUCKER*	**PHONE:** *503-857-5671*
	FAX: *503-985-1953*

BILLING: *Landfill account STRATUS CORPORATION*	**PO#:** *P08105.01*	**JOB#:** *N/A*

We accept business checks, cash, VISA / Mastercard or charge(with prior approval)

SPECIAL HANDLING : ***NOTE: NO FREE LIQUIDS***

MK **TyT**

APPROVED: *KRISTIN CASTNER* DATE: ***05/14/08 2:23:41 PM***

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

THERE IS A MINIMUM CHARGE OF $50-$60 FOR EACH LOAD OF SPECIAL WASTE

WASTE MANAGEMENT

HAZARDOUS WASTE IS STRICTLY PROHIBITED

COP0016375

Generator's Nonhazardous Waste Profile Sheet

Requested Disposal Facility _____ Profile Number

☐ Renewal for Profile Number _____ Waste Approval Expiration Date _____

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: ConocoPhillips
2. Site Address: 5528 NW Doane Ave.
3. City/ZIP: Portland 97210
4. State: Oregon
5. County: Multnomah
6. Contact Name/Title: Alice Larsen for ConocoPhillips
7. Email Address: Alice.Larsen@stantec.com
8. Phone: 503-691-2030
9. FAX: 503-692-7074
10. NAICS Code: _____
11. Generator USEPA ID #: _____
12. State ID# (if applicable): _____

B. Customer Information ☐ same as above

P. O. Number: _____

1. Customer Name: Stratus Corporation
2. Billing Address: 39515 SW Hartley Road
3. City, State and ZIP: Gaston, OR 97119
4. Contact Name: Robert Tucker
5. Contact Email: tucker@stratuscorp.net
6. Phone: 985-7912 FAX: 503-985-1953
7. Transporter Name: Stratus Corporation
8. Transporter ID # (if appl.): _____
9. Transporter Address: 39515 SW Hartley Road
10. City, State and ZIP: Gaston, OR 97119

C. Waste Stream Information

1. DESCRIPTION

a. Common Waste Name: Spent carbon and spent booms State Waste Code(s): _____

b. Describe Process Generating Waste or Source of Contamination:

Spent carbon from site remediation system, spent booms, and PPE

c. Typical Color(s): _____

d. Strong Odor? ☐ Yes ☑ No Describe: _____

e. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____

f. Layers? ☐ Single layer ☐ Multi- layer ☑ NA

g. Water Reactive? ☐ Yes ☑ No If Yes, Describe: _____

h. Free Liquid Range (%): _____ to _____ ☑ NA(solid)

i. pH Range: ☐ ≤2 ☐ 2.1-12.4 ☐ ≥12.5 ☑ NA(solid) ☐ Actual: _____

j. Liquid Flash Point: ☐ < 140°F ☐ ≥ 140°F ☑ NA(solid) ☐ Actual: _____

k. Flammable Solid: ☐ Yes ☑ No

l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☑ (See Attached)

Constituents *(Total Composition Must be ≥ 100%)*	Concentration %	Constituents *(Total Composition Must be ≥ 100%)*	Concentration %
1.		4.	
2.		5.	
3.		6.	

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION

a. ☑ Event ☐ Base/Ongoing (Check One)

b. Estimated Annual Quantity: 25 ☐ Tons ☐ Cubic Yards ☑ Drums ☐ Gallons ☐ Other (specify): _____

c. Shipping Frequency: _____ Units per ☐ Month ☐ Quarter ☐ Year ☑ One Time ☐ Other

d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☑ No

e. USDOT Shipping Description (if applicable): _____

3. SAFETY REQUIREMENTS (Handling, PPE, etc.): Level D PPE

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Generator's Nonhazardous Waste Profile Sheet

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ☐ Yes ☑ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☑ No
   - ☐ Delisted Hazardous Waste
   - ☐ Excluded Wastes Under 40 CFR 261.4
   - ☐ Treated Hazardous Waste Debris
   - ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☑ Yes ☐ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☑ No
   a. If yes, is disposal regulated under TSCA? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ☐ Yes ☑ No
7. Does the waste contain asbestos? ☐ Yes ☑ No If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No
   If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
5. Check all that apply:
   - ☑ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
   - ☐ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   - ☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
   - ☐ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
   - ☐ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: Alice Larsen on behalf of ConocoPhillips **Title:** Senior Project Manager

Company Name: Stantec Inc **Name (Print):** Alice Larsen for ConocoPhillips

Date: 05/05/2008

FOR WM USE ONLY

Management Method: ☐ Landfill ☐ Bioremediation ☐ Non-hazardous solidification ☐ Other: _____

Approval Decision: ☐ Approved ☐ Not Approved

Waste Approval Expiration Date: _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval:

- ☐ Shall not contain free liquid
- ☐ Shipment must be scheduled into disposal facility
- ☐ Approval Number must accompany each shipment
- ☐ Waste Manifest must accompany load

WM Authorization Name / Title: _____ **Date:** _____

State Authorization (if Required): _____ **Date:** _____

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

April 28, 2008

Jessica Eckart
Secor
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 04/17/08 15:55. The following list is a summary of the Work Orders contained in this report, generated on 04/28/08 14:56.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRD0624	Portland Terminal	0922

Spent booms

TestAmerica Portland

Christina Woodcock

Christina Woodcock, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Spent Booms/Pads	PRD0624-01	Other dry	04/17/08 10:00	04/17/08 15:55

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

TCLP Volatile Organic Compounds per EPA Method 1311/8260B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0624-01 (Spent Booms/Pads)			**Other dry**			**Sampled: 04/17/08 10:00**				
Benzene	1311/8260B	ND	-----	0.0200	mg/l	1x	8040932	04/24/08 12:00	04/24/08 21:53	
Surrogate(s):	*4-BFB*		*104%*		*75 - 130 %*	*0.1x*			*"*	
	Dibromofluoromethane		*101%*		*75 - 130 %*	*"*			*"*	
	Toluene-d8		*108%*		*75 - 130 %*	*"*			*"*	
	1,2-DCA-d4		*98.0%*		*77.7 - 144 %*	*"*			*"*	

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full without the written approval of the laboratory.

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040932 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040932-BLK1)								**Extracted: 04/24/08 12:00**						
Benzene	1311/8260B	ND	---	0.0200	mg/l	1x	--	--	--	--	--	--	04/24/08 21:12	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 75-130%*	*0.1x*							*04/24/08 21:12*	
Dibromofluoromethane		*98.9%*			*75-130%*	"							"	
Toluene-d8		*106%*			*75-130%*	"							"	
1,2-DCA-d4		*97.4%*			*77.7-144%*	"							"	
LCS (8040932-BS1)								**Extracted: 04/24/08 12:00**						
Benzene	1311/8260B	0.222	---	0.0200	mg/l	1x	--	0.200	111%	(66-142)	--	--	04/24/08 16:51	
Surrogate(s): 4-BFB		*Recovery: 108%*			*Limits: 75-130%*	*0.1x*							*04/24/08 16:51*	
Dibromofluoromethane		*105%*			*75-130%*	"							"	
Toluene-d8		*111%*			*75-130%*	"							"	
1,2-DCA-d4		*98.9%*			*77.7-144%*	"							"	
Matrix Spike (8040932-MS1)					**QC Source: PRD0624-01**			**Extracted: 04/24/08 12:00**						
Benzene	1311/8260B	0.229	---	0.0200	mg/l	1x	ND	0.200	115%	(66-142)	--	--	04/24/08 19:49	
Surrogate(s): 4-BFB		*Recovery: 106%*			*Limits: 75-130%*	*0.1x*							*04/24/08 19:49*	
Dibromofluoromethane		*103%*			*75-130%*	"							"	
Toluene-d8		*107%*			*75-130%*	"							"	
1,2-DCA-d4		*97.6%*			*77.7-144%*	"							"	
Matrix Spike Dup (8040932-MSD1)					**QC Source: PRD0624-01**			**Extracted: 04/24/08 12:00**						
Benzene	1311/8260B	0.238	---	0.0200	mg/l	1x	ND	0.200	119%	(66-142)	3.76%	(25)	04/24/08 20:17	
Surrogate(s): 4-BFB		*Recovery: 107%*			*Limits: 75-130%*	*0.1x*							*04/24/08 20:17*	
Dibromofluoromethane		*107%*			*75-130%*	"							"	
Toluene-d8		*110%*			*75-130%*	"							"	
1,2-DCA-d4		*99.5%*			*77.7-144%*	"							"	

TestAmerica Portland

Christina Woodcock, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Christina Woodcock, Project Manager

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PRD0624

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jessica Eckart	Site Contact: Norman Swanson	Date: 4-17-08	COC No: 1
SECOR International, Inc.		Lab Contact: Christina	Carrier:	1 of 1 COCs
7730 SW Mohawk Blvd.	Analysis Turnaround Time			Job No 15CP 00922
Tualtin, OR 97062	Calendar (C) or Work Days (W) W			
(503) 691-2030 Phone	TAT if different from Below 5			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site: 0922	☐ 2 days			
P O # None - Direct Bill to SECOR	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y/N) Benzene TCLP	Sample Specific Notes:
Spent Booms/pads	4-17-8	1000	COMP	solid	2	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: DIRECT BILL TO SECOR - PLEASE DO NOT SEND INVOICE TO CONOCO PHILLIPS

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	SECOR	4-17-08 1506		TAP	4-17-08 1506
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAP	4-17-08 1555		TAP	4/17/08 1555
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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TestAmerica Sample Receipt Checklist

Cooler ID(s):

Received by: *(section A)* Date: 4/17/15 Time: 1555 Initials: ZI

Unpacked by: *(section B)* Date: 4/17/15 Initials: AX

Logged-in by: Date: 4/17/15 Initials: JI

Work Order No. PRD0624

Client: SCCC

Project: Portland Terminal

Temperature out of range:

___Not enough Ice
___No Ice
___Ice Melted
___Will 4 Hours
___Other:

***ESI Clients *(see Section C)*

Cooler Temperature (IR): 2.4 °C plastic glass NA *(oil/air samples, ESI client)* Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

____Gel Ice

X Loose Ice

____None

Packing Material:

X Bubble Bags

____Styrofoam Cubbies

____None (____Other:_____)

Received from:

X TA Courier

____Senvoy

____UPS

____Fed Ex

____Client

____TDP

____DHL

____SDS

____Mid-Valley

____GS/TA

____GS/Senvoy

____Other:

_____

B

Sample Status:

(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided

All preserved bottles checked Y N NA *(voas/soils/all unp.)*

All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other_____

Project Managers:

Comments: _____

PM Reviewed: *(Initial/Date)*

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

April 16, 2008

Jessica Eckart
Secor
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Conoco Phillips

Enclosed are the results of analyses for samples received by the laboratory on 04/02/08 16:45. The following list is a summary of the Work Orders contained in this report, generated on 04/16/08 12:03.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRD0097	Conoco Phillips	0922 Portland Terminal

TestAmerica Portland

Christina Woodcock

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
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ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WCV-4-2-08	PRD0097-01	Soil	04/02/08 13:00	04/02/08 16:45

TestAmerica Portland

Christina Woodcock, Project Manager

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Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Metals per EPA 1311/6000/7000 Series Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0097-01 (WCV-4-2-08)		**Soil**				**Sampled: 04/02/08 13:00**				
Lead	1311/6020	ND	-----	0.0500	mg/l	1x	8040371	04/09/08 17:20	04/11/08 04:10	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0097-01 (WCV-4-2-08)		**Soil**			**Sampled: 04/02/08 13:00**					
Benzene	1311/8260B	ND	-----	0.0100	mg/l	1x	8040498	04/12/08 12:36	04/12/08 17:37	
Carbon tetrachloride	"	ND	-----	0.0100	"	"	"	"	"	
Chlorobenzene	"	ND	-----	0.0100	"	"	"	"	"	
Chloroform	"	ND	-----	0.0100	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	-----	0.0100	"	"	"	"	"	
1,2-Dichloroethane	"	ND	-----	0.0100	"	"	"	"	"	
1,1-Dichloroethene	"	ND	-----	0.0100	"	"	"	"	"	
2-Butanone (MEK)	"	ND	-----	0.100	"	"	"	"	"	
Tetrachloroethene	"	ND	-----	0.0100	"	"	"	"	"	
Trichloroethene	"	ND	-----	0.0100	"	"	"	"	"	
Vinyl chloride	"	ND	-----	0.0100	"	"	"	"	"	
Surrogate(s):	*4-BFB*	*97.4%*		*75 - 130 %*		*0.1x*			"	
	Dibromofluoromethane	*103%*		*75 - 130 %*		"			"	
	Toluene-d8	*105%*		*75 - 130 %*		"			"	

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Extraction Only

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0097-01 (WCV-4-2-08)		**Soil**			**Sampled: 04/02/08 13:00**					
Extraction	EPA 1311	ND	-----	1.00	N/A	1x	8040317	04/08/08 22:10	04/09/08 15:56	

TestAmerica Portland

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full without the written approval of the laboratory.

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Metals per EPA 1311/6000/7000 Series Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040371 **Soil Preparation Method: EPA 1311/3005**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040371-BLK1)								Extracted: 04/09/08 17:20						
Lead	1311/6020	ND	---	0.0500	mg/l	1x	--	--	--	--	--	--	04/11/08 03:49	
LCS (8040371-BS1)								Extracted: 04/09/08 17:20						
Lead	1311/6020	0.180	---	0.0500	mg/l	1x	--	0.200	90.2%	(75-125)	--	--	04/11/08 04:00	
Duplicate (8040371-DUP1)					QC Source: PRD0097-01				Extracted: 04/09/08 17:20					
Lead	1311/6020	ND	---	0.0500	mg/l	1x	ND	--	--	--	NR	(20)	04/11/08 04:20	
Matrix Spike (8040371-MS1)					QC Source: PRD0122-05				Extracted: 04/09/08 17:20					
Lead	1311/6020	0.180	---	0.0500	mg/l	1x	0.00230	0.200	89.0%	(50-150)	--	--	04/10/08 22:06	
Matrix Spike (8040371-MS2)					QC Source: PRD0256-01				Extracted: 04/09/08 17:20					
Lead	1311/6020	0.185	---	0.0500	mg/l	1x	0.00130	0.200	91.8%	(50-150)	--	--	04/10/08 22:47	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040498 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040498-BLK1)							Extracted: 04/12/08 12:36							
Benzene	1311/8260B	ND	---	0.0100	mg/l	1x	--	--	--	--	--	--	04/12/08 16:41	
Carbon tetrachloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
2-Butanone (MEK)	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*99.2%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 16:41*	
	Dibromofluoromethane		*103%*			*75-130%*	*"*						*"*	
	Toluene-d8		*106%*			*75-130%*	*"*						*"*	
Blank (8040498-BLK2)							Extracted: 04/12/08 12:36							
Benzene	1311/8260B	ND	---	0.0100	mg/l	1x	--	--	--	--	--	--	04/12/08 17:09	
Carbon tetrachloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
2-Butanone (MEK)	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*98.9%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 17:09*	
	Dibromofluoromethane		*104%*			*75-130%*	*"*						*"*	
	Toluene-d8		*104%*			*75-130%*	*"*						*"*	

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040498 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8040498-BS1)									Extracted: 04/12/08 12:36					
Benzene	1311/8260B	0.224	---	0.0100	mg/l	1x	--	0.200	112%	(66-142)	--	--	04/12/08 13:56	
Carbon tetrachloride	"	0.262	---	0.0100	"	"	--	"	131%	(50-150)	--	--	"	
Chlorobenzene	"	0.238	---	0.0100	"	"	--	"	119%	(60-133)	--	--	"	
Chloroform	"	0.243	---	0.0100	"	"	--	"	122%	(50-150)	--	--	"	
1,4-Dichlorobenzene	"	0.211	---	0.0100	"	"	--	"	106%	"	--	--	"	
1,2-Dichloroethane	"	0.245	---	0.0100	"	"	--	"	122%	"	--	--	"	
1,1-Dichloroethene	"	0.215	---	0.0100	"	"	--	"	108%	(59-172)	--	--	"	
2-Butanone (MEK)	"	0.352	---	0.100	"	"	--	0.400	87.9%	(40-180)	--	--	"	
Tetrachloroethene	"	0.247	---	0.0100	"	"	--	0.200	124%	(50-150)	--	--	"	
Trichloroethene	"	0.232	---	0.0100	"	"	--	"	116%	(62-137)	--	--	"	
Vinyl chloride	"	0.269	---	0.0100	"	"	--	"	135%	(40-180)	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*104%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 13:56*	
	Dibromofluoromethane		*109%*			*75-130%*	"						"	
	Toluene-d8		*107%*			*75-130%*	"						"	
LCS (8040498-BS2)									Extracted: 04/12/08 12:36					
Benzene	1311/8260B	0.230	---	0.0100	mg/l	1x	--	0.200	115%	(66-142)	--	--	04/12/08 14:24	
Carbon tetrachloride	"	0.260	---	0.0100	"	"	--	"	130%	(50-150)	--	--	"	
Chlorobenzene	"	0.237	---	0.0100	"	"	--	"	119%	(60-133)	--	--	"	
Chloroform	"	0.246	---	0.0100	"	"	--	"	123%	(50-150)	--	--	"	
1,4-Dichlorobenzene	"	0.209	---	0.0100	"	"	--	"	104%	"	--	--	"	
1,2-Dichloroethane	"	0.251	---	0.0100	"	"	--	"	125%	"	--	--	"	
1,1-Dichloroethene	"	0.221	---	0.0100	"	"	--	"	110%	(59-172)	--	--	"	
2-Butanone (MEK)	"	0.400	---	0.100	"	"	--	0.400	100%	(40-180)	--	--	"	
Tetrachloroethene	"	0.250	---	0.0100	"	"	--	0.200	125%	(50-150)	--	--	"	
Trichloroethene	"	0.236	---	0.0100	"	"	--	"	118%	(62-137)	--	--	"	
Vinyl chloride	"	0.265	---	0.0100	"	"	--	"	133%	(40-180)	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*103%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 14:24*	
	Dibromofluoromethane		*111%*			*75-130%*	"						"	
	Toluene-d8		*109%*			*75-130%*	"						"	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040498 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (8040498-MS1)					QC Source: PRD0097-01				Extracted: 04/12/08 12:36					
Benzene	1311/8260B	0.220	---	0.0100	mg/l	1x	ND	0.200	110%	(66-142)	--	--	04/12/08 14:51	
Carbon tetrachloride	"	0.251	---	0.0100	"	"	ND	"	126%	(50-150)	--	--	"	
Chlorobenzene	"	0.230	---	0.0100	"	"	ND	"	115%	(60-133)	--	--	"	
Chloroform	"	0.236	---	0.0100	"	"	ND	"	118%	(50-150)	--	--	"	
1,4-Dichlorobenzene	"	0.198	---	0.0100	"	"	ND	"	99.1%	"	--	--	"	
1,2-Dichloroethane	"	0.239	---	0.0100	"	"	ND	"	120%	"	--	--	"	
1,1-Dichloroethene	"	0.215	---	0.0100	"	"	ND	"	108%	(59-172)	--	--	"	
2-Butanone (MEK)	"	0.392	---	0.100	"	"	ND	0.400	98.0%	(40-180)	--	--	"	
Tetrachloroethene	"	0.240	---	0.0100	"	"	ND	0.200	120%	(50-150)	--	--	"	
Trichloroethene	"	0.225	---	0.0100	"	"	ND	"	113%	(62-137)	--	--	"	
Vinyl chloride	"	0.231	---	0.0100	"	"	ND	"	116%	(40-180)	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*103%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 14:51*	
	Dibromofluoromethane		*111%*			*75-130%*	"						"	
	Toluene-d8		*109%*			*75-130%*	"						"	
Matrix Spike Dup (8040498-MSD1)					QC Source: PRD0097-01				Extracted: 04/12/08 12:36					
Benzene	1311/8260B	0.226	---	0.0100	mg/l	1x	ND	0.200	113%	(66-142)	2.74%	(21)	04/12/08 15:19	
Carbon tetrachloride	"	0.257	---	0.0100	"	"	ND	"	128%	(50-150)	2.28%	(40)	"	
Chlorobenzene	"	0.236	---	0.0100	"	"	ND	"	118%	(60-133)	2.66%	(21)	"	
Chloroform	"	0.243	---	0.0100	"	"	ND	"	122%	(50-150)	2.75%	(40)	"	
1,4-Dichlorobenzene	"	0.208	---	0.0100	"	"	ND	"	104%	"	4.73%	"	"	
1,2-Dichloroethane	"	0.248	---	0.0100	"	"	ND	"	124%	"	3.45%	"	"	
1,1-Dichloroethene	"	0.220	---	0.0100	"	"	ND	"	110%	(59-172)	2.11%	(22)	"	
2-Butanone (MEK)	"	0.393	---	0.100	"	"	ND	0.400	98.2%	(40-180)	0.229%	(50)	"	
Tetrachloroethene	"	0.242	---	0.0100	"	"	ND	0.200	121%	(50-150)	1.24%	"	"	
Trichloroethene	"	0.231	---	0.0100	"	"	ND	"	115%	(62-137)	2.50%	(24)	"	
Vinyl chloride	"	0.270	---	0.0100	"	"	ND	"	135%	(40-180)	15.3%	(50)	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*102%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 15:19*	
	Dibromofluoromethane		*109%*			*75-130%*	"						"	
	Toluene-d8		*107%*			*75-130%*	"						"	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Extraction Only - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040317 **Other dry Preparation Method: EPA 1311**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040317-BLK1)													Extracted: 04/08/08 22:10	
Extraction	EPA 1311	ND	---	1.00	N/A	1x	--	--	--	--	--	--	04/09/08 15:56	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Christina Woodcock, Project Manager

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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jessica Eckart	Site Contact: Norman Swanson	Date: 4/2/08	COC No: 1
SECOR International, Inc		Lab Contact:Christina	Carrier:	1 of 1 COCs
7730 SW Mohawk Blvd.	Analysis Turnaround Time			Job No 15CP.00922
Tualtin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site: 0922	☐ 2 days			
P O # None - Direct Bill to SECOR	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TCLP 8260 (see comments)	TCLP Pb	Sample Specific Notes:
WCV-4-2-08	4/2/2008	1300	Comp	Carbon	2		X	X	
									8260 TCLP:
									Vinyl Chloride; trichloroethene
									1,1-dichloroethene; chloroform;
									carbon tetrachloride; benzene;
									1,2-dichloroethane; tetrachloroethene;
									chlorobenzene; 2-butanone

Preservation Used : 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: DIRECT BILL TO SECOR - DO NOT SEND INVOICE TO CONOCO PHILLIPS

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	SECOR	4-2-08/1620	Bob Fay	TAP	16:20 @ 4/2/08
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Bob Fay	TAP @ 1645	4/2/08	James Fabel	TAP	4/2/08 16:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

4.1°C

COP0016396

TestAmerica Sample Receipt Checklist

Received by: (Section A)
Date: 4/2/08
Time: 1600
Initials: JE

Unpacked by: (Section B)
Date: 4/2/08
Initials: JE

Logged-in by:
Date: 4/2/08
Initials: JE

Work Order No.: PRD0097
Client: SECOR
Project: Conoco Phillips

Temperature out of range
___Not enough Ice
___No Ice
___Ice Melted
___Win 4 Hours
___Other

***ESI Clients (see Section C)

Cooler Temperature (IR): 4.1 °C plastic glass NA (oil/air samples, ESI client) Temperature Blank: _____ °C

A

Custody Seals: (#____)
Signature: Y N Dated:_____
X None

Container Type:
1 #Cooler(s)
____#Box(s)
____None (___#Other:_____)

Coolant Type:
____Gel Ice
X Loose Ice
____None

Packing Material:
____Bubble Bags
____Styrofoam Cubbies
X None (____Other _____)

Received from:
X TA Courier
____Senvoy
____UPS
____Fed Ex
____Client
____TDP
____DHL
____SDS
____Mid-Valley
____GS/TA
____GS/Senvoy
____Other
_____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: ____ C not provided
All preserved bottles ecked Y N NA voas/soils/all unp.)
All preserved accord ?N? Y N (see NOD) NA voas/soils/all unp.)

FED EX/ UPS Was the tracking paper keepable? YES NO
If circled NO what is the Tracking number? _____
FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments:_____

PM Reviewed:_____ (Initial/Date)

COP0016397

Incident ID: 73652

Short Description: Portland Product Terminal - Gasoline Thermal Overpressure of 6" Line w/Release [E]

Status: Closed

Responsible Dept\Unit: Terminals : Terminals - West Coast Division : Portland Product Terminal

Incident Type: Incident

General

Responsible Supervisor: INACTIVETHOMAS INACTIVELYONS

High Learning Value Event Status: Not Reviewed for HLVE

Location:

Specific Location: Portland Terminal, tank farm #2

Date Occurred: (mm/dd/yyyy) 5/16/2008 1:40:00 PM

Date Reported: (mm/dd/yyyy) 5/16/2008 2:20:00 PM

Date Entered: 5/16/2008 3:58:27 PM (GMT-07:00)

REPORTEDBY: THOMAS LYONS

Incident Description: Tank project CFR radioed that unleaded gasoline was leaking from a flange in tank farm. He secured the area. COP Maintenance and Operations personnel responded to radio call, recognzed the leak as thermal ovepressure, opened a nearby 6" valve that relieved pressure and slowed the leak.

CFR had two project LEL meters, found no detectable LEL meter readings. Contractors donned FRC, placed bucket under leaking flange. Contractors gathered tools and new gasket, COP Maintenance Technician performed LOTO on same 6" valve, contractors relieved pressure on line, removed old gasket and installed new. LOTO was removed, and 6" valve is now locked in open position to provide thermal overpressure protection for this temporary "dead leg".

HSE notified; Safety Coordinator & Environmental Coordinator. Release not reportable. After leak was repaired, Operators shoveled affected dirt into 55-gallon drum.

Weather: Clear

Address: 5528 NW Doane Avenue

City: Portland

Country: United States

Zip/Postal Code: 97210

Incident Flags: Hydrocarbon Loss of Containment , Loss of Process Containment

Entered By: LYONS, THOMAS

Immediate Actions Taken: CFR had two project LEL meters, found no detectable LEL meter readings. Contractors donned FRC, placed bucket under leaking flange. Contractors gathered tools and new gasket, COP Maintenance Technician performed LOTO on 6" valve, contractors relieved pressure on line, removed old gasket and installed new. LOTO was removed, and 6" valve is now locked in open position to provide thermal overpressure protection for this temporary "dead leg".

HSE notified (S.Gilfillan and Fran Nunn). Release not reportable. After leak was repaired, Operators shoveled affected dirt into 55-gallon drum.

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response
INACTIVETHOMAS INACTIVELYONS	

Incident Owner *

Name	Response
INACTIVETHOMAS INACTIVELYONS	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment: No Data is Available

People

Contractor Involvement : No Data is Available

Name	Employee Type	Consequence Number: Injury / Illness	Property	Transportation	Security	Quality	Environmental
LYONS, THOMAS	Employee						12448 Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Roger Bryant	ENGlobal	509-220-0949

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
12448 Open View	Environmental	...	LYONS, THOMAS	Closed

Pending Consequences : No Data is Available

Investigation

ID	Investigation Date	Type	Status	Contributing Factors
17659 Open View	5/19/2008	Simplified	Closed	Procedures:Procedures Equipment - Equipment Problems:Equipment Design LTA

COP0016399

SECOR

SECOR INTERNATIONAL INCORPORATED
7730 Southwest Mohawk Street
Tualatin, Oregon 97062
503-691-2030 TEL / 503-692-7074 FAX
www.secor.com

letter of transmittal

attention: Mr. Eric DeBerry date: May 30, 2008

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922.66 Permit No. 500.015

re: Discharge Monitoring Report – May 2008

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of Stantec Consulting Corporation (Stantec), formerly SECOR International Inc., on May 15, 2008. Grab samples were collected by discharging water from sample ports on the process piping directly into laboratory prepared containers. The sample containers were sealed, labeled, placed in a cooler with ice and transported to the project laboratory. The effluent samples were analyzed for pH (U.S. Environmental Protection Agency [EPA] Method 150.1/9040A), HEM Oil and Grease (EPA Method 1664), and benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8021B). Laboratory analysis was performed by Test America Laboratories in Beaverton, Oregon. A copy of the laboratory analytical reports is attached.

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015., dated 2 October, 2007. The discharge monitoring report (DMR) is being submitted as the self-monitoring report and is attached. All parameters monitored were within the limits listed in the facility's discharge permit.

If you have any questions regarding the enclosed DMR, please feel free to contact the above at (503) 691-2030. Thank you.

signator: Norman Swanson/Jessica Eckart, R.G.
title: Staff Scientist/Project Geologist

JE:dc

cc: Mike Noll, Noll Environmental, Inc.
Grant Sprick, Arcadis

COP0016400

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: 15 June, 2008

SAMPLING PERIOD: May 2008

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
4/17/2008	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664A	ND mg/L	4.76	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	EPA Method 150.1/9040A	6.48 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 5	0.75 mg/L	N/A	
Totalized Reading	Field	32,732,128		NA	N/A	Field Reading 1,313,000

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting gales information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 6/2/08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

May 20, 2008

Jessica Eckart
Secor
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 05/15/08 16:00. The following list is a summary of the Work Orders contained in this report, generated on 05/20/08 17:29.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRE0554	Portland Terminal	0922 COP

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FINAL	PRE0554-01	Water	05/15/08 14:15	05/15/08 16:00

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRE0554-01 (FINAL)			**Water**			**Sampled: 05/15/08 14:15**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8050746	05/19/08 10:50	05/19/08 20:41	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*79.6%*		*70 - 130%*	"			"

TestAmerica Portland

Estella Rieben, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRE0554-01 (FINAL)			**Water**				**Sampled: 05/15/08 14:15**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8050674	05/16/08 09:00	05/16/08 11:30	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRE0554-01 (FINAL)			**Water**			**Sampled: 05/15/08 14:15**				
pH	150.1/9040A	**6.48**	-----		pH Units	1x	8050634	05/15/08 17:21	05/15/08 17:40	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8050746 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8050746-BLK1)								**Extracted: 05/19/08 10:50**						
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	05/19/08 16:05	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 81.4%*			*Limits: 70-130%*	"							*05/19/08 16:05*	
LCS (8050746-BS1)								**Extracted: 05/19/08 10:50**						
Benzene	EPA 8021B	19.4	---	0.500	ug/l	1x	--	20.0	97.1%	(75-125)	--	--	05/19/08 14:16	
Toluene	"	20.0	---	0.500	"	"	--	"	99.9%	(80-120)	--	--	"	
Ethylbenzene	"	20.6	---	0.500	"	"	--	"	103%	(80-130)	--	--	"	
Xylenes (total)	"	61.4	---	1.00	"	"	--	60.0	102%	"	--	--	"	
o-Xylene	"	20.7	---	1.00	"	"	--	20.0	103%	"	--	--	"	
m,p-Xylene	"	40.8	---	1.00	"	"	--	40.0	102%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 77.7%*			*Limits: 70-130%*	"							*05/19/08 14:16*	
LCS Dup (8050746-BSD1)								**Extracted: 05/19/08 10:50**						
Benzene	EPA 8021B	19.0	---	0.500	ug/l	1x	--	20.0	94.8%	(75-125)	2.42%	(20)	05/19/08 14:44	
Toluene	"	19.4	---	0.500	"	"	--	"	96.8%	(80-120)	3.09%	"	"	
Ethylbenzene	"	20.1	---	0.500	"	"	--	"	100%	(80-130)	2.64%	"	"	
Xylenes (total)	"	59.8	---	1.00	"	"	--	60.0	99.6%	"	2.75%	"	"	
o-Xylene	"	20.1	---	1.00	"	"	--	20.0	101%	"	2.77%	"	"	
m,p-Xylene	"	39.7	---	1.00	"	"	--	40.0	99.2%	"	2.73%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 83.4%*			*Limits: 70-130%*	"							*05/19/08 14:44*	

TestAmerica Portland

Estella Rieben, Project Manager

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TestAmerica
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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8050674 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8050674-BLK1)								**Extracted: 05/16/08 09:00**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	05/16/08 11:30	
LCS (8050674-BS1)								**Extracted: 05/16/08 09:00**						
Oil & Grease	EPA 1664	37.8	---		mg/l	1x	--	40.0	94.5%	(78-114)	--	--	05/16/08 11:30	
LCS Dup (8050674-BSD1)								**Extracted: 05/16/08 09:00**						
Oil & Grease	EPA 1664	38.4	---		mg/l	1x	--	40.0	96.0%	(78-114)	1.57%	(18)	05/16/08 11:30	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8050634 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8050634-DUP1)				**QC Source: PRE0500-01**				**Extracted: 05/15/08 10:51**						
pH	150.1/9040A	6.40	---		pH Units	1x	6.25	--	--	--	2.37%	(25)	05/15/08 11:04	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	05/20/08 17:29

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

Incident ID: 76513

Short Description: Portland Product Terminal - Pipe Nipple Dripping Ethanol at Threaded Fitting [E]

Status: Closed

Responsible Dept\Unit: Terminals : Terminals - West Coast Division : Portland Product Terminal

Incident Type: Incident

Potential Risk Rating: I - Low

General

Responsible Supervisor:	THOMAS LYONS
High Learning Value Event Status:	Not Reviewed for HLVE
Location:	
Specific Location:	Tank Farm #2
Date Occurred: (mm/dd/yyyy)	6/27/2008 9:00:00 AM
Date Reported: (mm/dd/yyyy)	6/27/2008 10:00:00 AM
Date Entered:	6/27/2008 11:31:04 AM (GMT-07:00)
REPORTEDBY:	THOMAS LYONS
Incident Description:	While ethanol truck pump-off occurs during project work hours, the HMT firewatch makes safety rounds between her jobsite and ethanol tank 3410. She noticed a small drip on an ethanol-pump pipe nipple about 70' from project jobsite. She notified COP maintenance. Gasoline truck loading at rack was shutdown. COP maintenance & contract crew replaced pipe nipple. Affected soil removed. We estimate about a 1 pint of ethanol was released.
Weather:	Clear
Lighting:	Day
Address:	5528 NW Doane Avenue
City:	Portland
Country:	United States
Zip/Postal Code:	97210
Incident Flags:	Loss of Process Containment
Entered By:	LYONS, THOMAS
Immediate Actions Taken:	Gasoline truck loading at rack was shutdown. COP maintenance & contract crew replaced pipe nipple. Affected soil removed.

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response

THOMAS LYONS

Incident Owner *

Name	Response
THOMAS LYONS	

Creator *

Name	Response
THOMAS LYONS	

Notify Only

Name	Response
DONNIE HEMPHILL	
ALAN LANIER	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Piping Systems and Piping Components: Pipe	NO	

People

Name	Employee Type	Consequence Number: Injury / Illness	Property	Transportation	Security	Quality	Environmental
CUSTER, COLLEEN	Employee						13048 Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Tina Terpeney	Contractor (HMT)	

Contractor Involvement

Contractor	Involvement Type
HMT TANK SERVICES, INC.	Project

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
13048 Open View	Environmental	...	CUSTER, COLLEEN G	Closed

Pending Consequences : No Data is Available

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

Summary

Equipment:	1
Employees:	1
Contractors:	None
Witnesses:	1

COP0016412

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

letter of transmittal

attention: Mr. Eric DeBerry date: July 2, 2008

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922 Permit No.: 500.015

re: Discharge Monitoring Report (DMR) – June 2008

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of Stantec Consulting Corporation (Stantec), formerly SECOR International Incorporated, on June 17, 2008. A grab sample (labeled FINAL) was collected at the treated effluent sample port (1A) on the process piping directly into laboratory-prepared containers. The sample containers were sealed, labeled, entered into Stantec's chain-of-custody, placed in a cooler with ice, and transported to a licensed analytical laboratory. The effluent samples were analyzed for: pH by U.S. Environmental Protection Agency (EPA) Method 150.1/9040A; HEM Oil and Grease by EPA Method 1664; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B. Laboratory analysis was performed by TestAmerica Laboratories in Beaverton, Oregon. A copy of the laboratory analytical report and completed chain-of-custody documentation is attached.

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015., dated October 2, 2007. The attached DMR is being submitted as the self-monitoring report. All parameters monitored were found to be within the limits listed in the facility's discharge permit.

If you have any questions regarding the enclosed DMR, please feel free to contact the undersigned at (503) 691-2030.

signators: Norman Swanson
titles: Staff Scientist

Clifford R. Pollock, RG, PE
Senior Engineering Geologist

NS/CP:dc

cc: Mike Noll, DXT SERVICES Inc., Snohomish, WA
Grant Sprick, ARCADIS, Portland, OR

COP016413

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: July 15, 2008

SAMPLING PERIOD: June 2008

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
6/17/2008	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664A	ND mg/L	4.90	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	EPA Method 150.1/9040A	6.34 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 0005 (BTE) 0.001 (X)	0.75 mg/L	N/A	
Totalized Reading	Field	33,221,028		NA	N/A	Field Reading 1,801,900

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting gales information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 7/7/08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

June 23, 2008

Bill Edmund
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 06/17/08 08:20. The following list is a summary of the Work Orders contained in this report, generated on 06/23/08 14:10.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRF0621	Portland Terminal	0922

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FINAL	PRF0621-01	Water	06/17/08 07:00	06/17/08 08:20

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRF0621-01 (FINAL)			**Water**			**Sampled: 06/17/08 07:00**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8060658	06/18/08 08:52	06/19/08 19:39	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*94.9%*		*70 - 130%*	"			"

TestAmerica Portland

Estella Rieben, Project Manager

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TestAmerica
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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRF0621-01 (FINAL)			**Water**			**Sampled: 06/17/08 07:00**				
Oil & Grease	EPA 1664	ND	-----	4.90	mg/l	1x	8060750	06/19/08 14:45	06/20/08 08:29	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRF0621-01 (FINAL)			**Water**			**Sampled: 06/17/08 07:00**				
pH	150.1/9040A	**6.34**	-----		pH Units	1x	8060619	06/17/08 17:22	06/17/08 17:34	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8060658 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8060658-BLK1)									**Extracted: 06/18/08 08:52**					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	06/19/08 17:49	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 92.0%*			*Limits: 70-130%*	"							*06/19/08 17:49*	
LCS (8060658-BS1)									**Extracted: 06/18/08 08:52**					
Benzene	EPA 8021B	19.7	---	0.500	ug/l	1x	--	20.0	98.4%	(75-125)	--	--	06/19/08 16:53	
Toluene	"	19.8	---	0.500	"	"	--	"	99.1%	(80-120)	--	--	"	
Ethylbenzene	"	20.8	---	0.500	"	"	--	"	104%	(80-130)	--	--	"	
Xylenes (total)	"	62.4	---	1.00	"	"	--	60.0	104%	"	--	--	"	
o-Xylene	"	20.8	---	1.00	"	"	--	20.0	104%	"	--	--	"	
m,p-Xylene	"	41.6	---	1.00	"	"	--	40.0	104%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 96.5%*			*Limits: 70-130%*	"							*06/19/08 16:53*	
LCS Dup (8060658-BSD1)									**Extracted: 06/18/08 08:52**					
Benzene	EPA 8021B	20.5	---	0.500	ug/l	1x	--	20.0	102%	(75-125)	3.86%	(20)	06/19/08 17:21	
Toluene	"	20.6	---	0.500	"	"	--	"	103%	(80-120)	3.82%	"	"	
Ethylbenzene	"	21.6	---	0.500	"	"	--	"	108%	(80-130)	3.78%	"	"	
Xylenes (total)	"	64.5	---	1.00	"	"	--	60.0	108%	"	3.41%	"	"	
o-Xylene	"	21.5	---	1.00	"	"	--	20.0	107%	"	3.26%	"	"	
m,p-Xylene	"	43.1	---	1.00	"	"	--	40.0	108%	"	3.49%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 99.4%*			*Limits: 70-130%*	"							*06/19/08 17:21*	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8F19026 **Soil Preparation Method: 7090264**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8F19026-IBL1)									**Extracted: 06/19/08 00:00**					
Benzene	EPA 8021B	0.0000990	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	06/19/08 15:59	
Toluene	"	0.000293	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	0.000151	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	0.000594	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	0.000443	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	0.000151	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*06/19/08 15:59*	
Instrument Blank (8F19026-IBL2)									**Extracted: 06/19/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	06/19/08 21:01	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*06/19/08 21:01*	
Instrument Blank (8F19026-IBL3)									**Extracted: 06/19/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	06/19/08 23:46	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*06/19/08 23:46*	
Instrument Blank (8F19026-IBL4)									**Extracted: 06/19/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	06/20/08 00:13	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*06/20/08 00:13*	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8F19026 **Soil Preparation Method: 7090264**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8F19026-IBL5)									**Extracted: 06/19/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	06/20/08 05:14	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*06/20/08 05:14*	
Instrument Blank (8F19026-IBL6)									**Extracted: 06/19/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	06/20/08 10:15	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*06/20/08 10:15*	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8060750 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8060750-BLK1)								**Extracted: 06/19/08 14:00**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	06/20/08 08:29	
LCS (8060750-BS1)								**Extracted: 06/19/08 14:00**						
Oil & Grease	EPA 1664	39.3	---	5.00	mg/l	1x	--	39.3	100%	(78-114)	--	--	06/20/08 08:29	
LCS Dup (8060750-BSD1)								**Extracted: 06/19/08 14:00**						
Oil & Grease	EPA 1664	40.3	---	5.00	mg/l	1x	--	40.3	100%	(78-114)	2.51%	(18)	06/20/08 08:29	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8060619 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8060619-DUP1)					**QC Source: PRF0618-01**				**Extracted: 06/17/08 17:22**					
pH	150.1/9040A	6.14	---		pH Units	1x	6.27	--	--	--	2.10%	(25)	06/17/08 17:34	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	06/23/08 14:10

Notes and Definitions

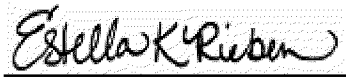
Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland



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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRF0621

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Bill Edmund	Site Contact: Norman Swanson	Date: 6-17-08	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier:	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W) _____			
(503) 691-2030 Phone	TAT if different from Below ___3 Days___			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
FINAL	6-17-8	0700	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 1,501,900

Please cc Results to Norman.Swanson@Stantec.com

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	~~SECOR~~ Stantec	6-17-08	Estella Rieben	TAP	6/17/08 0820
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

11.0C

TestAmerica Sample Receipt Checklist

Received by: *(section A)
Date: 2/17/08
Time: 08:20
Initials: BLE

Unpacked by: *(section B)
Date: 2/17/08
Initials: BLE

Logged-in by:
Date: 2/17/08
Initials: PS

Work Order No. PRF0621
Client: Secor
Project: 0922 Portland Terminal

Temperature out of range

Not enough Ice
No Ice
Ice Melted
X Win 4 Hours
Other

***ESI Clients *(see Section C)*

Cooler Temperature (IR): 11.0 °C plastic glass NA *(oil/air OR ESI client)* Temperature Blank: _____ C DIGI #1 #2

A

Custody Seals: (#____)

Signature: Y N Dated:_____
X None

Container Type:
1 #Cooler(s)
____#Box(s)
____None (___#Other:_____)

Coolant Type:
____Gel/ Blue Ice
X Loose Ice
____None

Packing Material:
X Bubble Bags
____Styrofoam Cubbies
____Peanuts
____None (____Other:_____)

Received from:
____TA Courier
____Senvoy
____UPS
____Fed Ex
X Client
____TDP
____USPS
____SDS
____Mid-Valley
____GS/TA
____GS/Senvoy
____Other:
_____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Cyanide checked?	Y	N	NA
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided DIGI #1 #2

All preserved bottles checked Y N NA *(voas/soils/all unp.)*
All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Reviewed: _____ *(Initial/Date)*

COP0016427

Incident ID: 77515

Short Description:	Portland Product Terminal - Small Diesel Spill [E]
Responsible Dept\Unit:	Terminals : Terminals - West Coast Division : Portland Product Terminal
Incident Type:	Incident
Status:	Closed
Potential Risk Rating:	I - Low

General

Responsible Supervisor:	INACTIVETHOMAS INACTIVELYONS
High Learning Value Event Status:	Not Reviewed for HLVE
Location:	
Specific Location:	Tank Farm #2
Date Occurred: (mm/dd/yyyy)	7/14/2008 7:45:00 AM
Date Reported: (mm/dd/yyyy)	7/14/2008 11:38:00 AM
Date Entered:	7/14/2008 12:48:36 PM (GMT-07:00)
REPORTEDBY:	THOMAS LYONS
Incident Description:	A mechanical contractor drained down 3 gallons of diesel into a 5-gallon metal bucket in preparation for a cold cut on a 10" line inside the tank farm. The contractor foreman instructed an employee to place a lid on the bucket, and move it off to the side of work area. To facilitate emptying the bucket, the employee thought it would be better to place the bucket right behind a nearby vacuum truck, which was parked in front of a utility truck. Soon after, a different contract employee and the vacuum truck driver discussed moving the utility truck away from the work area; so the vacuum truck was driven forward to allow the utility truck room to leave the area. The utility truck driver then drove over the 5-gallon bucket, spilling the diesel contents on the ground. The CFR stopped work and notified COP employees. The CFR met with contract employees on site, and discussed circle-for-safety. This is the 4th day of a planned 8-day project that has proceeded well, and the CFR impressed upon the employees the need to remain focused and avoid complacency. The diesel stained soil was placed into a 5-gallon drum for off-site disposal. Environmental Coordinator was notified. The incident is not reportable.
Weather:	Clear
Lighting:	Day
Address:	5528 NW Doane Avenue
City:	Portland
Country:	United States
State/Province:	Oregon
Zip/Postal Code:	97210
Incident Flags:	Hydrocarbon Loss of Containment
Entered By:	LYONS, THOMAS
Immediate Actions Taken:	The CFR stopped work and notified COP employees. The CFR met with contract employees on site, and discussed circle-for-safety. This is the 4th day of a planned 8-day project that has proceeded well, and the CFR impressed upon the employees the need to remain focused and avoid complacency. The diesel stained soil was placed into a 5-gallon drum for off-site disposal. Environmental Coordinator was notified. The

incident is not reportable.

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response
INACTIVETHOMAS	
INACTIVELYONS	

Incident Owner *

Name	Response
INACTIVETHOMAS	
INACTIVELYONS	

Creator *

Name	Response
THOMAS LYONS	

Notify Only

Name	Response
DONNIE HEMPHILL	
ALAN LANIER	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Mobile Equipment/Vehicles: Pickup	NO	

People

		Consequence Number						
Name	Employee Type	Injury / Illness	Property	Transportation	Security	Quality	Environmental	
CUSTER, COLLEEN	Employee						13529	Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Tim VanLannan	Contractor	
Jim Neely	Contractor	503-572-9515

Contractor Involvement

Contractor	Involvement Type
NORTHWEST METAL FAB & PIPE, INC.	Oper. and Main

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
13529 Open View	Environmental	...	CUSTER, COLLEEN G	Open

Pending Consequences : No Data is Available

COP0016429

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

July 29, 2008

Michael Noll
DXT SERVICES INC
11921 - 185th Avenue SE
Snohomish, WA 98290

RE: ConocoPhillips Portland Terminal
5528 NW Doane Avenue, Portland, OR 97210
Stantec Project Number: 15CP.00922.69
Waste Disposal Report – Spent Carbon and Sorbent Booms

Dear Mr. Noll:

On June 19, 2008, Stantec Consulting Corporation retained Stratus Corporation (Stratus) on behalf of ConocoPhillips to dispose of 6 drums of spent carbon and the contents of 19 drums of spent sorbent booms at the ConocoPhillips Portland Terminal. On June 23, 2008, Stratus disposed of these at the Waste Management, Hillsboro Landfill Inc. Attached are copies of Hillsboro Landfill's documentation: Generator's Nonhazardous Waste Profile Sheet, Disposal Permit# 101217OR and Disposal Ticket# 1151671, as well as TestAmerica analytical laboratory reports for work orders PRD0097 (Spent Carbon) and PRD0624 (Spent Booms). Conoco Phillips RMR Waste Determination Forms (WDFs) were sent to you for spent sorbent booms (in a letter dated March 12, 2008) and for spent carbon (in a letter dated March 19, 2008). No changes in waste characteristics were apparent; no WDFs were needed to be produced for this disposal activity

If you have questions or comments, please call the undersigned.

Respectfully submitted,
Stantec Consulting Corporation

Norman Swanson
Staff Scientist

Clifford R. Pollock, RG, PE
Senior Engineering Geologist

NS/CRP

Attachments: as stated

Generator's Nonhazardous Waste Profile Sheet

Requested Disposal Facility _____ Profile Number

☐ Renewal for Profile Number _____ Waste Approval Expiration Date _____

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: ConocoPhillips
2. Site Address: 5528 NW Doane Ave.
3. City/ZIP: Portland 97210
4. State: Oregon
5. County: Multnomah
6. Contact Name/Title: Alice Larsen for ConocoPhillips
7. Email Address: Alice.Larsen@stantec.com
8. Phone: 503-691-2030
9. FAX: 503-692-7074
10. NAICS Code: _____
11. Generator USEPA ID #: _____
12. State ID# (if applicable): _____

B. Customer Information ☐ same as above

P. O. Number: _____

1. Customer Name: Stratus Corporation
2. Billing Address: 39515 SW Hartley Road
3. City, State and ZIP: Gaston, OR 97119
4. Contact Name: Robert Tucker
5. Contact Email: tucker@stratuscorp.net
6. Phone: 985-7912 FAX: 503-985-1953
7. Transporter Name: Stratus Corporation
8. Transporter ID # (if appl.): _____
9. Transporter Address: 39515 SW Hartley Road
10. City, State and ZIP: Gaston, OR 97119

C. Waste Stream Information

1. DESCRIPTION
   a. Common Waste Name: Spent carbon and spent booms State Waste Code(s): _____
   b. Describe Process Generating Waste or Source of Contamination:

   Spent carbon from site remediation system, spent booms, and PPE

   c. Typical Color(s): _____
   d. Strong Odor? ☐ Yes ☑ No Describe: _____
   e. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other: _____
   f. Layers? ☐ Single layer ☐ Multi- layer ☑ NA
   g. Water Reactive? ☐ Yes ☑ No If Yes, Describe: _____
   h. Free Liquid Range (%): _____ to _____ ☑ NA(solid)
   i. pH Range: ☐ ≤2 ☐ 2.1-12.4 ☐ ≥12.5 ☑ NA(solid) ☐ Actual: _____
   j. Liquid Flash Point: ☐ < 140°F ☐ ≥ 140°F ☑ NA(solid) ☐ Actual: _____
   k. Flammable Solid: ☐ Yes ☑ No
   l. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%): ☑ (See Attached)

Constituents *(Total Composition Must be ≥ 100%)*	Concentration %	Constituents *(Total Composition Must be ≥ 100%)*	Concentration %
1.		4.	
2.		5.	
3.		6.	

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. ☑ Event ☐ Base/Ongoing (Check One)
   b. Estimated Annual Quantity: 25 ☐ Tons ☐ Cubic Yards ☑ Drums ☐ Gallons ☐ Other (specify): _____
   c. Shipping Frequency: _____ Units per ☐ Month ☐ Quarter ☐ Year ☑ One Time ☐ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☑ No
   e. USDOT Shipping Description (if applicable): _____
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): Level D PPE

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Generator's Nonhazardous Waste Profile Sheet

D. Regulatory Status (Please check appropriate responses)

1. Is this a USEPA (40 CFR Part 261)/State hazardous waste? If yes, contact your sales representative. ☐ Yes ☑ No
2. Is this waste included in one or more of categories below (Check all that apply)? If yes, attach supporting documentation. ☐ Yes ☑ No
   - ☐ Delisted Hazardous Waste
   - ☐ Excluded Wastes Under 40 CFR 261.4
   - ☐ Treated Hazardous Waste Debris
   - ☐ Treated Characteristic Hazardous Waste
3. Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? If yes, see instructions. ☑ Yes ☐ No
4. Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☑ No
   a. If yes, is disposal regulated by the Nuclear Regulatory Commission? ☐ Yes ☐ No
   b. If yes, is disposal regulated by a State Agency for radioactive waste/NORM? ☐ Yes ☐ No
5. Does the waste represented by this waste profile sheet contain concentrations of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☑ No
   a. If yes, is disposal regulated under TSCA? ☐ Yes ☐ No
6. Does the waste contain untreated, regulated, medical or infectious waste? ☐ Yes ☑ No
7. Does the waste contain asbestos? ☐ Yes ☑ No If Yes, ☐ Friable ☐ Non Friable
8. Is this profile for remediation waste from a facility that is a major source of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☑ No
   If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No

E. Generator Certification (Please read and certify by signature below)

By signing this Generator's Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazards pertaining to this waste has been disclosed to WM/the Contractor;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to WM (and the Contractor if applicable) prior to providing the waste to WM (and the Contractor if applicable).
5. Check all that apply:
   - ☑ Attached analytical pertains to the waste. Identify laboratory & sample ID #'s and parameters tested: _____ # Pages: _____
   - ☐ Only the analyses identified on the attachment pertain to the waste (identify by laboratory & sample ID #'s and parameters tested). Attachment #: _____
   - ☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical). Indicate the number of attached pages: _____
   - ☐ I am an agent signing on behalf of the Generator, and the delegation of authority to me from the Generator for this signature is available upon request.
   - ☐ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

Certification Signature: Alice Larsen on behalf of ConocoPhillips **Title:** Senior Project Manager

Company Name: Stantec, Inc **Name (Print):** Alice Larsen for ConocoPhillips

Date: 05/05/2008

FOR WM USE ONLY

Management Method: ☐ Landfill ☐ Bioremediation **Approval Decision:** ☐ Approved ☐ Not Approved

☐ Non-hazardous solidification ☐ Other: _____ Waste Approval Expiration Date: _____

Management Facility Precautions, Special Handling Procedures or Limitation on approval:

- ☐ Shall not contain free liquid
- ☐ Shipment must be scheduled into disposal facility
- ☐ Approval Number must accompany each shipment
- ☐ Waste Manifest must accompany load

WM Authorization Name / Title: _____ **Date:** _____

State Authorization (if Required): _____ **Date:** _____

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Hillsboro Landfill, Inc.

3205 SE MINTER BRIDGE ROAD HILLSBORO, OR 97123

PERMIT # 101217OR

Tracking Number 11936

PERMIT TO DISPOSE OF NON-HAZARDOUS MATERIALS

This permit authorizes disposal of Customer's waste materials in accordance with the Industrial Waste & Disposal Services Agreement dated *2/4*.

EXPIRES: 8/13/08

GENERATOR: CONOCO PHILLIPS

DESCRIPTION: *SPENT CARBON AND BOOMS*	**TONS:** *10*
☐ SPECIAL WASTE ☐ CS ☐ C&D ☒ CLEAN-UP	
LOCATION: *PORTLAND, OREGON* *5528 NW DOANE AVENUE*	**COUNTY:** *Multnomah*
CONTACT: *ROBERT TUCKER*	**PHONE:** *503-857-5671*
	FAX: *503-985-1953*

BILLING: *Landfill account STRATUS CORPORATION*	**PO#:** *P08105.01*	**JOB#:** *N/A*

We accept business checks, cash, VISA / Mastercard or charge(with prior approval)

SPECIAL HANDLING : ***NOTE: NO FREE LIQUIDS***

MK **TyT**

APPROVED: *KRISTIN CASTNER* DATE: ***07/29/08 10:58:43 AM***

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

THERE IS A MINIMUM CHARGE OF $50-$60 FOR EACH LOAD OF SPECIAL WASTE

WASTE MANAGEMENT

HAZARDOUS WASTE IS STRICTLY PROHIBITED

WASTE MANAGEMENT

Hillsboro Landfill, Inc
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1151671

Customer Name STRATUSCORP STRATUS CORPORATI Carrier STRATUS CORPORATION
Ticket Date 06/23/2008 Vehicle# 37 Volume
Payment Type Credit Account Container
Manual Ticket# Driver michael
Hauling Ticket# Check#
Route Billing # 0000371
State Waste Code Gen EPA ID
Manifest na
Destination Grid
PO P08105.01
Profile 101217OR (Spent Carbon and Booms)
Generator 168-CONOCO5528 Conoco Phillips

	Time	Scale	Operator	Inbound		
In	06/23/2008 14:20:06	Inbound 2	jdb		Gross	16280 lb
Out	06/23/2008 14:34:33	Outbound	jlr		Tare	12800 lb
					Net	3480 lb
					Tons	1.74

Comments

Consumer Comments? We want to know. Please call.

Product	LOW	Qty	UOM	Rate	Tax	Amount	Origin
1 Declassified-Tons	100	1.74	Tons				MULT-IN
2 EVL-Env Fee Lg.	100	1	Load				MULT-IN
3 AF1-Approval Fee	100	1	Each				MULT-IN

Total Tax
Total Ticket

Driver's Signature

403WM

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

April 16, 2008

Jessica Eckart
Secor
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Conoco Phillips

Enclosed are the results of analyses for samples received by the laboratory on 04/02/08 16:45. The following list is a summary of the Work Orders contained in this report, generated on 04/16/08 12:03.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRD0097	Conoco Phillips	0922 Portland Terminal

TestAmerica Portland

Christina Woodcock

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full without the written approval of the laboratory.

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ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	Conoco Phillips	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WCV-4-2-08	PRD0097-01	Soil	04/02/08 13:00	04/02/08 16:45

TestAmerica Portland

Christina Woodcock

Christina Woodcock, Project Manager

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Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Metals per EPA 1311/6000/7000 Series Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0097-01 (WCV-4-2-08)		**Soil**			**Sampled: 04/02/08 13:00**					
Lead	1311/6020	ND	-----	0.0500	mg/l	1x	8040371	04/09/08 17:20	04/11/08 04:10	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0097-01 (WCV-4-2-08)		**Soil**			**Sampled: 04/02/08 13:00**					
Benzene	1311/8260B	ND	-----	0.0100	mg/l	1x	8040498	04/12/08 12:36	04/12/08 17:37	
Carbon tetrachloride	"	ND	-----	0.0100	"	"	"	"	"	
Chlorobenzene	"	ND	-----	0.0100	"	"	"	"	"	
Chloroform	"	ND	-----	0.0100	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	-----	0.0100	"	"	"	"	"	
1,2-Dichloroethane	"	ND	-----	0.0100	"	"	"	"	"	
1,1-Dichloroethene	"	ND	-----	0.0100	"	"	"	"	"	
2-Butanone (MEK)	"	ND	-----	0.100	"	"	"	"	"	
Tetrachloroethene	"	ND	-----	0.0100	"	"	"	"	"	
Trichloroethene	"	ND	-----	0.0100	"	"	"	"	"	
Vinyl chloride	"	ND	-----	0.0100	"	"	"	"	"	
Surrogate(s): *4-BFB*		*97.4%*		*75 - 130 %*	*0.1x*				"	
Dibromofluoromethane		*103%*		*75 - 130 %*	"				"	
Toluene-d8		*105%*		*75 - 130 %*	"				"	

TestAmerica Portland

Christina Woodcock, Project Manager

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BEAVERTON, OR 97008-7132
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Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Extraction Only

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0097-01 (WCV-4-2-08)		**Soil**			**Sampled: 04/02/08 13:00**					
Extraction	EPA 1311	ND	-----	1.00	N/A	1x	8040317	04/08/08 22:10	04/09/08 15:56	

TestAmerica Portland

Christina Woodcock, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Metals per EPA 1311/6000/7000 Series Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040371 **Soil Preparation Method: EPA 1311/3005**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040371-BLK1)								Extracted: 04/09/08 17:20						
Lead	1311/6020	ND	---	0.0500	mg/l	1x	--	--	--	--	--	--	04/11/08 03:49	
LCS (8040371-BS1)								Extracted: 04/09/08 17:20						
Lead	1311/6020	0.180	---	0.0500	mg/l	1x	--	0.200	90.2%	(75-125)	--	--	04/11/08 04:00	
Duplicate (8040371-DUP1)						QC Source: PRD0097-01			Extracted: 04/09/08 17:20					
Lead	1311/6020	ND	---	0.0500	mg/l	1x	ND	--	--	--	NR	(20)	04/11/08 04:20	
Matrix Spike (8040371-MS1)						QC Source: PRD0122-05			Extracted: 04/09/08 17:20					
Lead	1311/6020	0.180	---	0.0500	mg/l	1x	0.00230	0.200	89.0%	(50-150)	--	--	04/10/08 22:06	
Matrix Spike (8040371-MS2)						QC Source: PRD0256-01			Extracted: 04/09/08 17:20					
Lead	1311/6020	0.185	---	0.0500	mg/l	1x	0.00130	0.200	91.8%	(50-150)	--	--	04/10/08 22:47	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040498 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040498-BLK1)								Extracted: 04/12/08 12:36						
Benzene	1311/8260B	ND	---	0.0100	mg/l	1x	--	--	--	--	--	--	04/12/08 16:41	
Carbon tetrachloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
2-Butanone (MEK)	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 99.2%*			*Limits: 75-130%*	*0.1x*							*04/12/08 16:41*	
Dibromofluoromethane		*103%*			*75-130%*	"							"	
Toluene-d8		*106%*			*75-130%*	"							"	
Blank (8040498-BLK2)								Extracted: 04/12/08 12:36						
Benzene	1311/8260B	ND	---	0.0100	mg/l	1x	--	--	--	--	--	--	04/12/08 17:09	
Carbon tetrachloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
2-Butanone (MEK)	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 98.9%*			*Limits: 75-130%*	*0.1x*							*04/12/08 17:09*	
Dibromofluoromethane		*104%*			*75-130%*	"							"	
Toluene-d8		*104%*			*75-130%*	"							"	

TestAmerica Portland

Christina M. Woodcock

Christina Woodcock, Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040498 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8040498-BS1)								Extracted: 04/12/08 12:36						
Benzene	1311/8260B	0.224	---	0.0100	mg/l	1x	--	0.200	112%	(66-142)	--	--	04/12/08 13:56	
Carbon tetrachloride	"	0.262	---	0.0100	"	"	--	"	131%	(50-150)	--	--	"	
Chlorobenzene	"	0.238	---	0.0100	"	"	--	"	119%	(60-133)	--	--	"	
Chloroform	"	0.243	---	0.0100	"	"	--	"	122%	(50-150)	--	--	"	
1,4-Dichlorobenzene	"	0.211	---	0.0100	"	"	--	"	106%	"	--	--	"	
1,2-Dichloroethane	"	0.245	---	0.0100	"	"	--	"	122%	"	--	--	"	
1,1-Dichloroethene	"	0.215	---	0.0100	"	"	--	"	108%	(59-172)	--	--	"	
2-Butanone (MEK)	"	0.352	---	0.100	"	"	--	0.400	87.9%	(40-180)	--	--	"	
Tetrachloroethene	"	0.247	---	0.0100	"	"	--	0.200	124%	(50-150)	--	--	"	
Trichloroethene	"	0.232	---	0.0100	"	"	--	"	116%	(62-137)	--	--	"	
Vinyl chloride	"	0.269	---	0.0100	"	"	--	"	135%	(40-180)	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*104%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 13:56*	
	Dibromofluoromethane		*109%*			*75-130%*	"						"	
	Toluene-d8		*107%*			*75-130%*	"						"	
LCS (8040498-BS2)								Extracted: 04/12/08 12:36						
Benzene	1311/8260B	0.230	---	0.0100	mg/l	1x	--	0.200	115%	(66-142)	--	--	04/12/08 14:24	
Carbon tetrachloride	"	0.260	---	0.0100	"	"	--	"	130%	(50-150)	--	--	"	
Chlorobenzene	"	0.237	---	0.0100	"	"	--	"	119%	(60-133)	--	--	"	
Chloroform	"	0.246	---	0.0100	"	"	--	"	123%	(50-150)	--	--	"	
1,4-Dichlorobenzene	"	0.209	---	0.0100	"	"	--	"	104%	"	--	--	"	
1,2-Dichloroethane	"	0.251	---	0.0100	"	"	--	"	125%	"	--	--	"	
1,1-Dichloroethene	"	0.221	---	0.0100	"	"	--	"	110%	(59-172)	--	--	"	
2-Butanone (MEK)	"	0.400	---	0.100	"	"	--	0.400	100%	(40-180)	--	--	"	
Tetrachloroethene	"	0.250	---	0.0100	"	"	--	0.200	125%	(50-150)	--	--	"	
Trichloroethene	"	0.236	---	0.0100	"	"	--	"	118%	(62-137)	--	--	"	
Vinyl chloride	"	0.265	---	0.0100	"	"	--	"	133%	(40-180)	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*103%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 14:24*	
	Dibromofluoromethane		*111%*			*75-130%*	"						"	
	Toluene-d8		*109%*			*75-130%*	"						"	

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full without the written approval of the laboratory.

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	Conoco Phillips	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040498 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (8040498-MS1)					QC Source: PRD0097-01				Extracted: 04/12/08 12:36					
Benzene	1311/8260B	0.220	---	0.0100	mg/l	1x	ND	0.200	110%	(66-142)	--	--	04/12/08 14:51	
Carbon tetrachloride	"	0.251	---	0.0100	"	"	ND	"	126%	(50-150)	--	--	"	
Chlorobenzene	"	0.230	---	0.0100	"	"	ND	"	115%	(60-133)	--	--	"	
Chloroform	"	0.236	---	0.0100	"	"	ND	"	118%	(50-150)	--	--	"	
1,4-Dichlorobenzene	"	0.198	---	0.0100	"	"	ND	"	99.1%	"	--	--	"	
1,2-Dichloroethane	"	0.239	---	0.0100	"	"	ND	"	120%	"	--	--	"	
1,1-Dichloroethene	"	0.215	---	0.0100	"	"	ND	"	108%	(59-172)	--	--	"	
2-Butanone (MEK)	"	0.392	---	0.100	"	"	ND	0.400	98.0%	(40-180)	--	--	"	
Tetrachloroethene	"	0.240	---	0.0100	"	"	ND	0.200	120%	(50-150)	--	--	"	
Trichloroethene	"	0.225	---	0.0100	"	"	ND	"	113%	(62-137)	--	--	"	
Vinyl chloride	"	0.231	---	0.0100	"	"	ND	"	116%	(40-180)	--	--	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*103%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 14:51*	
	Dibromofluoromethane		*111%*			*75-130%*	"						"	
	Toluene-d8		*109%*			*75-130%*	"						"	
Matrix Spike Dup (8040498-MSD1)					QC Source: PRD0097-01				Extracted: 04/12/08 12:36					
Benzene	1311/8260B	0.226	---	0.0100	mg/l	1x	ND	0.200	113%	(66-142)	2.74%	(21)	04/12/08 15:19	
Carbon tetrachloride	"	0.257	---	0.0100	"	"	ND	"	128%	(50-150)	2.28%	(40)	"	
Chlorobenzene	"	0.236	---	0.0100	"	"	ND	"	118%	(60-133)	2.66%	(21)	"	
Chloroform	"	0.243	---	0.0100	"	"	ND	"	122%	(50-150)	2.75%	(40)	"	
1,4-Dichlorobenzene	"	0.208	---	0.0100	"	"	ND	"	104%	"	4.73%	"	"	
1,2-Dichloroethane	"	0.248	---	0.0100	"	"	ND	"	124%	"	3.45%	"	"	
1,1-Dichloroethene	"	0.220	---	0.0100	"	"	ND	"	110%	(59-172)	2.11%	(22)	"	
2-Butanone (MEK)	"	0.393	---	0.100	"	"	ND	0.400	98.2%	(40-180)	0.229%	(50)	"	
Tetrachloroethene	"	0.242	---	0.0100	"	"	ND	0.200	121%	(50-150)	1.24%	"	"	
Trichloroethene	"	0.231	---	0.0100	"	"	ND	"	115%	(62-137)	2.50%	(24)	"	
Vinyl chloride	"	0.270	---	0.0100	"	"	ND	"	135%	(40-180)	15.3%	(50)	"	
Surrogate(s):	*4-BFB*	*Recovery:*	*102%*		*Limits:*	*75-130%*	*0.1x*						*04/12/08 15:19*	
	Dibromofluoromethane		*109%*			*75-130%*	"						"	
	Toluene-d8		*107%*			*75-130%*	"						"	

TestAmerica Portland

Christina M. Woodcock

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

TCLP Extraction Only - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040317 **Other dry Preparation Method: EPA 1311**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040317-BLK1)													**Extracted: 04/08/08 22:10**	
Extraction	EPA 1311	ND	---	1.00	N/A	1x	--	--	--	--	--	--	04/09/08 15:56	

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ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Conoco Phillips**	
7730 SW Mohawk Street	Project Number:	0922 Portland Terminal	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/16/08 12:03

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Christina M. Woodcock

Christina Woodcock, Project Manager

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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jessica Eckart	Site Contact: Norman Swanson	Date: 4/2/08	COC No: 1
SECOR International, Inc.		Lab Contact: Christina	Carrier:	1 of 1 COCs
7730 SW Mohawk Blvd.	Analysis Turnaround Time			Job No. 15CP.00922
Tualtin, OR 97062	Calendar (C) or Work Days (W)			
(503) 681-2030 Phone	TAT if different from Below _____			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site: 0922	☐ 2 days			
P O # None - Direct Bill to SECOR	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TCLP 8260 (see comments)	TCLP Pb	Sample Specific Notes:
WCV-4-2-08	4/2/2008	1320	Comp	Carbon	2		X	X	
									8260 TCLP:
									Vinyl Chloride; trichloroethene
									1,1-dichloroethene; chloroform;
									carbon tetrachloride; benzene;
									1,2-dichloroethane; tetrachloroethene;
									chlorobenzene; 2-butanone

Preservation Used : 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: DIRECT BILL TO SECOR - DO NOT SEND INVOICE TO CONOCO PHILLIPS

Relinquished by:	Company:	Date/Time:	Received By:	Company:	Date/Time:
Norman Swanson Christina	SECOR	4-2-08/1620	Bill Fahey	TAP	16:20 @ 4/2/08
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Bill Fahey	TAP @ 16:45	4/2/08	Jamie Fabel	TAP	4/2/08 16:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

4.1°C

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TestAmerica Sample Receipt Checklist

Received by: (section A) Date: 4/2/09 Time: 1610 Initials: JE

Unpacked by: (section B) Date: 4/2/09 Initials: JE

Logged-in by: Date 4/2/09 Initials: JE

Work Order No. PRD0097

Client: SECOR

Project: Conoco Phillips

Temperature out of range

___Not enough ice
___No Ice
___Ice Melted
___Win 4 Hours
___Other

***ESI Clients (see Section C)

Cooler Temperature (IR): 4.1 °C plastic glass NA (oil/air samples, ESI client) Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y X N Dated:_____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

____Gel Ice

X Loose Ice

____None

Packing Material:

____Bubble Bags

____Styrofoam Cubbies

X None (___Other _____)

Received from:

X TA Courier

____Servoy

____UPS

____Fed Ex

____Client

____TDP

____DHL

____SDS

____Mid-Valley

____GS/TA

____GS/Servoy

____Other

_____

B

Sample Status:

(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: ___ °C not provided

All preserved bottles checked Y N NA (voas/soils/all unp.)

All preserved accord[illegible] Y N (see NOD) NA (voas/soils/all unp.)

FED EX/ UPS Was the tracking paper keepable? YES NO

If circled NO what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments:_____

PM Reviewed:_____ (Initial/Date)

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

April 28, 2008

Jessica Eckart
Secor
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 04/17/08 15:55. The following list is a summary of the Work Orders contained in this report, generated on 04/28/08 14:56.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRD0624	Portland Terminal	0922

Spent booms

TestAmerica Portland

Christina Woodcock

Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full without the written approval of the laboratory.

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Spent Booms/Pads	PRD0624-01	Other dry	04/17/08 10:00	04/17/08 15:55

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

TCLP Volatile Organic Compounds per EPA Method 1311/8260B

TestAmerica Portland

Analyte		Method	Result	MDL[A]	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRD0624-01	**(Spent Booms/Pads)**		**Other dry**			**Sampled: 04/17/08 10:00**					
Benzene		1311/8260B	ND	-----	0.0200	mg/l	1x	8040932	04/24/08 12:00	04/24/08 21:53	
Surrogate(s):	*4-BFB*			*104%*		*75 - 130 %*	*0.1x*			"	
	Dibromofluoromethane			*101%*		*75 - 130 %*	"			"	
	Toluene-d8			*108%*		*75 - 130 %*	"			"	
	1,2-DCA-d4			*98.0%*		*77.7 - 144 %*	"			"	

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created:
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

TCLP Volatile Organic Compounds per EPA Method 1311/8260B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8040932 **Soil Preparation Method: EPA 1311/5030**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8040932-BLK1)							Extracted: 04/24/08 12:00							
Benzene	1311/8260B	ND	---	0.0200	mg/l	1x	--	--	--	--	--	--	04/24/08 21:12	
Surrogate(s): *4-BFB*		*Recovery:* *103%*			*Limits: 75-130%*	*0.1x*							*04/24/08 21:12*	
Dibromofluoromethane		*98.9%*			*75-130%*	"							"	
Toluene-d8		*106%*			*75-130%*	"							"	
1,2-DCA-d4		*97.4%*			*77.7-144%*	"							"	
LCS (8040932-BS1)							Extracted: 04/24/08 12:00							
Benzene	1311/8260B	0.222	---	0.0200	mg/l	1x	--	0.200	111%	(66-142)	--	--	04/24/08 16:51	
Surrogate(s): *4-BFB*		*Recovery:* *108%*			*Limits: 75-130%*	*0.1x*							*04/24/08 16:51*	
Dibromofluoromethane		*105%*			*75-130%*	"							"	
Toluene-d8		*111%*			*75-130%*	"							"	
1,2-DCA-d4		*98.9%*			*77.7-144%*	"							"	
Matrix Spike (8040932-MS1)					QC Source: PRD0624-01		Extracted: 04/24/08 12:00							
Benzene	1311/8260B	0.229	---	0.0200	mg/l	1x	ND	0.200	115%	(66-142)	--	--	04/24/08 19:49	
Surrogate(s): *4-BFB*		*Recovery:* *106%*			*Limits: 75-130%*	*0.1x*							*04/24/08 19:49*	
Dibromofluoromethane		*103%*			*75-130%*	"							"	
Toluene-d8		*107%*			*75-130%*	"							"	
1,2-DCA-d4		*97.6%*			*77.7-144%*	"							"	
Matrix Spike Dup (8040932-MSD1)					QC Source: PRD0624-01		Extracted: 04/24/08 12:00							
Benzene	1311/8260B	0.238	---	0.0200	mg/l	1x	ND	0.200	119%	(66-142)	3.76%	(25)	04/24/08 20:17	
Surrogate(s): *4-BFB*		*Recovery:* *107%*			*Limits: 75-130%*	*0.1x*							*04/24/08 20:17*	
Dibromofluoromethane		*107%*			*75-130%*	"							"	
Toluene-d8		*110%*			*75-130%*	"							"	
1,2-DCA-d4		*99.5%*			*77.7-144%*	"							"	

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FORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Secor	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922	Report Created
Tualatin, OR 97062	Project Manager:	Jessica Eckart	04/28/08 14:56

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate)
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received) Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Christina M. Woodcock

Christina Woodcock, Project Manager

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PRD0624

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503 906.9200 fax 503.906.9210

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jessica Eckart	Site Contact: Norman Swanson	Date: 4-17-08	COC No: 1
SECOR International, Inc.		Lab Contact: Christina	Carrier:	1 of 1 COCs
7730 SW Mohawk Blvd.	Analysis Turnaround Time			Job No 15CP 0922
Tualtin, OR 97062	Calendar (C) or Work Days (W) W			
(503) 691-2030 Phone	TAT if different from Below 5			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site: 0922	☐ 2 days			
P O # None - Direct Bill to SECOR	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Benzene	TCLP	Sample Specific Notes:
Spent Booms/pads	4-17-08	1000	COMP	Solid	2			X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments: DIRECT BILL TO SECOR - PLEASE DO NOT SEND INVOICE TO CONOCO PHILLIPS

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	SECOR	4-17-08 1506		TAP	4-17-08 1506
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAP	4-17-08 1555		TAP	4/17/08 1555
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016453

TestAmerica Sample Receipt Checklist

Cooler #(s)

Received by: *(section A)* Date: 4/17/15 Time: 1555 Initials: ZJ

Unpacked by: *(section B)* Date: 4/17/15 Initials: ZK

Logged-in by: Date: 4/17/15 Initials: JL

Work Order No. PRD0624

Client: SCCC

Project: Portland Terminal

Temperature out of range:

___Not enough Ice
___No Ice
___Ice Melted
___Win 4 Hours
___Other:

***ESI Clients *(see Section C)*

Cooler Temperature (IR): 2.4 °C plastic glass NA *(oil/air samples, ESI client)* Temperature Blank: _____ °C

A

Custody Seals: (#___)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)

___#Box(s)

___None (___#Other:_____)

Coolant Type:

___Gel Ice

X Loose Ice

___None

Packing Material:

X Bubble Bags

___Styrofoam Cubbies

___None (___Other:_____)

Received from:

X TA Courier

___Servoy

___UPS

___Fed Ex

___Client

___TDP

___DHL

___SDS

___Mid-Valley

___GS/TA

___GS/Senvoy

___Other:

_____

B

Sample Status:

(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided

All preserved bottles checked Y N NA *(voas/soils/all unp.)*

All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Reviewed: *(Initial/Date)*

COP0016454

Incident ID: 78797

Short Description: Spontaneous Combustion of Biodiesel Soaked Rags

Responsible Dept\Unit: Terminals : Terminals - West Coast Division : Portland Product Terminal

Status: Closed

Incident Type: Near Miss

Potential Risk Rating: I - Low

General

Responsible Supervisor: THOMAS LYONS

High Learning Value Event Status: Not Reviewed for HLVE

Location:

Specific Location: Temporary Biodiesel Frac Tank

Date Occurred: (mm/dd/yyyy) 7/20/2008 10:00:00 PM

Date Reported: (mm/dd/yyyy) 7/31/2008 2:21:00 PM

Date Entered: 7/31/2008 3:58:30 PM (GMT-07:00)

REPORTEDBY: THOMAS LYONS

Incident Description: Night Operator found in the rag bucket stored on top of a temporary biodiesel storage tank charred remants of red rags used to wipe the gauging stick.

Rag bucket was moved from the top of the frac tank to a covered area. All used rags will be stored in newly procured OSHA-compliant oily rag cans.

Weather: Clear

Lighting: Night

Address: 5528 NW Doane Avenue

City: Portland

Country: United States

State/Province: Oregon

Zip/Postal Code: 97210

Incident Flags: Unsafe Condition, Practice, or Hazard

Phase of Operation: Material Handling

Entered By: LYONS, THOMAS

Immediate Actions Taken: Rag bucket was moved from the top of the frac tank to a covered area. All used rags will be stored in newly procured OSHA-compliant oily rag cans.

Sub Types

Check All That Apply: General: Property Damage / Loss (e.g.: Fires, Explosions, Loss of Well Control, Business Interruptions, Abnormal Operations, Production Loss / Reduction)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Shop Equipment: Shop Equipment	NO	

People

Contractor Involvement : No Data is Available

Consequence Number : No Data is Available

Witnesses

Name	Employee,Contractor,or Other	Phone
Denyse Fields	Employee	503-248-1565

Consequence

Incident Consequences:
No Data is Available

Pending Consequences

ID	Type	Description	Party Involved
Recommended	Property Damage/Loss	Property Damage/Loss Consequence	

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

Summary

Equipment:	**1**
Employees:	**None**
Contractors:	**None**
Witnesses:	**1**
Investigations:	**None**
Recordable:	**No**
Last Updated Date :	**11/10/2008 3:21:13 PM (GMT-08:00)**

Consequence

Injury/Illness:	**None**
Environmental:	**None**
Community:	**None**
Business Interruption:	**None**

COP0016456

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

letter of transmittal

attention: Mr. Eric DeBerry date: August 12, 2008

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922 Permit No.: 500.015

re: Discharge Monitoring Report (DMR) – July 2008

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of Stantec Consulting Corporation (Stantec), formerly SECOR International Incorporated, on July 15, 2008. A grab sample (labeled FINAL) was collected at the treated effluent sample port (1A) on the process piping directly into laboratory-prepared containers. The sample containers were sealed, labeled, entered into Stantec's chain-of-custody, placed in a cooler with ice, and transported to a licensed analytical laboratory. The effluent samples were analyzed for: pH by U.S. Environmental Protection Agency (EPA) Method 150.1/9040A; HEM Oil and Grease by EPA Method 1664; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B. Laboratory analysis was performed by TestAmerica Laboratories in Beaverton, Oregon. A copy of the laboratory analytical report and completed chain-of-custody documentation is attached.

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015., dated October 2, 2007. The attached DMR is being submitted as the self-monitoring report. All parameters monitored were found to be within the limits listed in the facility's discharge permit.

If you have any questions regarding the enclosed DMR, please feel free to contact the undersigned at (503) 691-2030.

signators: Norman Swanson
titles: Staff Scientist

Clifford R. Pollock, RG, PE
Senior Engineering Geologist

NS/CP:dc

cc: Mike Noll, DXT SERVICES Inc., Snohomish, WA
Grant Sprick, ARCADIS, Portland, OR

COP0016457

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: August 15, 2008

SAMPLING PERIOD: July 2008

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
6/17/2008	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664A	ND mg/L	4.76	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	EPA Method 150.1/9040A	6.29 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 0005 (BTE) 0.001 (X)	0.75 mg/L	N/A	
Totalized Reading	Field	33,877,028		NA	N/A	Field Reading 2,457,900

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 8/6/08

COP0016458

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

July 18, 2008

Bill Edmund
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 07/15/08 13:30. The following list is a summary of the Work Orders contained in this report, generated on 07/18/08 15:41.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRG0454	Portland Terminal	0922 - COP

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Final	PRG0454-01	Water	07/15/08 09:30	07/15/08 13:30

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0454-01RE1 (Final)			**Water**			**Sampled: 07/15/08 09:30**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8070585	07/17/08 09:34	07/17/08 19:22	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*104%*		*70 - 130 %*	"			"

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0454-01 (Final)			**Water**				**Sampled: 07/15/08 09:30**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8070517	07/16/08 09:00	07/18/08 10:30	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0454-01 (Final)			**Water**			**Sampled: 07/15/08 09:30**				
pH	150.1/9040A	**6.29**	-----		pH Units	1x	8070492	07/15/08 16:19	07/15/08 17:14	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070585 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8070585-BLK1)									**Extracted: 07/17/08 09:34**					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	07/17/08 17:59	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 103%*			*Limits: 70-130%*	"							*07/17/08 17:59*	
LCS (8070585-BS1)									**Extracted: 07/17/08 09:34**					
Benzene	EPA 8021B	16.4	---	0.500	ug/l	1x	--	20.0	81.9%	(75-125)	--	--	07/17/08 16:09	
Toluene	"	16.8	---	0.500	"	"	--	"	83.8%	(80-120)	--	--	"	
Ethylbenzene	"	17.5	---	0.500	"	"	--	"	87.7%	(80-130)	--	--	"	
Xylenes (total)	"	53.6	---	1.00	"	"	--	60.0	89.4%	"	--	--	"	
o-Xylene	"	17.7	---	1.00	"	"	--	20.0	88.6%	"	--	--	"	
m,p-Xylene	"	35.9	---	1.00	"	"	--	40.0	89.7%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 89.6%*			*Limits: 70-130%*	"							*07/17/08 16:09*	
LCS Dup (8070585-BSD1)									**Extracted: 07/17/08 09:34**					
Benzene	EPA 8021B	19.8	---	0.500	ug/l	1x	--	20.0	99.2%	(75-125)	19.1%	(20)	07/17/08 16:37	
Toluene	"	19.9	---	0.500	"	"	--	"	99.6%	(80-120)	17.2%	"	"	
Ethylbenzene	"	21.1	---	0.500	"	"	--	"	105%	(80-130)	18.2%	"	"	
Xylenes (total)	"	63.2	---	1.00	"	"	--	60.0	105%	"	16.5%	"	"	
o-Xylene	"	21.0	---	1.00	"	"	--	20.0	105%	"	16.9%	"	"	
m,p-Xylene	"	42.3	---	1.00	"	"	--	40.0	106%	"	16.3%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 116%*			*Limits: 70-130%*	"							*07/17/08 16:37*	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070517 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8070517-BLK1)								**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	07/18/08 10:30	
LCS (8070517-BS1)								**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	38.6	---		mg/l	1x	--	40.0	96.5%	(78-114)	--	--	07/18/08 10:30	
Matrix Spike (8070517-MS1)				**QC Source: PRG0435-01**				**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	85.0	---		mg/l	1x	16.4	40.0	172%	(78-114)	--	--	07/18/08 10:30	M7
Matrix Spike (8070517-MS3)				**QC Source: PRG0435-01**				**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	54.6	---		mg/l	1x	16.4	40.0	95.5%	(78-114)	--	--	07/18/08 10:30	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070492 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8070492-DUP1)					**QC Source: PRG0433-01**				**Extracted: 07/15/08 13:36**					
pH	150.1/9040A	7.33	---		pH Units	1x	7.24	--	--	--	1.24%	(25)	07/15/08 13:52	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Notes and Definitions

Report Specific Notes:

M7 - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRG0454

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Bill Edmund	Site Contact: Norman Swanson	Date: 7-15-08	COC No:
SECOR International Inc. Stantec Consulting Corp	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier:	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
FINAL	7-15-08	0930	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 2,457,900

13.0°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	SECOR Stantec	7-15-08 1330	[signature]	TAP	7/15/08 13:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016468

TestAmerica Sample Receipt Checklist

Received by: (section A)
Date: 7/15/08
Time: 13:30
Initials: JI

Unpacked by: (section B)
Date: 7/15/08
Initials: JI

Logged-in by:
Date: 7/15/08
Initials: BLE

Work Order No. PRG0454
Client: Stantec Consulting Corp.
Project: Portland Terminal

Temperature out of range:
___ Not enough Ice
___ No Ice
___ Ice Melted
X W/in 4 Hours
___ Other: _____

***ESI Clients (see Section C)

Cooler Temperature (IR): 13.0 °C plastic / glass NA (oil/air OR ESI client) Temperature Blank: _____ °C DIGI #1 #2

A

Custody Seals: (#___)

Signature: Y N Dated: _____
X None

Container Type:
1 #Cooler(s)
___ #Box(s)
___ None (___ #Other: _____)

Coolant Type:
___ Gel/ Blue Ice
X Loose Ice
___ None

Packing Material:
X Bubble Bags
___ Styrofoam Cubbies
___ Peanuts
___ None (___ Other: _____)

Received from:
___ TA Courier
___ Senvoy
___ UPS
___ Fed Ex
X Client
___ TDP
___ USPS
___ SDS
___ Mid-Valley
___ GS/TA
___ GS/Senvoy
___ Other: _____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Cyanide checked?	Y	N	NA
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided DIGI #1 #2

All preserved bottles checked Y N NA (voas/soils/all unp.)
All preserved accordingly? Y N (see NOD) NA (voas/soils/all unp.)

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Reviewed:

COP001646

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

August 14, 2008

Mr. Michael Romero
Oregon Department of Environmental Quality – Northwest Region Cleanup Section
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201

RE: Cure-in-Place Pipe (CIPP) Lining Work Plan for 60-Inch Storm Sewer Discharging at City of Portland Outfall #22 to Willamette River
ConocoPhillips Portland Terminal
5528 NW Doane Avenue, Portland, Oregon 97210
SECOR Project No.: 15CP.00922.64

Dear Mr. Romero:

On behalf of ConocoPhillips Company (CP), Stantec Consulting Corporation (Stantec)--formerly SECOR International Incorporated (SECOR)--is submitting this work plan for relining a 60-inch-diameter City of Portland (City) concrete storm sewer located on Port of Portland riverfront property currently leased by CP to support CP's marine dock fuel loading operations. The storm sewer runs for approximately 365 linear feet between City manhole AAM077 (also named MH-8A or MH77 on most City utility and CP terminal maps) and City Outfall #22 at the Willamette River (Figure 1). The CP Portland Terminal is under an agreed order of consent (WMCSR-NWR-94-06) with Oregon Department of Environmental Quality (DEQ). The proposed CIPP lining project will be funded jointly by CP and ChevronTexaco Company (Chevron), and both companies have elected to involve their environmental consultants (Stantec and ARCADIS, respectively) in implementing various portions of the proposed scope of work.

CP and Chevron are two of three firms (the third is Kinder Morgan Liquids Terminals, LLC) which together comprise the Willbridge Terminals Group (WTG). WTG was formed to facilitate a joint response to DEQ's requirements for completing a Remedial Investigation/ Feasibility Study (RI/FS) of their terminals and remediating adverse impacts of petroleum products released historically to the subsurface at their facilities. Storm water runoff from the Upland areas of the CP and Chevron terminals ultimately is discharged at Outfall #22. Based on a historical pattern of recurring oily sheens at Outfall #22 and at the adjacent discharge point of a former City 27-inch wood stake storm sewer, WTG has implemented a number of interim remedial measures (IRMs) to minimize the potential for oily sheen discharges to the Willamette River from their shared riverfront properties. The IRMs affecting CP and Chevron include installation of a sheet pile cutoff wall at Outfall #22, installation of a sheet pile wall across the former location of the 27-inch storm sewer and nearly-coincident Holbrook Slough, and installation of recovery wells along the river bank between the Ordinary Low Water Line (OLWL) and the Ordinary High Water Line (OHWL). CP and Chevron have installed additional recovery wells and constructed a treatment system to process petroleum-impacted groundwater. Oily sheen discharges were observed

intermittently at Outfall #22 from January to March 2007 and from January through April 2008. CP and Stantec consider it likely that petroleum-impacted groundwater with oily sheen is entering the 60-inch storm sewer bedding from the surrounding subsurface soils, and then entering the concrete pipe at open joints or through cracks. Lining the interior of the storm water pipe is expected to close off this migration pathway.

PROPOSED SCOPE OF WORK

The proposed scope of work includes permitting activities with City of Portland Bureau of Environmental Services (BES) to secure a BES Public Improvement Permit, a BES Sewer Permit, and an encroachment permit (if necessary); preparation of Manhole AAM077; pre-insertion cleaning of the 60-inch pipe; pre-insertion video documentation; CIPP lining of the 60-inch storm sewer using a patented Insert Air Inversion Process; post-insertion video documentation; restoration of the manhole; engineering supervision; and preparation of a CIPP Lining report. Stantec and ARCADIS will complete the permitting, pre-field activities, engineering supervision, and report preparation tasks. A highly qualified construction firm--Stratus Corporation (Stratus) of Gaston, Oregon--will perform the remainder of the tasks listed in this proposed scope of work.

Storm Sewer Construction Permitting

This task will require a minimum of one office visit to BES to present the CIPP lining project elements and to determine BES' required submissions. An Oregon-registered Professional Engineer from ARCADIS will be responsible for the preparation of all of the BES-required blueprints except those for the shoring and excavation plan. The latter are to be provided by an Oregon-registered Professional Engineer retained by Stratus. Stratus also will be responsible for supplying the other BES-required plans, drawings, material information data sheets, and construction bonds. At a minimum, Stantec or Stratus will need to submit a BES Sewer Permit Application (with all required attachments) and a BES Public Improvement Permit (with CP named as the applicant). All plans, blueprints, and reports will be properly sealed by the Oregon Professional Engineer.

Stantec prefers to implement this work plan during a period when there are few rainfall events and these are of relatively short duration. Tentatively, the work is scheduled for the latter half of September 2008. Stratus will be responsible for sealing off access to Manhole AAM077 so that it receives no storm water discharges. Stantec and Stratus will negotiate jointly with BES to determine appropriate procedures for handling diverted storm water during the storm sewer construction permitting process. Stantec will be responsible for ensuring that BES-approved storm water diversion procedures are properly implemented by Stratus during the planned field activities (see below).

Pre-Field Activities

Stantec will be responsible for preparing a site-specific health and safety plan (HASP) which will be used to ensure that all Stantec field personnel and all subcontractor personnel can perform the field activities safely. Stantec also will be responsible for securing any necessary encroachment permits from the issuing City of Portland department, if Stratus's excavation and staging areas encroach onto the City's right-of-way along the north side of NW Front Avenue.

Manhole Preparation

Stratus has been selected as Stantec's subcontractor for the manhole preparation task, and for the subsequent CIPP lining and manhole restoration tasks (see below). Stratus has a past record of success in installing the proposed CIPP lining for similar storm sewer pipe lining projects (including the Butterfield Storm Sewer CIPP Lining project that Stratus recently completed for the City of St. Albert in Alberta, Canada).

Manhole preparation will entail temporary modifications of Manhole AAM077 to create an adequate working space from which Stratus can access the 60-inch storm sewer. Proposed modification activities are expected to include all of the following: excavation (approximately 15-foot square by 9-foot deep) and shoring; installation of a 50-foot square silt fence around the excavation; removal of the 24-inch manhole cover and ring; removal of the 24-inch to 48-inch diameter concrete cone section; removal of two 48-inch diameter concrete riser sections; and saw cutting and removal of a 7-foot by 10-foot section of the vault ceiling. Stratus will be responsible for providing all materials, equipment, and labor to accomplish this task safely, including establishing appropriate lock-out/tag-out (LOTO) procedures to ensure that its workers are not engulfed due to sudden precipitation events and/or exposed to potential engulfment/chemical hazard in the event of a CP or Chevron aboveground product tank release or product line failure. Stantec understands that Stratus proposes to position an additional attendant at City Manhole AAM080 to implement the following LOTO activities: 1) perform air monitoring to detect a product release; and 2) monitor potential storm water entering the 48-inch diameter storm sewer. The attendant will maintain walkie-talkie contact, or other appropriate telecommunications, with the Stratus crew working at Manhole AAM077, and he/she will order the immediate evacuation of any "entrants" if air monitoring indicates any changes or if water is observed entering the storm sewer.

Stantec will provide trained field personnel to oversee all field activities, and to interface with CP Portland Terminal personnel. A CP Contractor Field Representative (CFR) will serve as the Site Safety Officer, and he/she will be present on-site during all planned excavation, shoring, confined space entry (CSE), and excavation backfilling activities. Stantec will provide a CSE-trained health-and-safety specialist with extensive shoring and excavation oversight experience to oversee Stratus's field work and ensure that it is

performed safely and in accordance with all applicable worker safety laws and regulations promulgated by the federal Occupational Safety Health Administration (OSHA).

CIPP Lining Activities

Stantec proposes to subcontract Stratus to install 365 feet of Insituform® CIPP Tube in the 60-inch storm sewer between City Manhole AAM077 and City Outfall #22. These tubes are manufactured by Insituform Technologies, Inc. (ITI) of Chesterfield, Missouri; they comply with the industry standards as stipulated within American Society for Testing Materials (ASTM) Standard F1216 and ASTM Standard D5813. The ITI CIPP Tubes will be installed in accordance with ITI's proprietary *Inspector's Guide [for] Medium Diameter Air Inversion/Steam Cure Installation*, dated December 5, 2005 (ITI, 2005).

Prior to installing the ITI CIPP Tube®, Stratus will be responsible for cleaning (via pressure washing) the storm sewer of any debris that could impede a hydraulically-tight seal between the concrete interior surface and the polyethylene-extruded outer coating of the polyester resin-impregnated, polyester felt, sewn-seam tubes that together comprise the ITI CIPP Tube®. Stratus also will be responsible for containment and removal of the rinse water. The exposed interior surface of the storm sewer will be air dried and then epoxy-coated to provide an adhesive base against which to tightly seal the ITI CIPP Tube. Stratus will use a robotic video camera to produce video documentation of the pre-insertion and post-insertion conditions along the storm sewer. It should be noted that the CIPP tube lining process calls for confined space entry (CSE) by Stratus workers. Stratus will be responsible for providing a highly-trained and fully qualified team of workers to perform this task safely, and for preparing a site-specific CSE HASP. Stantec will provide a CSE-trained site safety officer to ensure that all CSE-related activities are properly performed. Stantec understands that Stratus proposes to emplace the ITI CIPP Tube® using ITI's proprietary "Insert Air Inversion Process", which is described in detail in ITI (2005).

Stratus will be responsible for following the ITI (2005) tube insertion procedures and ensuring that the ITI CIPP Tube® is installed properly (i.e., forms a hydraulically-tight seal against the concrete interior wall) of the 60-inch storm sewer. As part of the documentation process, Stratus will provide BES with a sample of CIPP used in this project.

As noted above, Stantec prefers to implement this work plan during a period when there are few rainfall events and these are of relatively short duration. However, this condition may not be achievable. Stratus will be responsible for sealing off access to Manhole AAM077 so that it receives no storm water discharges. Diverted storm water handling procedures will be negotiated with BES during the permitting process.

Manhole Restoration

Stratus will be responsible for replacing the removed sections of Manhole AAM077, properly reconnecting temporarily disconnected storm sewer inlets and outlets, and

installing a new vault lid. The new vault lid will be of equal quality to the one removed, and it should conform to the original design specifications. Stantec understands that Stratus proposes to have the new vault lid fabricated by Oldcastle Precast (Utility Vault) per the AAM077 "Original" drawing (see attached). Stratus also will be responsible for removing the shoring and concurrently ensuring that the excavation surrounding Manhole AAM077 is backfilled properly in accordance with BES requirements as to appropriate backfill material and compaction requirements. Stantec and/or CP will provide qualified field personnel to monitor and document Stratus's manhole restoration activities.

Report Preparation

Stantec will prepare a report for submission to CP, WTG, BES, and other concerned parties that documents the CIPP lining activities described above. At a minimum, the report will provide a summary of office (i.e., permitting and pre-planning activities) and field activities (i.e., the activities listed above under the task headings "Manhole Preparation", "CIPP Lining Activities", and "Manhole Restoration"). The report will be submitted as a draft to CP and WTG for technical review, and it will be finalized after the CP and WTG reviewer comments have been incorporated. The draft report will be submitted within three weeks following completion of the above-described field activities.

Respectfully submitted,

Stantec Consulting Corporation

REGISTERED PROFESSIONAL ENGINEER
77529
OREGON
MARCH 14, 2006
FREDERICK A. FETTERLY
EXPIRES: 12/31/2009

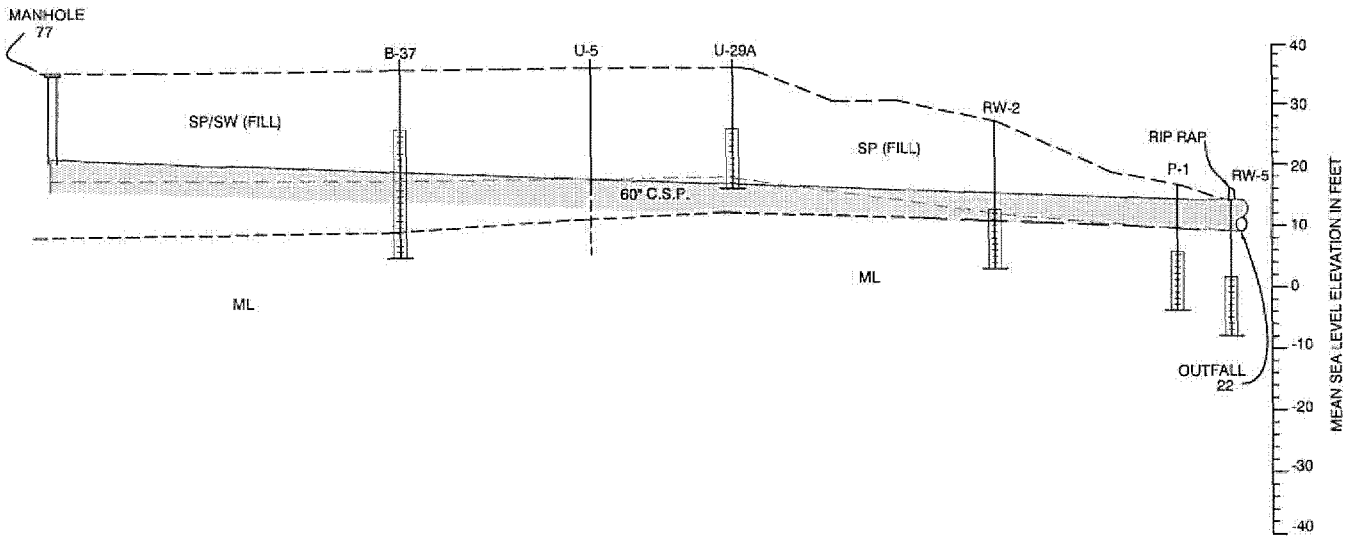
Clifford R. Pollock, R.G., P.E.
Senior Engineering Geologist

Rick Fetterly, P.E.
Senior Project Manager
CP Portland Terminal Project Manager

CRP/RF:dc

cc: Mr. Michael D. Noll, L.H.G., DXT SERVICES INC., ConocoPhillips Portland Terminal Site Manager, Snohomish, WA 98290
Mr. Bill Collins, ConocoPhillips Pipeline & Terminals, Regional Environmental Coordinator, Portland, OR 97210
Mr. Grant V. Sprick, P.E., ARCADIS, Portland, OR 97201
Mr. William C. Edmund, R.G., Stantec, Tualatin, OR 97062 (PacNW Program Director for ConocoPhillips Account)

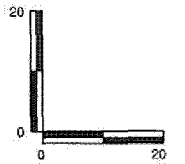
Attachments:
Figure 1 Cross-Section and Plan View of 60" Dia. Storm Sewer Pipeline
AAM077 Original Drawing, Dated November 22, 1978



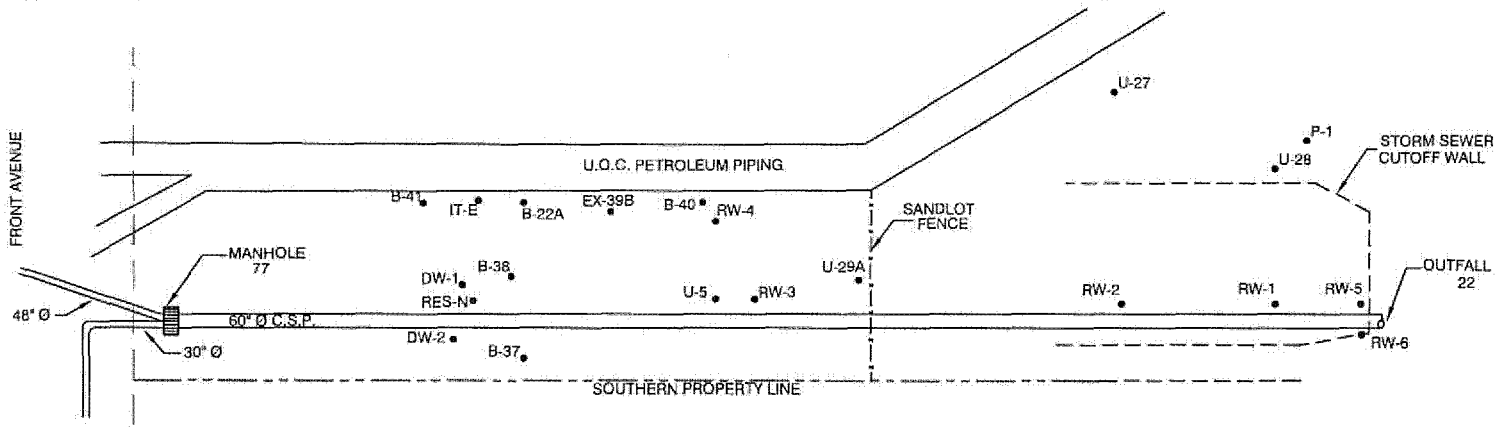
CROSS-SECTION VIEW

EXPLANATION:

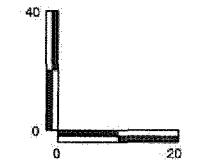
- BORING/WELL LOCATION
- SCREENED INTERVAL FOR MONITORING WELLS
- SP / SW — POORLY GRADED SAND / WELL GRADED SAND
- ML — SILT / SANDY SILT
- APPROXIMATE GROUNDWATER ELEVATION 01/2008



APPROXIMATE SCALE IN FEET



PLAN VIEW



APPROXIMATE SCALE IN FEET

No warranty is made by SECOR International, Inc. as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically and may be updated without notification. Any reproduction may result in a loss of scale and information.

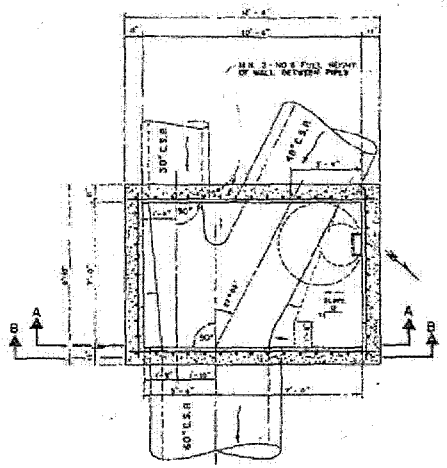
SECOR
7730 SW MOHAWK STREET
TUALATIN, OREGON
PH (503) 691-2000 FAX (503) 692-7974

FOR:			FIGURE:
WILLBRIDGE TERMINALS 5528 NW DOANE AVENUE PORTLAND, OREGON	**CROSS-SECTION AND PLAN VIEW OF 60" DIA. STORM SEWER PIPELINE**		**1**
JOB NUMBER: 15CP.00922.40	DRAWN BY: DJH	CHECKED BY: MAT	APPROVED BY: WCE	DATE: 2/11/08

COP0016475

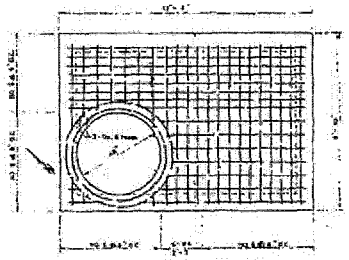
NOTES

See General Notes, Sheet 6



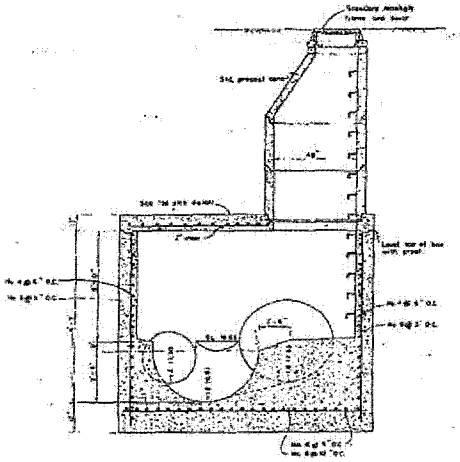
SECTIONAL PLAN MH 8A△

NTS



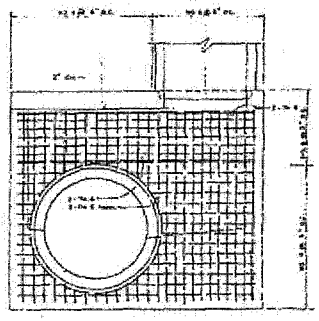
TOP SLAB MH 8A△

TOP SLAB DETAIL MH 8A△

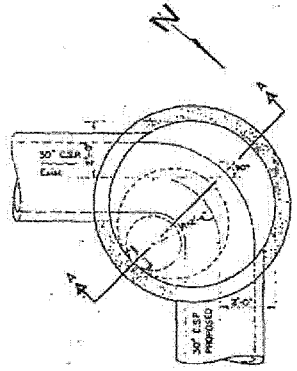


SECTION A-A MH 8A△

NTS

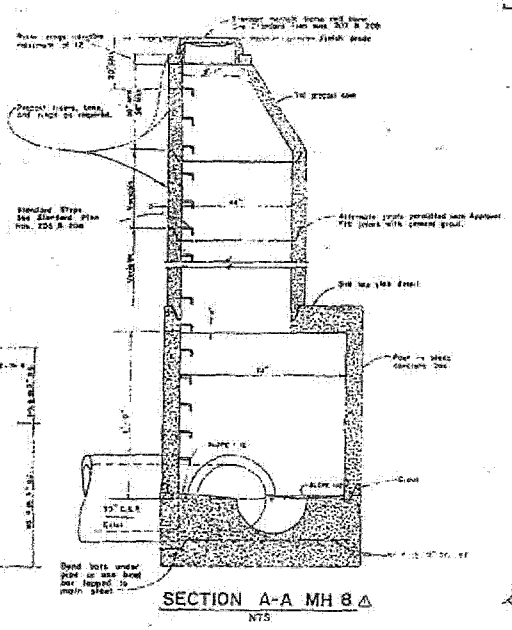


SECTION B-B MH 8A△



SECTIONAL PLAN MH 8△

NTS



SECTION A-A MH 8△

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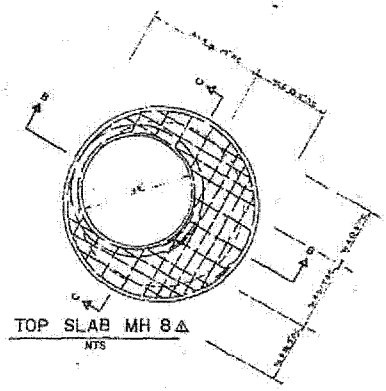
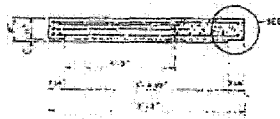
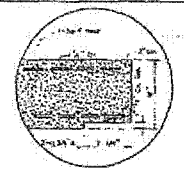


TOP SLAB MH 8△

NTS



SECTION B-B MH 8△



DETAIL NO. 1

SECTION C-C MH 8△

EDA PROJECT NO. 07-01-01976.1

CITY OF PORTLAND, OREGON

DEPARTMENT OF PUBLIC WORKS

CHARLIE HALES, COMMISSIONER

CHARLES MALLORY, P.E., CITY ENGINEER

N.W. FRONT AVE.

PARTS I & II

STORM SEWER SYSTEM

M. SECTION	DATE	
2423	11-22-76	
APPROVED	FILE NO.	
APPROVED	JOB NO.	
	3395	
APPROVED	SHEET NO.	
	6 of 7	

1	ADD MANHOLE MH8A REPRESENTATIVE	DJK	12-7-76
2	ADD MISSING MANHOLES	DJK	12-7-76

AAMOTT ORIGINAL DRAWING

COP00164764

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

letter of transmittal

attention: Mr. Eric DeBerry date: August 20, 2008

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922 Permit No.: 500.015

re: Discharge Monitoring Report (DMR) – August 2008

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of Stantec Consulting Corporation (Stantec) on August 15, 2008. A grab sample (labeled EFFLUENT) was collected at the treated effluent sample port (1A) on the process piping directly into laboratory-prepared containers. The sample containers were sealed, labeled, entered into Stantec's chain-of-custody, placed in a cooler with ice, and transported to a licensed analytical laboratory. The effluent samples were analyzed for: pH by U.S. Environmental Protection Agency (EPA) Method 150.1/9040A; HEM Oil and Grease by EPA Method 1664; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B. Laboratory analysis was performed by TestAmerica Laboratories in Beaverton, Oregon. A copy of the laboratory analytical report and completed chain-of-custody documentation is attached.

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015., dated October 2, 2007. The attached DMR is being submitted as the self-monitoring report. All parameters monitored were found to be within the limits listed in the facility's discharge permit.

If you have any questions regarding the enclosed DMR, please feel free to contact the undersigned at (503) 691-2030.

signators: Norman Swanson
titles: Staff Scientist

Rick Fetterly, PE
Senior Project Manager

NS/RF:dc

cc: Mike Noll, DXT SERVICES Inc., Snohomish, WA
Grant Sprick, ARCADIS, Portland, OR

COP0016477

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: Sept 15, 2008

SAMPLING PERIOD: August 2008

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
8/15/2008	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664A	ND mg/L	4.76	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	EPA Method 150.1/9040A	6. 62 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 0005 (BTE) 0.001 (X)	0.75 mg/L	N/A	
Totalized Reading	Field	34,519,428		NA	N/A	Field Reading 3,100,300

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Date: 9/2/08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

August 20, 2008

Rick Fetterly
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 08/15/08 09:40. The following list is a summary of the Work Orders contained in this report, generated on 08/20/08 16:59.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRH0516	Portland Terminal	0922 - COP

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFFLUENT	PRH0516-01	Water	08/15/08 08:10	08/15/08 09:40

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0516-01 (EFFLUENT)			**Water**			**Sampled: 08/15/08 08:10**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8080503	08/15/08 13:12	08/16/08 09:24	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*94.9%*		*70 - 130%*	"			"

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Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0516-01 (EFFLUENT)			**Water**			**Sampled: 08/15/08 08:10**				
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8080516	08/18/08 10:45	08/18/08 13:12	

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7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0516-01 (EFFLUENT)			**Water**			**Sampled: 08/15/08 08:10**				
pH	150.1/9040A	**6.62**	-----		pH Units	1x	8080497	08/15/08 11:41	08/15/08 12:02	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080503 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8080503-BLK1)								**Extracted: 08/15/08 13:12**						
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	08/15/08 20:58	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 70-130%*	"							*08/15/08 20:58*	
LCS (8080503-BS1)								**Extracted: 08/15/08 13:12**						
Benzene	EPA 8021B	17.6	---	0.500	ug/l	1x	--	20.0	87.9%	(75-125)	--	--	08/15/08 19:07	
Toluene	"	18.6	---	0.500	"	"	--	"	92.9%	(80-120)	--	--	"	
Ethylbenzene	"	19.5	---	0.500	"	"	--	"	97.4%	(80-130)	--	--	"	
Xylenes (total)	"	59.2	---	1.00	"	"	--	60.0	98.7%	"	--	--	"	
o-Xylene	"	19.6	---	1.00	"	"	--	20.0	98.2%	"	--	--	"	
m,p-Xylene	"	39.6	---	1.00	"	"	--	40.0	99.0%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 70-130%*	"							*08/15/08 19:07*	
LCS Dup (8080503-BSD1)								**Extracted: 08/15/08 13:12**						
Benzene	EPA 8021B	18.7	---	0.500	ug/l	1x	--	20.0	93.7%	(75-125)	6.33%	(20)	08/15/08 19:35	
Toluene	"	19.7	---	0.500	"	"	--	"	98.4%	(80-120)	5.81%	"	"	
Ethylbenzene	"	20.6	---	0.500	"	"	--	"	103%	(80-130)	5.50%	"	"	
Xylenes (total)	"	62.0	---	1.00	"	"	--	60.0	103%	"	4.49%	"	"	
o-Xylene	"	20.5	---	1.00	"	"	--	20.0	103%	"	4.47%	"	"	
m,p-Xylene	"	41.4	---	1.00	"	"	--	40.0	104%	"	4.50%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 105%*			*Limits: 70-130%*	"							*08/15/08 19:35*	

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8H15019 **Soil Preparation Method: 8060296**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8H15019-IBL1)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	0.000116	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/15/08 15:47	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	0.000207	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/15/08 15:47*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL2)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/15/08 18:38	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/15/08 18:38*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL3)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 02:57	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/16/08 02:57*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL4)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 08:01	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/16/08 08:01*	
a,a,a-TFT (PID)					*60-130%*	"							"	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8H15019 **Soil Preparation Method: 8060296**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8H15019-IBL5)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 11:13	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s):	*4-BFB (PID)*				*Limits:*	*70-130%*	"						*08/16/08 11:13*	
	a,a,a-TFT (PID)					*60-130%*	"						"	

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7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080516 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8080516-BLK1)								**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	08/18/08 13:12	
LCS (8080516-BS1)								**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	37.6	---		mg/l	1x	--	40.1	93.8%	(78-114)	--	--	08/18/08 13:12	
Matrix Spike (8080516-MS1)				**QC Source: PRH0460-04**				**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	38.5	---		mg/l	1x	0.400	40.1	95.0%	(78-114)	--	--	08/18/08 13:12	
Matrix Spike (8080516-MS3)				**QC Source: PRH0460-04**				**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	38.1	---		mg/l	1x	0.400	40.1	94.0%	(78-114)	--	--	08/18/08 13:12	

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7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080497 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8080497-DUP1)				**QC Source: PRH0516-01**				**Extracted: 08/15/08 11:41**						
pH	150.1/9040A	6.58	---		pH Units	1x	6.62	--	--	--	0.606%	(25)	08/15/08 12:02	

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7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Notes and Definitions

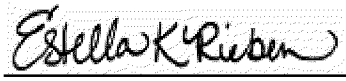
Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland



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TestAmerica Portland
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Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRH0516

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Bill Edmund**	**Site Contact: Norman Swanson**	**Date:** 8/15/08	COC No:
Stantec Consulting Corporation, *formerly SECOR*	**Tel/Fax: (503) 691-2030**	**Lab Contact: Estella Rieben**	**Carrier:**	1 of 1 COCs
7730 SW Mohawk St	**Analysis Turnaround Time**			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
EFFLUENT	8/15/08	0810	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 3,100,300

Please email results to Norman.Swanson@Stantec.com

17.2°

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	SECOR/STANTEC	8/15/08 0940		TAP	8/15/08 0940
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016490

TestAmerica Sample Receipt Checklist

Received by: *(section A)* Date: 8-15-08 Time: 9:40A Initials: BE

Unpacked by: *(section B)* Date: 8-15-08 Initials: K

Logged-in by: Date: 8/15/08 Initials: BLE

Work Order No. PRH0516

Client: Stantec

Project: Portland Terminal

***ESI Clients *(see Section C)*

Temperature out of range:

___Not enough Ice
___*No Ice*
___*Ice Melted*
X *W/in 4 Hours*
___*Other:*

Digi #1
Digi #2

Cooler Temperature (IR): 17.2 °C plastic glass NA *(oil/air samples, ESI client)*

Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)
____#Box(s)
____None (___#Other:_____)

Coolant Type:

____Gel Ice
X Loose Ice
____None

Packing Material:

X Bubble Bags
____Styrofoam Cubbies
____Peanuts
____None (____Other:_____)

Received from:

____TA Courier
____Senvoy
____UPS
____Fed Ex
X Client
____TDP
____DHL
____SDS
____Mid-Valley
____GS/TA
____GS/Senvoy
____Other:
_____

B

Sample Status:
(If N circled, see NOD)

General:

Intact?	(Y)	N	
# Containers Match COC?	(Y)	N	none given
IDs Match COC?	(Y)	N	

For Analyses Requested:

Cyanide Checked?	Y	N	(NA)
Correct Type & Preservation?	(Y)	N	
Adequate Volume?	(Y)	N	
Within Hold Time?	(Y)	N	

Volatiles/ Oil Quality:

VOAs/ Syringes free of Headspace?	(Y)	N	NA
TB on COC? (not provided)	Y	N	NA

Metals:

HNO3 Preserved?	Y	N	(NA)
Dissolved Metals Filtered?	Y	N	(NA)

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided

All preserved bottles checked Y N NA *(voas/soils/all unp.)*
All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

*PM Reviewed:*_____ *(Initial/Date)*

COP0016491

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

August 22, 2008
File: 15CP.00922.74

Mr. Michael Romero
Oregon Department of Environmental Quality – NW Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201

Reference: **Spill Response/Outfall Management Plan**
City of Portland Outfall #22 at ConocoPhillips Portland Terminal Dock Facility
5528 NW Doane Avenue, Portland, Oregon 97210

Dear Mr. Romero:

Stantec Consulting Corporation (Stantec), formerly doing business as SECOR International Incorporated (SECOR), has prepared this plan on behalf of ConocoPhillips Company (ConocoPhillips) to document Stantec's procedures for: 1) monitoring the City of Portland's Outfall #22 for evidence of oily sheen discharges to waters of the state; and 2) responding to a discharge incident. Outfall #22 is located just southeast of the ConocoPhillips Willbridge Terminal facility dock at river mile (RM) 7.5. Outfall #22 is at the end of a 60-inch diameter concrete storm sewer discharging to Willbridge Cove on the Willamette River, and it receives stormwater discharges from the ConocoPhillips Portland Terminal and Chevron U.S.A. Inc. (Chevron) Willbridge Terminal via feeder stormwater sewers. The outfall is enclosed by several sets of floating containment (outer) or absorbent (inner) booms that are maintained by ConocoPhillips.

BACKGROUND

ConocoPhillips has directed Stantec to treat any petroleum product discharge (such as an oily sheen) to waters of the state (in this instance, the Willamette River) from Outfall #22 as a potentially reportable incident that is to be reported to the National Response Center (NRC), City of Portland Bureau of Environmental Services (BES), Oregon Spill Response (OSR). ConocoPhillips currently is working cooperatively with BES and Chevron on a plan to install a cure-in-place interior liner for the 60-inch storm sewer in an effort to mitigate contaminated groundwater leaking into the storm sewer and subsequently discharging at Outfall #22 into the Willamette River. The permit process is ongoing, but the work is tentatively scheduled to begin on or about September 19, 2008 and last approximately 10 working days.

Outfall #22 has been incorporated into a U-shaped sheet pile cut-off wall that was installed as an Interim Remedial Action Measure (IRAM) by ConocoPhillips as part of Consent Order WMCSR-NWR-94-06 between the Oregon Department of Environmental Quality (ODEQ) and the Willbridge Terminals Group (which is a cooperative effort among ConocoPhillips, Chevron, and Kinder Morgan Liquids Terminals, LLC [Kinder Morgan]). The cut-off wall--installed during the winter of 2001--is one of two that were installed along the shoreline; the other was emplaced on Chevron property to cut-off migration of petroleum hydrocarbon-impacted groundwater and phase-separated hydrocarbons (PSH) where a former 27-inch diameter wood-stave storm drain (abandoned in 1982) and the former Holbrook Slough (filled in with dredge sands in the early 1900s) discharged to the river. Hydrocarbon-impacted groundwater and PSH that collect behind the cut-off walls are pumped to a groundwater treatment system (GWTS) consisting of an oil/water separator, PSH holding tank, and several granular activated carbon (GAC) vessels in series. Treated water is discharged under permit to the City of Portland sanitary sewer system. Provisions for monitoring performance of this IRAM are provided in a March 30, 2007 document, titled *Sheet Pile Cut-Off/Recovery System Performance Monitoring Plan, Willbridge Terminals, Portland, Oregon*, prepared by Delta Environmental Consultants, Inc. (Delta, 2007).

ConocoPhillips has directed Stantec to: 1) inspect the outfall boom areas on work days to observe, photograph, and log any oily sheen appearances; 2) collect investigative samples of oily sheens observed to

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be flowing out of Outfall #22; 3) maintain the integrity of the outfall boom system; 4) ensure that no oily sheen discharges from the outfall escape into the Willamette River channel; and 5) initiate cleanup of any significant oily sheens that may be present in the boom containment area. This management plan provides details on Stantec's proposed procedures for sheen monitoring and spill response.

PROPOSED ACTIVITIES

Plan Objectives

The objectives of the proposed activities are to: 1) develop and implement an effective sheen monitoring/outfall management procedure for Outfall #22; and 2) define and promulgate spill response and notification procedures. Sheen monitoring of the outfall will be a standard best management practice at the ConocoPhillips Portland Terminal.

Sheen Monitoring

Stantec field technicians typically visit the GWTS two to three times each work week to inspect the system and to relieve pressure build up on the GAC vessels by backflushing them. On each day that a Stantec field technician is on site, the technician will visually examine Outfall #22 (if exposed by low river stages) and the floating boom containment area surrounding the outfall for oily sheens. Negative reports will be noted on field logs. Positive reports will require further actions, described below in the **Spill Response** section. Sheen monitoring has been and will continue to be among the standard best management practices at the ConocoPhillips Willbridge Terminal.

Spill Response

Visual observation of an oily sheen discharging from Outfall #22 will trigger a set sequence of actions, starting with Stantec's field technician contacting the Stantec Project Manager (Rick Fetterly at 503-550-5917) and then notifying the ConocoPhillips Portland Terminal Maintenance Supervisor (Tom Lyons at 503-248-1572) (that an oily sheen has been observed discharging from the outfall. Stantec's field technician will maintain a written and photographic record of the discharge observation. Stantec's Project Manager will notify the ConocoPhillips Site Manager (Michael Noll at 425-501-1476) and jointly they will evaluate the need to initiate a formal notification (see **Formal Notification Procedures** section for further details) of concerned regulatory agencies. The deciding factor generally will be the confirmed existence (i.e., visible discharge from a mostly exposed sewer mouth) of an oily sheen discharge at Outfall #22. This situation always will warrant initiation of the notification process. Also, Stantec's field technician will collect a sample of the oily sheen discharge using a net sampler that is specially designed to retrieve floating skim oil samples. The presence of an oily sheen within the floating boom area that has not escaped beyond the absorbent (interior) floating boom generally will not warrant a formal notification; the Stantec field technician will attempt to clean up the oily sheen discharge by placing absorbent pads. However, the presence of an oily sheen beyond the lines of absorbent booms generally will require mobilization of an emergency response contractor (Scott Gilfalan of Cowlitz Clean Sweep at 360-957-2010) to clean up the discharge. Attachment 1 is a spill response flow chart.

Whenever oily sheen net samples are collected, Stantec will submit the samples for analysis as directed by ConocoPhillips.

Formal Notification Procedures

Stantec's Project Manager, with the approval of ConocoPhillips Site Manager (Michael Noll), will contact the following regulatory agencies to report a reportable spill discharge incident at Outfall #22:

1) NRC, at 1-(800)-424-8802; document telephone call and obtain an NRC Incident Report Number;

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2) OSR, at 1-800-452-0311; document telephone call and record OSR Incident Number;

3) BES Duty Officer, at (503)-823-7180; document telephone call; and—as a courtesy call--

4) Oregon DEQ, via Mike Romero at (503) 229-5563.

Stantec's Project Manager will prepare a summary e-mail of the sheen observation and spill response actions for submittal to ConocoPhillips. A copy will be filed electronically in the Stantec's project files.

Reporting and Schedule

A Sheen Response Report (SRR) will be prepared by Stantec's Project Manager on an annual or semi-annual basis for submittal to ODEQ, Attention: Michael Romero. The report will be submitted within 45 days following the end of a prolonged cycle of intermittent oily sheen discharge events. During the past two years, there have been only two prolonged cycles: January to March 2007, and January through April 2008. Both cycles coincide with Portland's rainy season. Each SRR will include a tabulated summary of oily sheen event dates with agency report documentation and sampling activities. Each incident will be described in sufficient detail to enable the reader to comprehend the actions taken and their results. Each SSR will provide a summary of typical sample collection and handling procedures, describe the analytical testing program, and discuss findings and conclusions regarding the oily sheen discharge events that occurred during the reporting period. B&B forensic analysis reports will be included, as will photographic records of significant Outfall #22 oily sheen discharge events.

Stantec appreciates the opportunity to assist ConocoPhillips and ODEQ with this project. Please contact the undersigned at (503) 612-2525 (Mr. Fetterly) or (602) 707-4733 (Mr. Pollock) if you have any comments or questions.

Sincerely,

Stantec Consulting Corporation

Clifford R. Pollock, R.G., P.E.
Senior Engineering Geologist

Rick Fetterly, P.E.
Senior Engineer
ConocoPhillips Portland Terminal Project Manager

CRP/RF:dc

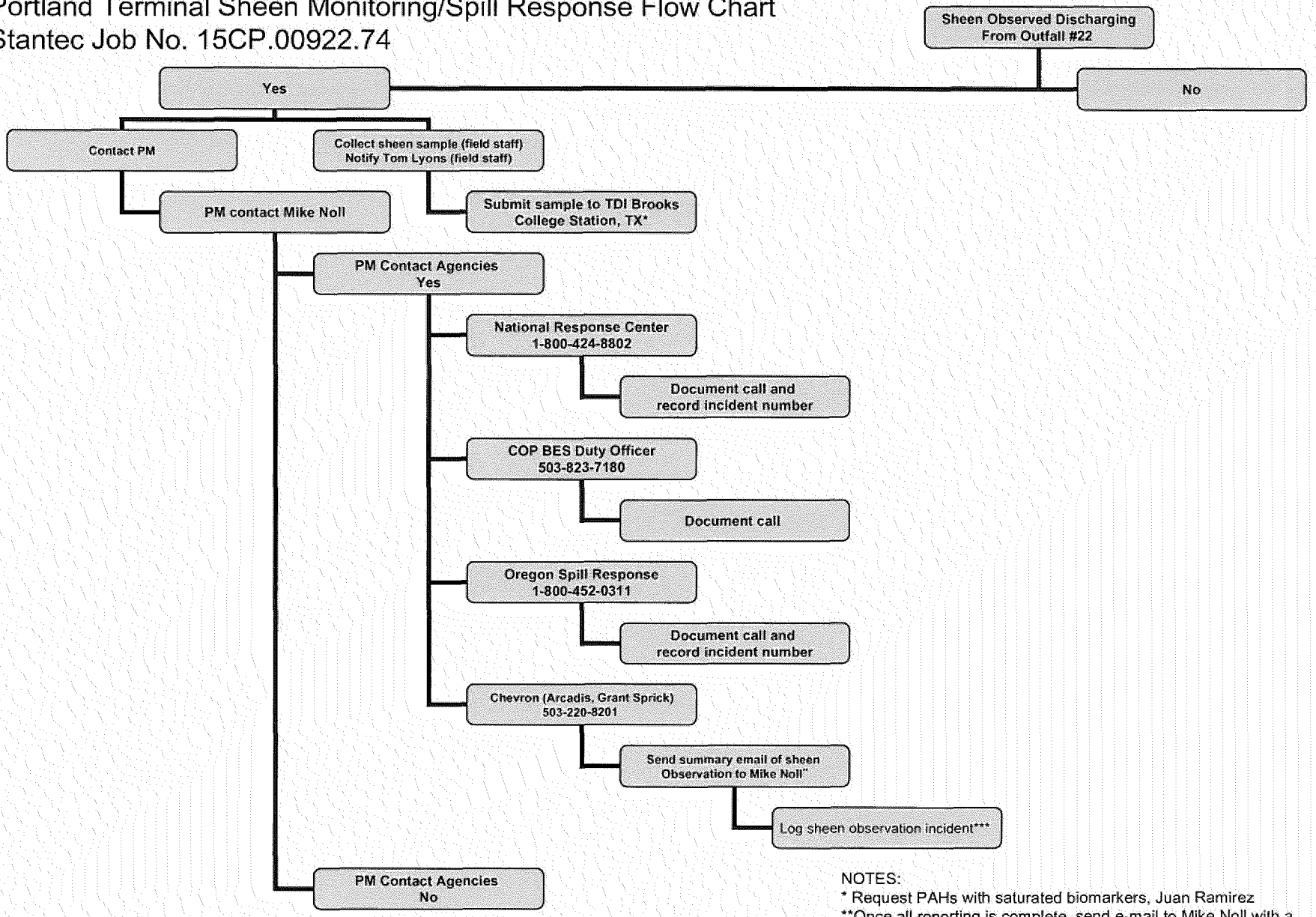
Attachment: Portland Terminal Sheen Monitoring/Spill Response Flow Chart

cc: Mr. Michael D. Noll, DXT SERVICES Inc., ConocoPhillips Portland Terminal Site Manager, Snohomish, WA 98290
Mr. Bill Collins, ConocoPhillips Pipelines & Terminals Regional Environmental Coordinator, Portland, OR 97210
Mr. Grant V. Sprick, P.E., ARCADIS, Portland, OR 97201
Mr. Timothy Browning, R.G., Delta Environmental Consultants, Inc., Tigard, OR 97223

ATTACHMENT 1

SHEEN MONITORING/SPILL RESPONSE FLOW CHART

Portland Terminal Sheen Monitoring/Spill Response Flow Chart
Stantec Job No. 15CP.00922.74



NOTES:
* Request PAHs with saturated biomarkers, Juan Ramirez
**Once all reporting is complete, send e-mail to Mike Noll with a summary of sheen observations and incident report numbers
***P:\Conocophillips\0922 Portland Terminal\Outfall 22\Sheen monitoring summary.xls

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Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

August 25, 2008

Michael Noll
DXT SERVICES INC
Approved Service Provider of ConocoPhillips –
Risk Management & Remediation
11921 - 185th Avenue SE
Snohomish, WA 98290

RE: Disposal Report – Manhole MH-12 Lining Activities
ConocoPhillips Portland Terminal, 5528 NW Doane Avenue, Portland, Oregon 97210
Stantec Project Number: 15CP.00922.73

Dear Mr. Noll:

This letter documents the waste handling activities related to disposal of epoxy residues and expendable supplies and/or health-and-safety clothing generated during the lining of manhole MH-12 at the ConocoPhillips Portland Terminal. On August 5-7, 2008, Stantec Consulting Corporation retained Stratus Corporation, on behalf of ConocoPhillips, to line manhole MH-12 with NPR 5300 Series Epoxy Resin manufactured by NeoPoxy International. This manhole is located adjacent to NW Doane Avenue, opposite the truck loading racks.

A material Safety Data Sheet (MSDS) for the epoxy was provided by Stratus and was reviewed and approved by the ConocoPhillips Portland Terminal environmental management staff and by ConocoPhillips Corporate environmental management staff. Based on ConocoPhillips' review of the MSDS, the epoxy was approved for use at the terminal. However, because of the rapid review of the MSDS required to allow manhole lining work to commence according to schedule, Stratus was required to arrange for removal, off-site transport, and disposal of all epoxy-associated waste.

During the course of the 1.5-working day manhole MH-12 lining project, approximately six 5-gallon drums coated with the hardened epoxy residue were generated as waste. Since the epoxy becomes hot as it starts to harden, sufficient time was allowed for the drums to cool prior to removing them from the site. Additional, non-hazardous, waste generated during manhole MH-12 lining activities included four trowels, two drill paddles, three Tyvek suits, and approximately 12 pairs of gloves. All of these materials were transported to the Waste Management Hillsboro, Oregon Landfill for disposal. No other wastes were generated during the manhole MH-12 lining activities.

Please contact the undersigned at (503) 612-2505 if you have any additional questions.

Respectfully Submitted,
Stantec Consulting Corporation

Rick Fetterly, P.E.
Senior Engineer
ConocoPhillips Portland Terminal Project Manager

RF:dc

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
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Stantec

September 10, 2008
File: 15CP.00922.74

Mr. Michael Romero
Oregon Department of Environmental Quality –
Northwest Region Cleanup Section
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201

Reference: **Sheen Response Report, January Through April 2008**
City of Portland Outfall #22 at ConocoPhillips Portland Terminal Dock Facility
5528 NW Doane Avenue, Portland, Oregon 97210

Dear Mr. Romero:

Stantec Consulting Corporation (Stantec), formerly doing business as SECOR International Incorporated (SECOR), until June 1, 2008, has prepared this report on behalf of ConocoPhillips Company (ConocoPhillips) to document incidents during the four-month reporting period (January 1 through April 30, 2008) when oily sheen discharges to waters of the state occurred at the City of Portland's Outfall #22. Outfall #22 is located just southeast of the ConocoPhillips Willbridge Terminal facility dock at river mile (RM) 7.5. Outfall #22 is a 60-inch diameter concrete storm sewer discharging to Willbridge Cove on the Willamette River; it receives storm water discharges from the ConocoPhillips Portland Terminal and the Chevron U.S.A. Inc. (Chevron) Willbridge Terminal via feeder stormwater sewers, as well as from several other sources located along NW St. Helens Road, NW Doane Avenue, and NW Front Street The outfall end of the stormwater pipe is enclosed by several sets of floating containment (outer) and absorbent (inner) booms, which have been maintained by ConocoPhillips as a precautionary measure to preclude any release of fugitive oily sheens to the river.

ConocoPhillips has directed Stantec to treat any oily sheen discharges to waters of the state (such as the Willamette River) as a potentially reportable incident that is to be reported to the National Response Center (NRC), City of Portland Bureau of Environmental Services (BES), Oregon Spill Response (OSR), and Oregon Department of Environmental Quality (ODEQ). It should be noted that ConocoPhillips currently is working cooperatively with BES and Chevron on a plan to line the 60-inch storm sewer in an effort to mitigate the potential for contaminated groundwater to leak under certain conditions into the storm sewer and subsequently discharge at Outfall #22 into waters of the state.

ConocoPhillips has directed Stantec to: 1) inspect the outfall boom areas on work days to observe, photograph, and log any oily sheen appearances; 2) collect investigative samples of any oily sheens observed to be flowing out of Outfall #22; 3) maintain the integrity of the outfall boom system; 4) ensure that no oily sheen discharges from the outfall escape into the Willamette River channel; and 5) initiate cleanup of any significant oily sheens that may be present in the boom containment area.

This report documents intermittent observances by SECOR (later Stantec) of oily sheens at Outfall #22 during the reporting period from January 15 through April 22, 2008; sheen reporting and documentation procedures; and associated investigative oily sheen sampling and analysis activities conducted by SECOR (later Stantec). During the reporting period, oily sheens were observed at the outfall on 12 occasions. The **SUMMARY OF SHEEN RESPONSE ACTIONS** section summarizes the intermittent oily sheen occurrences, typical regulatory agency notifications, and typical response actions. Each sheen discharge incident is described in the **OILY SHEEN MONITORING ACTIVITIES** section; and the **SAMPLING METHODS AND CHEMICAL ANALYSIS** section describes the sampling and analytical testing procedures that were used by SECOR (later

Stantec) to collect and analyze oily sheen samples. The analytical testing program involved forensic analysis by B&B Laboratories (B&B) of College Station, Texas, using gas chromatography/mass spectroscopy/selective ion monitoring (GC/MS/SIM) techniques to identify polycyclic aromatic hydrocarbons (PAHs). The detected PAHs were then used to determine the nature of the oily sheens and attempt to determine their origin. The analytical laboratory results are summarized in the **RESULTS** section, and conclusions regarding the origin and composition of the oily sheens are provided in the **CONCLUSIONS** section.

SUMMARY OF SHEEN RESPONSE ACTIONS

Table 1 summarizes the dates on which oily sheens were observed at Outfall #22 during the 4-month reporting period. Table 1 also identifies the dates on which SECOR (later Stantec) collected samples for hydrocarbon fingerprint analysis at Outfall #22, and dates when samples were collected from other locations (i.e., at City-owned manholes along storm sewers discharging to Outfall #22, and ConocoPhillips shallow water wells in close proximity to the 60-inch storm sewer). These latter samples were collected for comparative analysis with the outfall sheen samples in an attempt to determine the origin of the oily sheens.

As noted above in the introductory remarks, ConocoPhillips maintains sets of containment and absorbent booms around Outfall #22 as a precautionary measure to preclude any release of a fugitive oily sheen to the Willamette River. On all occasions during this reporting period, SECOR (later Stantec) field personnel observed that the oily sheen was fully contained by the booms. On each occasion when an oily sheen was noted at the outfall, ConocoPhillips or SECOR (later Stantec) promptly notified the NRC, OSR, BES, and ODEQ. The NRC Incident Reports are provided in Appendix A. As necessary, Cowlitz Clean Sweep (CCS) of Longview, Washington was called to the outfall site to provide emergency responder oily sheen cleanup actions.

OILY SHEEN MONITORING ACTIVITIES

January 15-16, 2008 Incident

SECOR personnel observed, documented with photographs, and reported a contained oily sheen that appeared to be discharging from Outfall #22 on January 15, 2008. The sheen had disappeared by the end of the day. ConocoPhillips, with Chevron, initiated a joint investigation on January 16 to determine its source. The investigation involved removal of manhole covers by SECOR field personnel to inspect the sewer route upstream of the discharge point (i.e., Outfall #22) and collection of samples for hydrocarbon fingerprint analysis at the following three locations shown on Figure 1:

- Sample OF-1 at Outfall #22
- Sample SL-A, at Manhole AAM077 (395 linear feet from Outfall #22)
- Sample SS-76 at Manhole AAM076 (1,044 linear feet from Outfall #22)

Table 2 provides the laboratory results. PAH composition bar charts are provided in Appendix B, and the B&B Technical Report (08-2018) and completed chain-of-custody documentation are included in Appendix C.

SECOR notified ConocoPhillips, NRC, OSR, BES, and ODEQ about this incident. NRC notified U.S. Coast Guard (USCG) and Washington State Emergency Management Division (WEMD) of the incident. USCG observed the cleanup of the oily sheen.

January 28-29, 2008 Incident

An oily sheen appeared to be discharging from Outfall #22 on January 28, although it had disappeared by early afternoon. No samples were collected for chemical analysis; however, the event was documented with

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photographs. SECOR subsequently observed and photographed an oily sheen discharging from Outfall #22 on the morning of January 29. For this incident, SECOR used Teflon® net samplers to collect skimmed sheen samples from the water surface at the following four locations (see below) shown in Figure 1. In addition, a grab groundwater sample was collected by disposable polyethylene bailer from recovery well RW-6, also shown in Figure 1.

- Sample OF-22-01-29-08 at Outfall #22
- Sample SL-A-01-29-08 at City Manhole AAM077 (395 linear feet from Outfall #22)
- Sample MH-X-01-29-08 at City Manhole AAM080 (595 linear feet from Outfall #22)
- Sample SS-76-01-29-08 at City Manhole AAM076 (1,044 linear feet from Outfall #22)
- Sample RW-6-1-29-08 at recovery well RW-6 (approximately 8 linear feet from Outfall #22)

Table 3 and Table 4 provide the laboratory results for net samples and the recovery well sample, respectively. PAH composition bar charts are provided in Appendix B, and the B&B Technical Report (08-2021) and completed chain-of-custody documentation are included in Appendix C.

SECOR notified ConocoPhillips, OSR, BES, and ODEQ about this incident. NRC was not notified because oily sheen was observed discharging for only one hour on January 28. SECOR photographed the sheen on January 28 and January 29.

February 7-8, 2008 Incident

A contained oily sheen that appeared to be discharging from Outfall #22 was documented and reported on February 7, 2008. On February 8, SECOR collected one water sample for chemical analysis from the storm sewer and two grab groundwater samples (one each from adjacent recovery wells RW-1 and RW-2) at the locations shown in Figure 1:

- Sample OF-22 at Outfall #22
- Sample RW-1 from recovery well RW-1 (32 linear feet from Outfall #22)
- Sample RW-2 from recovery well RW-2 (90 linear feet from Outfall #22)

Table 5 provides the laboratory results. PAH composition bar charts are provided in Appendix B, and the B&B Technical Report (08-2024) and completed chain-of-custody documentation are included in Appendix C.

February 29, 2008 Incident

A black oily sheen that appeared to be discharging from Outfall #22 was observed to have migrated beyond the inner floating absorbent booms but was trapped within the outer containment boom. The sheen incident was documented and reported on February 29, 2008. On February 29, SECOR collected the following water samples for chemical analysis at four of the five locations sampled on January 29 (see Figure 1):

- Sample Outfall22COP2-29-08-1 at Outfall #22 (sample)
- Sample Outfall22COP2-29-08-2 at Outfall #22 (duplicate sample)
- Sample Outfall22sediment (a turbid water sample) at Outfall #22
- Sample AAM077-2-29-08 at City Manhole AAM077
- Sample AAM080-2-29-08 at City Manhole AAM080
- Sample AAM076-2-29-08 at City Manhole AAM076

Table 6 provides the laboratory results. PAH composition bar charts are provided in Appendix B, and the B&B Technical Report (08-2038) and completed chain-of-custody documentation are included in Appendix C.

The three Outfall #22 samples were collected from the same sheen but at three slightly different locations at the outfall. Because the oily sheen had migrated beyond the inner absorbent floating booms, the booms were replaced with new booms set in multiple rings. SECOR also set absorbent pads near the discharge end of Outfall #22 to capture the discharging sheen. CCS emergency responders were mobilized to clean up the sheen trapped within the outer containment boom.

SECOR notified ConocoPhillips, NRC, OSR, and ODEQ about this incident. SECOR's project manager was contacted by several other concerned agencies, including the USCG and WEMD. The oily sheen was not evident on March 1.

March 10-13, 2008 Incident

A contained oily sheen (having the appearance of white globules) that appeared to be discharging from Outfall #22 was documented and reported on March 13, 2008. Light sheens that did not appear to be flowing from Outfall #22 had been observed by SECOR within the inner absorbent boom area on March 10, March 11, and March 12. On March 13, SECOR collected two Teflon® net samples for chemical analysis to assess oily sheen conditions along the final 395-foot section of the storm sewer line between the two sampling points:

- Sample Outfall22-3-13-08 (Net) at Outfall #22
- Sample AAM077-3-13-08 (Net) at City Manhole AAM077

Table 7 provides the laboratory results. The PAH composition bar charts are provided in Appendix B, and the B&B Technical Report (08-2041) and completed chain-of-custody documentation are included in Appendix C.

SECOR notified ConocoPhillips, NRC, OSR, and ODEQ about this incident. USCG performed a site inspection on March 11. The oily sheen was not evident on March 14.

March 21, 2008 Incident

Contained oily sheen that did not appear to be flowing was documented, sampled using a Teflon® net sampler, and reported on March 21, 2008. SECOR submitted the following Outfall #22 net sample for chemical analysis:

- Sample Outfall22-3-21-08 (Net) at Outfall #22

Table 7A (Outfall #22) provides the laboratory results. The PAH composition bar chart is provided in Appendix B, and the B&B Technical Report (08-2056) and completed chain-of-custody documentation are included in Appendix C.

SECOR notified ConocoPhillips, NRC, OSR, and ODEQ about this incident. SECOR field personnel set absorbent pads near the discharge end of Outfall #22 to catch any oily sheen discharge.

March 26-28, 2008 Incident (and Follow-up on March 31)

Contained oily sheens that appeared to be discharging from Outfall #22 were documented and reported on March 26 and March 28, 2008. On March 26, 27, 28, and 31, SECOR collected a total of six water samples (three Teflon® net and three grab groundwater samples) for chemical analysis to assess oily sheen conditions at Outfall #22 and three nearby groundwater monitoring wells (U-4, U-5A, and U-29A) shown on Figure 1:

- Sample Outfall 22 on March 26, 2008 at Outfall #22
- Sample U-5A (grab groundwater sample by disposable bailer on March 27) at groundwater monitoring well U-5A (approximately 196 linear feet from Outfall #22)

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- Sample U-4 (grab groundwater sample by disposable bailer on March 27) at groundwater monitoring well U-4 (approximately 623 linear feet from Outfall #22)
- Sample U-29A (grab groundwater sample by disposable bailer on March 27) at groundwater monitoring well U-29A (approximately 213 linear feet from Outfall #22)
- Sample Outfall 22-3-28-08 at Outfall #22
- Sample Outfall 22-3-31-08 at Outfall #22

Table 8 (monitoring wells) and Table 9 (Outfall #22) provide the laboratory results. The PAH composition bar charts are provided in Appendix B, and the B&B Technical Report (08-2036) and completed chain-of-custody documentation are included in Appendix C.

SECOR contacted ConocoPhillips, NRC, OSR, BES, ODEQ, and USCG (both Sector Portland and Incident Management Response [IMR]) about this incident. Sheen photographs were taken on March 26 and March 28. Absorbent pads were spread on the sheen on March 26.

April 7-8, 2008 Incident

A contained light oily sheen was observed on April 7 within the inner floating absorbent boom area, but it did not appear to be discharging from the outfall. On April 8, however, a heavy sheen was observed discharging from Outfall #22. The sheen was contained within the inner floating absorbent boom area. The incident was documented and reported on April 8, 2008; SECOR sampled the oily sheen using a Teflon® net sampler, and submitted the Outfall #22 net sample for chemical analysis:

- Sample Outfall 22-4-8-08 at Outfall #22

Table 9 provides the laboratory results. The PAH composition bar chart is provided in Appendix B, and the B&B Technical Report (08-2036) and completed chain-of-custody documentation are included in Appendix C.

SECOR contacted ConocoPhillips, NRC, OSR, BES, and ODEQ about this incident. Absorbent pads were spread on the sheen on April 7 and April 8.

April 16, 2008 Incident

A contained oily sheen that appeared to be discharging from Outfall #22 was documented and reported on April 16, 2008. SECOR submitted the following Teflon® net sample for chemical analysis:

- Sample Outfall 22-4-16-08 at Outfall #22

Table 10 provides the laboratory results. The PAH composition bar chart is provided in Appendix B, and the B&B Technical Report (08-2064) and completed chain-of-custody documentation are included in Appendix C.

SECOR contacted ConocoPhillips, NRC, OSR, BES, and ODEQ about this incident. Absorbent pads were spread on the sheen on April 16.

April 22, 2008 Incident

A contained oily sheen with dark brown or black oil globules floating on the water surface that appeared to be discharging from Outfall #22 was documented and reported on April 22, 2008. SECOR collected a sample from inside the pipe near the outfall using a clean cup attached to the end of a rod. The following water sample was submitted for chemical analysis:

- Sample Outfall 22-4-22-08 at Outfall #22

Table 11 provides the laboratory results. The PAH composition bar chart is provided in Appendix B, and the B&B Technical Report (08-2064) and completed chain-of-custody documentation are included in Appendix C.

SECOR contacted ConocoPhillips, NRC, OSR, BES, and ODEQ about this incident. Absorbent pads were spread on the sheen on April 22. CCS emergency responders were mobilized to clean up the sheen trapped within the containment booms.

SAMPLING METHODS AND CHEMICAL ANALYSIS

Stantec (formerly SECOR) typically collected grab water samples and grab groundwater samples in 1-liter amber glass bottles from bottom-filling polyethylene disposable bailers. To retrieve a sample of floating oil globules near the outfall end of the 60-inch storm sewer, SECOR collected one water sample (on April 22) using a cup attached to the end of a rod. In order to focus on the sheen present in the surface microlayer of the water column, SECOR field personnel collected additional storm sewer samples from the outfall on January 29, March 13, March 21, March 26-31, April 8, and April 16 using ultra-clean Teflon® oil sampling net samplers manufactured by G.O. Environmental, Inc. of Miami, Florida. Many of the net and water samples were collected at the outfall, but several sets of water and net samples were collected from manholes upstream of the 60-inch storm sewer which discharges at Outfall #22. The net samplers are designed to capture skimmed oil sheen on the surface of the net while permitting water to pass through. The entire net is placed in a solvent-cleaned sample jar and submitted to a forensic laboratory for chemical analysis of PAHs.

Analyses of storm sewer water samples and groundwater samples from water wells were completed by B&B of College Station, Texas, in accordance with modified U.S. Environmental Protection Agency (EPA) SW-846 methodology for semi-volatile organic compounds. B&B extracted all samples using B&B standard operating procedure (SOP) #1011, and quantified for PAHs and related compound results by B&B SOP #1006. Reported results were recovery-corrected based on the addition of a radio-labeled internal standard (i.e., phenanthrene-d_{10}). GC/MS/SIM techniques were used to analyze all samples for PAHs. All sample analyses met required B&B quality control criteria.

RESULTS

Tables 2, 3, 5, 6, 7, 7A, 9, 10, and 11 summarize quantitative PAH results for water and/or net samples collected from Outfall #22. Tables 2, 3, 6, and 7 provide analogous results for manhole access points sited 395 feet to 1,044 feet upstream of the 60-inch storm sewer line from Outfall #22. Tables 4 and 5 summarize results for grab groundwater samples collected from three recovery wells (RW-1, RW-2, and RW-6) located near Outfall #22. Table 8 provides results for grab groundwater samples collected from three monitoring wells (U-4, U-5A, and U-29A) located alongside the 60-inch storm sewer.

Results for all water samples are expressed in nanograms per liter (ng/L), which is directly equivalent to parts per trillion in storm water. Storm sewer sampling was focused on incorporating oily sheen, and all of the water samples contained some water collected from below the sheen layer; therefore, the results are not representative of either average conditions at the time of collection or solely of the oily sheen. Results for Teflon® net samples are expressed in nanograms per net (ng/net), which effectively is a measure of "mass per surface area of sheen sampled", although that area has not been recorded. The net sample concentrations are intended to be used semi-quantitatively for comparison among samples collected on the same day. The intended use of the Teflon® net samples and storm sewer water samples is to assess potential sources, and how those sources may differ at points along the storm sewer system along NW Doane Avenue, along the 60-inch storm sewer discharging at Outfall #22, and in comparison to nearby oil recovery and groundwater monitoring wells.

Reference: Sheen Response Report, January through April 2008

CONCLUSIONS

The composition of PAHs in Outfall #22 samples is similar to that found in oily water samples taken on the same date from nearby recovery wells, as shown on Figure 2 for the February 29, 2008 comparative PAH compositions found in the Outfall #22 and RW-6 samples. By contrast, the Figure 3 PAH composition for the RW-6 sample is demonstrably different from the PAH composition of the City Manhole AAM077 sample collected on the same date. In addition, the elevated concentration of PAHs at Outfall #22 in the skimmed oily sheen samples collected by Teflon® net samplers compared with any of the manhole samples (see Table 3) suggests that oily water from a local source has entered the 60-inch storm sewer at a point(s) between City Manhole AAM077 and Outfall #22. The source material is consistent with that found in adjacent recovery wells. The point(s) at which this material may enter the storm sewer along the final 395-foot stretch of pipe is unknown, but logically should lie within the plume captured by the recovery well system. A plan is in place to line the storm sewer with a BES-approved cure-in-place pipe liner. The permitting process is almost completed, the sewer liner contractor has been identified, and contract documents are being prepared.

Monitoring of the outfall system will continue as part of the standard best management practices at the ConocoPhillips Portland Terminal and as an assessment of the effectiveness of the stormwater source control.

Sincerely,

Stantec Consulting Corporation

William C. Pollock P.G. for

Clifford R. Pollock, R.G., P.E.
Senior Engineering Geologist

F. A. Fetterly

Rick Fetterly, P.E.
Senior Engineer
CP Portland Terminal Project Manager

CP/RF:dc

cc: Mr. Michael D. Noll, DXT SERVICES Inc., Approved Service Provider of ConocoPhillips – Risk Management and Remediation, Snohomish, WA
Mr. Bill Collins, ConocoPhillips Pipeline, Regional Environmental Compliance Manager, Portland, OR
Mr. Grant V. Sprick, P.E., ARCADIS, Portland, OR
Ms. Jessica Eckhart, Delta Environmental Consultants, Inc., Portland, OR
Mr. Darrin L. Rouse, Project Manager, Chevron Environmental Management Company, San Ramon, CA

Attachments:

Figure 1	Approximate Stormwater, Recovery Well, and Monitoring Well Sampling Locations (January – April 2008)
Figure 2	Comparison of PAH Composition in Sheen at Outfall 22 (February 29) with Oily Water from Recovery Well 6 (February 29)
Figure 3	Comparison of PAH Composition in Sheen at Outfall 22 (February 29) with Sheen at Manhole AAM077 (February 29)

Reference: Sheen Response Report, January through April 2008

Table 1	Oily Sheen Events, Agency Notifications, and Sampling Activities
Table 2	January 16 Water Sample Results [for PAHs]
Table 3	January 29, 2008 Teflon Net [Sample] Results [for PAHs]
Table 4	Recovery Well RW-6 Water Sample [January 29, for PAHs]
Table 5	February 8 Water Sample Results [for PAHs]
Table 6	February 29 Water Sample Results [for PAHs]
Table 7	March 13 Teflon Net Sample Results [for PAHs]
Table 7A	March 21 Teflon Net Sample Results [for PAHs]
Table 8	March 27 Monitoring Well Sample Results [for PAHs]
Table 9	March 26 to April 8 Teflon Net Sample Results [for PAHs]
Table 10	April 16 Teflon Net Sample Results [for PAHs]
Table 11	April 22 Water Sample Results [for PAHs]
Appendix A	NRC Incident Reports, Outfall #22, January – April 2008
Appendix B	Oily Sheen Sample PAH Composition Bar Charts
Appendix C	B&B Laboratories Technical Reports and Chain-of-Custody Documentation

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FIGURES

Figure 1. Approximate stormwater, recovery well, and monitoring well sampling locations (January - April 2008)

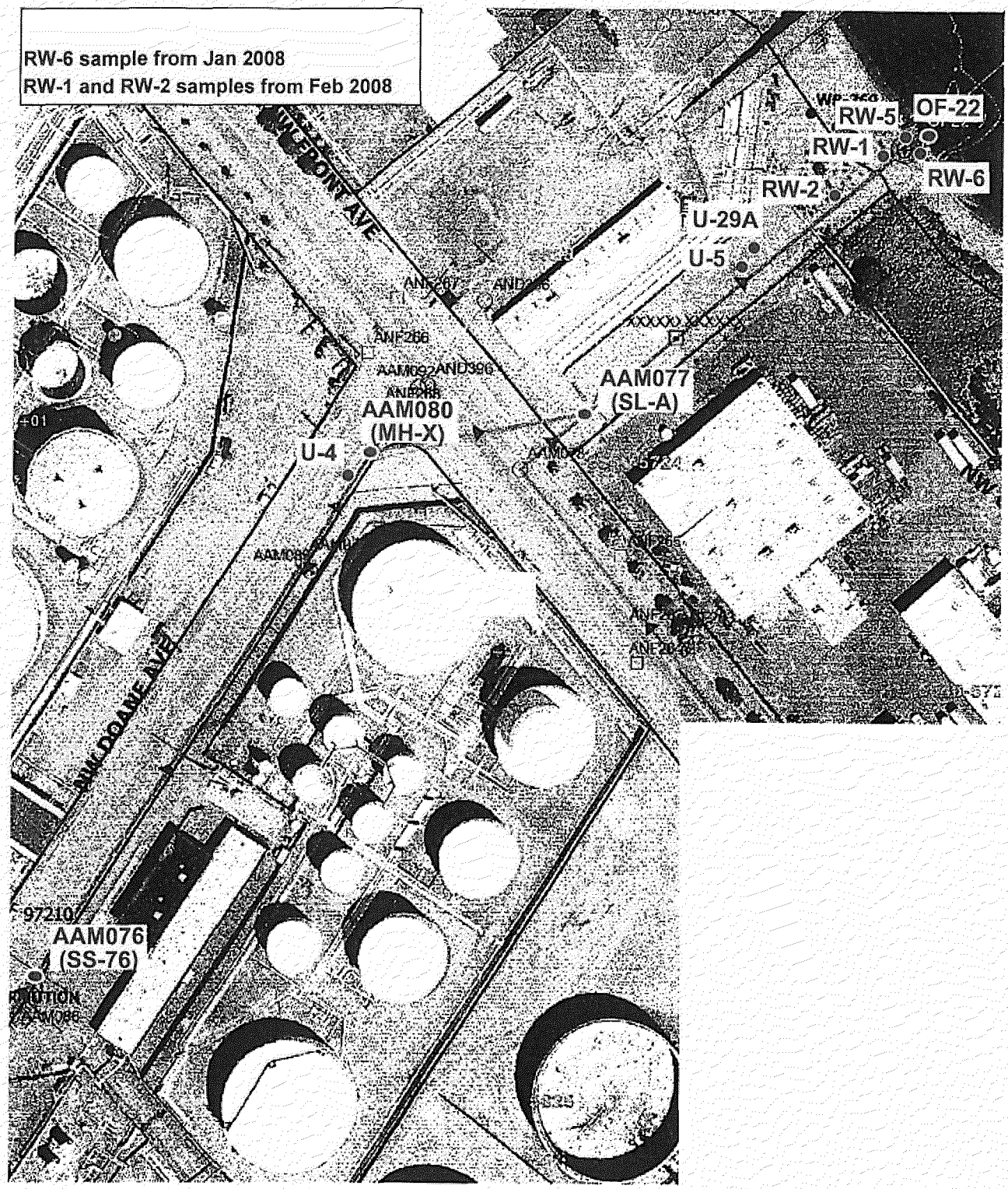

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Figure 2. Comparison of PAH composition in sheen at Outfall 22 (February 29) with oily water from Recovery Well 6 (February 29)

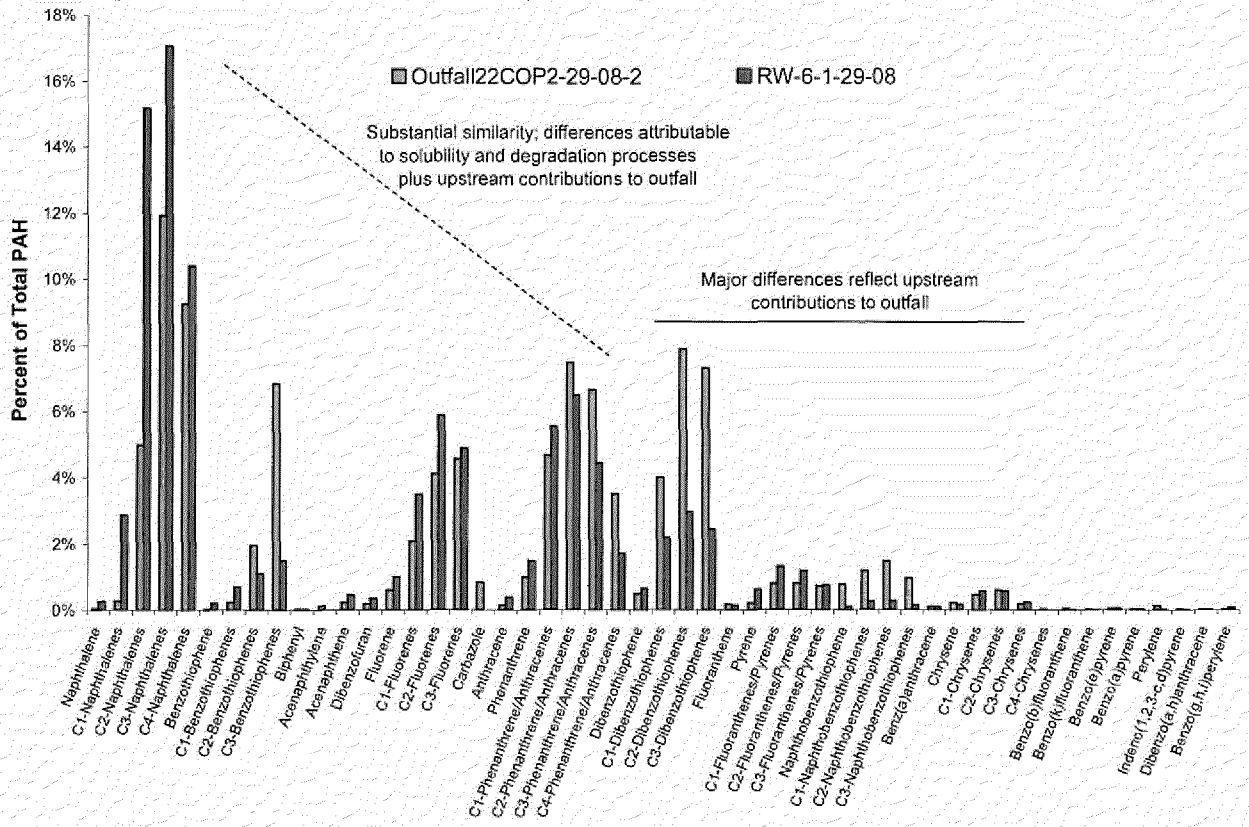
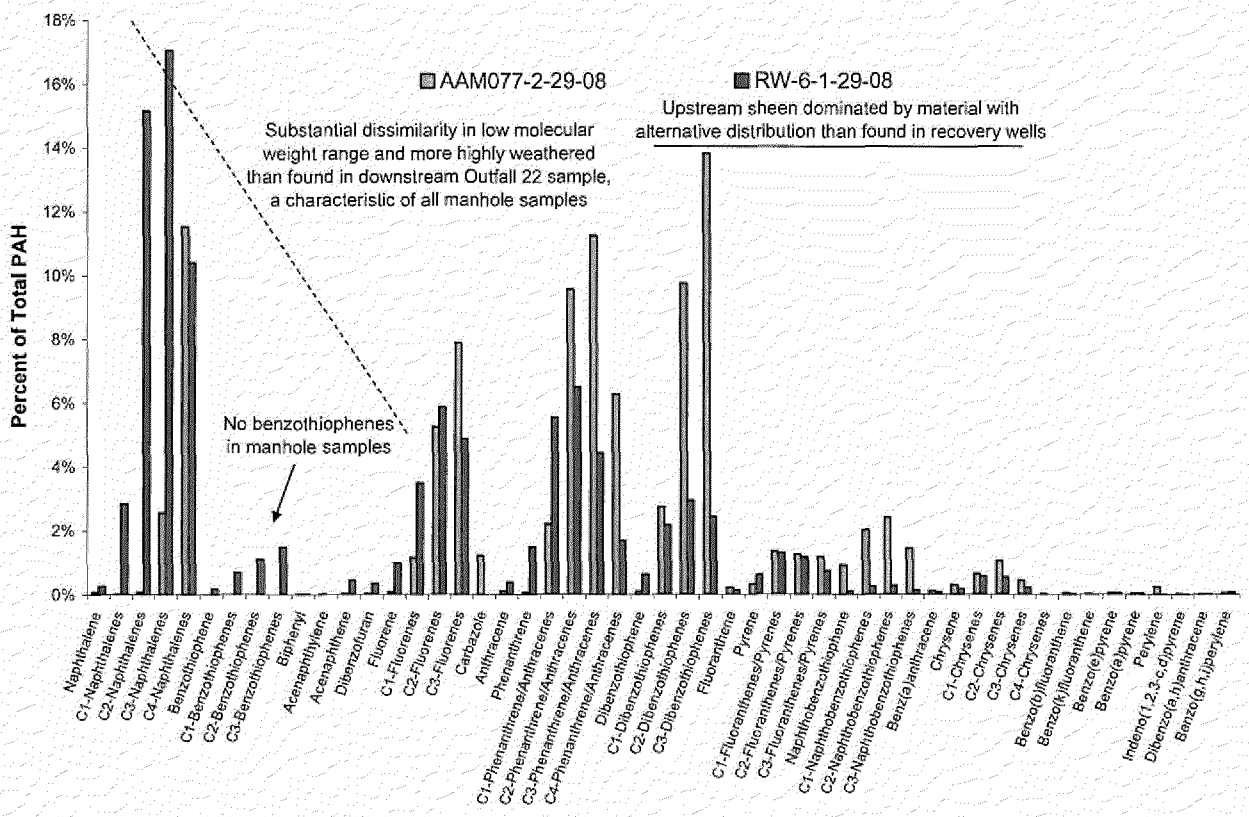


Figure 3. Comparison of PAH composition in sheen at Outfall 22 (February 29) with sheen at Manhole AAM077 (February 29)



TABLES

Table 1 -- Oily Sheens, Agency Notifications, and Sampling Activities			
Oily Sheen Event Observation and/or Sampling Date	OSR Reported?/ Report No.?	NRC Reported?/ Incident Report No.?	Remarks/Comments
Jan. 15-16, 2008	Yes/ Unknown	Yes/859853	oily sheen discharging from Outfall #22; collected grab water samples from Outfall #22 and City of Portland (City) manholes AAM076 and AAM077; cleanup initiated; U.S. Coast Guard inspected site on Jan. 16
Jan. 28-29, 2008	Yes/ 2008-0303 (for Jan. 28) Yes/ 2008-0315 (for Jan. 29)	No	oily sheen that appeared to be discharging from Outfall #22 was not present by early afternoon on Jan. 28;oily sheen reappeared on Jan. 29 within inner floating absorbent boom area, but not discharging from outfall; contacted BES duty officer on each date; collected net samples from OF#22 and City manholes AAM076, AAM077, and AAM080; collected grab groundwater sample from RW-6; photographed sheen on both dates; spread absorbent pads at outfall
Feb. 7-8, 2008	No	No	oily sheen appeared to be discharging from Outfall #22; contacted BES duty officer and ODEQ; collected water sample from OF#22 and grab groundwater samples from recovery wells RW-1 and RW-2; did not maintain photodocumentation log; spread absorbent pads at outfall
Feb. 29, 2008	Yes/ 2008-0596	Yes/863752	black sheen discharging from Outfall #22 has migrated beyond inner absorbent booms, but it is contained inside outer floating containment boom; collected net samples at Outfall #22 and at City manholes AAM076, AAM077, and AAM080; Cowlitz Clean Sweep (CCS) performed emergency response cleanup of the sheen
Mar. 10-13, 2008	Yes/ 2008-0683	Yes/864979	light to very light sheen contained inside inner boom area, not flowing from Outfall #22 from Mar. 10-12; no samples collected on Mar. 10-12; on Mar. 13, oily sheen appearing as white globules discharging from Outfall #22 but contained inside inner boom area; collected net samples from Outfall #22 and City manhole AAM077
Mar. 21, 2008	Yes/ 2008-0683	Yes/865691	oily sheen contained inside inner boom area, not flowing from Outfall #22; net sample collected from Outfall #22; photographed sheen; spread absorbent pads at outfall
Mar. 26-31, 2008	Yes/ 2008-0683	Yes/866124 (on Mar. 26) and 866537 (on Mar. 28)	oily sheen discharging from Outfall #22 but is contained inside inner boom area on Mar. 26-30; by Mar. 31, oily sheen has migrated beyond inner absorbent booms but is contained within outer containment booms; collected net sample from Outfall #22 on March 26; collected grab groundwater samples from wells U-4, U-5A, and U-29A on March 27; collected net sample from Outfall #22 on Mar. 31; contacted USCG on Mar. 28; spread absorbent pads on sheen on Mar. 26-31

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Table 1 -- Oily Sheens, Agency Notifications, and Sampling Activities			
Oily Sheen Event Observation and/or Sampling Date	OSR Reported?/ Report No.?	NRC Reported?/ Incident Report No.?	Remarks/Comments
Apr. 7-8, 2008	Yes/ 2008-0859	Yes/867352 (on Apr. 8)	Light to heavy sheen discharging intermittently from Outfall #22 but is contained inside inner boom area; on Apr. 8, collected net sample from Outfall #22; spread absorbent pads at outfall on Apr. 7-8
Apr. 16, 2008	Yes/Unknown	Yes/868134	sheen discharging from Outfall #22 but is contained inside inner boom area; collected net sample from Outfall #22; spread absorbent pads on outfall
Apr. 22, 2008	Yes/ 2008-0911	Yes/868770	Waste oil globules and sheen discharging from Outfall #22 but are contained inside inner boom area; collected net sample from Outfall #22; spread absorbent pads on outfall

COP0016511

Table 2. January 16 Water Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7329.D	ETX7330.D	ETX7331.D
Client Name	OF-1	SS-76	SL-A
Matrix	Water	Water	Water
Collection Date	01/16/08	01/16/08	01/16/08
Received Date	01/17/08	01/17/08	01/17/08
Extraction Date	01/21/08	01/21/08	01/21/08
Extraction Batch	ENV.1758	ENV.1758	ENV.1758
Date Acquired	01/21/08	01/22/08	01/22/08
Method	PAH-2002	PAH-2002	PAH-2002
Sample Volume (L)	1.0	1.1	1.1
Dilution	NA	NA	NA

Target Compounds	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q
Naphthalene	15.2		44.8		18.3	
C1-Naphthalenes	6.9		25.6		10.1	
C2-Naphthalenes	37.7		202		187	
C3-Naphthalenes	77.1		249		185	
C4-Naphthalenes	120		168		73.3	
Benzothiophene	<1.6	U	<1.6	U	<1.6	U
C1-Benzothiophenes	<3.2	U	<3.2	U	<3.2	U
C2-Benzothiophenes	<3.2	U	<3.2	U	<3.2	U
C3-Benzothiophenes	<3.2	U	<3.2	U	<3.2	U
Biphenyl	2.7		6.9		1.0	J
Acenaphthylene	19.8		26.8		6.1	
Acenaphthene	9.4		74.2		31.4	
Dibenzofuran	10.5		43.0		18.6	
Fluorene	17.4		115		75.2	
C1-Fluorenes	78.6		123		73.9	
C2-Fluorenes	158		164		50.0	
C3-Fluorenes	387		233		31.9	
Carbazole	31.1		110		5.1	
Anthracene	37.1		102		8.4	
Phenanthrene	24.5		489		26.5	
C1-Phenanthrene/Anthracenes	48.4		212		29.9	
C2-Phenanthrene/Anthracenes	218		250		<2.7	U
C3-Phenanthrene/Anthracenes	571		214		<2.7	U
C4-Phenanthrene/Anthracenes	347		164		<2.7	U
Dibenzothiophene	3.1		33.0		11.5	
C1-Dibenzothiophenes	43.7		59.3		18.4	
C2-Dibenzothiophenes	96.5		159		12.7	
C3-Dibenzothiophenes	316		119		21.5	
Fluoranthene	79.0		1080		53.8	
Pyrene	132		1220		58.2	
C1-Fluoranthenes/Pyrenes	169		385		33.2	
C2-Fluoranthenes/Pyrenes	174		236		22.3	
C3-Fluoranthenes/Pyrenes	193		175		29.9	
Naphthobenzothiophene	91.8		187		<1.1	U
C1-Naphthobenzothiophenes	150		193		20.4	
C2-Naphthobenzothiophenes	225		377		42.8	
C3-Naphthobenzothiophenes	130		248		28.6	
Benz(a)anthracene	51.1		471		28.6	
Chrysene	103		726		40.0	
C1-Chrysenes	168		391		25.7	
C2-Chrysenes	215		255		34.5	
C3-Chrysenes	136		281		<1.6	U
C4-Chrysenes	<1.6	U	93.3		<1.6	U
Benzo(b)fluoranthene	142		1010		75.7	
Benzo(k)fluoranthene	38.8		404		22.1	
Benzo(e)pyrene	108		842		55.5	
Benzo(a)pyrene	75.5		782		45.3	
Perylene	34.0		218		16.2	
Indeno(1,2,3-c,d)pyrene	71.1		599		48.3	
Dibenzo(a,h)anthracene	15.5		121		10.1	
Benzo(g,h,i)perylene	87.0		614		57.1	
Total PAHs	5266		14295		1644	
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	5.3		17.9		2.3	
1-Methylnaphthalene	5.6		22.8		14.2	
2,6-Dimethylnaphthalene	4.4		31.3		16.3	
1,6,7-Trimethylnaphthalene	8.6		39.1		24.7	
1-Methylphenanthrene	19.0		63.7		15.9	
C29-Hopane	615		1010		112	
18a-Oleanane	150		179		22.9	
C30-Hopane	835		1170		122	

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
Naphthalene-d8	63	68	67
Acenaphthene-d10	77	82	79
Phenanthrene-d10	64	75	93
Chrysene-d12	75	70	80
Perylene-d12	84	94	83

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016512

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Project J08668
Report 08-2021

Table 3. January 29, 2008 Teflon Net Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

h	ETX7334.D		ETX7335.D		ETX7336.D		ETX7337.D	
Client Name	OF-22-01-29-08		SS-76-01-29-08		SL-A-01-29-08		MH-X-01-29-08	
Matrix	Net		Net		Net		Net	
Collection Date	01/29/08		01/29/08		01/29/08		01/29/08	
Received Date	01/30/08		01/30/08		01/30/08		01/30/08	
Extraction Date	01/30/08		01/30/08		01/30/08		01/30/08	
Extraction Batch	ENV 1761		ENV 1761		ENV 1761		ENV 1761	
Date Acquired	02/01/08		02/01/08		02/01/08		02/01/08	
Method	PAH-2002		PAH-2002		PAH-2002		PAH-2002	
Sample Amount (filter)	1.0		1.0		1.0		1.0	
Dilution	10x		NA		NA		NA	
Target Compounds	Su Corrected Conc. (ng/net)	Q	Su Corrected Conc. (ng/net)	Q	Su Corrected Conc. (ng/net)	Q	Su Corrected Conc. (ng/net)	Q
Naphthalene	186		233		920		201	
C1-Naphthalenes	344		383		1590		286	
C2-Naphthalenes	2630		281		1400		252	
C3-Naphthalenes	12900		186		1000		193	
C4-Naphthalenes	28300		98.1		458		116	
Benzothiophene	21.8		9.0	J	38.8		7.0	J
C1-Benzothiophenes	158		23.9		109		22.1	
C2-Benzothiophenes	573		28.3		148		28.2	
C3-Benzothiophenes	2760		27.8		233		36.4	
Biphenyl	125		123		649		114	
Acenaphthylene	78.7		4.2	J	23.5		6.9	J
Acenaphthene	317		228		1150		201	
Dibenzofuran	878		1100		5650		929	
Fluorene	1140		392		2070		328	
C1-Fluorenes	2750		107		593		156	
C2-Fluorenes	16800		257		1650		329	
C3-Fluorenes	24300		248		1440		287	
Carbazole	5610		194		1100		136	
Anthracene	1280		80.2		415		73.2	
Phenanthrene	3040		2390		14100		2150	
C1-Phenanthrene/Anthracenes	11400		340		1960		343	
C2-Phenanthrene/Anthracenes	38000		63.9		404		56.8	
C3-Phenanthrene/Anthracenes	42800		43.4		273		140	
C4-Phenanthrene/Anthracenes	22000		19.6		92.8		121	
Dibenzothiophene	481		169		1010		148	
C1-Dibenzothiophenes	13600		97.7		626		107	
C2-Dibenzothiophenes	33800		79.7		449		74.3	
C3-Dibenzothiophenes	43200		29.7		147		107	
Fluoranthene	2930		188		994		207	
Pyrene	3920		52		311		82.3	
C1-Fluoranthenes/Pyrenes	8690		13.6		135		87.8	
C2-Fluoranthenes/Pyrenes	7180		16.8		87.9		110	
C3-Fluoranthenes/Pyrenes	4950		18.0		58.5		124	
Naphthobenzothiophene	2190		8.0	J	29.7		18.4	
C1-Naphthobenzothiophenes	6380		16.6		56.0		56.4	
C2-Naphthobenzothiophenes	7430		19.8		91.2		75.5	
C3-Naphthobenzothiophenes	3930		10.7		46.4		63.2	
Benz(a)anthracene	765		5.6	J	36.4		14.7	
Chrysene	2250		9.2	J	29.5		28.8	
C1-Chrysenes	3220		11.1		50.7		56.9	
C2-Chrysenes	3900		17.3		61.1		88.2	
C3-Chrysenes	1080		<10	U	<10	U	71.8	
C4-Chrysenes	297		<10	U	<10	U	<10	U
Benzo(b)fluoranthene	1280		9.3	J	53.3		46.1	
Benzo(k)fluoranthene	411		2.1	J	11.5		11.4	
Benzo(e)pyrene	710		6.0	J	43.7		37.2	
Benzo(a)pyrene	563		4.8	J	32.5		25.9	
Perylene	1280		1.9	J	15.1		18.3	
Indeno(1,2,3-c,d)pyrene	534		4.6	J	33.1		25.2	
Dibenzo(a,h)anthracene	117		1.5	J	4.0	J	7.1	J
Benzo(g,h,i)perylene	685		6.1	J	33.2		32.6	
Total PAHs	374165		7620		41923		8250	
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	318		398		1730		323	
1-Methylnaphthalene	198		145		656		124	
2,6-Dimethylnaphthalene	853		189		924		164	
1,6,7-Trimethylnaphthalene	1650		21.7		137		28.5	
1-Methylphenanthrene	3030		93.9		619		95.0	
C29-Hopane	15000		46.1		229		247	
18a-Oleanane	1680		9.5	J	<10	U	76.4	
C30-Hopane	12900		66.1		270		321	
Surrogate (Su)	Su Recovery (%)		Su Recovery (%)		Su Recovery (%)		Su Recovery (%)	
Naphthalene-d8	82		74		56		68	
Acenaphthene-d10	90		95		73		75	
Phenanthrene-d10	98		87		85		87	
Chrysene-d12	90		88		85		77	
Perylene-d12	99		91		95		88	

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016513

B&B Laboratories
Project J08668
Report 08-2021

Table 4. Recovery Well RW-6 Water Sample
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7333.D
Client Name	RW-6-1-29-08
Matrix	Water
Collection Date	01/29/08
Received Date	01/30/08
Extraction Date	01/30/08
Extraction Batch	ENV 1760
Date Acquired	02/01/08
Method	PAH-2002
Sample Volume (L)	1.1
Dilution	700x

Target Compounds	Su Corrected Conc. (ng/L)	Q
Naphthalene	223100	
C1-Naphthalenes	2433100	
C2-Naphthalenes	12889900	
C3-Naphthalenes	14498100	
C4-Naphthalenes	8845600	
Benzothiophene	156900	
C1-Benzothiophenes	592000	
C2-Benzothiophenes	931400	
C3-Benzothiophenes	1263700	
Biphenyl	15100.0	
Acenaphthylene	<687.6	U
Acenaphthene	383500	
Dibenzofuran	296000	
Fluorene	842000	
C1-Fluorenes	2974900	
C2-Fluorenes	4989400	
C3-Fluorenes	4152400	
Carbazole	<1205.4	U
Anthracene	326100	
Phenanthrene	1265300	
C1-Phenanthrene/Anthracenes	4707100	
C2-Phenanthrene/Anthracenes	5522500	
C3-Phenanthrene/Anthracenes	3772600	
C4-Phenanthrene/Anthracenes	1443800	
Dibenzothiophene	549300	
C1-Dibenzothiophenes	1847100	
C2-Dibenzothiophenes	2506600	
C3-Dibenzothiophenes	2074600	
Fluoranthene	114100	
Pyrene	520000	
C1-Fluoranthenes/Pyrenes	1111600	
C2-Fluoranthenes/Pyrenes	1000700	
C3-Fluoranthenes/Pyrenes	630800	
Naphthobenzothiophene	78400	
C1-Naphthobenzothiophenes	216100	
C2-Naphthobenzothiophenes	234100	
C3-Naphthobenzothiophenes	123700	
Benz(a)anthracene	73500	
Chrysene	148800	
C1-Chrysenes	469000	
C2-Chrysenes	470200	
C3-Chrysenes	199300	
C4-Chrysenes	<1045.7	U
Benzo(b)fluoranthene	16000	
Benzo(k)fluoranthene	4210	
Benzo(e)pyrene	41500	
Benzo(a)pyrene	26900	
Perylene	10400	
Indeno(1,2,3-c,d)pyrene	8890	
Dibenzo(a,h)anthracene	9750	
Benzo(g,h,i)perylene	63400	
Total PAHs	85093450	
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	735000	
1-Methylnaphthalene	2962000	
2,6-Dimethylnaphthalene	6965700	
1,6,7-Trimethylnaphthalene	1882000	
1-Methylphenanthrene	1003000	
C29-Hopane	162200	
18a-Oleanane	17100	
C30-Hopane	151200	

Surrogate (Su)	Su Recovery (%)
Naphthalene-d8	84
Acenaphthene-d10	87
Phenanthrene-d10	97
Chrysene-d12	87
Perylene-d12	82

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016514

Table 5. February 8 Water Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7338.D	ETX7339.D	ETX7340.D
Client Name	RW-1	RW-2	OF-22
Matrix	Water	Water	Water
Collection Date	02/08/08	02/08/08	02/08/08
Received Date	02/12/08	02/12/08	02/12/08
Extraction Date	02/12/08	02/12/08	02/12/08
Extraction Batch	ENV 1766	ENV 1766	ENV 1766
Date Acquired	02/12/08	02/13/08	02/13/08
Method	PAH-2002	PAH-2002	PAH-2002
Sample Volume (L)	1.0	0.8	1.1
Dilution	20x	6000x	20x

Target Compounds	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q
Naphthalene	2720		8608100		87.2	
C1-Naphthalenes	26100		238884500		486	
C2-Naphthalenes	189300		439320800		21500	
C3-Naphthalenes	347300		315645900		78200	
C4-Naphthalenes	321200		133881100		80700	
Benzothiophene	3940		3953700		50.8	
C1-Benzothiophenes	14100		15594900		139	
C2-Benzothiophenes	20400		26363300		6300	
C3-Benzothiophenes	36800		29539100		40100	
Biphenyl	<41.1	U	711200		94.2	
Acenaphthylene	<20	U	<7463	U	507	
Acenaphthene	9970		10784200		782	
Dibenzofuran	4740		9365300		562	
Fluorene	22000		25574800		2040	
C1-Fluorenes	80100		59556000		13500	
C2-Fluorenes	206600		98391000		37800	
C3-Fluorenes	212600		72437700		47300	
Carbazole	5470		2423800		5950	
Anthracene	11700		6780900		1810	
Phenanthrene	25300		73715900		9930	
C1-Phenanthrene/Anthracenes	171200		135978700		46000	
C2-Phenanthrene/Anthracenes	339200		127505500		75000	
C3-Phenanthrene/Anthracenes	338600		77024300		69400	
C4-Phenanthrene/Anthracenes	139400		29448400		34200	
Dibenzothiophene	15200		17677200		2630	
C1-Dibenzothiophenes	82000		46772000		39600	
C2-Dibenzothiophenes	153900		52487800		81600	
C3-Dibenzothiophenes	147000		39330600		84200	
Fluoranthene	4300		1585200		4010	
Pyrene	33500		7428300		4190	
C1-Fluoranthenes/Pyrenes	66200		13915000		8730	
C2-Fluoranthenes/Pyrenes	61100		14072400		7630	
C3-Fluoranthenes/Pyrenes	44400		9256900		6470	
Naphthobenzothiophene	5160		1912700		4610	
C1-Naphthobenzothiophenes	17000		4627700		10700	
C2-Naphthobenzothiophenes	22600		4490900		14200	
C3-Naphthobenzothiophenes	10500		2297600		8310	
Benz(a)anthracene	4870		1424000		1850	
Chrysene	6550		2249300		3460	
C1-Chrysenes	24800		7095200		4630	
C2-Chrysenes	28800		5629900		5720	
C3-Chrysenes	14100		2605300		1690	
C4-Chrysenes	1000		154900		680	
Benzo(b)fluoranthene	1490		410000		2700	
Benzo(k)fluoranthene	186		74000		737	
Benzo(e)pyrene	2510		746600		1870	
Benzo(a)pyrene	1950		581900		1370	
Perylene	1000		217500		1060	
Indeno(1,2,3-c,d)pyrene	616		159100		1200	
Dibenzo(a,h)anthracene	677		192000		332	
Benzo(g,h,i)perylene	4260		1149500		1500	
Total PAHs	3284409		2180032700		878117	
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	5220		162322400		300	
1-Methylnaphthalene	35000		193450300		428	
2,6-Dimethylnaphthalene	92800		250979400		8660	
1,6,7-Trimethylnaphthalene	37400		33981400		8920	
1-Methylphenanthrene	37800		29534900		8300	
C29-Hopane	8570		2464300		19200	
18a-Oleanane	1220		314600		2130	
C30-Hopane	9590		2651300		19200	

Surrogate (Su)	Su Recovery (%)		Su Recovery (%)		Su Recovery (%)	
Naphthalene-d8	76	D	80	D	86	D
Acenaphthene-d10	85	D	96	D	92	D
Phenanthrene-d10	92	D	93	D	97	D
Chrysene-d12	98	D	98	D	85	D
Perylene-d12	98	D	87	D	97	D

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016515

Table 6. February 29 Water Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7341.D	ETX7342.D	ETX7343.D	ETX7344.D	ETX7345.D
Client Name	AAM076-2-29-08	AAM077-2-29-08	AAM080-2-29-08	Outfall22COP2-29-08-1	Outfall22COP2-29-08-2
Matrix	Water	Water	Water	Water	Water
Collection Date	02/29/08	02/29/08	02/29/08	02/29/08	02/29/08
Received Date	03/04/08	03/04/08	03/04/08	03/04/08	03/04/08
Extraction Date	03/04/08	03/04/08	03/04/08	03/04/08	03/04/08
Extraction Batch	ENV 1776	ENV 1776	ENV 1776	ENV 1776	ENV 1776
Date Acquired	03/06/08	03/06/08	03/06/08	03/06/08	03/06/08
Method	PAH-2002	PAH-2002	PAH-2002	PAH-2002	PAH-2002
Sample Volume (L)	0.4	0.3	0.4	1.0	1.0
Dilution	NA	NA	NA	NA	NA

Target Compounds	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q
Naphthalene	35.0		138		58.2		57.0		118	
C1-Naphthalenes	27.5		26.8		18.4		754		578	
C2-Naphthalenes	91.1		149		61.2		10400		10800	
C3-Naphthalenes	235		4280		85.1		22900		25800	
C4-Naphthalenes	302		19300		750		19300		20000	
Benzothiophene	26.0		<6.2	U	<4.6	U	20.9		26.2	
C1-Benzothiophenes	54.5		<12.3	U	<9.2	U	413		472	
C2-Benzothiophenes	<7.8	U	<12.3	U	<9.2	U	4190		4200	
C3-Benzothiophenes	<7.8	U	<12.3	U	<9.2	U	13900		14800	
Biphenyl	8.2		22.8		5.0	J	21.1		30.7	
Acenaphthylene	26.1		39.1		11.6		289		268	
Acenaphthene	45.6		62		43.7		376		492	
Dibenzofuran	30.6		65.0		14.5		302		385	
Fluorene	52.4		123		26.4		1040		1290	
C1-Fluorenes	68.9		1920		82		3250		4480	
C2-Fluorenes	193		8760		340		7990		6870	
C3-Fluorenes	685		13200		1130		8490		9680	
Carbazole	195		2040		476		2020		1810	
Anthracene	83.5		175		51.1		440		314	
Phenanthrene	429		120		174		3260		2130	
C1-Phenanthrene/Anthracenes	435		3680		399		14800		10100	
C2-Phenanthrene/Anthracenes	464		16000		614		24800		16200	
C3-Phenanthrene/Anthracenes	717		18800		2120		19000		14400	
C4-Phenanthrene/Anthracenes	733		10500		2170		10200		7590	
Dibenzothiophene	30.2		165		23.8		1450		1040	
C1-Dibenzothiophenes	104.0		4580		222		15500		8630	
C2-Dibenzothiophenes	153		16300		428		24500		17000	
C3-Dibenzothiophenes	502		23100		2000		22300		15800	
Fluoranthene	862		376		365		483		355	
Pyrene	1280		544		526		630		438	
C1-Fluoranthenes/Pyrenes	551		2250		579		2460		1690	
C2-Fluoranthenes/Pyrenes	442		2110		513		2240		1720	
C3-Fluoranthenes/Pyrenes	345		1960		493		1640		1540	
Naphthobenzothiophene	338		1540		296		1810		1670	
C1-Naphthobenzothiophenes	496		3380		798		3560		2530	
C2-Naphthobenzothiophenes	938		4030		1110		4700		3180	
C3-Naphthobenzothiophenes	709		2410		765		2470		2070	
Benz(a)anthracene	616		182		276		274		193	
Chrysene	1110		515		513		493		485	
C1-Chrysenes	618		1080		421		1080		1010	
C2-Chrysenes	514		1770		506		1500		1270	
C3-Chrysenes	324		742		293		460		367	
C4-Chrysenes	164		61		79.6		74.4		50.5	
Benzo(b)fluoranthene	1280		113		484		83.3		104.0	
Benzo(k)fluoranthene	409		24.2		150		13.4		21.6	
Benzo(e)pyrene	796		93.8		297		62.1		72.3	
Benzo(a)pyrene	759		65.9		289		63.6		55.3	
Perylene	242		393		157		285		262	
Indeno(1,2,3-c,d)pyrene	871		67.4		329		40.7		49.0	
Dibenzo(a,h)anthracene	166		11.9		77.7		19.2		20.2	
Benzo(g,h,i)perylene	836		69.8		327		39.7		42.2	
Total PAHs	20393		167335		20948		256444		216699	
Selected Ratios										
Individual Alkyl Isomers and Hopanes										
2-Methylnaphthalene	19.5		19.0		13.3		413		303	
1-Methylnaphthalene	24.0		23.5		15.8		776		608	
2,6-Dimethylnaphthalene	29.8		31.8		12.1		4050		3780	
1,6,7-Trimethylnaphthalene	12.3		502		5.5		3210		2920	
1-Methylphenanthrene	300		461		305		3720		1970	
C29-Hopane	743		1700		617		909		962	
18a-Oleanane	151		246		85.5		118		102.0	
C30-Hopane	946		1660		747		958		989	

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
Naphthalene-d8	59	61	70	52	62
Acenaphthene-d10	80	69	82	57	64
Phenanthrene-d10	67	77	72	90	61
Chrysene-d12	76	84	89	97	94
Perylene-d12	65	68	68	75	72

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016516

Table 6. February 29 Water Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7346.D
Client Name	Outfall22sediment
Matrix	Water
Collection Date	02/29/08
Received Date	03/04/08
Extraction Date	03/04/08
Extraction Batch	ENV 1776
Date Acquired	03/06/08
Method	PAH-2002
Sample Volume (L)	0.3
Dilution	10x

Target Compounds	Su Corrected Conc. (ng/L)	Q
Naphthalene	378	
C1-Naphthalenes	4010	
C2-Naphthalenes	90100	
C3-Naphthalenes	323200	
C4-Naphthalenes	436200	
Benzothiophene	165	
C1-Benzothiophenes	2870	
C2-Benzothiophenes	29100	
C3-Benzothiophenes	165800	
Biphenyl	618	
Acenaphthylene	2590	
Acenaphthene	3720	
Dibenzofuran	3410	
Fluorene	9670	
C1-Fluorenes	60100	
C2-Fluorenes	175100	
C3-Fluorenes	194600	
Carbazole	29600	
Anthracene	6910	
Phenanthrene	22000	
C1-Phenanthrene/Anthracenes	137400	
C2-Phenanthrene/Anthracenes	290100	
C3-Phenanthrene/Anthracenes	267300	
C4-Phenanthrene/Anthracenes	145300	
Dibenzothiophene	9760	
C1-Dibenzothiophenes	155100	
C2-Dibenzothiophenes	299800	
C3-Dibenzothiophenes	323600	
Fluoranthene	7200	
Pyrene	8460	
C1-Fluoranthenes/Pyrenes	29100	
C2-Fluoranthenes/Pyrenes	29200	
C3-Fluoranthenes/Pyrenes	26400	
Naphthobenzothiophene	26800	
C1-Naphthobenzothiophenes	47500	
C2-Naphthobenzothiophenes	59500	
C3-Naphthobenzothiophenes	37400	
Benz(a)anthracene	2970	
Chrysene	10000	
C1-Chrysenes	17100	
C2-Chrysenes	24100	
C3-Chrysenes	9810	
C4-Chrysenes	1180	
Benzo(b)fluoranthene	2030	
Benzo(k)fluoranthene	532	
Benzo(e)pyrene	1740	
Benzo(a)pyrene	1120	
Perylene	5020	
Indeno(1,2,3-c,d)pyrene	1150	
Dibenzo(a,h)anthracene	362	
Benzo(g,h,i)perylene	1100	
Total PAHs	3528295	
Selected Ratios		
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	2790	
1-Methylnaphthalene	3550	
2,6-Dimethylnaphthalene	35700	
1,6,7-Trimethylnaphthalene	43700	
1-Methylphenanthrene	30300	
C29-Hopane	18800	
18a-Oleanane	2680	
C30-Hopane	19300	

Surrogate (Su)	Su Recovery (%)	
Naphthalene-d8	97	D
Acenaphthene-d10	91	D
Phenanthrene-d10	92	D
Chrysene-d12	97	D
Perylene-d12	90	D

Qualifiers (Q) J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016517

Table 7. March 13 Teflon Net Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7347 D		ETX7348 D	
Client Name	Outfall22-3-13-08		AAM077-3-13-08	
Matrix	Net		Net	
Collection Date	03/13/08		03/13/08	
Received Date	03/14/08		03/14/08	
Extraction Date	03/14/08		03/14/08	
Extraction Batch	ENV 1783		ENV 1783	
Date Acquired	03/18/08		03/18/08	
Method	PAH-2002		PAH-2002	
Sample Number (net)	1.0		1.0	
Dilution	160x		NA	
Target Compounds	Su Corrected Conc. (ng/net)	Q	Su Corrected Conc. (ng/net)	Q
Naphthalene	546	J	29.6	
C1-Naphthalenes	2970		50.2	
C2-Naphthalenes	118700		89.3	
C3-Naphthalenes	1117700		295	
C4-Naphthalenes	1660300		368	
Benzothiophene	45.5	J	1.5	J
C1-Benzothiophenes	1940		7.6	J
C2-Benzothiophenes	27800		8.5	J
C3-Benzothiophenes	468600		102	
Biphenyl	1320	J	23.7	
Acenaphthylene	4490.0		3.7	J
Acenaphthene	4660		57.8	
Dibenzofuran	5460		226	
Fluorene	13600		91.1	
C1-Fluorenes	169400		65.5	
C2-Fluorenes	648000		187	
C3-Fluorenes	849600		305	
Carbazole	116800		40.2	
Anthracene	10500		15.0	
Phenanthrene	121300		529	
C1-Phenanthrene/Anthracenes	867200		284	
C2-Phenanthrene/Anthracenes	1745700		319	
C3-Phenanthrene/Anthracenes	1519900		407	
C4-Phenanthrene/Anthracenes	776200		219	
Dibenzothiophene	44700		40.1	
C1-Dibenzothiophenes	804300		195	
C2-Dibenzothiophenes	1509900		357	
C3-Dibenzothiophenes	1547000		433	
Fluoranthene	33400		27.0	
Pyrene	48900		28.6	
C1-Fluoranthenes/Pyrenes	196400		61.7	
C2-Fluoranthenes/Pyrenes	175100		56.5	
C3-Fluoranthenes/Pyrenes	129000		55.8	
Naphthobenzothiophene	150600		40.3	
C1-Naphthobenzothiophenes	241600		68.8	
C2-Naphthobenzothiophenes	303800		86.7	
C3-Naphthobenzothiophenes	160300		51.7	
Benz(a)anthracene	15800		11.4	
Chrysene	36000		23.3	
C1-Chrysenes	84700		30.5	
C2-Chrysenes	102900		36.7	
C3-Chrysenes	30800		11.0	
C4-Chrysenes	5560		<10	U
Benzo(b)fluoranthene	12700		13.1	
Benzo(k)fluoranthene	2430		2.7	J
Benzo(e)pyrene	10900		9.3	J
Benzo(a)pyrene	9540		7.3	J
Perylene	31000		8.3	J
Indeno(1,2,3-c,d)pyrene	7620		9.2	J
Dibenzo(a,h)anthracene	2000		2.7	J
Benzo(g,h,i)perylene	9010		9.7	J
Total PAHs	15958692		5404	
Individual Alkyl Isomers and Hopanes				
2-Methylnaphthalene	2060		51.7	
1-Methylnaphthalene	2500		23.6	
2,6-Dimethylnaphthalene	38900		43.4	
1,6,7-Trimethylnaphthalene	121700		24.4	
1-Methylphenanthrene	178400		62.0	
C29-Hopane	131200		51.4	
18a-Oleanane	15900		6.8	J
C30-Hopane	142100		64.1	
Surrogate (Su)	Su Recovery (%)		Su Recovery (%)	
Naphthalene-d8	78	D	67	
Acenaphthene-d10	80	D	78	
Phenanthrene-d10	93	D	91	
Chrysene-d12	77	D	96	
Perylene-d12	86	D	70	

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016518

Table 7A. March 21 Teflon Net Sample Results
Portland Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7349.D
Client Name	Outfall22-3-21-08
Matrix	Net
Collection Date	03/21/08
Received Date	03/25/08
Extraction Date	03/25/08
Extraction Batch	ENV.1790
Date Acquired	03/26/08
Method	PAH-2002
Sample (net)	1.0
Dilution	NA

Target Compounds	Su Corrected Conc. (ng/net)	Q
Naphthalene	16.4	
C1-Naphthalenes	32.4	
C2-Naphthalenes	1310	
C3-Naphthalenes	17100	
C4-Naphthalenes	39000	
Benzothiophene	6.3	J
C1-Benzothiophenes	61.7	
C2-Benzothiophenes	236	
C3-Benzothiophenes	6290	
Biphenyl	16.4	
Acenaphthylene	65.6	
Acenaphthene	108	
Dibenzofuran	191	
Fluorene	324	
C1-Fluorenes	5220	
C2-Fluorenes	26300	
C3-Fluorenes	33100	
Carbazole	<10	U
Anthracene	1230	
Phenanthrene	2770	
C1-Phenanthrene/Anthracenes	28600	
C2-Phenanthrene/Anthracenes	61000	
C3-Phenanthrene/Anthracenes	56800	
C4-Phenanthrene/Anthracenes	29300	
Dibenzothiophene	1300	
C1-Dibenzothiophenes	30500	
C2-Dibenzothiophenes	75600	
C3-Dibenzothiophenes	88600	
Fluoranthene	963	
Pyrene	648	
C1-Fluoranthenes/Pyrenes	10100	
C2-Fluoranthenes/Pyrenes	9670	
C3-Fluoranthenes/Pyrenes	5970	
Naphthobenzothiophene	4420	
C1-Naphthobenzothiophenes	6760	
C2-Naphthobenzothiophenes	7490	
C3-Naphthobenzothiophenes	3600	
Benz(a)anthracene	906	
Chrysene	2660	
C1-Chrysenes	3300	
C2-Chrysenes	3790	
C3-Chrysenes	1180	
C4-Chrysenes	180	
Benzo(b)fluoranthene	984	
Benzo(k)fluoranthene	370	
Benzo(e)pyrene	577	
Benzo(a)pyrene	586	
Perylene	1260	
Indeno(1,2,3-c,d)pyrene	531	
Dibenzo(a,h)anthracene	144	
Benzo(g,h,i)perylene	465	
Total PAHs	571832	
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	26.5	
1-Methylnaphthalene	24.4	
2,6-Dimethylnaphthalene	436	
1,6,7-Trimethylnaphthalene	2270	
1-Methylphenanthrene	8060	
C29-Hopane	3240	
18a-Oleanane	379	
C30-Hopane	3460	

Surrogate (Su)	Su Recovery (%)
Naphthalene-d8	98
Acenaphthene-d10	97
Phenanthrene-d10	95
Chrysene-d12	89
Perylene-d12	88

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016519

Table 8. March 27 Monitoring Well Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7350.D	ETX7351.D	ETX7352.D
Client Name	U-5A	U-4	U-29A
Matrix	Water	Water	Water
Collection Date	03/27/08	03/27/08	03/27/08
Received Date	04/02/08	04/02/08	04/02/08
Extraction Date	04/02/08	04/02/08	04/02/08
Extraction Batch	ENV 1799	ENV 1799	ENV 1799
Date Acquired	04/08/08	04/09/08	04/09/08
Method	PAH-2002	PAH-2002	PAH-2002
Sample Volume (L)	1.0	1.0	1.0
Dilution	NA	10x	160x

Target Compounds	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q	Su Corrected Conc. (ng/L)	Q
Naphthalene	1060		2900		167100	
C1-Naphthalenes	16700		42700		4016700	
C2-Naphthalenes	37200		314500		12404300	
C3-Naphthalenes	24400		566300		12450400	
C4-Naphthalenes	12600		405500		7214800	
Benzothiophene	405		3080		83200	
C1-Benzothiophenes	4340		14800		525400	
C2-Benzothiophenes	3400		14700		561000	
C3-Benzothiophenes	5430		31800		793900	
Biphenyl	34.9		282		3410	
Acenaphthylene	341		6380		150000	
Acenaphthene	1790		9530		292100	
Dibenzofuran	1050		14400		296700	
Fluorene	3580		31000		776200	
C1-Fluorenes	2970		97100		2039600	
C2-Fluorenes	2450		224400		4251700	
C3-Fluorenes	2980		157700		3788100	
Carbazole	235		5800		108100	
Anthracene	49.2		11400		316600	
Phenanthrene	205		26400		1581400	
C1-Phenanthrene/Anthracenes	875		128400		3974700	
C2-Phenanthrene/Anthracenes	1830		150300		4771800	
C3-Phenanthrene/Anthracenes	3180		96100		3076100	
C4-Phenanthrene/Anthracenes	3110		45800		1290100	
Dibenzothiophene	611		29300		687000	
C1-Dibenzothiophenes	724		86600		2080400	
C2-Dibenzothiophenes	675		115500		2542800	
C3-Dibenzothiophenes	1630		83900		1755800	
Fluoranthene	103		2840		70900	
Pyrene	227		7640		343500	
C1-Fluoranthenes/Pyrenes	986		13700		637800	
C2-Fluoranthenes/Pyrenes	1220		8930		697400	
C3-Fluoranthenes/Pyrenes	1800		4570		442500	
Naphthobenzothiophene	163		1760		61900	
C1-Naphthobenzothiophenes	119		1690		130900	
C2-Naphthobenzothiophenes	461		1400		134000	
C3-Naphthobenzothiophenes	316		382		73500	
Benz(a)anthracene	81.3		714		38200	
Chrysene	251		1860		72700	
C1-Chrysenes	770		2090		252900	
C2-Chrysenes	1610		1330		290800	
C3-Chrysenes	959		319		178700	
C4-Chrysenes	32.1		<15.7	U	6130	
Benzo(b)fluoranthene	92.5		344		10400	
Benzo(k)fluoranthene	21.8		89.6		2650	
Benzo(e)pyrene	130		234		29000	
Benzo(a)pyrene	111		313		18900	
Perylene	241		335		8500	
Indeno(1,2,3-c,d)pyrene	56.7		199		12700	
Dibenzo(a,h)anthracene	18.5		41.7		14600	
Benzo(g,h,i)perylene	56.2		187		82600	
Total PAHs	143681		2767540		75610590	
Selected Ratios						
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	202		2030		2636800	
1-Methylnaphthalene	26500		66300		3612600	
2,6-Dimethylnaphthalene	20800		164500		6772800	
1,6,7-Trimethylnaphthalene	3100		75500		1443500	
1-Methylphenanthrene	370		35200		1058800	
C29-Hopane	994		320		48000	
18a-Oleanane	508		75.1	J	5740	
C30-Hopane	1720		395		48000	

Surrogate (Su)	Su Recovery (%)		Su Recovery (%)		Su Recovery (%)	
Naphthalene-d8	96		72	D	83	D
Acenaphthene-d10	98		91	D	98	D
Phenanthrene-d10	84		81	D	92	D
Chrysene-d12	92		99	D	91	D
Perylene-d12	81		75	D	84	D

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016520

Table 9. March 26 to April 8 Teflon Net Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7353.D	ETX7356.D	ETX7357.D	ETX7358.D
Client Name	Outfall 22	Outfall 22-3-28-08	Outfall 22-3-31-08	Outfall 22-4-8-08
Matrix	Net	Net	Net	Net
Collection Date	03/26/08	03/28/08	03/31/08	04/08/08
Received Date	04/02/08	04/02/08	04/02/08	04/09/08
Extraction Date	04/10/08	04/10/08	04/10/08	04/10/08
Extraction Batch	ENV 1803	ENV 1803	ENV 1803	ENV 1803
Date Acquired	04/11/08	04/11/08	04/11/08	04/11/08
Method	PAH-2002	PAH-2002	PAH-2002	PAH-2002
Sample Weight (net)	1.0	1.0	1.0	1.0
Dilution	30x	10x	30x	30x

Target Compounds	Su Corrected Conc. (ng/net)	Q	Su Corrected Conc. (ng/net)	Q	Su Corrected Conc. (ng/net)	Q	Su Corrected Conc. (ng/net)	Q
Naphthalene	167	J	257		169	J	521	
C1-Naphthalenes	12100		20900		3440		68900	
C2-Naphthalenes	223100		198300		285900		1206800	
C3-Naphthalenes	584900		353900		1100400		2512500	
C4-Naphthalenes	613700		273700		1074200		1893000	
Benzothiophene	312		565		169	J	781	
C1-Benzothiophenes	3200		6440		1450		19800	
C2-Benzothiophenes	72400		71000		75200		394900	
C3-Benzothiophenes	286800		208000		584900		1470500	
Biphenyl	397		558		1030		3170	
Acenaphthylene	3830		2820		7080		25700	
Acenaphthene	5030		3040		8120		25700	
Dibenzofuran	4840		4110		8000		24900	
Fluorene	12800		8060		25800		60000	
C1-Fluorenes	81000		31400		140800		284400	
C2-Fluorenes	212900		86100		347900		594100	
C3-Fluorenes	284900		105800		359100		649000	
Carbazole	50200		12700		49300		73000	
Anthracene	12600		3950		15300		41700	
Phenanthrene	91100		28200		91000		206900	
C1-Phenanthrene/Anthracenes	396700		113600		418200		731600	
C2-Phenanthrene/Anthracenes	653900		149400		588100		1011700	
C3-Phenanthrene/Anthracenes	577200		140400		542400		855200	
C4-Phenanthrene/Anthracenes	278600		69200		264400		431000	
Dibenzothiophene	60000		25600		66100		156800	
C1-Dibenzothiophenes	454200		115700		444900		817900	
C2-Dibenzothiophenes	832800		195300		728500		1273200	
C3-Dibenzothiophenes	779200		205100		792100		1261900	
Fluoranthene	14100		7220		11500		19200	
Pyrene	23800		7560		20700		34800	
C1-Fluoranthenes/Pyrenes	71900		17400		66000		98700	
C2-Fluoranthenes/Pyrenes	71500		18000		71300		103200	
C3-Fluoranthenes/Pyrenes	58200		14800		61900		75900	
Naphthobenzothiophene	46500		9940		41500		64400	
C1-Naphthobenzothiophenes	86100		16700		77100		109700	
C2-Naphthobenzothiophenes	101200		20800		93300		129400	
C3-Naphthobenzothiophenes	52400		11600		50100		61500	
Benz(a)anthracene	6610		2470		6560		9560	
Chrysene	21600		6120		19500		28300	
C1-Chrysenes	37200		9060		36700		51400	
C2-Chrysenes	48100		11400		44600		54300	
C3-Chrysenes	12900		2900		13300		16800	
C4-Chrysenes	1970		520		1830		1760	
Benzo(b)fluoranthene	3770		1950		3810		5020	
Benzo(k)fluoranthene	2430		1000		1420		3230	
Benzo(e)pyrene	3520		1380		2680		4740	
Benzo(a)pyrene	1320		1350		3020		4780	
Perylene	9520		2910		9860		17600	
Indeno(1,2,3-c,d)pyrene	2130		985		1790		2720	
Dibenzo(a,h)anthracene	393		395		815		1200	
Benzo(g,h,i)perylene	1950		928		1800		2700	
Total PAHs	7267989		2601488		8664983		16998482	
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	7110		12800		1910		44500	
1-Methylnaphthalene	10800		18100		3180		57300	
2,6-Dimethylnaphthalene	92900		86600		107700		531100	
1,6,7-Trimethylnaphthalene	82000		42900		145700		313000	
1-Methylphenanthrene	103300		25200		103800		186700	
C29-Hopane	35800		11600		36900		62700	
18a-Oleanane	3930		1030		4180		6510	
C30-Hopane	35900		11400		37900		61500	

Surrogate (Su)	Su Recovery (%)		Su Recovery (%)		Su Recovery (%)		Su Recovery (%)	
Naphthalene-d8	98	D	94	D	83	D	94	D
Acenaphthene-d10	88	D	94	D	92	D	95	D
Phenanthrene-d10	98	D	83	D	74	D	80	D
Chrysene-d12	98	D	97	D	94	D	94	D
Perylene-d12	98	D	95	D	84	D	94	D

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016521

Table 10. April 16 Teflon Net Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7359.D
Client Name	Outfall22-4-16-08
Matrix	Net
Collection Date	04/16/08
Received Date	04/17/08
Extraction Date	04/17/08
Extraction Batch	ENV 1809
Date Acquired	04/18/08
Method	PAH-2002
Sample Weight (net)	1.0
Dilution	25x

Target Compounds	Su Corrected Conc. (ng/net)	Q
Naphthalene	62.0	J
C1-Naphthalenes	521	
C2-Naphthalenes	18800	
C3-Naphthalenes	76900	
C4-Naphthalenes	199700	
Benzothiophene	35.7	J
C1-Benzothiophenes	512	
C2-Benzothiophenes	3020	
C3-Benzothiophenes	20100	
Biphenyl	19.6	J
Acenaphthylene	641	
Acenaphthene	2240	
Dibenzofuran	1150	
Fluorene	6200	
C1-Fluorenes	26100	
C2-Fluorenes	136600	
C3-Fluorenes	220400	
Carbazole	31300	
Anthracene	4370	
Phenanthrene	10800	
C1-Phenanthrene/Anthracenes	90600	
C2-Phenanthrene/Anthracenes	234600	
C3-Phenanthrene/Anthracenes	262500	
C4-Phenanthrene/Anthracenes	138600	
Dibenzothiophene	5310	
C1-Dibenzothiophenes	85800	
C2-Dibenzothiophenes	278300	
C3-Dibenzothiophenes	348800	
Fluoranthene	8430	
Pyrene	4390	
C1-Fluoranthenes/Pyrenes	40500	
C2-Fluoranthenes/Pyrenes	43200	
C3-Fluoranthenes/Pyrenes	31300	
Naphthobenzothiophene	30500	
C1-Naphthobenzothiophenes	55700	
C2-Naphthobenzothiophenes	70200	
C3-Naphthobenzothiophenes	39400	
Benz(a)anthracene	2870	
Chrysene	10700	
C1-Chrysenes	22700	
C2-Chrysenes	30400	
C3-Chrysenes	8250	
C4-Chrysenes	1020	
Benzo(b)fluoranthene	1860	
Benzo(k)fluoranthene	1050	
Benzo(e)pyrene	1710	
Benzo(a)pyrene	1540	
Perylene	6010	
Indeno(1,2,3-c,d)pyrene	721	
Dibenzo(a,h)anthracene	234	J
Benzo(g,h,i)perylene	579	
Total PAHs	2619445	
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	301	
1-Methylnaphthalene	545	
2,6-Dimethylnaphthalene	4610	
1,6,7-Trimethylnaphthalene	9810	
1-Methylphenanthrene	18100	
C29-Hopane	22000	
18a-Oleanane	2060	
C30-Hopane	20700	

Surrogate (Su)	Su Recovery (%)	
Naphthalene-d8	82	D
Acenaphthene-d10	87	D
Phenanthrene-d10	84	D
Chrysene-d12	86	D
Perylene-d12	84	D

Qualifiers (Q): J=Below the MDL. U=Not detected. B=In procedural blank > 3x MDL. I=Interference. D=Diluted value. NA=Not Applicable. *=Outside QA limits, refer to narrative

COP0016522

Table 11. April 22 Water Sample Results
Willbridge Terminal Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7360.D
Client Name	Outfall 22-4-22-08
Matrix	Water
Collection Date	04/22/08
Received Date	04/24/08
Extraction Date	04/24/08
Extraction Batch	ENV 1812
Date Acquired	04/26/08
Method	PAH-2002
Sample Volume (L)	0.4
Dilution	25x

Target Compounds	Su Corrected Conc. (ng/L)	Q
Naphthalene	214	
C1-Naphthalenes	249	
C2-Naphthalenes	5810	
C3-Naphthalenes	15400	
C4-Naphthalenes	15500	
Benzothiophene	289	
C1-Benzothiophenes	892	
C2-Benzothiophenes	930	
C3-Benzothiophenes	3100	
Biphenyl	53.6	
Acenaphthylene	285	
Acenaphthene	677	
Dibenzofuran	476	
Fluorene	2080	
C1-Fluorenes	5500	
C2-Fluorenes	13500	
C3-Fluorenes	38600	
Carbazole	2100	
Anthracene	1000.0	
Phenanthrene	5050	
C1-Phenanthrene/Anthracenes	14300	
C2-Phenanthrene/Anthracenes	37000	
C3-Phenanthrene/Anthracenes	45900	
C4-Phenanthrene/Anthracenes	32800	
Dibenzothiophene	982	
C1-Dibenzothiophenes	7940	
C2-Dibenzothiophenes	16900	
C3-Dibenzothiophenes	32900	
Fluoranthene	7770	
Pyrene	10600	
C1-Fluoranthenes/Pyrenes	7090	
C2-Fluoranthenes/Pyrenes	9430	
C3-Fluoranthenes/Pyrenes	7550	
Naphthobenzothiophene	7020	
C1-Naphthobenzothiophenes	13100	
C2-Naphthobenzothiophenes	24800	
C3-Naphthobenzothiophenes	13200	
Benz(a)anthracene	3180	
Chrysene	8070	
C1-Chrysenes	9060	
C2-Chrysenes	11500	
C3-Chrysenes	4120	
C4-Chrysenes	1270	
Benzo(b)fluoranthene	6430	
Benzo(k)fluoranthene	1210	
Benzo(e)pyrene	3830	
Benzo(a)pyrene	2680	
Perylene	1960	
Indeno(1,2,3-c,d)pyrene	3020	
Dibenzo(a,h)anthracene	673	
Benzo(g,h,i)perylene	3310	
Total PAHs	461301	
Selected Ratios		
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	188	
1-Methylnaphthalene	195	
2,6-Dimethylnaphthalene	1150	
1,6,7-Trimethylnaphthalene	2040	
1-Methylphenanthrene	3480	
C29-Hopane	29700	
18a-Oleanane	2960	
C30-Hopane	29700	

Surrogate (Su)	Su Recovery (%)	
Naphthalene-d8	94	D
Acenaphthene-d10	96	D
Phenanthrene-d10	97	D
Chrysene-d12	99	D
Perylene-d12	83	D

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

COP0016523

APPENDIX A

NRC INCIDENT REPORTS, OUTFALL #22,

JANUARY – APRIL 2008

NATIONAL RESPONSE CENTER 1-800-424-8802
*** For Public Use ***
Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 859853

INCIDENT DESCRIPTION

*Report taken at 17:07 on 16-JAN-08
Incident Type: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Affected Area: WILLIAMETTE RIVER
The incident was discovered on 15-JAN-08 at 10:00 local time.
Affected Medium: WATER WILLIAMETTE RIVER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

County: MULTNOMAH
City: PORTLAND State: OR Zip: 97062
Section: N/A Township: N/A Range: N/A WILLAMETTE RIVER OUTFALL

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

THE CALLER IS REPORTING AN UNKNOWN SHEEN NEAR THE PORTLAND OUTFALL ON THE WILLIAMETTE RIVER. THERE WAS A CLEANUP INITIATED AFTER IT WAS DISCOVERED AND THE COAST GUARD IS ON SCENE.

INCIDENT DETAILS

Platform Rig Name: N/A
Platform Letter:
Location Area ID: N/A
Location Block ID: N/A
OCSG Number: N/A
OCSP Number: N/A
State Lease Number: N/A
Pier Dock Number: N/A
Berth Slip Number: N/A

---SHEEN INFORMATION---
Sheen Color: RAINBOW
Sheen Odor Description: NONE
Sheen Travel Direction:
Sheen Size Length: 3 FEET
Sheen Size Width:

COP0016525

---WATER INFORMATION---
Body of Water: WILLIAMETTE RIVER
Tributary of: COLUMBIA RIVER
Nearest River Mile Marker: 7.5
Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	
Damages:	NO			

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			M Ar
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: NO
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

CLEANUP IS UNDERWAY, HARD BOOMS WERE LOCATED NEAR THE OUTFALL.
Release Secured: YES
Release Rate:
Estimated Release Duration:

WEATHER

Weather: CLEAR, 36°F
Wave Condition: 0 CALM

ADDITIONAL AGENCIES NOTIFIED

Federal: USCG
State/Local: OR DEQ
State/Local On Scene: NONE
State Agency Number: NONE

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
16-JAN-08 17:13
USCG ICC (ICC ONI)
16-JAN-08 17:13
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
16-JAN-08 17:13
FEMA REGION 10 (MAIN OFFICE)

COP0016526

16-JAN-08 17:13
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
16-JAN-08 17:13
NOAA RPTS FOR OR (MAIN OFFICE)
16-JAN-08 17:13
OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
16-JAN-08 17:13
MSO PORTLAND, OR (MAIN OFFICE)
16-JAN-08 17:15
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
16-JAN-08 17:13
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
16-JAN-08 17:13

ADDITIONAL INFORMATION

THE CALLER HAD NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 859853 ***

COP0016527

NATIONAL RESPONSE CENTER 1-800-424-8802
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Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 863752

INCIDENT DESCRIPTION

*Report taken at 17:14 on 29-FEB-08
Incident Type: FIXED
Incident Cause: UNKNOWN
Affected Area: WILLAMETTE RIVER
The incident was discovered on 29-FEB-08 at 10:30 local time.
Affected Medium: WATER WILLAMETTE RIVER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

5528 NORTH WEST DOAN AVE. County: MULTNOMAH
City: PORTLAND State: OR

OUTFALL 22, RIVER MILE 7.5

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS REPORTING AN ONGOING OBSERVATION OF A PETROLEUM SHEEN THAT HAS BEEN DISCHARGING FROM A STORM SEWAR PIPE, 60IN IN DIAMETER. IT IS OUTFALL 22 ON THE WILLAMETTE RIVER. IT HAS BEEN AN ONGOING EVENT SINCE JAN 17TH. IT IS A SPORADIC SHEEN, COMING AND GOING. TODAY IT THE SHEEN WAS FLOWING VERY SIGNIFICANTLY. THE OUTFALL GOES FROM THE RIVER AND WORKS ITS WAY UP THROUGH FRONT AND DOAN AVE, AND IS SITUATED BETWEEN TWO BULK FUELING FACILITIES, CHEVRON TO THE NORTH, AND CONOCO PHILIPPS TO THE SOUTH.

INCIDENT DETAILS

Package: N/A
Building ID: OUTFALL 22
Type of Fixed Object: OTHER
Power Generating Facility: UNKNOWN
Generating Capacity:
Type of Fuel:
NPDES:
NPDES Compliance: UNKNOWN
---SHEEN INFORMATION---
Sheen Color: DARK BLACK
Sheen Odor Description: PETROLEUM

COP0016528

Sheen Travel Direction:
Sheen Size Length:
Sheen Size Width:

---WATER INFORMATION---
Body of Water: WILLAMETTE RIVER
Tributary of: COLUMBIA RIVER
Nearest River Mile Marker: 7.5
Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	

Damages: NO

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: UNKNOWN
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

BOOM HAS BEEN APPLIED AND CLEANUP CONTRACTORS ARE ON SCENE
Release Secured: NO
Release Rate:
Estimated Release Duration: 4 HOUR

WEATHER

Weather: OVERCAST, 60°F

ADDITIONAL AGENCIES NOTIFIED

Federal: USCG
State/Local: OR SPILL RESP., BUREAU ENVR. SPILL RESP
State/Local On Scene: NONE
State Agency Number: 2008-0596

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
29-FEB-08 17:28
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
29-FEB-08 17:28
U.S. EPA X SEATTLE (MAIN OFFICE)

COP0016529

29-FEB-08 17:31
FEMA REGION 10 (MAIN OFFICE)
29-FEB-08 17:28
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
29-FEB-08 17:28
NOAA RPTS FOR OR (MAIN OFFICE)
29-FEB-08 17:28
OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
29-FEB-08 17:28
SECTOR PORTLAND (COMMAND CENTER)
29-FEB-08 17:32
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
29-FEB-08 17:28
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
29-FEB-08 17:28

ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 863752 ***

COP0016530

NATIONAL RESPONSE CENTER 1-800-424-8802
*** For Public Use ***
Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 864979

INCIDENT DESCRIPTION

*Report taken at 17:29 on 13-MAR-08
Incident Type: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Affected Area: WILLAMETTE RIVER
The incident was discovered on 13-MAR-08 at 09:30 local time.
Affected Medium: WATER /WILLAMETTE RIVER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

County: MULTNOMAH
City: PORTLAND State: OR
OUTFALL 22 WILLAMETTE RIVER, RIVER MILE 7.5

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS REPORTING AN UNKNOWN SHEEN FROM AN UNKNOWN SOURCE. REFER TO REPORT # 863752

INCIDENT DETAILS

Platform Rig Name:
Platform Letter:
Location Area ID:
Location Block ID:
OCSG Number:
OCSP Number:
State Lease Number:
Pier Dock Number:
Berth Slip Number:

---SHEEN INFORMATION---
Sheen Color: RAINBOW
Sheen Odor Description:
Sheen Travel Direction:
Sheen Size Length:
Sheen Size Width:
---WATER INFORMATION---
Body of Water: WILLAMETTE RIVER

COP0016531

Tributary of:
Nearest River Mile Marker: 7.5
Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	

Damages: NO

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			M Ar
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: NO
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

NONE
Release Secured: UNKNOWN
Release Rate:
Estimated Release Duration:

WEATHER

Weather: RAINY, 55°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: NONE
State/Local On Scene: NONE
State Agency Number: NO REPORT #

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
13-MAR-08 17:40
USCG ICC (ICC ONI)
13-MAR-08 17:40
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
13-MAR-08 17:40
FEMA REGION 10 (MAIN OFFICE)
13-MAR-08 17:40
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
13-MAR-08 17:40

COP0016532

NOAA RPTS FOR OR (MAIN OFFICE)
13-MAR-08 17:40
OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
13-MAR-08 17:40
SECTOR PORTLAND (COMMAND CENTER)
13-MAR-08 17:41
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
13-MAR-08 17:40
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
13-MAR-08 17:40

ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 864979 ***

COP0016533

NATIONAL RESPONSE CENTER 1-800-424-8802
*** For Public Use ***
Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 865691

INCIDENT DESCRIPTION

*Report taken at 15:22 on 21-MAR-08
Incident Type: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Affected Area: WILLAMETTE RIVER
The incident was discovered on 21-MAR-08 at 07:45 local time.
Affected Medium: WATER /WILLAMETTE RIVER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

County: MULTNOMAH
City: PORTLAND State: OR
OUTFALL 22 WILLAMETTE RIVER MILE 7.5

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS REPORTING AN UNKNOWN SHEEN FROM AN UNKNOWN SOURCE. REFER TO REPORT # 863752 AND 864979.

INCIDENT DETAILS

Platform Rig Name:
Platform Letter:
Location Area ID:
Location Block ID:
OCSG Number:
OCSP Number:
State Lease Number:
Pier Dock Number:
Berth Slip Number:

---SHEEN INFORMATION---
Sheen Color: RAINBOW
Sheen Odor Description:
Sheen Travel Direction:
Sheen Size Length:
Sheen Size Width:
---WATER INFORMATION---
Body of Water: WILLAMETTE RIVER

COP0016534

Tributary of:
Nearest River Mile Marker: 7.5
Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	
Damages:	NO			

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			M Ar
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: NO
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

BOOMS APPLIED, ABSORBENTS APPLIED
Release Secured: UNKNOWN
Release Rate:
Estimated Release Duration:

WEATHER

Weather: PARTLY CLOUDY, 60°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: OR-SPILL RESPONSE
State/Local On Scene: NONE
State Agency Number: 20080683

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
21-MAR-08 15:31
USCG ICC (ICC ONI)
21-MAR-08 15:31
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
21-MAR-08 15:31
FEMA REGION 10 (MAIN OFFICE)
21-MAR-08 15:31
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
21-MAR-08 15:31

COP0016535

NOAA RPTS FOR OR (MAIN OFFICE)
21-MAR-08 15:31
OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
21-MAR-08 15:31
SECTOR PORTLAND (COMMAND CENTER)
21-MAR-08 15:32
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
21-MAR-08 15:31
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
21-MAR-08 15:31

ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 865691 ***

COP0016536

NATIONAL RESPONSE CENTER 1-800-424-8802
*** For Public Use ***
Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 866124

INCIDENT DESCRIPTION

*Report taken at 19:02 on 26-MAR-08
Incident Type: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Affected Area: WILLAMETTE RIVER
The incident was discovered on 26-MAR-08 at 09:00 local time.
Affected Medium: WATER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

OUTFALL 22 County: MULTNOMAH
CITY OF PORTLAND SEWER PIPE
5528 NORTHWEST DOANE AVENUE
City: PORTLAND State: OR

UNKNOWN SHEEN INCIDENT WILLAMETTE RIVER

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS REPORTING AN UNKNOWN SHEEN FROM AN UNKNOWN SOURCE.

INCIDENT DETAILS

Platform Rig Name:
Platform Letter:
Location Area ID:
Location Block ID:
OCSG Number:
OCSP Number:
State Lease Number:
Pier Dock Number:
Berth Slip Number:

---WATER INFORMATION---
Body of Water: WILLAMETTE RIVER
Tributary of:
Nearest River Mile Marker:

COP0016537

Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	

Damages: NO

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			M Ar
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: NO
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

BOOMS APPLIED AND CONTAINED THE SHEEN.

Release Secured: UNKNOWN
Release Rate:
Estimated Release Duration:

WEATHER

Weather: RAINY, 55°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: NONE
State/Local On Scene: NONE
State Agency Number: NONE

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
26-MAR-08 19:05
USCG ICC (ICC ONI)
26-MAR-08 19:05
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
26-MAR-08 19:05
FEMA REGION 10 (MAIN OFFICE)
26-MAR-08 19:05
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
26-MAR-08 19:05
NOAA RPTS FOR OR (MAIN OFFICE)
26-MAR-08 19:05

COP0016538

OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
26-MAR-08 19:05
SECTOR PORTLAND (COMMAND CENTER)
26-MAR-08 19:06
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
26-MAR-08 19:05
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
26-MAR-08 19:05

ADDITIONAL INFORMATION

CALLER HAS NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 866124 ***

COP0016539

NATIONAL RESPONSE CENTER 1-800-424-8802
*** For Public Use ***
Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 866537

INCIDENT DESCRIPTION

*Report taken at 14:08 on 31-MAR-08
Incident Type: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Affected Area: WILLAMETTE RIVER
The incident was discovered on 31-MAR-08 at 07:00 local time.
Affected Medium: WATER WILLAMETTE RIVER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

County: MULTNOMAH
City: PORTLAND State: OR
UNKNOWN SHEEN INCIDENT, WILLAMETTE RIVER, RIVER MILE 7.5

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS REPORTING AND UNKNOWN SHEEN FROM A UNKNOWN SOURCE IN THE WILLAMETTE RIVE

INCIDENT DETAILS

Platform Rig Name:
Platform Letter:
Location Area ID:
Location Block ID:
OCSG Number:
OCSP Number:
State Lease Number:
Pier Dock Number:
Berth Slip Number:

---SHEEN INFORMATION---
Sheen Color: RAINBOW
Sheen Odor Description:
Sheen Travel Direction:
Sheen Size Length: 60 FEET
Sheen Size Width: 100 FEET
---WATER INFORMATION---
Body of Water: WILLAMETTE RIVER

COP0016540

Tributary of: COLUMBIA RIVER
Nearest River Mile Marker: 7.5
Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	
Damages:	NO			

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			M Ar
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: NO
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

BOOMS APPLIED, ABSORBENTS APPLIED AND CALLED CONTRACTOR FOR CLEAN-UP.
Release Secured: YES
Release Rate:
Estimated Release Duration:

WEATHER

Weather: OVERCAST, 50°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: OSR
State/Local On Scene: NONE
State Agency Number: 20080683

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
31-MAR-08 14:19
USCG ICC (ICC ONI)
31-MAR-08 14:19
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
31-MAR-08 14:19
FEMA REGION 10 (MAIN OFFICE)
31-MAR-08 14:19
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
31-MAR-08 14:19

COP0016541

NOAA RPTS FOR OR (MAIN OFFICE)
31-MAR-08 14:19
OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
31-MAR-08 14:19
SECTOR PORTLAND (COMMAND CENTER)
31-MAR-08 14:20
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
31-MAR-08 14:19
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
31-MAR-08 14:19

ADDITIONAL INFORMATION

NO ADDITIONAL INFORMATION

*** END INCIDENT REPORT # 866537 ***

COP0016542

NATIONAL RESPONSE CENTER 1-800-424-8802
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Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 867352

INCIDENT DESCRIPTION

*Report taken at 13:02 on 08-APR-08
Incident Type: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Affected Area: WILLAMETTE RIVER
The incident was discovered on 08-APR-08 at 08:00 local time.
Affected Medium: WATER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

WILLAMETTE RIVER MILE 7.5 County: MULTNOMAH
City: PORTLAND State: OR

UNKNOWN SHEEN INCIDENT

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS REPORTING AN UNKNOWN SHEEN COMING OUT OF OUTFALL 22 INTO THE WILLAMTETTE RIVER.

INCIDENT DETAILS

Platform Rig Name:
Platform Letter:
Location Area ID:
Location Block ID:
OCSG Number:
OCSP Number:
State Lease Number:
Pier Dock Number:
Berth Slip Number:

---WATER INFORMATION---
Body of Water: WILLAMETTE RIVER
Tributary of:
Nearest River Mile Marker: 7.5
Water Supply Contaminated: UNKNOWN

COP0016543

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	

Damages: NO

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: UNKNOWN
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

MATERIAL CONTAINED WITHIN BOOMS
Release Secured: UNKNOWN
Release Rate:
Estimated Release Duration:

WEATHER

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: OR SPILL RESPONSE
State/Local On Scene: NONE
State Agency Number: 20080859

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
08-APR-08 13:05
USCG ICC (ICC ONI)
08-APR-08 13:05
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
08-APR-08 13:05
FEMA REGION 10 (MAIN OFFICE)
08-APR-08 13:05
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
08-APR-08 13:05
NOAA RPTS FOR OR (MAIN OFFICE)
08-APR-08 13:05
OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)

COP0016544

08-APR-08 13:05
SECTOR PORTLAND (COMMAND CENTER)
08-APR-08 13:06
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
08-APR-08 13:05
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
08-APR-08 13:05

ADDITIONAL INFORMATION

NO SHEEN INFORMATION PROVIDED.

*** END INCIDENT REPORT # 867352 ***

COP0016545

NATIONAL RESPONSE CENTER 1-800-424-8802
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Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 868134

INCIDENT DESCRIPTION

*Report taken at 19:17 on 16-APR-08
Incident Type: PIPELINE
Incident Cause: UNKNOWN
Affected Area: WILLAMETTE RIVER
The incident was discovered on 16-APR-08 at 11:00 local time.
Affected Medium: WATER

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

WILLAMETTE RIVER County: MULTNOMAH
RIVER MILE 7.5
City: PORTLAND State: OR

5528 NORTHWEST DOANE AVENUE

RELEASED MATERIAL(S)

CHRIS Code: UNK Official Material Name: UNKNOWN MATERIAL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER IS REPORTING A SHEEN WHICH IS COMING FROM A PIPELINE DUE TO UNKNOWN REASONS. THE SHEEN WAS SEEN IN THE RIVER.

INCIDENT DETAILS

Pipeline Type: UNKNOWN
DOT Regulated: UNKNOWN
Pipeline Above/Below Ground: ABOVE
Exposed or Under Water: NO
Pipeline Covered: UNKNOWN

---SHEEN INFORMATION---
Sheen Color: WHITISH
Sheen Odor Description:
Sheen Travel Direction:
Sheen Size Length:
Sheen Size Width:
---WATER INFORMATION---
Body of Water: WILLAMETTE RIVER
Tributary of:
Nearest River Mile Marker:

COP0016546

Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	

Damages: NO

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			M Ar
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: NO
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

ABSORBENTS USED. THE SHEEN HAS BEEN REMOVED.

Release Secured: UNKNOWN
Release Rate:
Estimated Release Duration:

WEATHER

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: NONE
State/Local On Scene: NONE
State Agency Number: NONE

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
16-APR-08 19:23
USCG ICC (ICC ONI)
16-APR-08 19:23
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
16-APR-08 19:23
FEMA REGION 10 (MAIN OFFICE)
16-APR-08 19:23
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
16-APR-08 19:23
NOAA RPTS FOR OR (MAIN OFFICE)
16-APR-08 19:23

COP0016547

OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
16-APR-08 19:23
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE OF PIPELINE SAFETY (AUTO))
16-APR-08 19:23
SECTOR PORTLAND (COMMAND CENTER)
16-APR-08 19:24
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
16-APR-08 19:23
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
16-APR-08 19:23

ADDITIONAL INFORMATION

CALLER HAS NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 868134 ***

COP0016548

NATIONAL RESPONSE CENTER 1-800-424-8802
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Information released to a third party shall comply with any
applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 868770

INCIDENT DESCRIPTION

*Report taken at 16:37 on 22-APR-08
Incident Type: UNKNOWN SHEEN
Incident Cause: UNKNOWN
Affected Area: OUTFALL 22
The incident was discovered on 22-APR-08 at 08:45 local time.
Affected Medium: WATER OUTFALL 22

SUSPECTED RESPONSIBLE PARTY

XX

Type of Organization: UNKNOWN

INCIDENT LOCATION

OUTFALL 22 County: MULTNOMAH
WILLAMETTE RIVER
RIVER MILE 7.5
City: PORTLAND State: OR

UNKNOWN SHEEN INCIDENT

RELEASED MATERIAL(S)

CHRIS Code: OUN Official Material Name: UNKNOWN OIL
Also Known As:
Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

CALLER STATED AN UNKNOWN SHEEN WAS DISCOVERED ON OUTFALL 22 AT THE WILLAMETTE RIVER FROM UNKNOWN SOURCE.

INCIDENT DETAILS

Platform Rig Name:
Platform Letter:
Location Area ID:
Location Block ID:
OCSG Number:
OCSP Number:
State Lease Number:
Pier Dock Number:
Berth Slip Number:

---WATER INFORMATION---
Body of Water: OUTFALL 22
Tributary of: WILLAMETTE RIVER

COP0016549

Nearest River Mile Marker:
Water Supply Contaminated: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	

Damages: NO

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			M Ar
Waterway:	N			
Track:	N			

Passengers Transferred: NO
Environmental Impact: UNKNOWN
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

CALLER STATED A CLEAN UP CREW IS ON THE SCENE AT THIS TIME.
Release Secured: UNKNOWN
Release Rate:
Estimated Release Duration:

WEATHER

Weather: OVERCAST, 35°F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: NONE
State/Local On Scene: NONE
State Agency Number: NONE

NOTIFICATIONS BY NRC

USCG HSOC AT DHS (USCG HSOC DESK)
22-APR-08 16:46
USCG ICC (ICC ONI)
22-APR-08 16:46
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
22-APR-08 16:46
U.S. EPA X SEATTLE (MAIN OFFICE)
22-APR-08 16:50
FEMA REGION 10 (MAIN OFFICE)
22-APR-08 16:46
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)

COP0016550

22-APR-08 16:46
NOAA RPTS FOR OR (MAIN OFFICE)
22-APR-08 16:46
OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)
22-APR-08 16:46
SECTOR PORTLAND (COMMAND CENTER)
22-APR-08 16:51
OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)
22-APR-08 16:46
WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)
22-APR-08 16:46

ADDITIONAL INFORMATION

CALLER STATED THE CITY OF PORTLAND AND ORS WILL BE CALLED.

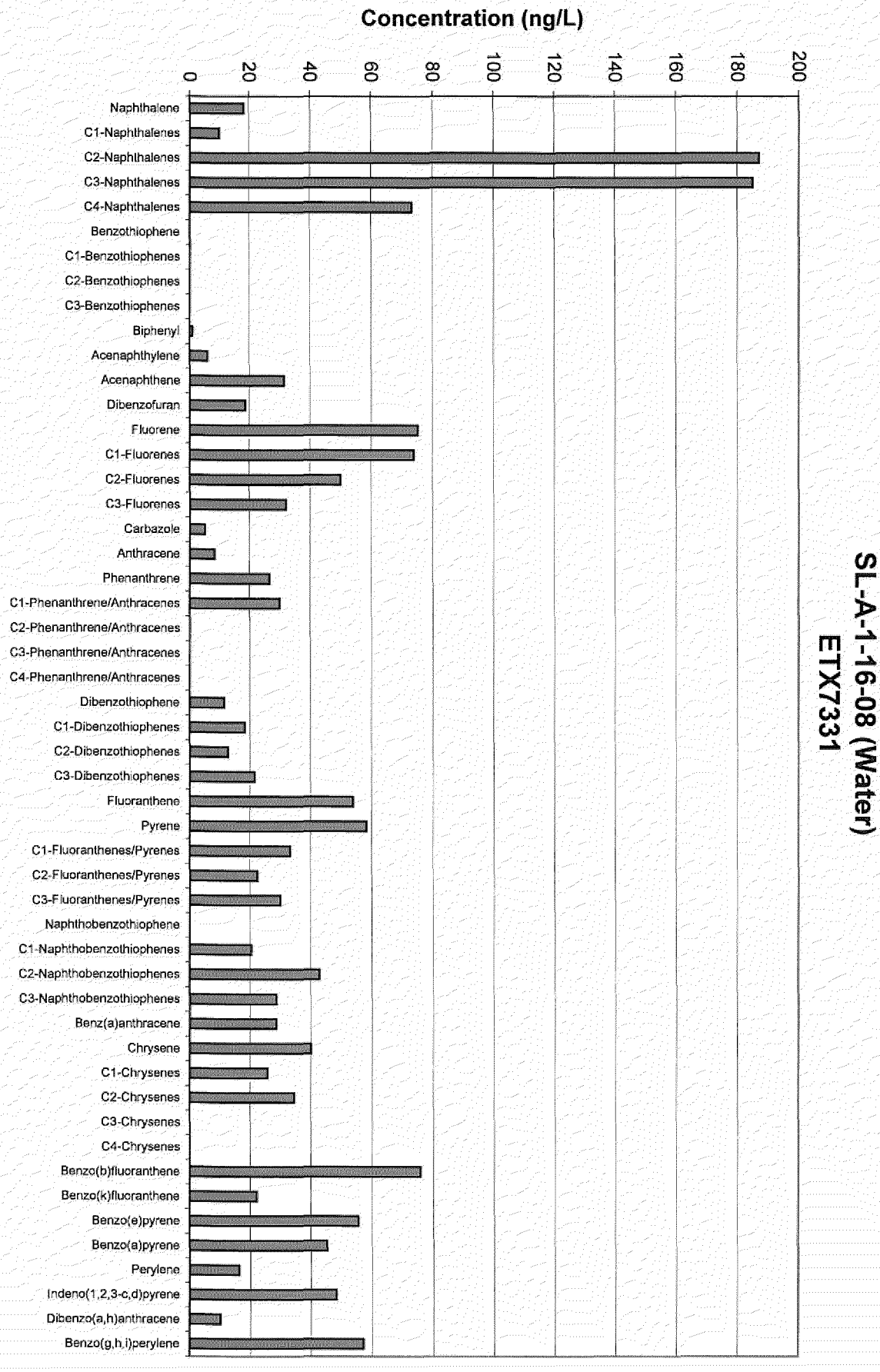
*** END INCIDENT REPORT # 868770 ***

COP0016551

APPENDIX B
OILY SHEEN SAMPLE PAH COMPOSITION
BAR CHARTS

COP001653

Concentration (ng/L)
0
100
200
300
400
500
600
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
OF-1-1-16-08 (Water)
ETX7329


Concentration (ng/L)
0
20
40
60
80
100
120
140
160
180
200
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
SL-A-1-16-08 (Water)
ETX7331

COP001655S

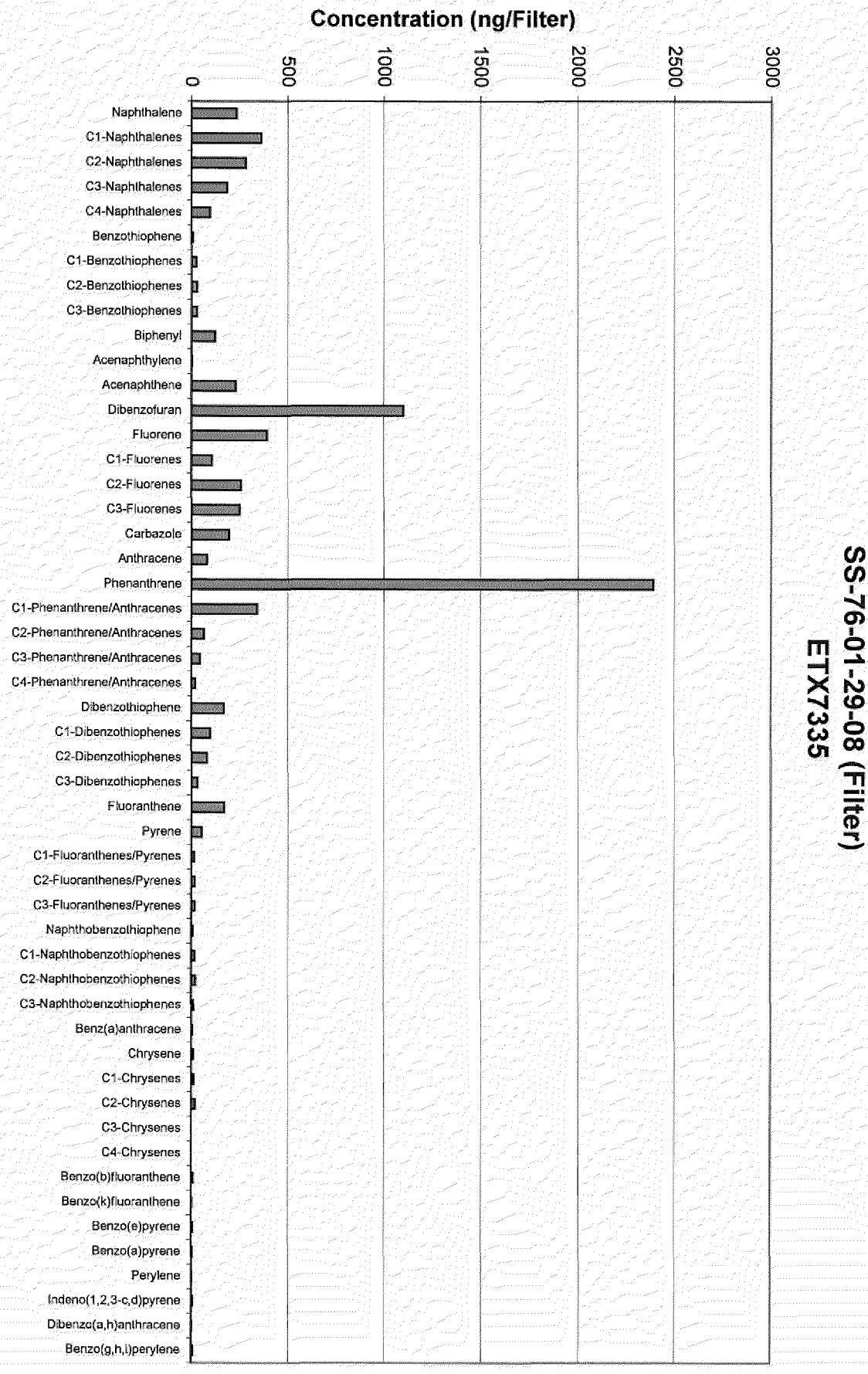
Concentration (ng/L)
0
200
400
600
800
1000
1200
1400
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
SS-76-1-16-08 (Water)
ETX7330

COP0016556

Concentration (ng/L)
0
2000000
4000000
6000000
8000000
10000000
12000000
14000000
16000000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
RW-6-1-29-08 (Water)
ETX7333

COP001657

OF-22-01-29-08 (Filter)
ETX7334

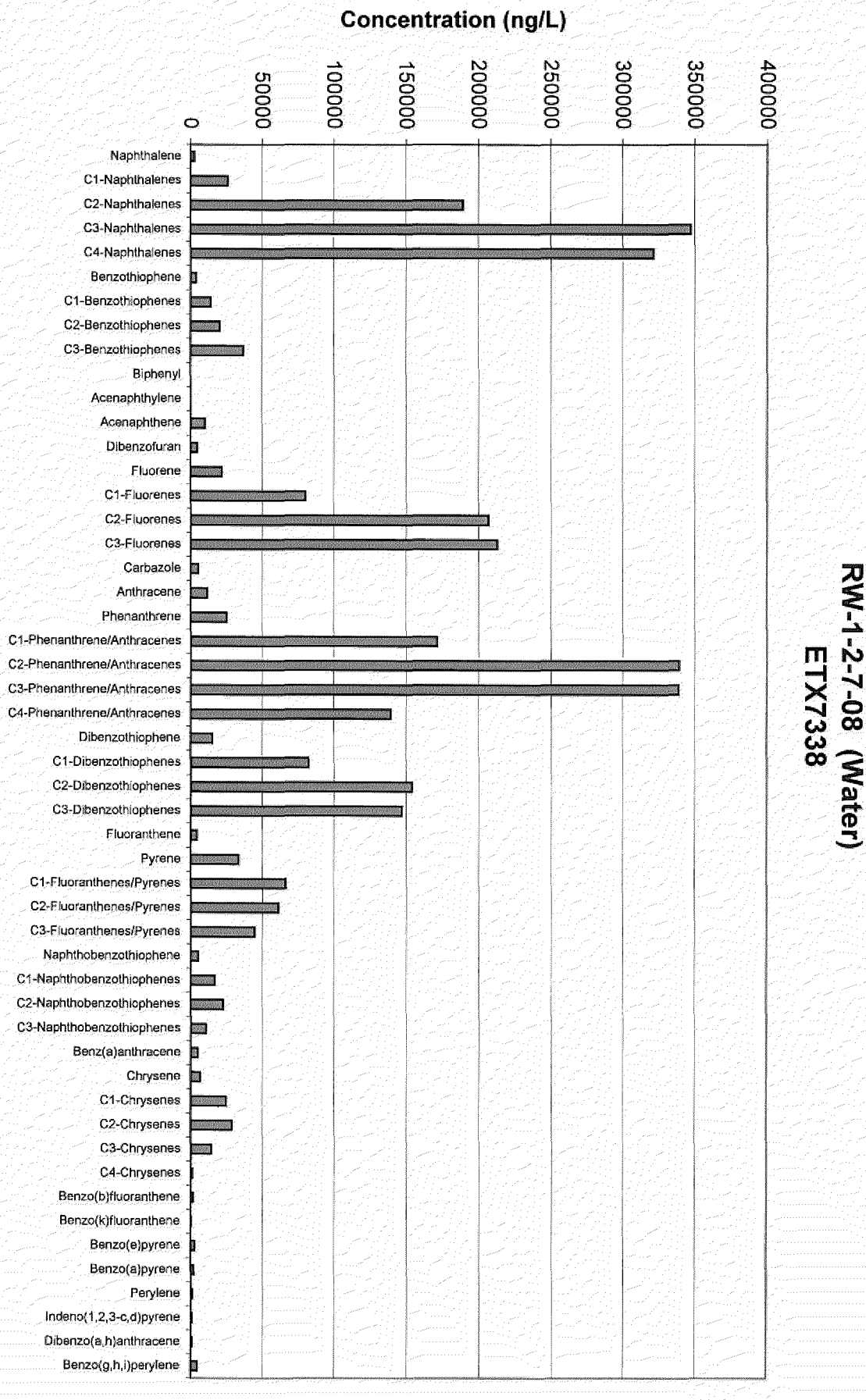


SS-76-01-29-08 (Filter)
ETX7335

COP001655 9

Concentration (ng/Filter)
0
2000
4000
6000
8000
10000
12000
14000
16000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
SL-A-01-29-08 (Filter)
ETX7336

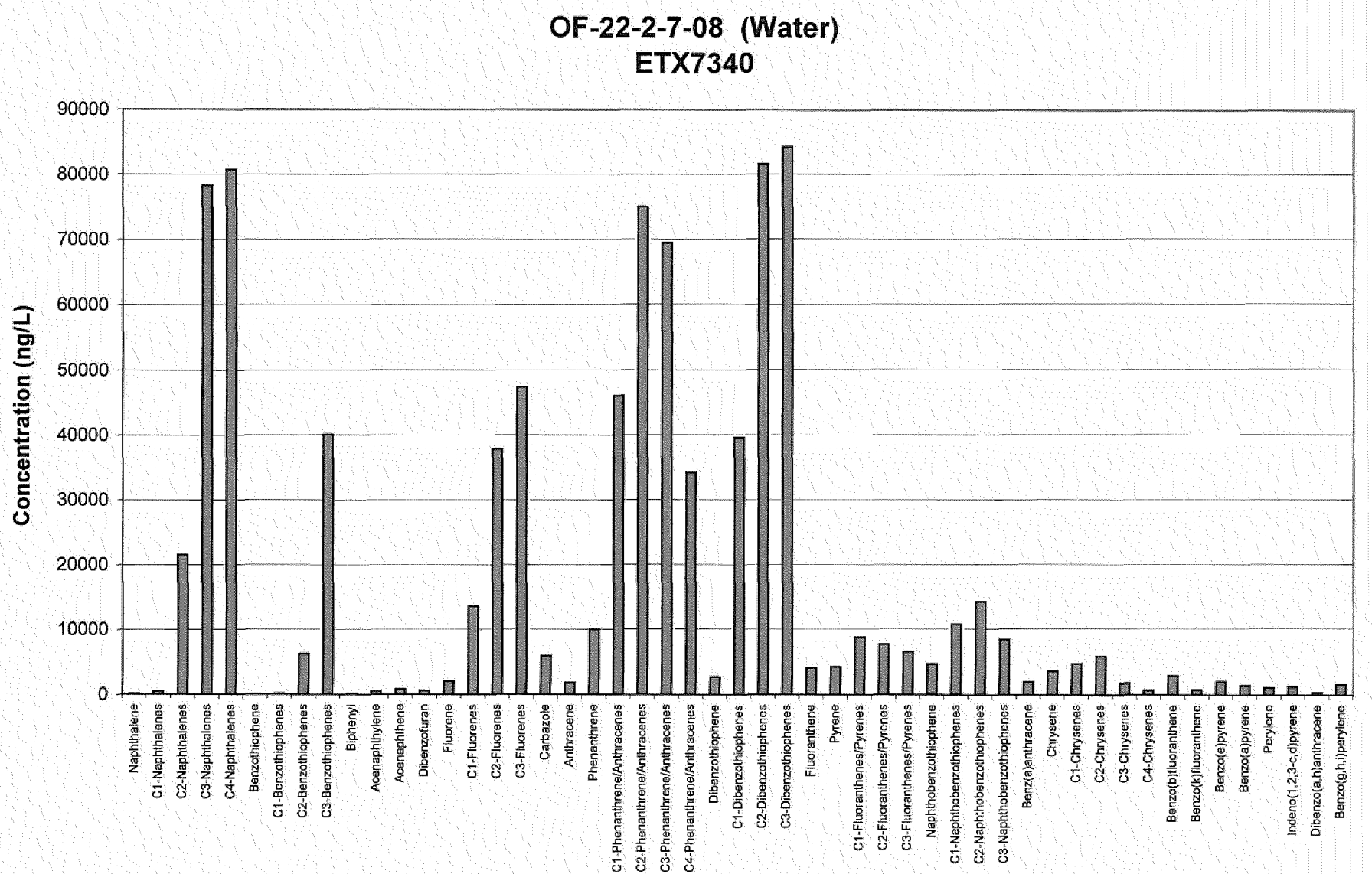
MH-X-01-29-08 (Filter)
ETX7337



RW-1-2-7-08 (Water)
ETX7338

COP001656Z

Concentration (ng/L)
0
50000000
100000000
150000000
200000000
250000000
300000000
350000000
400000000
450000000
500000000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
RW-2-27-08 (Water)
ETX7339


OF-22-2-7-08 (Water)
ETX7340
Concentration (ng/L)
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

COP0016563

COP001656-4

Concentration (ng/L)
0
5000
10000
15000
20000
25000
30000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
Outfall22COP2-29-08-1 (Water)
ETX7344

Concentration (ng/L)
0
5000
10000
15000
20000
25000
30000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
Outfall22COP2-29-08-2 (Water)
ETX7345

COP01656

Concentration (ng/L)
0
50000
100000
150000
200000
250000
300000
350000
400000
450000
500000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
Outfall22-2-29-08 Sediment (Water)
ETX7346

COP001656?

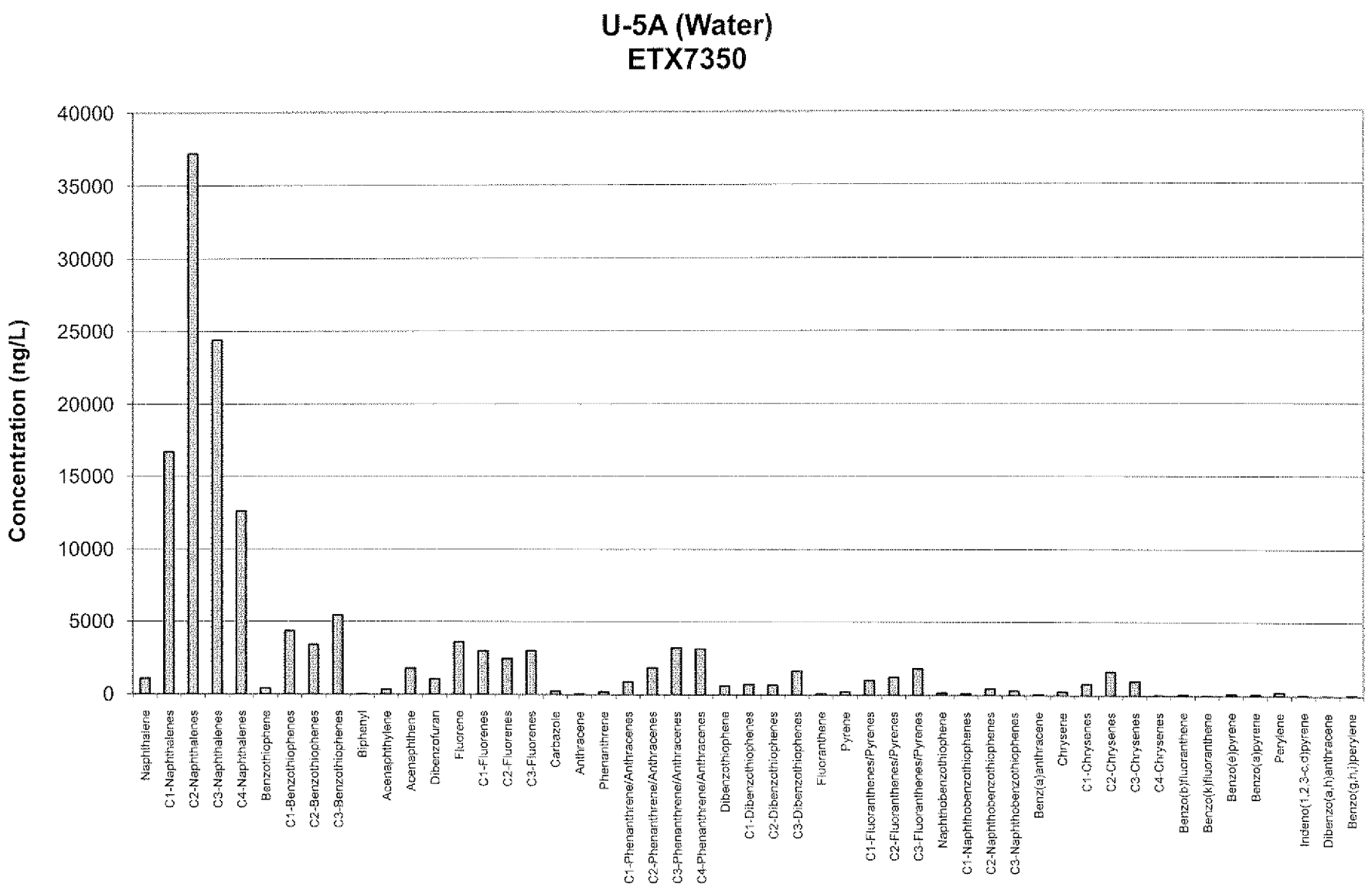
Concentration (ng/net)
0
200000
400000
600000
800000
1000000
1200000
1400000
1600000
1800000
2000000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
Outfall22-3-13-08 (Net)
ETX7347

COP01656B

Concentration (ng/net)
0
100
200
300
400
500
600
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
AAM077-3-13-08 (Net)
ETX7348

COP001656 9

Concentration (ng/net)
0
10000
20000
30000
40000
50000
60000
70000
80000
90000
100000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
Outfall22-3-21-08 (Net)
ETX7349



000011

COP0016570

COP001657

000012

COP001657

U-29A (Water)
ETX7352

Concentration (ng/net)
0
100000
200000
300000
400000
500000
600000
700000
800000
900000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
Outfall 22 (Net)
ETX7353

Outfall 22-3-28-08 (Net)
ETX7356

COP00165754

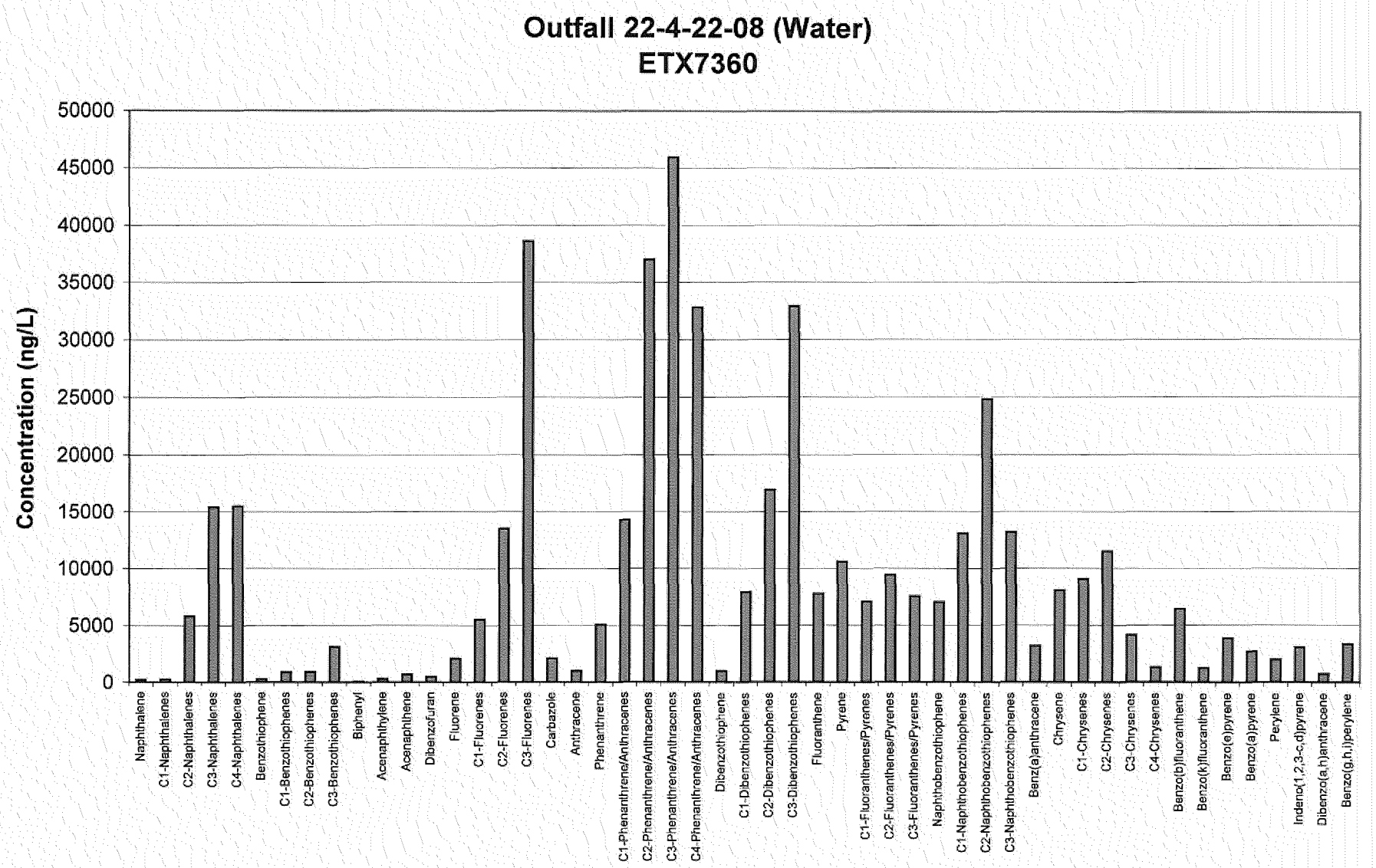
000047

Outfall 22-3-31-08 (Net)
ETX7357

COP00165?6

Outfall 22-4-8-08 (Net)
ETX7358

Concentration (ng/net)
0
50000
100000
150000
200000
250000
300000
350000
400000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene
Outfall 22-4-16-08 (Net)
ETX7359


Outfall 22-4-22-08 (Water)
ETX7360
Concentration (ng/L)
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

APPENDIX C

B&B LABORATORIES TECHNICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Technical Report 08-2018
Entrix, Inc.
Portland Terminal Project
January 16, 2008 Collection Date
Water Samples

January 31, 2008

Introduction

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on January 16, 2008 and arrived on January 17, 2008 in College Station, Texas. The ice chest arrived sealed and in good condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	4.1°C	2.8°C	Three 1-L water samples.

The water samples were collected in support of the Portland Terminal Project (Entrix Project # 15CP.00922.47)). The samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009). There were no discrepancies to report. The water samples were stored in an access-controlled refrigerator (4°C) prior to preparation and analysis.

The results for PAH, selected hopanes, and saturate biological marker analysis are included in this report.

Analytical Methods

The analytical methods employed for PAH analysis are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Water	B&B 1011	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <2X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are

considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report.

Table 2. Analytical reporting units.

Matrix	PAH
Water	ng/L

Table 3. Method Detection Limits.

PAH	Water MDL
Sample size	1 L, 1.0 ml final volume
Unit of measure	ng/L
Naphthalene	3.03
C1-Naphthalenes	3.67
C2-Naphthalenes	6.06
C3-Naphthalenes	6.06
C4-Naphthalenes	6.06
Benzothiophene	1.60
C1-Benzothiophenes	3.21
C2-Benzothiophenes	3.21
C3-Benzothiophenes	3.21
Biphenyl	2.12
Acenaphthylene	1.03
Acenaphthene	1.30
Dibenzofuran	1.12
Fluorene	0.60
C1-Fluorenes	1.19
C2-Fluorenes	1.19
C3-Fluorenes	1.19
Carbazole	1.81
Anthracene	0.76
Phenanthrene	1.34
C1-Phenanthrenes/Anthracenes	2.69
C2-Phenanthrenes/Anthracenes	2.69
C3-Phenanthrenes/Anthracenes	2.69
C4-Phenanthrenes/Anthracenes	2.69
Dibenzothiophene	0.84
C1-Dibenzothiophenes	1.68
C2-Dibenzothiophenes	1.68
C3-Dibenzothiophenes	1.68
Fluoranthene	0.68
Pyrene	0.93
C1-Fluoranthenes/Pyrenes	1.35
C2-Fluoranthenes/Pyrenes	1.35
C3-Fluoranthenes/Pyrenes	1.35
Naphthobenzothiophene	1.12
C1-Naphthobenzothiophenes	2.24
C2-Naphthobenzothiophenes	2.24
C3-Naphthobenzothiophenes	2.24

PAH (Continued)	Water MDL
Sample size	1 L, 1.0 ml final volume
Unit of measure	ng/L
Benz(a)anthracene	0.89
Chrysene	0.78
C1-Chrysenes	1.57
C2-Chrysenes	1.57
C3-Chrysenes	1.57
C4-Chrysenes	1.57
Benzo(b)fluoranthene	2.68
Benzo(k)fluoranthene	2.74
Benzo(e)pyrene	2.83
Benzo(a)pyrene	1.71
Perylene	0.73
Indeno(1,2,3-c,d)pyrene	1.97
Dibenzo(a,h)anthracene	1.49
Benzo(g,h,i)perylene	2.24
Individual Alkyl Isomers and Hopanes	
2-Methylnaphthalene	2.27
1-Methylnaphthalene	1.40
2,6-Dimethylnaphthalene	1.61
1,6,7-Trimethylnaphthalene	0.97
1-Methylphenanthrene	1.06
C29-Hopane	9.6
18a-Oleanane	9.6
C30-Hopane	9.6

Quality Assurance/Quality Control - Waters

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control Variances - Waters

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- No variances were observed.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Thomas J. McDonald
Project Manager

Donell S. Frank
Project Quality Manager

SECOR CHAIN-OF-CUSTODY RECORD

SECOR

COC # _____
Page 1 of 1

FIELD OFFICE INFORMATION	PROJECT INFORMATION
OFFICE: Tualatin, OR	Project No.: 15CP.00922.47 Task:
Send Report to: 7730 SW Mohawk St. Tualatin, OR 97062	Project Name: Portland Terminal
	Project Manager: Jessica Eckart
Telephone: 503-691-2030	Laboratory: B&B Laboratories
Fax/E-Mail: 503-692-7074	

Sample No./ Identification	SAMPLE Date	Time	Matrix*	Container & Size**	Preservative	Number of Containers	PAHs Plus	Saturated Biomarkers								REMARKS/ PRECAUTIONS
OF-1	1/16/08	1215	W	1 L	—		X									Questions -
SS-76	1/16/08	1330	W	1 L	—		X									Please contact
SL-A	1/16/08	1400	W	1 L	—		X									Rob Berrick

ANALYSES / METHOD REQUEST

TAT: ☑ Normal ☐ Rush ☐ Other: _____

REPORTING REQUIREMENTS: ☐ MB & SURGS ☐ Dup/MS/MSD ☐ Raw Data ☐ CLP Rpt ☐ EDD ☐ Other

Possible Hazard Identification: ☒ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Sampled by: Shipment Method: Airbill Number:

	Signature	Print Name	Company	Date	Time
1(a)	Relinquished by:	Ben Haynes	SECOR	1/16/07	1600
1(b)	Received by: Amanda Fryer	Amanda Fryer	B&B Laboratories	1-17-08	9:00am
2(a)	Relinquished by:				
2(b)	Received by:				
3(a)	Relinquished by:				
3(b)	Received by:				

*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other **Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

000105

COP0016584

B&B LABORATORIES RECEIVING/INTEGRITY REPORT

Job: JO 86668 Date Received: 1-17-08 SDG#: 08011701

Sender: Entrix - Portland Terminal

1. Number of Shipping Containers: 1

Comments: small blue cooler

2. Airbill Present? Yes/No Shipping Company: Fed Ex

Airbill Number: 8541 9373 5668 Comments: contact Rob Barrick w/ questions

3. Custody Seals on Container?
No Yes Intact Not Intact Comments: taped shut

4. Chain of Custody Records?
No Yes Comments from Secor Int.

5. General Sample Conditions:
Frozen Cool Unrefrigerated
Dry Ice Blue Ice Ice

Temperature/Comments: 4.1°C temperature blank: 2.8°C

6. List of Broken Containers:

7. Number of Samples Expected: ? Number of Samples Received: 3 waters

8. Problems/Discrepancies:

OF - 1
SS - 76
SL - A

Col. 1-16-08

9. Resolutions:

10. Checked in by: Amanda Frye Date: 01-17-08

From This portion can be removed for Recipient's records.

Date 1/16/06 FedEx Tracking Number 854193735668

Sender's Name Ben Hayes Phone 503 691-2030

Company SECOR INTERNATIONAL INC

Address 7730 SW MOHAWK ST

Dept/Floor/Suite/Room

City TUALATIN State OR ZIP 97062

Your Internal Billing Reference

B&B LABORATORIES SAMPLE INITIATION FORM-ENV

Job #: JO 86668
SDG: 08011701
Client: Entrix - Portland Terminal
Initiation Date: 01-17-08

Number of Samples: 3
Matrix: Waters
Due Date: collected 1-16-08
Comments: must be extracted 01-21-08

Analyses

☒	PAHs	☐	OCs/PCBs	☐	Aliphatics/TPH	☐	EOM
☐	Dry Wt.	☐	%Lipid	☐	TOC/TIC	☐	____
☒	Short Columns	☐	Long Columns	☒	Biomarkers	☐	____

Requested QA/QC (per batch of ____ Client Samples)

☒ Blank	☒ Blank Spike	☒ Blank Spike Duplicate	
☐ Duplicate ____		☐ Matrix Spike ____	
☐ Matrix Spike Duplicate ____		☐ SRM ____	

SEE BACK FOR SPECIFIC STANDARDS TO USE

Surrogate(s): ALI, PAH — Volume(s): 100ml
Spike Standard(s): ALI, PAH — Volume(s): 100ml
Internal Standard(s): ALI, PAH — Volume(s): 100ml
Final Extract Volume (ml): 1.0 — Final Solvent: DCM

Comments:

Sample Custodian Signature: Amanda Frei — Date: 01-17-08
Project Administrator Signature: [signature] — Date: 1/17/08

Spl Initiation.doc

cc: COC Book
Extraction Lab

000109

COP0016587

Extraction Standard Inventory

Organophosphates (OPs)

- ☐ OP-WKSU-0050-006 (Surrogate)
- ☐ OP-WKSK-TPT-006 (Surrogate)
- ☐ OP-WKIS-0100-006 (Int STD)

Aliphatic Hydrocarbons (ALI/TPH)

- ☑ AL-WKSU-20-009 (Surrogate)
- ☐ AL-WKSK-100-010 (Spike)
- ☐ AL-WKIS-200-007 (Int STD)
- ☐ AL-STSU-200-007 **(High Surrogate)**
- ☐ AL-STIS-2000-008 **(High Int STD)**

Polycyclic Aromatic Hydrocarbons (PAHs)

- ☐ AR-WKSU-0500-018 (Surrogate)
- ☐ AR-WKSK-1000-013 (Spike)
- ☐ AR-WKIS-0500-011 (Int STD)
- ☐ AR-STSU-5000-009 **(High Surrogate)**
- ☐ AR-STIS-5000-008 **(High Int STD)**

Organochlorine Pesticides/PCBs (OCs/PCBs)

- ☐ OC-WKSU-1000-010 (Surrogate)
- ☐ OC-WKSK-0400-008 (Spike)
- ☐ PEST-WKSU-1000-003 (Surrogate)*(Epsilon-HCH)*
- ☐ OC-WKIS-1000-008 (Int STD)

Polychlorinated Biphenyls (PCBs by GC/MS)

- ☐ PCB-WKSU-008-008 (Surrogate)
- ☐ PCB-WKSK-300-003 (Spike)
- ☐ PCB-WKIS-010-007 (Int STD)

Polybrominated Diphenyl Ether (PBDEs) and Polybrominated Biphenyls (PBBs)

- ☐ PBDE-WKSU-1.0-005 (Surrogate)
- ☐ PBDE-WKSK-1-006 (Spike)
- ☐ PBDE-WKIS-0.5-005 (Int STD)
- ☐ PBB-WKSU-5.0-004 (Surrogate)
- ☐ PBB-WKSK-2500-001 (Spike)
- ☐ PBB-WKIS-5.0-004 (Int STD)

Linear Alkylbenzenes (LABs)

- ☐ LAB-WKSK-2500-002 (Spike)

000110

COP0016588

8668 ENTRIX- Portland Terminal

SECOR-TIDEWATER
11811 [redacted] 922

Sample Identification/Location OF-1

COLLECTION INFORMATION:
Date 1/16/08 Time 1115 By: BH
☐ Composite ☑ Grab ☐ Filtered

TESTING REQUIRED: ~~TPH-Dx~~ PAHs
PRESERVATIVE(S) ADDED: [redacted] u.p.

Lancaster Laboratories | LL # 29 53386

B&B ID: ETX7329

Client ID: OF-1
Job#: **J08668** Entrix- Portland Terminal
Coll. Date: **01/16/08** Analysis: **PAH, Sat BIO**
Comments:

SECOR-TIDEWATER
11811 [redacted] 922

Sample Identification/Location SS-76

COLLECTION INFORMATION:
Date 1/16/08 Time 1330 By: BH
☐ Composite ☑ Grab ☐ Filtered

TESTING REQUIRED: [redacted] PAHs
PRESERVATIVE(S) ADDED: [redacted] u.p.

Lancaster Laboratories | LL # 29 53386

B&B ID: ETX7330

Client ID: SS-76
Job#: **J08668** Entrix- Portland Terminal
Coll. Date: **01/16/08** Analysis: **PAH, Sat BIO**
Comments:

SECOR-TIDEWATER
11811 [redacted] 922

Sample Identification/Location [redacted] SL-A

COLLECTION INFORMATION:
Date 1/16/08 Time 1400 By: BH
☐ Composite ☑ Grab ☐ Filtered

TESTING REQUIRED: [redacted] PAHs
PRESERVATIVE(S) ADDED: [redacted] u.p.

Lancaster Laboratories | LL # 45 53386

B&B ID: ETX7331

Client ID: SL-A
Job#: **J08668** Entrix- Portland Terminal
Coll. Date: **01/16/08** Analysis: **PAH, Sat BIO**
Comments:

000106

COP0016589

TDI Brooks **TDI-Brooks International**

Thomas J. McDonald 1902 Pinon College Station TX 77845 phone (979) 693-3446 fax (979) 693-6389 tommcdonald@tdi-bi.com

January 17, 2008

Dr. Robert C. Barrick
Senior Consultant
ENTRIX, Inc.
2701 First Avenue, Suite 500
Seattle, WA 98121

Dear Robert:

B&B Laboratories received a shipment of one (1) ice chest that was sent using Federal Express on January 16, 2008 and arrived on January 17, 2008 in College Station, Texas. The cooler arrived sealed and in excellent condition.

Cooler Number	Temperature	Samples Received
1	4.1°C Blank: 2.8°C	3 Water samples

The water samples were collected on January 16, 2008 in support of the Entrix project at Portland Terminal, number 15CP.00922.47. The samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009). There are no discrepancies to report. The water samples are being stored in an access-controlled refrigerator (4°C) until processing.

If I can provide additional information please contact me. Once again, thank you for allowing TDI-Brooks/B&B Laboratories to assist with your analytical requirements on this project.

Sincerely yours,

Amanda J. Fryer

Amanda J. Fryer
Sample Custodian

cc: Dr. Thomas J. McDonald
Mr. Juan Ramirez
Ms. Donell S. Frank

000112

COP0016590

Technical Report 08-2021
Entrix, Inc./Secor International Inc.
Portland Terminal Project
January 29, 2008 Collection Date
Water and Filter (Net) Samples

February 18, 2008

Introduction

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on January 29, 2008 and arrived on January 30, 2008 in College Station, Texas. The ice chest arrived sealed and in good condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	1.0°C	na	One 1-L water sample and four filter (net) samples.

The water and filter (net) samples were collected in support of the Portland Terminal Project. The samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009). There were no discrepancies to report. The water and filter samples were stored in an access-controlled refrigerator (4°C) prior to preparation and analysis.

The results for PAH, selected hopanes, and saturate biological marker analysis are included in this report.

Analytical Methods

The analytical methods employed for PAH analysis are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Water	B&B 1011	B&B 1006
Filter (Net)	SW-846 3580A	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <2X MDL are

qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report.

Table 2. Analytical reporting units.

Matrix	PAH
Water Filter (Net)	ng/L ng/filter

Table 3. Method Detection Limits.

PAH	Water MDL	Filter MDL
Sample size	1 L, 1.0 ml final volume	1 filter, 1.0 ml final volume
Unit of measure	ng/L	ng/filter
Naphthalene	3.03	10.0
C1-Naphthalenes	3.67	10.0
C2-Naphthalenes	6.06	10.0
C3-Naphthalenes	6.06	10.0
C4-Naphthalenes	6.06	10.0
Benzothiophene	1.60	10.0
C1-Benzothiophenes	3.21	10.0
C2-Benzothiophenes	3.21	10.0
C3-Benzothiophenes	3.21	10.0
Biphenyl	2.12	10.0
Acenaphthylene	1.03	10.0
Acenaphthene	1.30	10.0
Dibenzofuran	1.12	10.0
Fluorene	0.60	10.0
C1-Fluorenes	1.19	10.0
C2-Fluorenes	1.19	10.0
C3-Fluorenes	1.19	10.0
Carbazole	1.81	10.0
Anthracene	0.76	10.0
Phenanthrene	1.34	10.0
C1-Phenanthrenes/Anthracenes	2.69	10.0
C2-Phenanthrenes/Anthracenes	2.69	10.0
C3-Phenanthrenes/Anthracenes	2.69	10.0
C4-Phenanthrenes/Anthracenes	2.69	10.0
Dibenzothiophene	0.84	10.0
C1-Dibenzothiophenes	1.68	10.0
C2-Dibenzothiophenes	1.68	10.0
C3-Dibenzothiophenes	1.68	10.0
Fluoranthene	0.68	10.0
Pyrene	0.93	10.0
C1-Fluoranthenes/Pyrenes	1.35	10.0
C2-Fluoranthenes/Pyrenes	1.35	10.0
C3-Fluoranthenes/Pyrenes	1.35	10.0
Naphthobenzothiophene	1.12	10.0
C1-Naphthobenzothiophenes	2.24	10.0

PAH (Continued)	Water MDL	Filter MDL
Sample size	1 L, 1.0 ml final volume	1 filter, 1.0 ml final volume
Unit of measure	ng/L	ng/filter
C2-Naphthobenzothiophenes	2.24	10.0
C3-Naphthobenzothiophenes	2.24	10.0
Benz(a)anthracene	0.89	10.0
Chrysene	0.78	10.0
C1-Chrysenes	1.57	10.0
C2-Chrysenes	1.57	10.0
C3-Chrysenes	1.57	10.0
C4-Chrysenes	1.57	10.0
Benzo(b)fluoranthene	2.68	10.0
Benzo(k)fluoranthene	2.74	10.0
Benzo(e)pyrene	2.83	10.0
Benzo(a)pyrene	1.71	10.0
Perylene	0.73	10.0
Indeno(1,2,3-c,d)pyrene	1.97	10.0
Dibenzo(a,h)anthracene	1.49	10.0
Benzo(g,h,i)perylene	2.24	10.0
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	2.27	10.0
1-Methylnaphthalene	1.40	10.0
2,6-Dimethylnaphthalene	1.61	10.0
1,6,7-Trimethylnaphthalene	0.97	10.0
1-Methylphenanthrene	1.06	10.0
C29-Hopane	9.6	10.0
18a-Oleanane	9.6	10.0
C30-Hopane	9.6	10.0

Quality Assurance/Quality Control - Waters

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are

corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control - Filters

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control Variances - Waters

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- ETX7333 (RW-6-1-29-08) required dilution prior to instrumental analysis due to high native PAH levels. The surrogate recoveries are annotated with a "D".

Comment

- Surrogates were re-added to the diluted sample prior to instrument analysis.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

Quality Assurance/Quality Control Variances - Filters

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- ETX7334 (OF-22-01-29-08) required dilution prior to instrumental analysis due to high native PAH levels. The surrogate recoveries are annotated with a "D".

Comment

- Surrogates were re-added to the diluted sample prior to instrument analysis.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Thomas J. McDonald
Project Manager

Donell S. Frank
Project Quality Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: SECOR
REPORT TO: Jessica Eckart
ADDRESS: 7730 Mohawk St
Tualatin, OR 97062
PHONE: 503 691 2030 FAX:
PROJECT NAME: 0922 Portland Terminal (COC)
PROJECT NUMBER: 0922
SAMPLED BY: Norman Swanson

INVOICE TO: SECOR
Contact Jessica Eckart
P.O. NUMBER: NA

PRESERVATIVE

REQUESTED ANALYSES

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER Specify: RUSH
* Turnaround Requests less than standard may incur Rush Charges

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
1	AW6-1-29-08	1-29-08 / 0930	W	1	Not Preserved	
2	1L Amber					
3						
4						
5						
6						
7						
8						
9						
10						

PAH + Saturate biomarkers per ENTRIX protocol, RUSH-Expedite analysis, Contact Bob Barrick for Instructions. Release of electronic and hard copy data to ENTRIX is authorized.

RELEASED BY: PRINT NAME: Norman Swanson FIRM: SECOR DATE: 1-29-08 TIME: 1741
RECEIVED BY: Amanda Fryer PRINT NAME: Amanda Fryer FIRM: B&B Labs DATE: 01-30-08 TIME: 9:00 am
RELEASED BY: PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:
ADDITIONAL REMARKS: Fed Ex tracking # 8632 0004 7754
TEMP: 1.0°C PAGE OF

TAL-1000 0907

000159

COP0016596

CHAIN OF CUSTODY FORM

Sample Identification Number
DF22-01-29-08

ACCOUNT INFORMATION

Account Name: SECOR
Customer Code _____

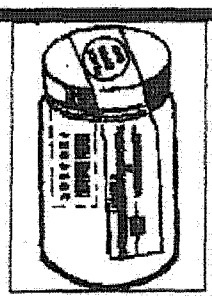
Address: 7730 Mohawk St
Tualatin OR 97062

Contact: Jessica Eckart
Tel No.: 503-691-2038

SITE INFORMATION

Location 0922 Portland Terminal
Address 5526 Doane Av
Portland OR 97210

Lat: _____
Long: _____
Date: 1-29-08
Time: 0925



Peel off & apply the entire label which contains the sample ID number.

SAMPLE INFORMATION

Test #: _____
Test Type _____

Other Test: _____
Collection Facility _____
Address _____

Other: _____
Tel No.: 503-383-4905
Collector: CM

Description: PAH + Saturate biomarkers per ENTRIX protocols.
Rush - expedite analysis, Contact Rob Barrick for instructions.
Release of electronic and hardcopy to ENTRIX is authorized.

CHAIN OF CUSTODY DOCUMENT

Purpose of Change of custody	Released By	Received by	Date
Provide sample for testing	Signature of Collector	Signature of Receiver	1741 1/29/08
Provide shipment	Signature of Receiver	Mode of Transportation to laboratory	
	Amanda Frue	Fed Ex tracking no. 8632 0004 7754 01/30/08 9:00 am	
	B&B Laboratories		/ /

000160

COP0016597

CHAIN OF CUSTODY FORM

Sample Identification Number
SL-A-01-29-08

ACCOUNT INFORMATION

Account Name: SECOR
Customer Code _____

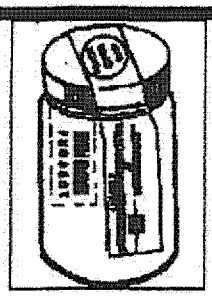
Address: 7730 Mohawk st
Tualatin, OR 97210

Contact: Jessica Eckart
Tel No.: 503-691-2030

SITE INFORMATION

Location 0922 Portland Terminal
Address 5528 Doane Ave
Portland OR 97210

Lat: _____
Long: _____
Date: 11-29-08
Time: 1104



Peel off & apply the entire label which contains the sample ID number.

SAMPLE INFORMATION

Test #: _____
Test Type _____

Other Test: _____
Collection Facility _____
Address _____

Other: _____
Tel No.: 503-383-8905
Collector: CLS

Description: PAH + Saturate biomarkers per ENTRIX protocol, RUSH - expedite analysis. Contact Rob Bassick for instructions. Release of electronic and hardcopy data to ENTRIX is authorized.

CHAIN OF CUSTODY DOCUMENT

Purpose of Change of custody	Released By	Received by	Date
Provide sample for testing	Signature of Collector	Signature of Receiver	1741 11/29/08
Provide shipment	Signature of Receiver	Mode of Transportation to laboratory	
	Amanda Yue	FedEx tracking no. 8632 0004 7754	01/30/08 9:00 am
	B:B Laboratories		/ /

000162

COP0016598

CHAIN OF CUSTODY FORM

Sample Identification Number
MH-X-01-29-08

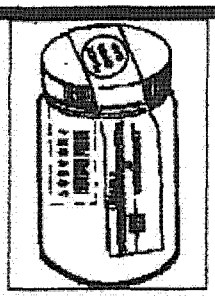
ACCOUNT INFORMATION

Account Name: SECOR
Customer Code

Address: 7730 Mohawk St, Tualatin, OR 97062
Contact: Jessica Eckart
Tel No.: 503-691-2030

SITE INFORMATION

Location: 0922 Portland Terminal
Address: 5528 Doane Av, Portland OR 97210
Lat:
Long:
Date: 1-29-08
Time: 1116



Peel off & apply the entire label which contains the sample ID number.

SAMPLE INFORMATION

Test #:
Test Type

Other Test:
Collection Facility
Address
Other:
Tel No.: 503-363-8905
Collector: CS

Description: PAH + Saturate biomarkers per ENTRIX protocol. RUSH - expedite analysis. Contact Rob Barrick for instructions. Release of hardcopy and electronic data to ENTRIX is authorized.

CHAIN OF CUSTODY DOCUMENT

Purpose of Change of custody	Released By	Received by	Date
Provide sample for testing	Signature of Collector	Signature of Receiver	1741 1/29/08
Provide shipment	Signature of Receiver	Mode of Transportation to laboratory	
	Amanda Fryer	Fed Ex tracking no. 8632 0004 7754	01/30/08 9:00 am
	BiB Laboratories		/ /

000163

COP0016599

CHAIN OF CUSTODY FORM

Sample Identification Number
SS-7601-29-08

ACCOUNT INFORMATION

Account Name: GECOR
Customer Code _____

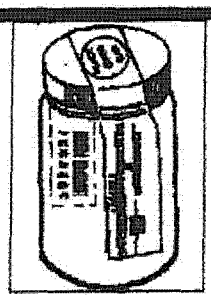
Address: 7730 Mohawk St
Ivalatin OR 97062

Contact: Jessica Ecbart
Tel No.: 503-691-2030

SITE INFORMATION

Location 0922 Portland Terminal
Address 5526 Doane Ave
Portland, OR 97210

Lat: _____
Long: _____
Date: 1-29-08
Time: 1137



Peel off & apply the entire label which contains the sample ID number.

SAMPLE INFORMATION

Test #: _____
Test Type _____

Other Test: _____
Collection Facility _____
Address _____

Other: _____
Tel No.: _____
Collector: _____

Description: PAH + Saliwate biomarkers per ENTRIX protocol. RUSH-expedite analysis. Contact Rob Barrick for instructions. Release of electronic and hardcopy data to ENTRIX is authorized.

CHAIN OF CUSTODY DOCUMENT

Purpose of Change of custody	Released By	Received by	Date
Provide sample for testing	Signature of Collector	Signature of Receiver	1741 1/29/08
Provide shipment	Signature of Receiver	Mode of Transportation to laboratory	
	Amanda Zue	FedEx tracking no. 8632 0004 7754	01/30/08 9:00 am
	B&B Laboratories		/ /

000161

COP0016600

Technical Report 08-2024
Entrix, Inc./Secor International Inc.
Portland Terminal Project
February 8, 2008 Collection Date
Water Samples

February 22, 2008

Introduction

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on February 11, 2008 and arrived on February 12, 2008 in College Station, Texas. The ice chest arrived sealed and in good condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	4.6°C	2.1°C	Three 1-L water samples.

The water samples were collected in support of the Portland Terminal Project (Secor Project # 922). The samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009). There were no discrepancies to report. The water samples were stored in an access-controlled refrigerator (4°C) prior to preparation and analysis.

The results for PAH, selected hopanes, and saturate biological marker analysis are included in this report.

Analytical Methods

The analytical methods employed for PAH analysis are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Water	B&B 1011	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <2X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report.

Table 2. Analytical reporting units.

Matrix	PAH
Water	ng/L

Table 3. Method Detection Limits.

PAH	Water MDL
Sample size	1 L, 1.0 ml final volume
Unit of measure	ng/L
Naphthalene	3.03
C1-Naphthalenes	3.67
C2-Naphthalenes	6.06
C3-Naphthalenes	6.06
C4-Naphthalenes	6.06
Benzothiophene	1.60
C1-Benzothiophenes	3.21
C2-Benzothiophenes	3.21
C3-Benzothiophenes	3.21
Biphenyl	2.12
Acenaphthylene	1.03
Acenaphthene	1.30
Dibenzofuran	1.12
Fluorene	0.60
C1-Fluorenes	1.19
C2-Fluorenes	1.19
C3-Fluorenes	1.19
Carbazole	1.81
Anthracene	0.76
Phenanthrene	1.34
C1-Phenanthrenes/Anthracenes	2.69
C2-Phenanthrenes/Anthracenes	2.69
C3-Phenanthrenes/Anthracenes	2.69
C4-Phenanthrenes/Anthracenes	2.69
Dibenzothiophene	0.84
C1-Dibenzothiophenes	1.68
C2-Dibenzothiophenes	1.68
C3-Dibenzothiophenes	1.68
Fluoranthene	0.68
Pyrene	0.93
C1-Fluoranthenes/Pyrenes	1.35
C2-Fluoranthenes/Pyrenes	1.35
C3-Fluoranthenes/Pyrenes	1.35
Naphthobenzothiophene	1.12
C1-Naphthobenzothiophenes	2.24
C2-Naphthobenzothiophenes	2.24
C3-Naphthobenzothiophenes	2.24
Benz(a)anthracene	0.89
Chrysene	0.78
C1-Chrysenes	1.57

PAH (Continued)	Water MDL
Sample size	1 L, 1.0 ml final volume
Unit of measure	ng/L
C2-Chrysenes	1.57
C3-Chrysenes	1.57
C4-Chrysenes	1.57
Benzo(b)fluoranthene	2.68
Benzo(k)fluoranthene	2.74
Benzo(e)pyrene	2.83
Benzo(a)pyrene	1.71
Perylene	0.73
Indeno(1,2,3-c,d)pyrene	1.97
Dibenzo(a,h)anthracene	1.49
Benzo(g,h,i)perylene	2.24
Individual Alkyl Isomers and Hopanes	
2-Methylnaphthalene	2.27
1-Methylnaphthalene	1.40
2,6-Dimethylnaphthalene	1.61
1,6,7-Trimethylnaphthalene	0.97
1-Methylphenanthrene	1.06
C29-Hopane	9.6
18a-Oleanane	9.6
C30-Hopane	9.6

Quality Assurance/Quality Control - Waters

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control Variances - Waters

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- ETX7338 (RW-1), ETX7339 (RW-2), and ETX7340 (OF-22) all required dilution prior to instrumental analysis due to high native PAH levels. The surrogate recoveries are annotated with a "D".

Comment

- Surrogates were re-added to the diluted sample prior to instrument analysis.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Thomas J. McDonald
Project Manager

Donell S. Frank
Project Quality Manager

SECOR

SECOR CHAIN-OF-CUSTODY RECORD

COC # _____

Page 1 of 1

FIELD OFFICE INFORMATION	PROJECT INFORMATION
OFFICE: Portland - 15	Project No.: 922 Task:
Send Report to: SECOR 7730 SW Mohawk St. Tualatin, OR 97062	Project Name: Portland Terminal
	Project Manager: Jessica Eckart
Telephone: 503-691-2030	Laboratory: B & B 1902 Pinson College Station, TX
Fax/E-Mail: 503-692-7074	

ANALYSES / METHOD REQUEST

REMARKS/ PRECAUTIONS

TAT: ☐ Normal ☒ Rush ☐ Other: 24 hrs

REPORTING REQUIREMENTS: ☐ MB & SURGS ☐ Dup/MS/MSD ☐ Raw Data ☐ CLP Rpt ☐ EDD ☐ Other

Sample No. / Identification	SAMPLE Date	Time	Matrix*	Container & Size**	Preservative	Number of Containers	PAHs with bio markers									REMARKS/ PRECAUTIONS
RW-2	2-8-08	920	W	1-Lit.	—		X									contact Rob
OF-22	2-8-08	850	W	1-Lit.	—		X									Barrick with
RW-1	2-8-08	908	W	1-Lit.	—		X									any questions

Possible Hazard Identification: ☐ Non-Hazardous ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

Sampled by: Shipment Method: Airbill Number:

	Signature	Print Name	Company	Date	Time
1(a) Relinquished by:	Ben Haynes	Ben Haynes	SECOR	2/11/08	1500
1(b) Received by:	Amanda Fryer	Amanda Fryer	B&B Labs	2-12-08	10:00
2(a) Relinquished by:					
2(b) Received by:					
3(a) Relinquished by:					
3(b) Received by:					

*Matrix Key: AQ = Aqueous AR = Air SO = Soil WA = Waste OT = Other **Container: A = Amber C = Clear Glass V = VOA S = Soil Jar O = Orbo T = Tedlar B = Brass P = Plastic OT = Other

000110

COP0016605

Entrix - Portland Terminal

B&B ID: ETX7338

Client ID: RW-1
Job#: J08668 Entrix- Portland Terminal
Coll. Date: 02/08/08 Analysis: PAH, Sat BIO
Comments: 24 hr RTAT

0922 Portland Terminal (COP)
2-8-8 0908 SECOR
NormanSwanson

RW-1

B&B ID: ETX7339

Client ID: RW-2
Job#: J08668 Entrix- Portland Terminal
Coll. Date: 02/08/08 Analysis: PAH, Sat BIO
Comments: 24 hr RTAT

0922 Portland Terminal (COP)
2-8-8 0920 SECOR
NormanSwanson

RW-2

0922 Portland Terminal (COP)
2-8-8 0850 SECOR
NormanSwanson

OF-22

B&B ID: ETX7340

Client ID: OF-22
Job#: J08668 Entrix- Portland Terminal
Coll. Date: 02/08/08 Analysis: PAH, Sat BIO
Comments: 24 hr RTAT

000111

COP0016606

Technical Report 08-2038
Entrix, Inc./Secor International Inc.
Portland Terminal Project
February 29, 2008 Collection Date
Water Samples

March 15, 2008

Introduction

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on March 3, 2008 and arrived on March 4, 2008 in College Station, Texas. The ice chest arrived sealed and in good condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	6.0°C	na	Five 1-L water samples and one water/product sample.

The samples were collected in support of the Portland Terminal Project (Secor Project # 922). The samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009). There were no discrepancies to report. The samples were stored in an access-controlled refrigerator (4°C) prior to preparation and analysis.

The results for PAH, selected hopanes, and saturate biological marker analysis are included in this report.

Analytical Methods

The analytical methods employed for PAH analysis are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Water	B&B 1011	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <2X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report.

Table 2. Analytical reporting units.

Matrix	PAH
Water	ng/L

Table 3. Method Detection Limits.

PAH	Water MDL
Sample size	1 L, 1.0 ml final volume
Unit of measure	ng/L
Naphthalene	3.03
C1-Naphthalenes	3.67
C2-Naphthalenes	6.06
C3-Naphthalenes	6.06
C4-Naphthalenes	6.06
Benzothiophene	1.60
C1-Benzothiophenes	3.21
C2-Benzothiophenes	3.21
C3-Benzothiophenes	3.21
Biphenyl	2.12
Acenaphthylene	1.03
Acenaphthene	1.30
Dibenzofuran	1.12
Fluorene	0.60
C1-Fluorenes	1.19
C2-Fluorenes	1.19
C3-Fluorenes	1.19
Carbazole	1.81
Anthracene	0.76
Phenanthrene	1.34
C1-Phenanthrenes/Anthracenes	2.69
C2-Phenanthrenes/Anthracenes	2.69
C3-Phenanthrenes/Anthracenes	2.69
C4-Phenanthrenes/Anthracenes	2.69
Dibenzothiophene	0.84
C1-Dibenzothiophenes	1.68
C2-Dibenzothiophenes	1.68
C3-Dibenzothiophenes	1.68
Fluoranthene	0.68
Pyrene	0.93
C1-Fluoranthenes/Pyrenes	1.35
C2-Fluoranthenes/Pyrenes	1.35
C3-Fluoranthenes/Pyrenes	1.35
Naphthobenzothiophene	1.12
C1-Naphthobenzothiophenes	2.24
C2-Naphthobenzothiophenes	2.24
C3-Naphthobenzothiophenes	2.24
Benz(a)anthracene	0.89
Chrysene	0.78
C1-Chrysenes	1.57

PAH (Continued)	Water MDL
Sample size	1 L, 1.0 ml final volume
Unit of measure	ng/L
C2-Chrysenes	1.57
C3-Chrysenes	1.57
C4-Chrysenes	1.57
Benzo(b)fluoranthene	2.68
Benzo(k)fluoranthene	2.74
Benzo(e)pyrene	2.83
Benzo(a)pyrene	1.71
Perylene	0.73
Indeno(1,2,3-c,d)pyrene	1.97
Dibenzo(a,h)anthracene	1.49
Benzo(g,h,i)perylene	2.24
Individual Alkyl Isomers and Hopanes	
2-Methylnaphthalene	2.27
1-Methylnaphthalene	1.40
2,6-Dimethylnaphthalene	1.61
1,6,7-Trimethylnaphthalene	0.97
1-Methylphenanthrene	1.06
C29-Hopane	9.6
18a-Oleanane	9.6
C30-Hopane	9.6

Quality Assurance/Quality Control - Waters

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control Variances - Waters

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- ETX7346 (Outfall22sediment) required dilution prior to instrumental analysis due to high native PAH levels. The surrogate recoveries are annotated with a "D".

Comment

- Surrogates were re-added to the diluted sample prior to instrument analysis.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Thomas J. McDonald
Project Manager

Donell S. Frank
Project Quality Manager

TDI B&B Laboratories
Atten: Juan Rameriz
1902 Pinon, College Station, TX 77845
Phone: 979-693-3446

Chain of Custody Record

Client Contact	Project Manager: Jessica Eckart	Site Contact: Jessica Eckart	Date:2/29/08	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Juan Ramierz	Carrier: FedEx	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No. JO 8668
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below RUSH			
(503) 692-7074 FAX	☐ 2 weeks			SDG No. 08030401
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site:0922	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	PAHs and Saturated Biomarkers	Sample Specific Notes
✓ AAM076-2-29-08	2/29/2008	1258	Grab	W	1		X	
✓ AAM077-2-29-08	2/29/2008	1208	Grab	W	1		X	
✓ AAM080-2-29-08	2/29/2008	1215	Grab	W	1		X	
✓ Outfall22COP2-29-08-1	2/29/2008	1055	Grab	W	1		X	
✓ Outfall22COP2-29-08-2	2/29/2008	1055	Grab	W	1		X	
✓ Outfall22sediment	2/29/2008	1145	Grab	W	1		X	

Contact Rob Barrick with any questions

Please rush analysis.

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ None _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	SECOR	3-3-9/1213	Amanda Fryer	B&B Labs	03-04-08 / 10:00 am

000142

COP0016611

Technical Report 08-2041
Entrix, Inc./Secor International Inc.
Portland Terminal Project
March 13, 2008 Collection Date
Water Samples

April 14, 2008

Introduction

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on March 13, 2008 and arrived on March 14, 2008 in College Station, Texas. The ice chest arrived sealed and in fair condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	8.9°C	na	Two filter/product samples.

The samples were collected in support of the Portland Terminal Project (Secor Project # 922). The sample was logged in according to B&B Laboratories standard operating procedure (B&B 1009). The internal temperature was outside of the USEPA recommended temperature of 4°C ± 2°C. The samples were stored in an access-controlled refrigerator (4°C) prior to preparation and analysis.

The results for PAH, selected hopanes, and saturate biological marker analysis are included in this report.

Analytical Methods

The analytical methods employed for PAH analysis are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Net/Product	B&B 1011	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <2X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report.

Table 2. Analytical reporting units.

Matrix	PAH
Net/Product	ng/net

Table 3. Method Detection Limits.

PAH	Net/Product MDL
Sample size	1.0 net
Unit of measure	ng/net
Naphthalene	10.0
C1-Naphthalenes	10.0
C2-Naphthalenes	10.0
C3-Naphthalenes	10.0
C4-Naphthalenes	10.0
Benzothiophene	10.0
C1-Benzothiophenes	10.0
C2-Benzothiophenes	10.0
C3-Benzothiophenes	10.0
Biphenyl	10.0
Acenaphthylene	10.0
Acenaphthene	10.0
Dibenzofuran	10.0
Fluorene	10.0
C1-Fluorenes	10.0
C2-Fluorenes	10.0
C3-Fluorenes	10.0
Carbazole	10.0
Anthracene	10.0
Phenanthrene	10.0
C1-Phenanthrenes/Anthracenes	10.0
C2-Phenanthrenes/Anthracenes	10.0
C3-Phenanthrenes/Anthracenes	10.0
C4-Phenanthrenes/Anthracenes	10.0
Dibenzothiophene	10.0
C1-Dibenzothiophenes	10.0
C2-Dibenzothiophenes	10.0
C3-Dibenzothiophenes	10.0
Fluoranthene	10.0
Pyrene	10.0
C1-Fluoranthenes/Pyrenes	10.0
C2-Fluoranthenes/Pyrenes	10.0
C3-Fluoranthenes/Pyrenes	10.0
Naphthobenzothiophene	10.0
C1-Naphthobenzothiophenes	10.0
C2-Naphthobenzothiophenes	10.0
C3-Naphthobenzothiophenes	10.0
Benz(a)anthracene	10.0
Chrysene	10.0
C1-Chrysenes	10.0

PAH (Continued)	Net/Product MDL
Sample size	1.0 net
Unit of measure	ng/net
C2-Chrysenes	10.0
C3-Chrysenes	10.0
C4-Chrysenes	10.0
Benzo(b)fluoranthene	10.0
Benzo(k)fluoranthene	10.0
Benzo(e)pyrene	10.0
Benzo(a)pyrene	10.0
Perylene	10.0
Indeno(1,2,3-c,d)pyrene	10.0
Dibenzo(a,h)anthracene	10.0
Benzo(g,h,i)perylene	10.0
Individual Alkyl Isomers and Hopanes	
2-Methylnaphthalene	10.0
1-Methylnaphthalene	10.0
2,6-Dimethylnaphthalene	10.0
1,6,7-Trimethylnaphthalene	10.0
1-Methylphenanthrene	10.0
C29-Hopane	10.0
18a-Oleanane	10.0
C30-Hopane	10.0

Quality Assurance/Quality Control – Net/Product

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control Variances – Net/Product

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- ETX7347 (Outfall22-3-13-08) required dilution prior to instrumental analysis due to high native PAH levels. The surrogate recoveries are annotated with a "D".

Comment

- Surrogates were re-added to the diluted sample prior to instrument analysis.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Thomas J. McDonald
Project Manager

Donell S. Frank
Project Quality Manager

TDI B&B Laboratories
Atten: Juan Rameriz
1902 Pinon, College Station, TX 77845
Phone: 979-693-3446

Chain of Custody Record

Client Contact	Project Manager: Jessica Eckart	Site Contact: Jessica Eckart	Date:3/13/08	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Juan Ramierz	Carrier: FedEx	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No. JO 8668
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below RUSH			SDG No. 08031401
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site:0922	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	PAHs and Saturated Biomarkers	Sample Specific Notes:
Outfall22-3-13-08	3/13/2008	945	Grab	W	1		X	
AAM077-3-13-08	3/13/2008	1010	Grab	W	1		X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____None____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: **Contact Rob Barrick with any questions. Please rush analysis.**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	SECOR	3-13-8/1215	Amanda Angel	B&B Labs	3-14-08 / 10:00am
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016616

Technical Report 08-2056
Entrix, Inc./Secor International Inc.
Portland Terminal Project
March 21, 2008 Collection Date
Water Samples

April 14, 2008

Introduction

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on March 24, 2008 and arrived on March 25, 2008 in College Station, Texas. The ice chest arrived sealed and in fair condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	14.9°C	na	One net/product sample.

The sample was collected in support of the Portland Terminal Project (Secor Project # 922). The sample was logged in according to B&B Laboratories standard operating procedure (B&B 1009). The internal temperature was outside of the USEPA recommended temperature of 4°C ± 2°C. The sample was stored in an access-controlled refrigerator (4°C) prior to preparation and analysis.

The results for PAH, selected hopanes, and saturate biological marker analysis are included in this report.

Analytical Methods

The analytical methods employed for PAH analysis are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Net/Product	B&B 1011	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <2X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report.

Table 2. Analytical reporting units.

Matrix	PAH
Net/Product	ng/net

Table 3. Method Detection Limits.

PAH	Net/Product MDL
Sample size	1.0 net
Unit of measure	ng/net
Naphthalene	10.0
C1-Naphthalenes	10.0
C2-Naphthalenes	10.0
C3-Naphthalenes	10.0
C4-Naphthalenes	10.0
Benzothiophene	10.0
C1-Benzothiophenes	10.0
C2-Benzothiophenes	10.0
C3-Benzothiophenes	10.0
Biphenyl	10.0
Acenaphthylene	10.0
Acenaphthene	10.0
Dibenzofuran	10.0
Fluorene	10.0
C1-Fluorenes	10.0
C2-Fluorenes	10.0
C3-Fluorenes	10.0
Carbazole	10.0
Anthracene	10.0
Phenanthrene	10.0
C1-Phenanthrenes/Anthracenes	10.0
C2-Phenanthrenes/Anthracenes	10.0
C3-Phenanthrenes/Anthracenes	10.0
C4-Phenanthrenes/Anthracenes	10.0
Dibenzothiophene	10.0
C1-Dibenzothiophenes	10.0
C2-Dibenzothiophenes	10.0
C3-Dibenzothiophenes	10.0
Fluoranthene	10.0
Pyrene	10.0
C1-Fluoranthenes/Pyrenes	10.0
C2-Fluoranthenes/Pyrenes	10.0
C3-Fluoranthenes/Pyrenes	10.0
Naphthobenzothiophene	10.0
C1-Naphthobenzothiophenes	10.0
C2-Naphthobenzothiophenes	10.0
C3-Naphthobenzothiophenes	10.0
Benz(a)anthracene	10.0
Chrysene	10.0
C1-Chrysenes	10.0

PAH (Continued)	Net/Product MDL
Sample size	1.0 net
Unit of measure	ng/net
C2-Chrysenes	10.0
C3-Chrysenes	10.0
C4-Chrysenes	10.0
Benzo(b)fluoranthene	10.0
Benzo(k)fluoranthene	10.0
Benzo(e)pyrene	10.0
Benzo(a)pyrene	10.0
Perylene	10.0
Indeno(1,2,3-c,d)pyrene	10.0
Dibenzo(a,h)anthracene	10.0
Benzo(g,h,i)perylene	10.0
Individual Alkyl Isomers and Hopanes	
2-Methylnaphthalene	10.0
1-Methylnaphthalene	10.0
2,6-Dimethylnaphthalene	10.0
1,6,7-Trimethylnaphthalene	10.0
1-Methylphenanthrene	10.0
C29-Hopane	10.0
18a-Oleanane	10.0
C30-Hopane	10.0

Quality Assurance/Quality Control – Net/Product

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control Variances – Net/Product

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- No variances were observed.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Thomas J. McDonald
Project Manager

Donell S. Frank
Project Quality Manager

TDI B&B Laboratories
Atten: Juan Rameriz
1902 Pinon, College Station, TX 77845
Phone: 979-693-3446

Chain of Custody Record

Client Contact	Project Manager: Jessica Eckart	Site Contact: Jessica Eckart	Date:3/21/08	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Juan Ramierz	Carrier: FedEx	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No. J086668
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below RUSH			
(503) 692-7074 FAX	☐ 2 weeks			SDG No. 08032501
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site:0922	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	PAHs and Saturated Biomarkers	Sample Specific Notes:
Outfall22-3-21-08	3/21/2008	8:00	Sheen	W	1		X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____ None _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: **Contact Rob Barrick with any questions. Please rush analysis.**

Relinquished by: Norman Swanson	Company: SECOR	Date/Time:3/24/08 - 0800	Received by: Amanda Tyler	Company: B:B Labs	Date/Time: 3-25-08 9:00am
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016621

Technical Report 08-2064
Entrix, Inc./Secor International Inc.
Portland Terminal Project
April 16, 2008 and April 22, 2008 Collection Dates
Water and Filter (Net) Samples

May 3, 2008

Introduction

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on April 16, 2008 and arrived on April 17, 2008 in College Station, Texas. The ice chest arrived sealed and in fair condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	17.2°C	na	One filter (net) sample.

B&B Laboratories received a shipment of one (1) ice chest. The ice chest was sent using Federal Express on April 23, 2008 and arrived on April 24, 2008 in College Station, Texas. The ice chest arrived sealed and in good condition. The following table describes the sample number and condition.

Cooler Number	Temperature	Temp. Blank	Sample Received
1	6.0°C	6.4°C	One (1L) water sample.

The water and filter (net) samples were collected in support of the Portland Terminal Project. The samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009). There were no discrepancies to report. The water and filter samples were stored in an access-controlled refrigerator (4°C) prior to preparation and analysis.

The results for PAH, selected hopanes, and saturate biological marker analysis are included in this report.

Analytical Methods

The analytical methods employed for PAH analysis are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Water	B&B 1011	B&B 1006
Filter (Net)	SW-846 3580A	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <2X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report.

Table 2. Analytical reporting units.

Matrix	PAH
Water	ng/L
Filter (Net)	ng/filter

Table 3. Method Detection Limits.

PAH	Water MDL	Filter MDL
Sample size	1 L, 1.0 ml final volume	1 filter, 1.0 ml final volume
Unit of measure	ng/L	ng/filter
Naphthalene	3.03	10.0
C1-Naphthalenes	3.67	10.0
C2-Naphthalenes	6.06	10.0
C3-Naphthalenes	6.06	10.0
C4-Naphthalenes	6.06	10.0
Benzothiophene	1.60	10.0
C1-Benzothiophenes	3.21	10.0
C2-Benzothiophenes	3.21	10.0
C3-Benzothiophenes	3.21	10.0
Biphenyl	2.12	10.0
Acenaphthylene	1.03	10.0
Acenaphthene	1.30	10.0
Dibenzofuran	1.12	10.0
Fluorene	0.60	10.0
C1-Fluorenes	1.19	10.0
C2-Fluorenes	1.19	10.0
C3-Fluorenes	1.19	10.0
Carbazole	1.81	10.0

PAH (continued)	Water MDL	Filter MDL
Sample size	1 L, 1.0 ml final volume	1 filter, 1.0 ml final volume
Unit of measure	ng/L	ng/filter
Anthracene	0.76	10.0
Phenanthrene	1.34	10.0
C1-Phenanthrenes/Anthracenes	2.69	10.0
C2-Phenanthrenes/Anthracenes	2.69	10.0
C3-Phenanthrenes/Anthracenes	2.69	10.0
C4-Phenanthrenes/Anthracenes	2.69	10.0
Dibenzothiophene	0.84	10.0
C1-Dibenzothiophenes	1.68	10.0
C2-Dibenzothiophenes	1.68	10.0
C3-Dibenzothiophenes	1.68	10.0
Fluoranthene	0.68	10.0
Pyrene	0.93	10.0
C1-Fluoranthenes/Pyrenes	1.35	10.0
C2-Fluoranthenes/Pyrenes	1.35	10.0
C3-Fluoranthenes/Pyrenes	1.35	10.0
Naphthobenzothiophene	1.12	10.0
C1-Naphthobenzothiophenes	2.24	10.0
C2-Naphthobenzothiophenes	2.24	10.0
C3-Naphthobenzothiophenes	2.24	10.0
Benz(a)anthracene	0.89	10.0
Chrysene	0.78	10.0
C1-Chrysenes	1.57	10.0
C2-Chrysenes	1.57	10.0
C3-Chrysenes	1.57	10.0
C4-Chrysenes	1.57	10.0
Benzo(b)fluoranthene	2.68	10.0
Benzo(k)fluoranthene	2.74	10.0
Benzo(e)pyrene	2.83	10.0
Benzo(a)pyrene	1.71	10.0
Perylene	0.73	10.0
Indeno(1,2,3-c,d)pyrene	1.97	10.0
Dibenzo(a,h)anthracene	1.49	10.0
Benzo(g,h,i)perylene	2.24	10.0
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	2.27	10.0
1-Methylnaphthalene	1.40	10.0
2,6-Dimethylnaphthalene	1.61	10.0
1,6,7-Trimethylnaphthalene	0.97	10.0
1-Methylphenanthrene	1.06	10.0
C29-Hopane	9.6	10.0
18a-Oleanane	9.6	10.0
C30-Hopane	9.6	10.0

Quality Assurance/Quality Control - Waters

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control - Filters

PAH

The quality assurance/quality control procedure for this program included the analyses of a procedural blank and a blank spike/blank spike duplicate pair per analytical batch of no more than 20 samples. A standard reference oil (NIST 1582) and a laboratory control material solution were analyzed with each data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes and are used to verify analytical accuracy. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies that no more than 2 target analytes exceed 3X the method detection limits. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs for valid spiked duplicates is ±30%. The QA criterion for RPDs for valid duplicates is ±30%. The QC criterion for the reference oil SRM is ± 15% the laboratory derived mean. The QC criterion for the LCM is ± 15% the certified value.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene.

Quality Assurance/Quality Control Variances - Waters

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- ETX7360 (Outfall 22-4-22-08) required dilution prior to instrumental analysis due to high native PAH levels. The surrogate recoveries are annotated with a "D".

Comment

- Surrogates were re-added to the diluted sample prior to instrument analysis.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

Quality Assurance/Quality Control Variances - Filters

Polycyclic Aromatic Hydrocarbons (PAH)

Surrogate Recoveries

Observation

- ETX7359 (Outfall 22-4-16-08) required dilution prior to instrumental analysis due to high native PAH levels. The surrogate recoveries are annotated with a "D".

Comment

- Surrogates were re-added to the diluted sample prior to instrument analysis.

Procedural Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Standard Reference Material/Laboratory Control Material

Observation

- No variances were observed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Thomas J. McDonald
Project Manager

Donell S. Frank
Project Quality Manager

TDI B&B Laboratories
Atten: Juan Rameriz
1902 Pinon, College Station, TX 77845
Phone: 979-693-3446

Chain of Custody Record

Client Contact	Project Manager: Jessica Eckart	Site Contact: Jessica Eckart	Date: 4-16-8	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Juan Ramierz	Carrier: FedEx	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below RUSH			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			JO 8668
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			Sdg 08041701
Site:0922	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	PAHs and Saturated Biomarkers	Sample Specific Notes:
Outfall 22-4-16-08	4-16-8	1110	Sheen	W	1		X	
			~~Sheen~~	~~W~~	~~1~~		~~X~~	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ None _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: **Contact Rob Barrick with any questions. Please rush analysis.**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson [signature]	SECOR	~~4/17/08~~ ~~0730~~ 4-16-8 1315	Amanda Fryer	B:B Labs	4-17-08 / 9:00am

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COP0016628

TDI B&B Laboratories
Atten: Juan Rameriz
1902 Pinon, College Station, TX 77845
Phone: 979-693-3446

Chain of Custody Record

Client Contact	Project Manager: Jessica Eckart	Site Contact: Jessica Eckart	Date: 4-22-8	COC No:
SECOR International Inc.	Tel/Fax: (503) 691-2030	Lab Contact: Juan Ramierz	Carrier: FedEx	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No. JO 8668
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below RUSH			
(503) 692-7074 FAX	☐ 2 weeks			SDG No. 0802401
Project Name: 0922 Portland Terminal (COP)	☐ 1 week			
Site:0922	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	PAHs and Saturated Biomarkers	Sample Specific Notes:
Outfall 22-4-22-08	4-22-8	1100	Sheen	W	1		X	
			[redacted]					

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ None _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

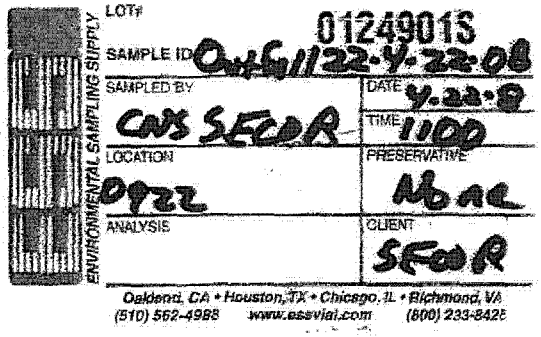
Special Instructions/QC Requirements & Comments: **Contact Rob Barrick with any questions. Please rush analysis.**

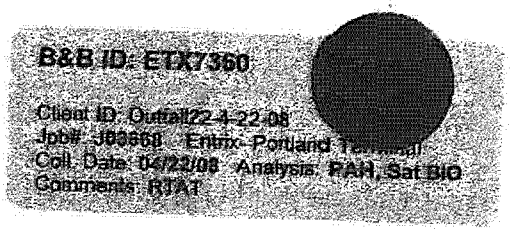
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	SECOR	[redacted] 4/23/08	Amanda Tyu	BiB Labs	4-24-08 10:30am
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP00166291

COP00166291

Entrix - Portland Terminal





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Oregon
Theodore Kulongoski, Governor

Department of Environmental Quality
Northwest Region Portland Office
Air Quality Program
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5554
FAX (503) 229-6945
TTY (503) 229-5471

October 9, 2008

ConocoPhillips Company
Attn: Williams Collins
5528 NW Doane Avenue
Portland, OR 97210

Re: Issuance of Air Contaminant Discharge Permit
Permit # 26-2026

The Department of Environmental Quality has completed a review of your application for a renewal of your Standard Air Contaminant Discharge permit. Based on the information in that application, the Department has issued the enclosed permit.

The effective date of the permit is the date it was signed by the regional Air Quality Manager. The signature and date appear on the first page of the document. The permit is issued pursuant to Oregon Revised Statutes 468A and Oregon Administrative Rules (OAR) 340-14-005 through 340-14-050, and 216-0010 through 216-0100.

You may appeal conditions or limitations contained in the attached permit by applying to the Environmental Quality Commission, or its authorized representative, within twenty days from the date of this letter. Appeals are pursuant to ORS Chapter 183 and OAR Chapter 340, Division 14-025 (6). Appeal procedures are contained in OAR Division 11-005 through 11-140.

A copy of the current permit must be available at the facility at all times. Failure to comply with permit conditions may result in civil penalties. **You are expected to read the permit carefully and comply with all conditions** to protect the environment of Oregon.

If you have any questions, please contact Dave Kauth at (503) 667-8414 extension 550003.

Sincerely,

for Ed Druback
Air Quality Manager
Northwest Region

DK/EJD: cab
Enclosure
Cc: HQ/AQ
NWR

COP0016631

STANDARD

AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Northwest Region
2020 SW 4th Avenue, #400
Portland, Oregon 97201
(503) 229-5554

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

ConocoPhillips Company
5528 NW Doane Ave.
Portland, OR 97210

PLANT SITE LOCATION:

ConocoPhillips Portland Terminal
5528 NW Doane
Portland, OR

INFORMATION RELIED UPON:

Application No.: 022496
Date Received: 01/09/2008

LAND USE COMPATIBILITY FINDING:

Approving Authority: City of Portland
Approval Date: 01-25-93

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Ed Druback, Northwest Region Air Quality Manager

October 9, 2008
Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

Table 1 Code	Source Description	SIC
Part B, 32	Gasoline Terminal	5171

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1.0 GENERAL EMISSION STANDARDS AND LIMITS

1.1. Visible Emissions

The permittee must comply with the following visible emission limits, as applicable:

a. Emissions from fuel burning equipment must not exceed an opacity equal to or greater than 20% for a period aggregating more than 3 minutes in any one hour.

b. Emissions from any air contaminant source other than fuel burning equipment must not equal or exceed 20% opacity for a period aggregating more than 30 seconds in any one hour.

1.2. Particulate Matter Emissions

The permittee must comply with the following particulate matter emission limits, as applicable:

a. Particulate matter emissions from any burning equipment must not exceed 0.1 grains per standard cubic foot, corrected to 12% CO_2 or 50% excess air.

b. Particulate matter emissions from fuel burning equipment must not exceed the emission rate shown in Figure 1 of OAR 340-208-0610 as a function of the maximum heat input when using all other fuels except natural gas and LPG.

1.3. Nuisance and Odors

The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by Department personnel.

1.4. Fuels and Fuel Sulfur Content

The permittee must comply with the following fuel and fuel sulfur content requirements:

a. The permittee must not use any fuel other than natural gas, propane, butane, ASTM grade fuel oils, or on-specification used oil.

b. The permittee must not sell, distribute, use (combust), or make available for use within the state of Oregon, any fuel oil which exceeds the following sulfur content limitations unless exempted in item below:

i. 0.3% sulfur by weight for ASTM Grade 1 distillate oil;

ii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil;

iii. 1.75% sulfur by weight for residual oil;

iv. The permittee must note on the bill of lading or custody transfer document the following statement " Fuel oil or residual oil with sulfur content above 1.75% by weight may not be used within the State of Oregon."

c. Exemptions from the requirements of Condition 1.4.b above:

i. Fuels used exclusively for the propulsion and auxiliary power requirements of vessels, railroad locomotives, and diesel motor vehicles.

ii. With prior approval of the Department of Environmental Quality, fuels used in such a manner or control provided such that sulfur dioxide emissions can be demonstrated to be equal to or less than those resulting from the combustion of fuels complying with the limitations of Condition 1.4.b above.

d. The permittee is allowed to use on-specification used oil as fuel provided it contains no more than 0.5% sulfur by weight. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that each shipment of oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

2.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS

2.1. Refined Products Truck Loading Rack

Pursuant to OAR 340-232-0085 through 0100, the permittee must observe the following conditions of operation for the truck loading rack:

a. The permittee must not allow volatile organic compounds (VOC) to be emitted into the atmosphere in excess of 80 milligrams of VOC per liter of gasoline loaded (0.67 lb VOC/1000 gal gasoline loaded) from the loading of truck tanks and truck trailers at the bulk gasoline terminal.

b. Gasoline may only be transferred between the loading rack and a truck tank or a truck trailer when a current Oregon leak test certification form for the delivery vessel (tank truck or trailer) is on file with the terminal or a valid Oregon delivery vessel certification sticker is verified to

be displayed on the delivery vessel.

c. All displaced vapors and gases from the delivery vessel must be vented only to the vapor recovery/control system.

d. All equipment associated with the vapor recovery/control system must be maintained to be vapor-tight and in good working order by following manufacturer recommended maintenance.

e. Each loading device must be designed and operated to allow no more than 10 cubic centimeters drainage per disconnect on the basis of five consecutive disconnects.

f. There must be no visible liquid gasoline leaks during loading or unloading operations. All observed leaks must be corrected immediately, or that system must be removed from service until the leaks are corrected.

g. All gasoline loading lines must be equipped with fittings which make vapor-tight connections and which close automatically and immediately when disconnected.

h. All vapor lines must be equipped with fittings which make vapor-tight connections and which close automatically and immediately when disconnected or which contain vapor-tight unidirectional valves.

i. The vapor collection system must be maintained and operated in a manner to prevent the pressure therein from exceeding a pressure of 18 inches of water gauge or a vacuum of 6 inches of water gauge, at the tank truck or trailer.

j. During periods when the loading rack is not operated by the permittee, the permittee's responsibility shall be defined in a letter of agreement on file at the terminal, signed by the person (or their agent) who will operate the truck loading rack, confirming compliance with the above conditions.

k. "Vapor tight" as used in this condition means: using an explosimeter, no reading may equal or exceed 100 percent of the lower explosive limit (LEL, measured as propane), measured at 2.5 centimeters from any point on the perimeter of a potential leak source.

2.2. Marine Vessel Loading

Pursuant to OAR 340-232-0110, the permittee must observe the following conditions of operation for marine vessel loadings:

a. The permittee is prohibited from loading gasoline onto

marine tank vessels unless loading emissions are controlled pursuant to OAR 340-232-0110.

b. The permittee is prohibited from loading any liquid product onto a marine tank vessel whose previous cargo was gasoline unless loading emissions are controlled pursuant to OAR 340-232-0110.

2.3. Storage Tanks

Fixed roof storage tanks having capacities greater than 150,000 liters (approx. 39,000 gallons), storing volatile organic compound liquids with true vapor pressures (determined in accordance with methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss from External Floating-Roof Tanks), as stored, of greater than 1.52 psia at actual monthly average storage temperatures, must meet the following conditions:

a. The fixed roof storage tanks must be equipped with an internal floating cover equipped with a continuous closure device (primary seal) between the tank wall and the cover edge. The primary seal must be a minimum of a nonmetallic resilient seal.

b. The cover is to be floating at all times, (i.e., off the leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the cover is resting on the leg supports must be continuous and is to be accomplished as rapidly as possible.

c. Each opening in the cover except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface.

d. Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal, or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use.

e. All tank gauging and sampling devices must be gas-tight except when gauging or sampling is taking place; except for slotted gage wells which must have floating seals with one half inch edge gaps or less.

f. All seals are to be maintained in good operating condition and the seal fabric may contain no visible holes, tears or other openings. Records of scheduled and unscheduled maintenance and inspections must be maintained to verify seal condition.

g. Automatic bleeder vents are to be closed at all times when

the cover is floating except when the cover is being floated off or is being landed on the leg supports.

h. Rim vents are to be set to open only when the cover is being floated off the leg supports or at the manufacturer's recommended setting.

i. The permittee must not store any volatile organic compound liquid with a true vapor pressure, as stored, of greater than 570 mm Hg (11.1 psia), unless the respective storage tank is equipped with a vapor recovery system or its equivalent.

2.4. 40 CFR 60 Subpart Kb (NSPS)

The permittee must comply with the following applicable requirements of federal regulations for New Source Performance Standards (NSPS) 40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984:

a. For all NSPS Subpart Kb subject tanks owned/operated by the permittee at the time of permit application, with storage capacities greater than 75 m^3 (19,813 gallons), the permittee:

i. is exempt from all provisions of the Subpart if the subject tank(s) stores a volatile organic liquid with a maximum true vapor pressure less than 15.0 kPa (2.18 psia).

ii. must comply with the monitoring requirements of 40 CFR §60.116b(c), (d), and (f) if it stores a volatile organic liquid with a maximum true vapor pressure between 15.0 kPa (2.18 psia) and 27.6 kPa (4.0 psia).

b. If the permittee installs any new tank while operating under this permit, it must provide notice to the Department as required in Condition 7.4 of this permit. In addition, the permittee must comply with all requirements of 40 CFR 60 Subpart Kb, as applicable, for any new NSPS Subpart Kb subject tank.

2.5. 40 CFR 63.11080 to 63.11100 (NESHAP) subpart BBBBBB

The permittee must comply with the applicable requirements of federal regulations (NESHAP) 40 CFR 63 Subpart BBBBBB - National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution, Bulk Terminals, Bulk Plants, and Pipeline Facilities.

3.0 SPECIAL CONDITIONS

3.1. Gasoline transfer and spillage

Pursuant to OAR 340-232-0090(3)(e), the permittee must observe the following conditions:

a. Gasoline must be handled in a manner to prevent its being discarded in sewers or stored in open containers or handled in any manner that would result in evaporation.

b. The permittee must address any gasoline spill of more than 5 gallons in accordance with permit conditions 6.2 and 7.1.

4.0 PLANT SITE EMISSION LIMITS

4.1. Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM/PM_{10}	14	tons per year
SO_2	75	tons per year
NO_X	39	tons per year
CO	99	tons per year
VOC	99	tons per year

4.2. Emission Limitation Period

The plant site emission limits apply to any 12-consecutive calendar month period.

5.0 COMPLIANCE DEMONSTRATION

5.1. PSEL Compliance Monitoring

Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \left[\sum \frac{EF \times P}{2000} \right] + K_{AI} + K_{FUG}$$

where,

E = pollutant emissions (ton/yr);
EF = pollutant emission factor (see condition

11.0);

P	=	process production (see condition 11.0)
K_{AI}	=	VOC aggregate insignificant activity emission constant (see condition 11.0)
K_{FUG}	=	VOC equipment leak fugitive emission constant (see condition 11.0)

5.2. Emission Factors

The permittee must use the default emission factors provided in condition 11.0 for calculating pollutant emissions, unless alternative emission factors are approved by the Department. The permittee may request or the Department may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by the Department.

5.3. Source Testing Requirements

The permittee must conduct a source test of its Callidus vapor recovery unit (VRU) as specified below:

a. Within 12 months from the issue date of this permit, the permittee must perform an emission performance test of the VRU to demonstrate it is capable of operating at its maximum normal operating capacity in compliance with Conditions 2.1.a and 2.1.i by conducting a source test for VOC control efficiency and emission rate (lbs VOC emitted/1000 gallons loaded).

b. The Source Test must be conducted using EPA test Methods as described in 40 CFR Part 60, Subpart XX, §60.503. The Source Test must be conducted in accordance with the testing procedures on file at the Department.

c. The following parameters must be monitored and recorded during the source test:

   i. The volume of gasoline dispensed through the loading rack;

   ii. Carbon bed cycle time;

   iii. VRU exhaust gas volume;

   iv. Pressure within the Vapor Recovery system measured as close as possible to the connection with the gasoline truck;

   v. Other operating parameters of the emission control equipment, determined at the time the pretest plan is reviewed.

d. Only regular operating staff may adjust the control device

and/or emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid.

e. All tests must be conducted in accordance with the Department's Source Sampling Manual and the approved pretest plan. The pretest plan must be submitted at least 15 days in advance and approved by the Regional Source Test Coordinator. Test data and results must be submitted for review to the Regional Source Test Coordinator within 45 days unless otherwise approved in the pretest plan.

f. The Department may approve an extension of the testing deadline in Condition 5.3.a if the permittee provides adequate justification for the extension.

5.4. Opacity and Grain loading

a. Monitoring for Opacity and Grain loading limits in conditions 1.1.a and 1.2.a is not required when the permittee burns only natural gas, propane, or butane as the boiler fuel.

b. Compliance with the Opacity limit in condition 1.1.a must be verified within 24 hours of each switch to a fuel other than natural gas, propane, or butane in the boilers, and must be monitored weekly for the duration of that fuel usage, using modified EPA method 9. The Grain loading standard in condition 1.2.a is assumed to be met if the Opacity limit is not exceeded.

6.0 RECORDKEEPING REQUIREMENTS

6.1. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:

	Monitoring Parameters	Monitoring Frequency
a.	Volatile organic liquid type and period of storage, for each storage tank.	As performed
b.	The amount and type of volatile organic liquid loaded into or withdrawn from each storage tank	As performed
c.	Maximum Reid vapor pressure for gasoline and any volatile organic liquid that has a RVP equal or greater	Each storage period

	than gasoline stored in each storage tank during the period of storage. [*volatile organic liquid is a volatile organic compound in the liquid phase*]	
d.	The HAP content (percent by weight) of each product terminaled (%HAP content is to be monitored based on individual HAPs).	Each product formulation change
e.	The type and amount of volatile organic liquid loaded into marine vessels.	Each loading event
f.	The type and amount of refined petroleum products dispensed through the truck loading rack.	Monthly
g.	The type and amount of fuel combusted in the steam generating boilers.	Monthly
h.	The sulfur content of each lot of fuel oil received for sale, distribution, or use (combustion in the steam generating boilers). Sulfur content must be determined by one of the following methods: • Analyze a composite sample of a new lot of fuel using ASTM D129-64, D1552-83, D4057-81, 2622, or other method approved in writing by the Department; • Obtain a certificate of analysis for sulfur content from the fuel oil vendor or third party laboratory; • If used oil is combusted, the permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that each shipment of oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.	Each receipt
i.	Perform a 12-month rolling emission rate calculation to demonstrate compliance with the PSEL emission rate limits of Condition 4.0. Rolling emission rate calculations must be performed in accordance with the calculation methods of Conditions 5.1 and 5.2.	Monthly
j.	Excess emission records as defined in OAR 340-214-	Each Occurrence

	0300 through 340-214-0340.	
k.	Records of air quality related complaints received by permittee and results of corresponding investigation/resolution.	Each Occurrence
l.	Records of major maintenance performed on air pollution control equipment.	Each Occurrence

6.2. Excess Emissions The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by the Department in accordance with OAR 340-214-0330(4).

6.3. Complaint Log The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

6.4. Retention of Records Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to the Department upon request.

7.0 REPORTING REQUIREMENTS

7.1. Excess Emissions The permittee must notify the Department by telephone or in person of any excess emissions which are of a nature that could endanger public health.

a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 8.5.

b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.

c. The permittee must also submit follow-up reports when required by the Department.

7.2. Annual Report

For each year this permit is in effect, the permittee must submit to the Department by **February 15,** two (2) copies of the following information for the previous calendar year:

a. Operating parameters:

i. A letter stating the facility's compliance status with permit conditions for the previous calendar year.

ii. The total amount of natural gas ($MMft^3$) combusted in the boilers.

iii. The total amount (gal) and type of fuel oil combusted in the boilers.

iv. The total amount of gasoline received into storage tanks (bbls per year).

v. The amount of gasoline loaded into tank trucks (gallons/yr).

vi. The total amount of gasoline loaded into marine vessels, (bbls or gal/year).

vii. The calculated PM/PM_{10}, SO_2, NO_X, CO, and VOC 12-month rolling emission rates for each month of the previous calendar year. Calculations must be performed following the calculation method in Conditions 5.1 and 5.2.

b. An evaluation of the permittee's HAP potential to emit (as limited by the overall VOC PSEL) based upon formulation changes documented for Condition 6.1.d.

c. Records of all planned and unplanned excess emissions events.

d. Summary of complaints relating to air quality received by permittee during the year.

e. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.

f. List major maintenance performed on pollution control equipment.

7.3. Notice of Change of Ownership or Company Name

The permittee must notify the Department in writing using a Departmental "Permit Application Form" within 60 days after the following:

a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or

b. Sale or exchange of the activity or facility.

7.4. Construction or Modification Notices

The permittee must notify the Department in writing using a Departmental "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;

b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or

c. Constructing or modifying any air pollution control equipment.

7.5. Where to Send Reports and Notices

The reports, with the permit number prominently displayed, must be sent to the Permit Coordinator for the region where the source is located as identified in Condition 8.3.

8.0 ADMINISTRATIVE REQUIREMENTS

8.1. Permit Renewal Application

The completed application package for renewal of this permit is due on 02/01/2013. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in condition 8.3

8.2. Permit Modifications

Application for a modification of this permit must be submitted not less than **60** days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of the Department.

8.3. Permit Coordinator Address

All reports, notices, and applications (without associated fees) should be directed to the Permit Coordinator of the Department's Northwest Regional Office. The address is as follows:

Department of Environmental Quality
Northwest Region
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
Telephone: (503) 229-5582

8.4. Department Contacts - Internet

Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at www.deq.state.or.us.

8.5. Department Contacts - General

All inquiries about this permit should be directed to the Department's Northwest Regional Office. The address and phone number are as follows:

Department of Environmental Quality
Northwest Regional Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
Telephone: (503) 229-5554

9.0 FEES

9.1. Annual Compliance Fee

The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Standard ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date.

9.2. Change of Ownership or Company Name Fee

The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.

9.3. Special Activity Fees

The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.

9.4. Where to Submit Fees

Fees must be submitted to:

Department of Environmental Quality
Business Office
811 SW Sixth Avenue
Portland, Oregon 97204-1390

10.0 GENERAL CONDITIONS AND DISCLAIMERS

10.1. Permitted Activities

This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.

10.2.	**Other Regulations**	In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department.
10.3.	**Conflicting Conditions**	In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
10.4.	**Masking of Emissions**	The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
10.5.	**Department Access**	The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
10.6.	**Permit Availability**	The permittee must have a copy of the permit available at the facility at all times.
10.7.	**Open Burning**	The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.
10.8.	**Asbestos**	The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance.
10.9.	**Property Rights**	The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
10.10.	**Termination, Revocation, or Modification**	The Department may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

11.0 EMISSION FACTORS

Process	Pollutant	Monitoring Parameter (P)	Emissions Factor (EF)	Emissions Factor Units
Boilers (natural gas)	PM/PM_{10}[(1)]	MM ft^3 of natural gas combusted	7.6	lbs/MM ft^3
	SO_2	MM ft^3 of natural gas combusted	2.6	lbs/MM ft^3

Process	Pollutant	Monitoring Parameter (P)	Emissions Factor (EF)	Emissions Factor Units
	NO_X	MM ft^3 of natural gas combusted	100	lbs/MM ft^3
	CO	MM ft^3 of natural gas combusted	84	lbs/MM ft^3
	VOC	MM ft^3 of natural gas combusted	5.5	lbs/MM ft^3
Boilers (fuel oil)	PM/PM_{10}[1]	Gallons of fuel oil combusted	Distillate oil - 3.3 Resid. oil – 20.8	lbs/1000 gal
	SO_2	Gallons of fuel oil combusted	Distillate oil – 71[2] Resid. oil – 274.8[3]	lbs/1000 gal
	NO_X	Gallons of fuel oil combusted	Distillate oil - 20 Resid. oil - 55	lbs/1000 gal
	CO	Gallons of fuel oil combusted	Distillate oil - 5 Resid. oil - 5	lbs/1000 gal
	VOC	Gallons of fuel oil combusted	Distillate oil – 0.2 Resid. oil – 0.28	lbs/1000 gal
Storage tanks	VOC	Monitor gallons of throughput for respective 12-month period	Use TANKS software or AP-42 algorithms for 12-month emission rate calculation[4]	tons/yr
Refined products truck loading rack	VOC	Gallons loaded	Gas – 0.011[8] Distillate[6]	lbs/1000 gal
Refined products truck loading rack fugitives	VOC	Gallons loaded	Gas[5] Distillate[6]	lbs/1000 gal
Marine loading	VOC	Gallons loaded	Distillate oil – 0.012 Jet Kerosene – 0.013 Resid. oil[6]	lbs/1000 gal
Process Oil/water separator	VOC	Gallons of throughput	TBD	lbs/1000 gal
Equipment Leaks	VOC	Equipment leak constant (K_{FUG})	3.6	tons/yr
Aggregate Insignificant activities[7]	VOC	Activity constant (K_{AI})	1	tons/yr

1. All PM from fuel combustion is presumed to be PM_{10}.
2. Permittee may determine emission factor based upon weighted average fuel oil sulfur content of all distillate fuel oil combusted during emission calculation period using the following formula: 142(S).
3. Permittee may determine emission factor based upon weighted average fuel oil sulfur content of all residual fuel oil combusted during emission calculation period using the following formula: 157(S).
4. Algorithms are referenced in Appendix A of this permit.
5. Factor includes a presumed vapor collection efficiency of 98.7% (fugitive emission rate of 1.3%). Factor may be determined using AP-42 formula:

$$Loading\ loss = 12.46 \frac{SPM}{T}\left[1 - \frac{eff}{100}\right]$$

Where:
S = saturation factor
P = true vapor pressure

M = molecular weight of vapor
T = temperature (°R)
eff = reduction efficiency

6. Emissions are negligible and are included as an insignificant activity component.
7. Aggregate insignificant emission sources consist of the following sources: lube plant tanks, truck fueling at refined products loading rack (diesel), lube oil truck loading rack (top loading of finished lube oils and some base stocks), black oil/RFO loading rack, diesel/black oil pump off area, lube oil truck unloading area, lube oil additive truck unloading area, gasoline additive truck unloading area, rail car loading (lube oil and base oils), rail car unloading (fuel oils; decant, cutter, RFO), marine vessel offloading (gasoline, diesel, and fuel oils), ethanol truck unloading, stormwater separators, and lube plant facility fugitive emissions.
8. This factor may be adjusted based on the latest approved source test results.

12.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit
ASTM	American Society for Testing and Materials
AQMA	Air Quality Maintenance Area
calendar year	The 12-month period beginning January 1st and ending December 31st
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic foot
EPA	US Environmental Protection Agency
FCAA	Federal Clean Air Act
gal	gallon(s)
gr/dscf	grains per dry standard cubic foot
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040
I&M	inspection and maintenance
lb	pound(s)
MMBtu	million British thermal units
NA	not applicable
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	nitrogen oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	operation and maintenance
Pb	lead
PCD	pollution control device
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
ppm	part per million
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
scf	standard cubic foot
SER	Significant Emission Rate
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	sulfur dioxide
Special Control Area	as defined in OAR 340-204-0070
VE	visible emissions
VOC	volatile organic compound
year	A period consisting of any 12-consecutive calendar months

Appendix A

The following equations were developed by the American Petroleum Institute. Equations were obtained from EPA's AP-42 Section 7.1.

$VOC_{IFRTanks}$ = VOC emissions from internal floating roof tanks.

$$VOC_{IFRTanks} = L_T = L_{WD} + L_R + L_F + L_D$$

L_T = total loss, lb VOC/yr

$$L_{WD} = \frac{(0.943)\,QCW_L}{D}\left[1 + \frac{(N_C F_C)}{D}\right]$$

$$L_R = (K_{Ra} + K_{Rb}v^n)DP^*M_V K_C$$

$$L_F = F_F P^* M_V K_C$$

$$L_D = K_D S_D D^2 P^* M_V K_C$$

where:

L_{WD} = withdrawal loss, lb/yr
L_R = rim seal loss, lb/ yr
L_F = deck fitting loss, lb/ yr
L_D = deck seam loss, lb/ yr
Q = product average throughput (tank capacity [bbl] times turnovers per year), bbl/ yr
C = product withdrawal shell clingage factor, bbl/1,000 ft^2
W_L = density of liquid, lb/gal
D = tank diameter, ft
N_C = number of columns, dimensionless
F_C = effective column diameter, ft
K_{Ra} = zero wind speed rim seal loss factor, lb-mole/ft·yr
K_{Rb} = wind speed dependent rim seal loss factor, lb-mole/$(mph)^n$ft·yr (see Table 7.1-8)
v = average ambient site wind speed (zero for internal floating roof tanks), mph
M_V = the average molecular weight of the product vapor, lb/lb-mole

K_C = the product factor, dimensionless
P^* = the vapor pressure function, dimensionless

$$= (P_{VA}/P_A)/[1 + (1-([P_{VA}/P_A])^{0.5})]^2$$

and

P_{VA} = the vapor pressure of the material stored, psia;
See Notes 1 and 2 to Equation 1-9 and Note 3 to Equation 2-3.

P_A = average atmospheric pressure at tank location, psia

F_F = the total deck fitting loss factor, lb-mole/yr

$$= \sum_{i=1}^{n_f} (N_{Fi}K_{Fi}) = [(N_{F1}K_{F1}) + (N_{F2}K_{F2}) + ... + (N_{Fnf}K_{Fnf})]$$

and:

N_{Fi} = number of fittings of a particular type, dimensionless. N_{Fi} is determined for the specific tank or estimated from AP-42 Table 7.1-12

K_{Fi} = deck fitting loss factor for a particular type of deck fitting, lb-mole/yr. K_{fi} is determined for each fitting type using AP-42 Table 7.1-12.

n_f = number of different types of fittings, dimensionless

K_D = the deck seam loss factor, lb-mole/ft·yr

= 0.14 for nonwelded decks

= 0 for welded decks

S_D = deck seam length factor, ft/ft^2

$= L_{seam}/A_{deck}$

and:

L_{seam} =total length of deck seams, ft

A_{deck} =area of deck, $ft^2 = \pi D^2/4$

The following parameters can be obtained from AP-42 Tables or assumptions:

K_C = 1.0 for volatile organic liquids

N_C = 1 (from AP-42 Table 7.1-11)

F_C = 1.0 (assumed)

K_{Ra} = 0.3 (from AP-42 Table 7.1-8)

K_{Rb} = 0.6 (from AP-42 Table 7.1-8)

v = 0 for internal floating roof tanks

M_V = 62 lb/lb-mole (from AP-42 Table 7.1-2)

W_L = 5.6 lb/gal (from AP-42 Table 7.1-2)

C = 0.0015 bbl/1,000 ft^2 (from AP-42 Table 7.1-10)

K_D = 0 for welded decks so S_D is not needed

F_F = $\Sigma(K_{Fi}N_{Fi})$

$VOC_{FRTanks}$ = VOC emissions from fixed roof tanks.

$$\mathbf{VOC_{FRTanks}} = L_T = L_S + L_W$$

where:

L_T = total losses, lb VOC/ yr

L_S = standing storage losses, lb VOC/ yr

L_W = working losses, lb VOC/ yr

Standing Storage Loss - Fixed roof tank breathing or standing storage losses can be estimated from:

$$L_S = 365\ V_V W_V K_E K_S$$

where:

L_S = standing storage loss, lb/ yr

V_V = vapor space volume, ft^3

W_V = vapor density, lb/ft^3

K_E = vapor space expansion factor, dimensionless

K_S = vented vapor saturation factor, dimensionless

365 = constant, days/yr

Working Loss - The working loss, L_W, can be estimated from:

$$L_W = 0.0010\ M_V P_{VA} Q K_N K_P$$

where:

L_W = working loss, lb/ yr

M_V = vapor molecular weight, lb/lb-mole; see Note 1 to Equation 1-9

P_{VA} = vapor pressure at daily average liquid surface temperature, psia; see Notes 1 and 2 to Equation 1-9

Q = annual net throughput (tank capacity [bbl] times annual turnover rate)

K_N = turnover factor, dimensionless; see Figure 7.1-18
for turnovers > 36, $K_N = (180 + N)/6N$
for turnovers ≤ 36, $K_N = 1$

N = number of turnovers per year, dimensionless

$$N = \frac{5.614Q}{V_{LX}}$$

where:

N = number of turnovers per year, dimensionless
Q = annual net throughput, bbl/ yr
V_{LX} = tank maximum liquid volume, ft^3

and

$$V_{LX} = \frac{\pi D^2 H_{LX}}{4}$$

where:

D = diameter, ft

H_{LX} = maximum liquid height, ft

K_P = working loss product factor, dimensionless, 0.75 for crude oils. For all other organic liquids, $K_P = 1$

ConocoPhilStdPmt.doc

Department of Environmental Quality
Northwest Region
Air Quality Program

Standard
AIR CONTAMINANT DISCHARGE PERMIT
REVIEW REPORT

ConocoPhillips Company
5528 NW Doane Ave.
Portland, OR 97210
503-248-1538

Unassigned emissions	X
Emission credits	
Source test	X
COMS	
CEMS	
Compliance schedule	
Special conditions	
Annual report	X
Semi-annual report	
Quarterly report	

Monthly report	
Excess emissions report	
NSPS	X
NESHAP	X
NSR	
PSD	
RACT	X
FCE	
Public Notice	Cat 2

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PERMITTING

PERMITTING ACTION

1. The permit is a renewal of an existing Air Contaminant Discharge Permit (ACDP) which was issued on 10/15/2003 and was originally scheduled to expire on 04/01/2008. The permit is being modified to specify monitoring requirements for opacity and grain loading for natural gas fired boilers.

OTHER PERMITS

2. Other permits issued or required by the Department of Environmental Quality for this source include:

   NPDES General Permit
   Underground Storage Tank Permit
   Hazardous Waste Generator Permit

ATTAINMENT STATUS

3. The facility is located in a maintenance area for carbon monoxide (CO) and ozone. Oxides of nitrogen (NO_x) and volatile organic compounds (VOC) are precursors of ozone. As permitted, the facility is an insignificant source of CO and a moderate source of NO_x and VOC. The area is in attainment for all other pollutants.

SOURCE DESCRIPTION

OVERVIEW

4. The permittee operates a bulk gasoline terminal located at 5528 N.W. Doane Avenue in Portland. The facility was previously owned and operated by Tosco Corporation and Phillips Petroleum Company. The terminal has 118 storage tanks for approximately 854,885 barrels of storage tank capacity. The products that are stored and loaded from the facility may include, but are not limited to, gasoline, diesel, fuel/heating oil, ethanol, lube oils and other common commercially available bulk organic liquid products. Organic vapors from the truck loading rack (gasoline/diesel) are controlled by a dual-bed carbon adsorption vapor recovery unit (VRU).

   Organic liquid products are stored predominantly in fixed-roof above-ground storage tanks at the facility. Storage tanks having capacity of greater than 39,000 gallons and storing a volatile organic compound (VOC) liquid with a true vapor pressure that is

greater than 1.52 psia, as stored, at actual monthly average storage temperatures, are equipped with internal floating covers having at least a primary seal.

PROCESS AND CONTROL DEVICES

5. Existing air contaminant sources at the facility consist of the following:

AMT	EQUIPMENT	MFG/MODEL	CAPACITY/ PROD. RATE	CONTROL EQUIPMENT	INSTALLED/ MODIFIED
118	Fixed-roof tanks	Various	Various	Roof, seals	Various
1	Refined Products Truck Loading Rack	NA (Custom)	5400 gal/min (600 gal/min /arm x 9)	Carbon Bed VRU	1999
1	Fuel (Black Oil) Truck Loading Rack	NA (Custom)	500 gal/min	None	1950s
1	Non-gasoline Marine Loading	NA (Custom)	3,600 gal/min	None	1950s
4	Oil/Water Separators	Custom	Various	None	Various
1	Fugitive	Unknown	Various	None	Various
2	Boilers	Erie City Cleaver Brooks	58 MMBtu/hr 14.6 MMBtu/hr	None	1973 1984
2	Railcar & lube oil loading	Custom	250 gal/min	Railcar & lube oil loading uncontrolled	1974

CONTINUOUS MONITORING DEVICES

6. The facility has the following continuous monitoring devices:

Organic vapor analyzer for VRU exhaust gas emissions.

COMPLIANCE

7. The facility was inspected on 09/26/2006 and 9/15/2003 and found to be in compliance with permit conditions.

8. During the prior permit period there were no complaints recorded for this facility.

9. No enforcement actions have been taken against this source since the last permit renewal.

EMISSIONS

10. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits[a] (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM/PM_{10}[a]	1.1	1	1	14	14	0
SO_2	1	75	75	75	75	0
NO_x	11.3	8	8	39	39	0
CO	2.8	7	7	99	99	0
VOC	726.4	119	119	99	99	0

a. The PSEL is a federally enforceable limit on the potential to emit.
b. With this permit action, the netting basis as proposed is hereby frozen pursuant to OAR 340-200-0020(71) and will only be recalculated as needed under the terms of OAR 340-200-0020(71)(a)(A) through (C).
c. Particulate matter is produced as product of combustion (boiler operation) and is all presumed to be PM_{10}.

11. In addition to the PSEL, the permit includes the following:

Pollutant	Unassigned Emissions (tons/yr)	Emission Reduction Credits (tons/yr)
VOC	20	NA

a. The permittee has 20 tons of unassigned VOC emissions. The unassigned emissions are attributed to its decision to accept federally enforceable permit conditions that limit its PTE to levels below Title V major source thresholds. The unassigned emission is the difference between its netting basis and its recognized PTE. Before it can utilize the unassigned emissions, the permittee must first obtain a Title V operating permit.

AGGREGATE INSIGNIFICANT EMISSIONS

12. Analysis of VOC emissions from the following sources at the terminal found the associated emissions to be negligible: lube plant tanks, truck fueling at refined products loading rack (diesel), lube oil truck loading rack (top loading of finished lube oils and some base stocks), black oil/RFO loading rack, diesel/black oil pump off area, lube oil truck unloading area, lube oil additive truck unloading area, gasoline additive truck unloading area, rail car loading (lube oil and base oils), rail car unloading (fuel oils; decant, cutter, RFO), marine vessel offloading (gasoline, diesel, and fuel oils), ethanol truck unloading, and lube plant facility fugitive emissions. For purposes of emission compliance determination calculations the identified sources and their emissions have been grouped together in this permit as "aggregate insignificant emissions." When all of the identified aggregate insignificant emissions are combined it results in less than one ton of hydrocarbon emissions annually. When performing PSEL compliance calculations, the permittee must account for the VOC emissions from the activities identified above by including a 1 ton per year aggregate insignificant emissions constant in the compliance calculation equation with the 1 ton divided equally between the twelve months of the year.

SIGNIFICANT EMISSION RATE ANALYSIS

13. For each pollutant, the proposed Plant Site Emission Limit is less than the Netting Basis plus the significant emission rate, thus no further air quality analysis is required.

MAJOR SOURCE APPLICABILITY

CRITERIA POLLUTANTS

14. A major source is a facility that has the potential to emit more than 100 tons per year of any criteria pollutant. Although the source has the capacity to emit above the Title V major source threshold levels, the permittee has elected not to obtain an Oregon Title V Operating Permit by requesting a PSEL below the major source threshold levels. The PSEL is a federally enforceable limit on PTE.

HAZARDOUS AIR POLLUTANTS

15. The permittee handles products that contain components that are listed as Hazardous Air Pollutants (HAPs) in Section 112(b) of the Federal Clean Air Act and OAR 340-244-0040, Table 1. Using mass balance calculations the permittee determined that when total VOC emissions are limited to 99 tons/year its potential to emit HAPs is below the major source thresholds (major source threshold for HAPs = potential to emit 10 or more tons of any single HAP or 25 or more tons of any combination of HAPs) of the Title V Federal Operating Permit program. The permit contains conditions requiring the permittee to monitor HAP content of terminaled products to ensure that changes in product formulations do not threaten the facility's minor source status. At the time of permit issuance, actual maximum HAP emissions were estimated to be less than 3 tons/yr

of total combined HAPs.

ADDITIONAL REQUIREMENTS

NSPS APPLICABILITY

16. The permittee has 2 storage tanks which are affected facilities under federal regulations for New Source Performance Standards (NSPS) **40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984**. The subject tanks have a capacity of 20,000 gallons each. Due to the small individual size of the tanks and the low true vapor pressure of the stored product (<2.18 psia – associated with 20,000 gallon tanks only) the only applicable regulatory requirement for the permittee to perform for the tanks is to maintain a permanent record of each tank's dimensions and an analysis of each tank's storage capacity.

NSPS Kb Subject Tanks					
Tank No.	Year Constructed	Capacity (gal)	Tank No.	Year Constructed	Capacity (gal)
4436	1990	20,000	4437	1990	20,000

NESHAPS/MACT APPLICABILITY

17. At the time of the ACDP issuance this source is subject to federal regulations for National Emissions Standards for Hazardous Air Pollutants (NESHAPs) – 40 CFR 63 subpart BBBBBB (63.11080 to 63.11100). Initial notification of applicability has been received by the Department.

RACT APPLICABILITY

18. The facility is located in the Portland AQMA and the following RACT requirements apply:

OAR 340-232-0085 - regulations for gasoline delivery vessels
OAR 340-232-0090 - regulations for bulk gasoline terminals
OAR 340-232-0100 - regulations for testing vapor transfer and collection systems
OAR 340-232-0150 - regulations for liquid (volatile organic) storage

TACT APPLICABILITY

19. The source is not subject to the state's TACT/Highest and Best Rules since it is subject to

and complying with the RACT regulations identified above.

SOURCE TESTING

PRIOR TESTING RESULTS

20. The results of the most recent source tests are listed below:

Emission Device	Test Date	Pollutant	Measured Value
Callidus VRU	12/03/2003	VOC	0.011 lb/1000 gallons loaded
Callidus VRU	04/28/2000	VOC	0.0067 lb/1000 gallons loaded
Callidus VRU	09/17/1999	VOC	0.008 lb/1000 gallons loaded

PROPOSED TESTING

21. The Callidus Technologies VRU will be tested within twelve months from permit date of issue.

PUBLIC NOTICE

22. Pursuant to OAR 340-216-0066(4)(a)(A), renewals of Standard Air Contaminant Discharge Permits require public notice in accordance with OAR 340-209-0030(3)(b). The proposed permit was on public notice for a 30-day period from September 5, 2008 to October 7, 2008. During the public notice period it was discovered that NESHAP applicability was not included in the permit. The issued permit does include applicability of 40 CFR 63 Subpart BBBBBB.

dpk:
262026RR.doc
10/9/2008

ConocoPhillips Company
Plant Site Emission Limit Detail Sheet
Baseline Year 1978

EMISSION POINT	OPERATING PARAMETER	EMISSION FACTOR RATE	EMISSION FACTOR REFERENCE	EMISSIONS TONS/YEAR
Volatile Organic Compounds				
Product storage and handling losses				
	Fixed Roof Tanks - 3,692,857 bbl gasoline	Tank specific	AP-42 TANKS	[308.3 Unadjusted(1)]
	Fixed Roof Tanks - 3,692,857 bbl gasoline	Tank specific Adjusted for rule	AP-42 TANKS	**17.2** Adjusted(2)
	Fixed Roof Tanks - 1,822,941 bbl fuel oil/diesel	Tank specific	AP-42 TANKS	**1.4**
Bulk Loading				
Truck Loading	110,800,000 gal gasoline	6.2 lbs/10^3 gal	AP-42	[343.5 Unadjusted(3)]
	110,800,000 gal gasoline	1.27 lbs/10^3 gal Adjusted for rule (0.67 lbs/10^3 gal w/98.3% capture eff.)	Regulatory Limit	**70.4** Adjusted (4)
	53,594,465 gal diesel/ heating oil[5]	0.014 lbs/10^3 gal	AP-42	**0.4**
Marine Vessel Loading				
	23,300,000 gal gasoline	3.9 lbs/10^3 gal	AP-42	[45.4 Unadjusted(6)]
	23,300,000 gal gasoline	0.2 lbs/10^3 gal	Regulatory Limit	**2.3** Adjusted (7)
	11,484,528 gal diesel/ heating oil[8]	0.012 lbs/10^3 gal	AP-42	**0.1**
Oil/Water Separator				
	3000 gal/day throughput	5 lbs/10^3 gal	FIRE	**3**

COP0016663

ConocoPhillips Company
Plant Site Emission Limit Detail Sheet
Baseline Year 1978

		EMISSION FACTOR		EMISSIONS
EMISSION POINT	OPERATING PARAMETER	RATE	REFERENCE	TONS/YEAR
	1,095,000 gal/yr[9]			
Fugitive Emissions (valves, pumps, flanges, etc.)	327 Valves	47 lb/source/yr	AP-42 S. Coast AQMD	**7.8**
	12 Pumps	432 lb/source/yr	AP-42 S. Coast AQMD	**2.6**
	604 Flanges	4.9 lb/source/yr	AP-42 S. Coast AQMD	**1.5**
	856 Other connectors	4.9 lb/source/yr	AP-42 S. Coast AQMD	**2.1**
Asphalt Operations				
Storage	32,613,000 Asphalt feed stock 18,315,360 gal finished asphalt	Tank specific	AP-42 TANKS	**4.7**
Loading	18,315,360 gal asphalt loaded	0.48 lbs/10^3 gal	AP-42 w/Chevron monitoring data	**4.4**
Boilers				
Erie City Cleaver Brooks	72.65 MMBtu/hr total input 10,128 gal No. 2 fuel oil 159.3 x 10^6 ft^3 nat. gas	 0.2 lbs/10^3 gal 5.5 lbs/10^6 ft^3	 AP-42 AP-42	 **negligible** **0.4**
Aggregate Insignificant Activities	Lube oil, gear oil, asphalt emulsions			**1**
		VOC Total	Baseline Emission Rate	726.4

COP0016664

ConocoPhillips Company
Plant Site Emission Limit Detail Sheet
Baseline Year 1978

EMISSION POINT	OPERATING PARAMETER	EMISSION FACTOR RATE	EMISSION FACTOR REFERENCE	EMISSIONS TONS/YEAR
			Netting Basis	**119**
Particulate Matter				
Erie City				
Cleaver Brooks	72.65 MMBtu/hr total input			
	10,128 gal No. 2 fuel oil	3.3 lbs/10^3 gal	AP-42	**negligible**
	159.3 x 10^6 ft^3 nat. gas	7.6 lbs/10^6 ft^3	AP-42	**0.6**
		PM Total	Baseline Emission Rate **Netting Basis**	**0.6**
Oxides of Nitrogen				
Erie City				
Cleaver Brooks	72.65 MMBtu/hr total input			
	10,128 gal No. 2 fuel oil	20 lbs/10^3 gal	AP-42	**0.1**
	159.3 x 10^6 ft^3 nat. gas	100 lbs/10^6 ft^3	AP-42	**8**
		NO_X Total	Baseline Emission Rate **Netting Basis**	**8.1**
Carbon Monoxide				
Erie City				
Cleaver Brooks	72.65 MMBtu/hr total input			
	10,128 gal No. 2 fuel oil	5 lbs/10^3 gal	AP-42	**negligible**
	159.3 x 10^6 ft^3 nat. gas	84 lbs/10^6 ft^3	AP-42	**6.7**
		CO Total	Baseline Emission Rate	**6.7**

COP0016665

ConocoPhillips Company
Plant Site Emission Limit Detail Sheet
Baseline Year 1978

		EMISSION FACTOR		EMISSIONS
EMISSION POINT	OPERATING PARAMETER	RATE	REFERENCE	TONS/YEAR
			Netting Basis	
Sulfur Dioxide				
Erie City				
Cleaver Brooks	72.65 MMBtu/hr total input			
	10,128 gal No. 2 fuel oil	71 lbs/10^3 gal	AP-42	**0.4**
	159.3 x 10^6 ft^3 nat. gas	2.6 lbs/10^6 ft^3	DEQ(10)	**0.2**
		SO_2 Total	Baseline Emission Rate **Netting Basis**	**0.6**

(1) "Unadjusted" emission quantity represents baseline emission rate for fixed roof gasoline storage tanks, unadjusted for Department RACT rules for storage vessels. Emission quantity includes emissions for two fixed roof tanks (2915 and 4259), equipped with internal floating pans and primary seals (RACT compliant) that were present during the baseline year. Other fixed roof gasoline storage tanks were connected to a Horton dome with diaphragm (vapor bag) for vapor control/recovery. Control efficiency was assumed to be 50%.

(2) "Adjusted" emission quantity equals the netting basis which is the baseline emission rate for fixed roof gasoline storage tanks, adjusted for Department RACT rules for storage vessels. Emissions were calculated assuming that each fixed roof gasoline storage tank was equipped with with an internal floating pan with primary seal.

(3) "Unadjusted" emission quantity represents baseline emission rate for the truck loading rack unadjusted for Department RACT rules for gasoline terminals.

(4) "Adjusted" emission quantity equals the netting basis which is the baseline emission rate for the truck loading rack adjusted for Department RACT rules for gasoline terminals.

(5) Actual quantity of diesel/heating oil loaded into trucks in the baseline year was not available in the source file. It was assumed that 70% of the annual diesel/heating oil throughput was loaded into trucks based upon historical operational performance documented in the file.

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(6) "Unadjusted" emission quantity represents baseline emission rate for marine vessel loading of gasoline unadjusted for Department RACT rules for marine vessel loading.

(7) "Adjusted" emission quantity equals the netting basis which is the baseline emission rate for marine vessel loading of gasoline adjusted for Department RACT rules.

(8) Actual quantity of diesel/heating oil loaded into marine vessels in the baseline year was not available in the source file. It was assumed that 15% of the annual diesel/heating oil throughput was loaded into marine vessels based upon historical operational performance documented in the file.

(9) Actual quantity of liquid throughput for the oil/water separators in the baseline year was not available in the source file. It was assumed that this quantity was identical to current typical years.

(10) Emission factor based upon sulfur content of Portland area natural gas supply - determined in 1993.

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EMISSION POINT	OPERATING PARAMETER	EMISSION FACTOR RATE	EMISSION FACTOR REFERENCE	EMISSIONS TONS/YEAR
Volatile Organic Compounds				
Product storage and handling losses				
	Int. Floating Roof Tanks - 9,175,648 bbl gasoline/ethanol/Ht. Oil	Tank Specific	AP-42 TANKS	**30.9**
	Fixed Roof Tanks –13,695,212 bbl fuel oil/diesel/base oil/RFO/MFO	Tank Specific	AP-42 TANKS	**2.4**
Bulk Loading Truck Loading	Max Load Rate = 3,600 gal/min 460 MMgal petroleum products loaded	0.21 lbs/10^3 gal (includes 1.3% fugitives)	Source Test	**48.3**
Marine Vessel Loading	Max Load Rate = 3,600 gal/min 85.7 MMgal diesel	0.012 lbs/10^3 gal	AP-42	**0.5**
Oil/Water Separator	20,000 gal/day throughput 4,653,750 gal/yr	5 lbs/10^3 gal	FIRE	**11.6**
Fugitive Emissions (valves, pumps, flanges, etc.)	327 Valves	1.4 lb/source/yr	API Pub. No. 4588	**0.2**
	12 Pumps	27.2 lb/source/yr	API Pub. No. 4588	**0.2**
	1460 Flanges/other connections	0.6 lb/source/yr	API Pub. No. 4588	**0.4**
Boilers Erie City				

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EMISSION POINT	OPERATING PARAMETER	EMISSION FACTOR		EMISSIONS
		RATE	REFERENCE	TONS/YEAR
Cleaver Brooks	72.65 MMBtu/hr total input			
	residual oil - no use projected	0.28 lbs/10^3 gal	AP-42	
	369,000 gal fuel oil (0.3% S)	0.2 lbs/10^3 gal	AP-42	**0.04**
	144 $MMft^3$ nat. gas	5.5 lbs/10^6 ft^3	AP-42	**0.4**
Insignificant Activities				
	Rail Car Loading (lube oil, fuel oil, additives)			**1**
	Barge loading diesel/fuel oil			
			VOC Totals	**95.9**
Particulate Matter				
Erie City				
Cleaver Brooks	72.65 MMBtu/hr total input			
	residual oil - no use projected	20.8 lbs/10^3 gal	AP-42	
	369,000 gal fuel oil (0.3% S)	3.3 lbs/10^3 gal	AP-42	**0.6**
	144 $MMft^3$ nat. gas	7.6 lbs/10^6 ft^3	AP-42	**0.5**
			Total PM/PM_{10}	**1.1**
Oxides of Nitrogen				
Erie City				
Cleaver Brooks	72.65 MMBtu/hr total input			
	residual oil - no use projected	55 lbs/10^3 gal	AP-42	
	369,000 gal fuel oil (0.3% S)	20 lbs/10^3 gal	AP-42	**3.7**
	144 $MMft^3$ nat. gas	100 lbs/10^6 ft^3	AP-42	**7.2**
			Total NO_X	**10.9**
Carbon Monoxide				

COP0016669

EMISSION POINT	OPERATING PARAMETER	EMISSION FACTOR RATE	EMISSION FACTOR REFERENCE	EMISSIONS TONS/YEAR
Erie City Cleaver Brooks	72.65 MMBtu/hr total input			
	residual oil - no use projected	5 lbs/10^3 gal	AP-42	
	369,000 gal fuel oil (0.3% S)	5 lbs/10^3 gal	AP-42	**1**
	144 $MMft^3$ nat. gas	84 lbs/10^6 ft^3	AP-42	**6**
			Total CO	**7**
Sulfur Dioxide				
Erie City Cleaver Brooks	72.65 MMBtu/hr total input			
	residual oil - no use projected	274.75 lbs/10^3 gal	AP-42	
	369,000 gal fuel oil (0.3% S)	71 lbs/10^3 gal (emission factor based on 0.5% S for operational flexibility)	AP-42	**13.1**
	144 $MMft^3$ nat. gas	2.6 lbs/10^6 ft^3	AP-42	**0.2**
			Total SO_2	**13.3**

COP0016670

Incident ID: 84918

Short Description: Portlant Product Terminal - Separator 002 O&G Exceedance [E]

Responsible Dept\Unit: **Terminals : Terminals - West Coast Division : Portland Product Terminal**

Incident Type: **Incident**

Status: **Closed**

Potential Risk Rating: **I - Low**

General

Responsible Supervisor: THOMAS LYONS

High Learning Value Event Status: **Not Reviewed for HLVE**

Location:

Specific Location: **Separator 002**

Date Occurred: (mm/dd/yyyy) **11/3/2008 10:30:00 PM**

Date Reported: (mm/dd/yyyy) **11/5/2008 8:30:00 PM**

Date Entered: **11/6/2008 3:15:46 PM (GMT-08:00)**

REPORTEDBY: THOMAS LYONS

Incident Description: A stormwater sample was collected from Separator 002 on 11/03/08 at 11:20 hours and submitted for evaluation of stormwater parameters including oil and grease at 11:33 hours. Results of the oil and grease analysis were received on 11/04/08 at 15:54 hours which indicated the concentration of oil and grease (i.e., 23 mg/L) exceeded the NPDES permit benchmark (i.e., 10 mg/L). A total of 14,382 gallons of stormwater were discharged from Separator 002 to the Williamette River on 11/03/08 (7,191 gallons) and 11/04/08 (7,191 gallons) with oil and grease concentrations potentially exceeding the benchmark. All shifts were notified that the stormwater sample had been collected from Separator 002 and stormwater release to the river was not to occur until the data has been received and evaluated. Heavy rain ocurred the evening of 11/03/08. Terminal Operators called the facility supervisor asking for permission to release water from the separator at approximately 22:00 hours on 11/03/08. Permission to release was granted before results of the stormwater analalytical data were received and compared against the NPDES benchmarks. Emergency procedures for discharge to the process stream instead of to the river were not considered. Stormwater analytical data was then received by the facility supervisor on 11/05/08 at 07:41 hours and the potential exceedance was realized. Stormwater discharge from Separator 002 has been discontinued. For confirmation purposes, an additional sample will be collected and evaluted for oil and grease. The City of Portland BES has been notified. Procedures for responding to a benchmark exceedance are being followed (i.e, review of the SWPCP and preparation of an Action Plan).

Weather: **Rain**

Lighting: **Night**

Address: **5528 NW Doane Avenue**

City: **Portland**

Country: **United States**

Zip/Postal Code: **97210**

Incident Flags: Weather Related

Entered By: **LYONS, THOMAS**

Sub Types

COP0016671

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Filters/Separators: Seperators	NO	

People

Contractor Involvement : No Data is Available

Name	Employee Type	Consequence Number: Injury / Illness	Property	Transportation	Security	Quality	Environmental	
CUSTER, COLLEEN	Employee						14842	Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Tom Lyons	Employee	503-248-1572

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
14842 Open View	Environmental	This is a Permit Exceedance, i...	CUSTER, COLLEEN G	Closed

Pending Consequences : No Data is Available

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

Summary

Equipment:	1
Employees:	1
Contractors:	None
Witnesses:	1

COP0016672

2008 Hazardous and Universal Waste Summary 1370.00

In EPOCH ?	Terminal	EPA ID No.	Date	Manifest ID#	Manifest Type	Waste Stream	Description	Generation	Volume	Units	Volume	Units	Final Volume	Final Units	Haz. Waste (yes/no)	Transporter	Destination	Oregon Code Final System Code	Washington Code Initial System Code
Hazardous Wastes - Burlington Environmental-Kent WA																			
	North Spokane	WAD070967245	02/11/08	000634842 JJK	UHW	Paint Related Materi	waste paint related material	1	dm	55	gallons	458.7	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H141
	Parkwater	WAD000801001	07/08/08	000634838 JJK	UHW	Contaminated Debris	rags and pads - waste solids containing flamm	1	DM	100	P	100	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Parkwater	WAD000801001	07/08/08	000634838 JJK	UHW	Paint Waste	paint waste - waste paint related material	1	DM	150	P	150	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H141
	Parkwater	WAD000801001	07/08/08	000634838 JJK	UHW	Rack Sludge	rack sludge - enviornmentally hazardous substa	1	DM	350	P	680	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Portland	ORD087458196	01/22/08	000634832 JJK	UHW	spent hexane and m	RE, Waste Flammable Liquid, Lubes	1	drum	23	gallons	153.45	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	03/14/08	000634558 JJK	UHW	Ink and wash solven	waste flammabnle liquids (met	Lubes	1	df	5	lbs	5	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	04/09/08	000634885 JJK	UHW	spent hexane and m	RE, Waste Flammable Liquid,	Lubes	1	drum	30	gallons	200.16	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	07/02/08	000634925 JJK	UHW	spend hexane and m	waste flamable liquid (hexane)		1	drum	33	gallons	220.17	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	08/15/08	000634941 JJK	UHW	lead paint chips and	haz waste solid (lead)		13	drums	1300	lbs	1300	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H132	H111
	Portland	ORD087458196	09/19/08	000634964 JJK	UHW	spent hexane	waste flamable liquid (hexane)		1	drum	33	gallons	200.16	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	10/01/08	000634973 JJK	UHW	calcium hydroxide	calcium hydroxide		1	dm	0.75	p	1	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Portland	ORD087458196	10/01/08	000634973 JJK	UHW	waste flammable liq	waste flammable liquids		1	dm	0.5	gallons	7.5 lbs	???	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	10/01/08	000634973 JJK	UHW	waste flammable liq	cyclohexanol				1	L	included in 7	???	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	10/01/08	000634973 JJK	UHW	waste flammable liq	ethyl acetate				1	L	included in 7	???	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	10/01/08	000634973 JJK	UHW	waste flammable liq	petroleum distillates				100	ml	included in 7	???	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	10/01/08	000634973 JJK	UHW	waste flammable liq	ethanol				100	ml	included in 7	???	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	10/01/08	000634973 JJK	UHW	waste flammable liq	toluene				200	ml	included in 7	???	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Portland	ORD087458196	11/19/08	005379534 JJK	UHW	spent hexane	waste flamable liquid (hexane)		1	drum	33	gallons	220.17	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H050	H061
	Renton	WAD000641530	02/27/08	000634853 JJK	UHW	Sorbents/Shop Rags	waste solids containing flammable liquid (unles		1	dm	75	p	118	lbs	yes	Cowlitz WAH000014944		Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Renton	WAD000641530	04/18/08	000634898 JJK	UHW	Floating Roof Seal -	waste solids containing flammable liquid (benz		1	dm	50	p	50	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Renton	WAD000641530	08/01/08	000634894 JJK	UHW	Sorbents/Shop Rags	waste solids containing flammable liquid (unles		1	dm	100	p	100	lbs	yes	Cowlitz WAH000014944		Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Renton	WAD000641530	10/04/08	000634972 JJK	UHW	lead paint chips and	hazardous waste solid (lead)		1	dm	100	p	100	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H132	H111
	Renton	WAD000641530	12/30/08	005379556 JJK	UHW	Sorbents/Shop Rags	waste solids containing flammable liquid (unles		1	dm		p	60	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Tacoma	WAD000641522	01/17/08	000634826 JJK	UHW	Sorbents/Shop Rags	waste solie containing flammable liquid (unlead		1	drum		lbs	100	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Tacoma	WAD000641522	03/25/08	000634872 JJK	UHW	Sorbents/Shop Rags	waste solie containing flammable liquid (unlead		1	drum	100	lbs	100	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Tacoma	WAD000641522	04/18/08	000634899 JJK	UHW	hydrogen peroxide	hydrogen peroxide aqueous solutions, 20-40%		1	df	85	p	85	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H132	H141
	Tacoma	WAD000641522	07/25/08	000634895 JJK	UHW	Sorbents/Shop Rags	waste solie containing flammable liquid (unlead		1	drum	100	lbs	100	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Tacoma	WAD000641522	10/04/08	000634975 JJK	UHW	Sorbents/Shop Rags	waste solie containing flammable liquid (unlead		2	drum	150	lbs	150	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
	Tacoma	WAD000641522	04/22/08	000634901 JJK	UHW	paint and asphalt sw	non RCRA waste liquid		1	df	20	g	100	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001744	Burlington Environemntal - Kent WA	WAD991281768	H050	H061
	Tacoma	WAD000641522	December	005379557 JJK	UHW	Sorbents/Shop Rags	waste solie containing flammable liquid (unlead		2	drum	150	lbs	198	lbs	yes	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767	H040	H141
Hazardous Wastes - Chemical Waste Management - Arlington OR																			
	North Spokane	WAD070967245	02/11/08	000634849 JJK	UHW	Soil, gravel, sludge	haz waste solid (benzen); Pig removals		1	dm	500	p	440	lbs	yes	Cowlitz WAH000014944	Chemical Waste Management - Arlington OR/ORD089452353	H132	H081
	Parkwater	WAD000801001	02/11/08	000634850 JJK	UHW	gasoline contaminat	hazardous waste solind (benzene)		1	drum	500	lbs	440	lbs	yes	Cowlitz WAH000014944	Chemical Waste Management - Arlington OR/ORD089452353	H132	H081
Hazardous Wastes - Safety Kleen-Clackamas, OR																			
	Portland	ORD087458196	09/22/08	000145708 SKS	UHW	spent parts cleaning	waste combustible liquid (petroleum naphtha)		1	dm	15	gallons	100.05	lbs	yes	Safety-Kleen Systems TXR000050930	Safety-Kleen Systems - Clackamas, OR/ORD981766124	H020	H141
	Portland	ORD087458196	11/18/08	001423415 SKS	UHW	spent parts cleaning	waste combustible liquid (petroleum naphtha)		1	dm	15	gallons	100.05	lbs	yes	Safety-Kleen Systems TXR000050930	Safety-Kleen Systems - Clackamas, OR/ORD981766124	H020	H141
Universal Wastes																			
	Parkwater	WAD000801001	02/11/08	000634848 JJK	UHW	universal waste	batteries		1	df	25	p			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Parkwater	WAD000801001	02/11/08	000634848 JJK	UHW	universal waste	light tubes		5	cf	75	p			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Parkwater	WAD000801001	02/11/08	000634848 JJK	UHW	universal waste	HID bulbs		1	cf	15	p			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	03/14/08	000634558 JJK	UHW	universal waste	batteries		1	df	10	lbs			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	03/14/08	000634558 JJK	UHW	universal waste	polychlorinated biphenyls solid light ballast for r		1	df	5	K			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	03/14/08	000634558 JJK	UHW	universal waste	non-polychlorinated biphenyls solid light ballast		1	df	10	lbs			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	04/09/08	000634885 JJK	UHW	universal waste	waste light tubes		2	cf	30	p			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	04/09/08	000634885 JJK	UHW	universal waste	universal waste lamps (HID bulbs)		1	cf	3	p			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	07/02/08	000634925 JJK	UHW	universal waste	batteries		1	df	5	lbs			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	07/02/08	000634925 JJK	UHW	universal waste	batteries		1	df	10	lbs			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	09/19/08	000634964 JJK	UHW	universal waste	light tubes		2	cw	112	lf			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
	Portland	ORD087458196	09/19/08	000634964 JJK	UHW	universal waste	HID lamps (lead, mercury)		2	cw	15	p			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		
ACM																			
	Parkwater	WAD000801001	02/11/08	000634848 JJK	UHW	asbestos containing	asbestos pipe wrapping		1	dm	60	lbs			no	Cowlitz WAH000014944/BEI	WAR000001743	Burlington Environemntal - Kent WA	WAD991281767		

Moses Lake No hazardous or universal wastes generated during 2008

COP0016673

DELIVERY VOLUME REPORTED BY BARRELS FOR PORLTLAND TERMINAL - 2008
TOTAL TERMINAL VOLUME (INCLUDING 3RD PARTY)

	January		February		March		April		May		June		July		August		September		October		November		December		
Reporting Location	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	Branded	Unbranded	YTD
TOTAL PDX RACK																									
Premium	31,256	5,982	32,055	3,955	28,727	2,648	27,846	4,019	27,008	3,379	27,245	1,405	28,394	1,950	29,427	1,680	27,085	3,309	26,941	3,558	26,447	3,983	23,732	1,654	373,685
Subgrade	309,275	23,728	258,703	17,075	285,490	7,461	282,037	16,743	303,268	13,449	335,039	20,378	372,019	44,358	383,371	35,833	347,159	75,545	364,021	69,858	345,121	84,512	320,310	28,697	4,343,450
U/L Reg	36,852	64,009	80,706	49,512	65,209	46,941	81,392	42,482	78,772	40,673	0	0	0	0	0	0	0	0	0	0	0	0	0	0	586,548
Ethanol	37,588	2,907	37,302	2,384	38,997	1,256	40,758	2,590	43,537	2,176	39,421	2,429	44,299	5,157	45,935	4,170	41,663	8,787	43,683	8,202	41,435	9,874	38,491	3,394	546,435
Diesel	52,609	132,444	57,932	92,378	57,256	88,242	56,941	92,601	60,458	113,992	58,243	105,582	63,538	104,783	63,254	93,128	60,253	160,304	60,844	180,143	49,621	119,452	46,885	90,233	2,061,116
Diesel Red	1,383	53,922	1,905	30,377	1,668	22,731	2,601	25,516	2,036	26,603	829	32,394	1,934	34,449	1,833	27,674	1,168	44,255	1,168	52,072	358	38,025	1,150	46,127	452,178
Bio Diesel Dyed	0	17	0	0	0	25	0	130	0	0	54	0	0	0	106	32	0	0	36	36	0	24	0	0	460
Bio Diesel	2,515	19,862	2,760	27,196	2,851	22,952	2,861	14,627	2,782	15,991	2,410	13,520	3,174	16,571	2,867	22,122	2,754	30,063	2,934	28,230	2,834	24,899	3,169	21,243	291,187
Diesel 1	455	2,170	120	824	0	363	0	116	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,098
Diesel 1 dyed	373	5,309	246	2,358	0	753	0	1,105	0	477	0	60	0	0	0	136	0	0	0	0	0	0	0	0	10,817
Black Oil		10,902		5,291		3,563		4,317		1,486		579		0		580		597		1,753		2,880		13,361	45,309
Total Rack	**472,306**	**321,252**	**471,729**	**231,350**	**480,198**	**196,935**	**494,436**	**204,246**	**517,861**	**218,276**	**463,241**	**176,347**	**513,358**	**207,268**	**526,793**	**185,355**	**480,082**	**322,860**	**499,627**	**343,852**	**465,816**	**283,649**	**433,737**	**204,709**	**8,715,283**
TOTAL PDX BARGE																									
Diesel		96,506		179,283		88,008		92,098		74,983		153,358		135,439		53,264		86,179		233,534		63,814		63,867	1,320,333
Diesel Red		5,360		6,946		6,857		8,986		6,302		7,870		11,377		13,287		8,139		8,486		9,733		5,325	98,668
Diesel 1		12,080		0		0		0		0		0		0		0		0		0		0		0	12,080
Black Oil		0		0		30,834		14,824		39,144		15,461		8,473		16,877		6,987		27,326		13,203		42,488	215,617
Total Barge		**113,946**		**186,229**		**125,699**		**115,908**		**120,429**		**176,689**		**155,289**		**83,428**		**101,305**		**269,346**		**86,750**		**111,680**	**1,646,698**
TOTAL PDX RAIL																									
Black Oil Total		**0**		**0**		**0**		**0**		**0**		**0**		**0**		**0**		**0**		**0**		**0**		**0**	0
TOTAL PDX PIPELINE ICPL																									
Premium		10,141		7,513		10,005		3,979		15,010		0		0		0		19,871		41,102		10,055		13,000	130,676
Subgrade		0		0		0		0		0		19,801		44,919		0		34,992		4,990		20,015		10,371	135,088
U/L Reg		40,317		0		0		11,905		19,951		0		0		0		0		0		0		0	72,173
Diesel		5,999		0		29,942		0		0		32,872		35,954		38,012		48,750		24,561		31,970		17,999	266,059
Total ICPL		**56,457**		**7,513**		**39,947**		**15,884**		**34,961**		**52,673**		**80,873**		**38,012**		**103,613**		**70,653**		**62,040**		**41,370**	**603,996**
TOTAL PDX PIPELINE KINDERMORGAN																									
Premium		7,520		3,000		5,002		11,050		5,001		2,509		5,005		7,475		7,518		5,000		0		0	59,080
U/L Reg		8,026		0		0		0		0		0		0		0		0		0		0		0	8,026
Diesel		2,508		0		7,488		0		0		0		0		0		0		0		0		0	9,996
Total KINDERMORGAN		**18,054**		**3,000**		**12,490**		**11,050**		**5,001**		**2,509**		**5,005**		**7,475**		**7,518**		**5,000**		**0**		**0**	**77,102**
TOTAL PDX LIGHTERING																									
Premium		0		0		0		0		0		0		0		0		0		0		0		0	0
Subgrade		0		0		0		0		0		0		0		0		0		15,038		0		0	15,038
U/L Reg		15,166		0		10,084		32,399		0		0		0		0		0		0		0		0	57,649
Diesel L/S		11,328		0		4,905		0		0		0		0		41,596		0		0		14,979		0	72,808
Diesel Red		0		0		0		0		0		0		0		0		0		0		0		0	0
Bio Diesel		0		0		0		0		0		0		0		0		0		0		0		0	0
Total Lightering		**26,494**		**0**		**14,989**		**32,399**		**0**		**0**		**0**		**41,596**		**0**		**15,038**		**14,979**		**0**	**145,495**
TOTAL PDX TERM																									
Premium	31,256	23,643	32,055	14,468	28,727	17,655	27,846	19,048	27,008	23,390	27,245	3,914	28,394	6,955	29,427	9,155	27,085	30,698	26,941	49,660	26,447	14,038	23,732	14,654	563,441
Subgrade	309,275	23,728	258,703	17,075	285,490	7,461	282,037	16,743	303,268	13,449	335,039	40,179	372,019	89,277	383,371	35,833	347,159	110,537	364,021	89,886	345,121	104,527	320,310	39,068	4,493,576
U/L Reg	36,852	127,518	80,706	49,512	65,209	57,025	81,392	86,786	78,772	60,624	0	0	0	0	0	0	0	0	0	0	0	0	0	0	724,396
Ethanol	37,588	2,907	37,302	2,384	38,997	1,256	40,758	2,590	43,537	2,176	39,421	2,429	44,299	5,157	45,935	4,170	41,663	8,787	43,683	8,202	41,435	9,874	38,491	3,394	546,435
Diesel	52,609	248,785	57,932	271,661	57,256	218,585	56,941	184,699	60,458	188,975	58,243	291,812	63,538	276,176	63,254	226,000	60,253	295,233	60,844	438,238	49,621	230,215	46,885	172,099	3,730,312
Diesel Red	1,383	59,282	1,905	37,323	1,668	29,588	2,601	34,502	2,036	32,905	829	40,264	1,934	45,826	1,833	40,961	1,168	52,394	1,168	60,558	358	47,758	1,150	51,452	550,846
Bio Diesel Dyed	0	17	0	0	0	25	0	130	0	0	54	0	0	0	106	32	0	0	36	36	0	24	0	0	460
Bio Diesel	2,515	19,862	2,760	27,196	2,851	22,952	2,861	14,627	2,782	15,991	2,410	13,520	3,174	16,571	2,867	22,122	2,754	30,063	2,934	28,230	2,834	24,899	3,169	21,243	291,187
Diesel #1	455	14,250	120	824	0	363	0	116	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,178
Diesel #1 dyed	373	5,309	246	2,358	0	753	0	1,105	0	477	0	60	0	0	0	136	0	0	0	0	0	0	0	0	10,817
Black Oil		10,902		5,291		34,397		19,141		40,630		16,040		8,473		17,457		7,584		29,079		16,083		55,849	260,926
TOTAL PDX TERM	**472,306**	**536,203**	**471,729**	**428,092**	**480,198**	**390,060**	**494,436**	**379,487**	**517,861**	**378,667**	**463,241**	**408,218**	**513,358**	**448,435**	**526,793**	**355,866**	**480,082**	**535,296**	**499,627**	**703,889**	**465,816**	**447,418**	**433,737**	**357,759**	**11,188,574**
	1,008,509		**899,821**		**870,258**		**873,923**		**896,528**		**871,459**		**961,793**		**882,659**		**1,015,378**		**1,203,516**		**913,234**		**791,496**		11,188,574

COP0016674

PORTLAND TERMINAL
TANK TO TANK TRANSFERS 2008 Estimates

2008	87	84	92	D/O #2	D/O #1	Total	Black Oil
January	32,000	38,000	10,000	244,400	3,900	328,300	4,590
February	39,175	20,000	29,240	383,750	0	472,165	0
March	0	46,000	7,000	206,770	0	259,770	3,642
April	0	48,000	15,000	245,000	300	308,300	2,343
May	0	38,000	10,000	189,000	0	237,000	1,731
June	0	18,000	4,500	205,000	0	227,500	0
July	0	20,000	9,080	183,250	0	212,330	1,902
August	0	11,000	6,800	212,500	1,070	231,370	11,619
September	0	18,000	5,700	223,500	0	247,200	2,480
October	0	22,000	7,400	252,400	0	281,800	3,251
November	0	20,000	14,500	274,700	0	309,200	5,694
December	0	8,000	5,500	215,000	0	228,500	10,851
Total	**71,175**	**307,000**	**124,720**	**2,835,270**	**5,270**	**3,343,435**	**48,103**

Reported in Bbls

Instructions for volume reports:
Black Oil diesel is included in Black Oil Volume
Lightering included in total terminal volume
Wilson Oil super is included in their unleaded volume
Other Notes:
To have diesels match TOR's then you have to substract from #2 and put into #1

2008 TERMINAL OIL AND GREASE THROUGHPUT
Portland Terminal

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Blending													
Lube Oil	1,401,989	1,361,940	1,388,743	1,598,220	1,116,965	1,522,024	1,447,929	1,411,561	1,330,158	1,650,347	991,228	936,629	16,157,733
Grease	53,993	44,395	52,001	59,039	36,214	69,341	34,904	65,106	42,899	44,035	42,069	28,304	572,300
			0										
Total	1,455,982	1,406,335	1,440,744	1,657,259	1,153,179	1,591,365	1,482,833	1,476,667	1,373,057	1,694,382	1,033,297	964,933	16,730,033
Filling													
Drums	105,824	141,830	145,522	152,553	128,111	140,669	121,389	143,103	105,627	124,908	92,255	53,771	1,455,562
Qtr Bbls	874	3,739	2,555	2,182	2,520	2,193	1,306	1,604	1,006	738	288	590	19,595
Pails	15,422	18,924	18,703	26,217	21,757	19,375	24,245	25,313	14,081	20,094	6,750	4,169	215,050
Jugs	0	0	0	0	0	0	0	0	0	0	0	0	0
24/1	0	0	0	0	0	0	0	0	0	0	0	0	0
12/1	112,530	80,719	84,651	83,010	44,625	110,013	136,108	52,458	49,527	28,386	26,421	14,982	823,430
Tote Bins	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	234,650	245,212	251,431	263,962	197,013	272,250	283,048	222,478	170,241	174,126	125,714	73,512	2,513,637
Bulk/Ship													
Trk/Bulk	870,350	876,012	943,019	966,603	879,492	1,103,764	924,723	961,803	820,334	796,402	596,118	311,027	10,049,647
Rail/Bulk	257,693	202,273	199,905	131,775	64,955	172,064	107,679	278,735	325,630	410,406	341,461	549,039	3,041,615
Trk/base	29,978	43,918	22,007	46,647	27,620	42,873	54,950	65,376	47,454	28,106	37,913	11,318	458,160
Rail/base	0	0	0	0	0	0	0	0	0	0	0	0	0
FOB/Trk/BK	0	0	0	0	0	0	0	0	0	0	0	0	0
FOB/Rail/BK	0	0	0	0	0	0	0	0	0	0	0	0	0
Exports	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Pkger	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,158,021	1,122,203	1,164,931	1,145,025	972,067	1,318,701	1,087,352	1,305,914	1,193,418	1,234,914	975,492	871,384	13,549,422
Orders													
#Mkters	0	0	0	0	0	0	0	0	0	0	0	0	0
#Retail	0	0	0	0	0	0	0	0	0	0	0	0	0
#Xport	0	0	0	0	0	0	0	0	0	0	0	0	0
#Other	0	0	0	0	0	0	0	0	0	0	0	0	0
							0						
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
#Blk/Trks	130	132	134	151	134	158	143	148	122	124	96	85	1,557
#Blk/Rail	13	9	9	7	4	9	6	17	17	22	20	16	149
#Pkg/Trks	128	130	116	139	111	145	121	147	115	130	89	91	1,462
Pkg/Ship													
M/T Pkg	0	0	0	0	0	0	0	0	0	0	0	0	0
CC/Pkg	0	0	0	0	0	0	0	0	0	0	0	0	0
LD/Pkg	0	0	0	0	0	0	0	0	0	0	0	0	0
XPORT/Pkg	0	0	0	0	0	0	0	0	0	0	0	0	0
FOB/Pkg	0	0	0	0	0	0	0	0	0	0	0	0	0
Total lbs	2,492,685	2,551,305	2,384,633	2,715,352	2,386,620	2,980,613	2,445,690	2,594,333	1,841,010	1,878,968	1,448,985	1,360,058	27,080,252
Total Gal	332,358	340,174	317,951	362,047	318,216	397,415	326,092	345,911	245,468	250,529	193,198	181,341	3,610,700
TOTAL	1,490,379	1,462,377	1,482,882	1,507,072	1,290,283	1,716,116	1,413,444	1,651,825	1,438,886	1,485,443	1,168,690	1,052,725	17,160,122
Receiving													
Marine	1,016,785	880,545	1,053,465	839,524	774,265	779,829	1,062,696	1,380,040	1,086,078	629,671	1,018,089	629,953	11,150,940
Trk/Base	12,590	0	16,950	5,926	26,246	5,914	6,057	0	12,395	5,870	5,769	12,054	109,771
Rail/Base	320,325	212,807	329,707	279,514	303,931	213,074	166,371	115,724	306,083	280,924	215,920	160,863	2,905,243
Trk/Fin	0	0	0	0	0	0	0	0	0	0	0	0	0
Trk/Add	0	0	6,227	0	0	0	0	16,454	8,709	16,795	15,623	5,987	69,795
Rail/Add	74,901	95,427	123,620	130,088	136,828	184,067	64,097	124,102	113,930	104,300	69,887	53,467	1,274,714
Pkg/Add	6,715	12,118	17,623	14,197	15,417	5,622	14,288	436	11,594	11,358	6,259	11,401	127,028
Pkg/Gr	28,025	18,186	35,201	26,711	35,606	29,091	19,862	33,435	37,125	22,834	23,287	19,629	328,992
Pkg/Lub	52,400	69,525	73,885	60,387	72,235	78,684	52,413	105,062	59,015	64,230	37,285	39,085	764,206
Rail/Fin	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulktainer Add	0	0	0	0	0	0	0	0	0	0	0	0	0
	4,456	0	8,581	4,456	0	8,890	0	8,641	0	4,456	4,421	4,145	48,046
Total	1,516,197	1,288,608	1,665,259	1,360,803	1,364,528	1,305,171	1,385,784	1,783,894	1,634,929	1,140,438	1,396,540	936,584	16,778,735

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Stantec

January 13, 2009

Ed C. Ralston
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818

RE: GWET System Operations Report – Third Quarter 2008
ConocoPhillips Portland Terminal, RM&R Site No. 0922
5528 NW Doane Avenue, Portland, Oregon 97210
Stantec Project Number: 15CP.00922.91

Dear Mr. Ralston:

This report has been prepared by Stantec Consulting Corporation (Stantec), on behalf of ConocoPhillips (COP) and Chevron Environmental Management Company (Chevron), to document operation-and-maintenance (O&M) activities for the groundwater extraction and treatment system (GWET) located near the ConocoPhillips Portland Terminal (COP Terminal) marine dock during Third Quarter 2008. A site location map is included in Figure 1.

SYSTEM OVERVIEW

The GWET system was installed in 2001 and connected to an extraction wellfield located near a 60-inch concrete storm sewer (whose discharge point to the Willamette River is City of Portland Outfall 22). The extraction wellfield was expanded in 2006 with the addition of wells near the outfall of a former 27-inch-diameter wood stave storm sewer (whose discharge point was also to the Willamette River). The GWET system was designed to: (1) remove separate-phase product (SPH) and petroleum-impacted groundwater in the vicinity of the two storm sewer outfalls referenced above; and (2) maintain a water table elevation below the top of the sheet pile cutoff walls installed at the outfalls of both storm sewers. Groundwater is simultaneously extracted from up to 11 recovery and extraction wells (RWs and EWs), each equipped with a pneumatic submersible pump. Extracted total fluids (both SPH and petroleum-impacted groundwater) are pumped to the GWET system for treatment using one oil/water separator (OWS) and two liquid-phase 1,800- to 2,000-pound (lb) granular activated carbon (GAC) vessels operated in series. The remedial system also includes a 100-gallon (gal) product recovery tank, a 300-gal batch water tank, and a 1,500-gal cone bottom tank (CBT). Treated water is discharged to the City of Portland sanitary sewer system for ultimate treatment at the Columbia Boulevard Publicly Owned Treatment Works (POTW). Wastewater discharge permit number 500.015 was issued by City of Portland Bureau of Environmental Services (BES) for the "ConocoPhillips (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal". Figure 2 depicts the Site Plan with GWET system layout, and Figure 3 presents a process and instrumentation diagram (P&ID).

Reference: GWET System Operations Report – Third Quarter 2008, RM&R #0922

PERFORMANCE SUMMARY

During Third Quarter 2008 (6/30/08 to 9/30/08), approximately 1,811,600 gallons of combined SPH and petroleum hydrocarbon-impacted groundwater were extracted by the GWET system, treated by the GWET system, and discharged to the City of Portland sanitary sewer system. Approximately 20% was extracted from the EWs and approximately 80% of total fluids were extracted from the RWs (RW-1 through RW-6 and EX-39B; Figure 2). Approximately 25 gallons of the volume recovered this reporting period was SPH.

System operating data is summarized in Table 1. Daily GWET System O&M Logs are included in Attachment 1.

GWET SYSTEM MAINTENANCE

JULY 2008

During July 2008, the treatment system required the following maintenance:

- **Carbon Vessels:** The primary carbon vessel (typically Vessel 1) was backflushed 10 times to prevent high pressure alarms and system shutdown. The secondary or sweep vessel (typically Vessel 2) was occasionally backflushed to help reduce pressure buildup associated with the fouling of the primary vessel. Vessel 1 mostly was used as the primary vessel, until it became so fouled that further backflushing was ineffective; the GAC vessel was taken offline on July 29, 2008. On July 31, 2008, Stantec contracted Stratus Corp (Stratus) to conduct a carbon changeout of Vessel 1. Eight drums of spent and iron precipitate-fouled GAC were removed and stored temporarily in 55-gal steel open-head drums with locking lids. The spent carbon drums were stored in the nearby Asphalt Shed for later disposal. Composite samples of the spent carbon were placed in laboratory-provided sealed containers entered on Stantec's chain-of-custody (COC) and delivered to TestAmerica laboratory in Beaverton, Oregon for analysis. Approximately 1,750 lbs of re-activated GAC was loaded in Vessel 1, and the vessel was filled with water, and then left to hydrate overnight. Carbon Vessel 2 was inoperable and remained offline during this period.

- **CBT:** The CBT was drained after each backflush event.

- **OWS:** The OWS was manually skimmed seven times, and wastewater was drained from the product recovery tank six times. The 4-inch-diameter PVC line, connecting the OWS and Batch Tank, was removed and cleaned twice. The 1-inch-nominal-diameter diaphragm pump used at the containment pad sump was disassembled and cleaned once. Additionally, Stantec field technicians assembled and installed a multi-valve pipe assembly at the connection to the batch pump, CBT inlet, and CBT drain to the sump to allow for more efficient backflushing.

- **General Site and System Maintenance:** Wood debris and trash were removed from the vicinity of the recovery wells.

Reference: GWET System Operations Report – Third Quarter 2008, RM&R #0922

AUGUST 2008

During August 2008, the treatment system required the following maintenance:

- **Carbon Vessels:** The lead carbon vessel was backflushed seven times to remove entrained solids that had caused high differential pressure and triggered unscheduled system shutdowns. The secondary vessel was backflushed less frequently to reduce differential pressure. The third carbon vessel remained offline during this reporting period.

- **CBT:** The CBT was drained after each backflush event referenced above.

- **OWS/Product Tank:** SPH was manually skimmed from the OWS on five separate occasions, and wastewater was drained from the product recovery tank and treated by the system. The 4-inch-diameter PVC line, connecting the OWS and Batch Tank, was cleaned to prevent overflow into the product tank and any subsequent alarm and upset conditions.

- **GAC Exchange:** On July 31, 2008, Stratus performed a GAC changeout on the lead vessel after previous attempts to backwash the GAC bed failed to relieve high differential pressure. Approximately 1,750 lbs of spent GAC were removed and stored in eight 55-gal drums, properly labeled, sealed and stored in the Asphalt Warehouse. Composite samples of the spent carbon were placed in laboratory-provided sealed containers entered on Stantec's COC and delivered to TestAmerica for analysis.

- **Maintenance of Extraction Pumps RW-1 and RW-4:** On August 4, 2008, RW-1 and RW-4 extraction pumps were pulled, cleaned of iron fouling, and reinstalled. The float mechanism on RW-1 was identified for repair.

- **Sanitary Sewer Discharge Cleanout:** Stratus and their subcontractor Pro-Pipe were retained on August 21, 2008, to clean out the 4-inch-diameter, 250-foot-long schedule 40 PVC discharge line connecting the treatment system to a COP manhole, prior to discharge to the City of Portland's sanitary sewer system.

- **Maintenance of Extraction Pump RW-1:** On August 8, 2008, RW-1 extraction pump was pulled, cleaned of iron fouling, and reinstalled. The float mechanism on RW-1 was repaired.

- **Monthly Gauging:** On July 21, 2008, August 22, 2008, and September 22, 2008, monthly gauging of the containment wall monitoring wells was performed.

- **Operations adjustment to Extraction Wells:** On August 22, 2008, several well pumps required miscellaneous minor maintenance to restart frozen mechanisms. This is especially apparent for the EW well pumps on the Chevron side installed in 2006. After consultation with the pump manufacturer, QED, the pressure to the extraction wells was increased from approximately 40 pounds per square inch (PSI) to approximately 70 PSI.

- **Recovery Well Rehabilitation:** Several recovery well pumps (EW-1, RW-1, RW-2, RW-3, RW-5, and RW-6), became stuck in sediments during the system shutdown in May 2008 and June 2008 due to the flooding stage of the Willamette River at that time. On August 27, 2008, Stratus was retained to free the stuck pumps and develop the wells. Sediments removed from the wells were stored in sealed drums and placed in the secondary waste storage area inside the Asphalt Warehouse. Liquids consisting of recovery well water and suspended sediments were decanted into the remediation system sump and treated by the system. Recovery pumps in wells RW-5, RW-6, and RW-2 were freed from sediments and reset at one-foot off the bottom of the wells. Pumps in RW-3 and EW-1 appear to be bound rather than stuck in sediments and could not be freed using the methods described above.

- **Compound & Sump:** On August 28, 2008, the diaphragm pump used in the containment pad sump was disassembled and cleaned once, and the sump area was cleaned.

SEPTEMBER 2008

During September 2008, the treatment system required the following maintenance:

- **Carbon Vessels:** The carbon vessels were backflushed six times to remove entrained solids that had caused high differential pressure across the GAC beds.

- **CBT:** The CBT was drained after each backflush event referenced above.

- **OWS/Product Tank:** SPH was manually skimmed from the OWS on three separate occasions, and the separated wastewater in the product recovery tank was pumped back through the treatment system.

- **OWS Clean Out:** On September 11, 2008, the OWS was opened and cleaned out by Cowlitz Clean Sweep.

- **Sheet Pile Wall Monitoring:** On September 22, 2008, gauging and product removal was conducted on the monitoring wells around the sheet pile walls.

- **Equipment Receiving:** Installed a new 1-inch-diameter diaphragm sump pump on September 3, 2008, and received a new GAC vessel on September 24, 2008. The new GAC vessel was plumbed and installed on September 29, 2008.

POTW MONTHLY GWET SYSTEM COMPLIANCE SAMPLING

In accordance with ConocoPhillips (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal Permit Number 500.015, GWET system effluent water samples were collected by a representative of Stantec on July 15, August 15, and September 15, 2008. Water samples were submitted to TestAmerica for analysis of discharge permit parameters, which include benzene, toluene, ethylbenzene, and total xylenes (BTEX) (Environmental Protection Agency [EPA] Method 8021); Oil and Grease (EPA Method 1664); and pH (EPA Method 150.1/9040 A). All parameters monitored were found to be within the limits listed in the above-referenced facility's discharge permit. All requirements of the discharge permit reporting procedure were completed and

previously provided. Groundwater analytical data is summarized in Table 2. Certified laboratory analytical reports with COC documentation are included in Attachment 2.

ACTIVITIES SCHEDULED DURING FOURTH QUARTER 2008

In accordance with approved budgets for September and October 2008, Stantec is scheduled to perform the following work on site:

- Continue O&M of the GWET system;
- Conduct monthly GWET system effluent sampling, in accordance with Willbridge Terminal Permit Number 500.015; and
- Perform monthly gauging and removal of SPH from monitoring wells located near the two on-site sheet pile barriers, upgradient of Outfall #22.

If you should have any questions concerning the information provided in this report, please contact Rick Fetterly at (503) 691-2030.

Sincerely,
Stantec Consulting Corporation

Robert Lund
Engineering Associate

Rick Fetterly, P.E.
Senior Project Manager

RL/RF:ald

cc: Grant Sprick, P.E., ARCADIS–111 SW Columbia Street, Suite 725, Portland, OR 97201
Tom Lyons, COP Portland Terminal–5528 NW Doane Avenue, Portland, OR 97210
Bill Collins, COP Portland Terminal–5528 NW Doane Avenue, Portland, OR 97210
Jessica Eckhart, Delta Environmental Consultants, Inc.–2020 SW 4th, Suite 400, Portland, OR 97201
Tim Browning, Delta Environmental Consultants, Inc.–2020 SW 4th, Suite 400, Portland, OR 97201

ATTACHMENTS

Figure 1.....Site Location Map
Figure 2.....Site Plan
Figure 3.....Process and Instrumentation Diagram

Table 1.....GWET System Operating Data
Table 2.....GWET System Groundwater Analytical Data

Attachment 1.....Daily GWET System O&M Logs
Attachment 2.....Certified Laboratory Analytical Report and Chain-of-Custody Documentation

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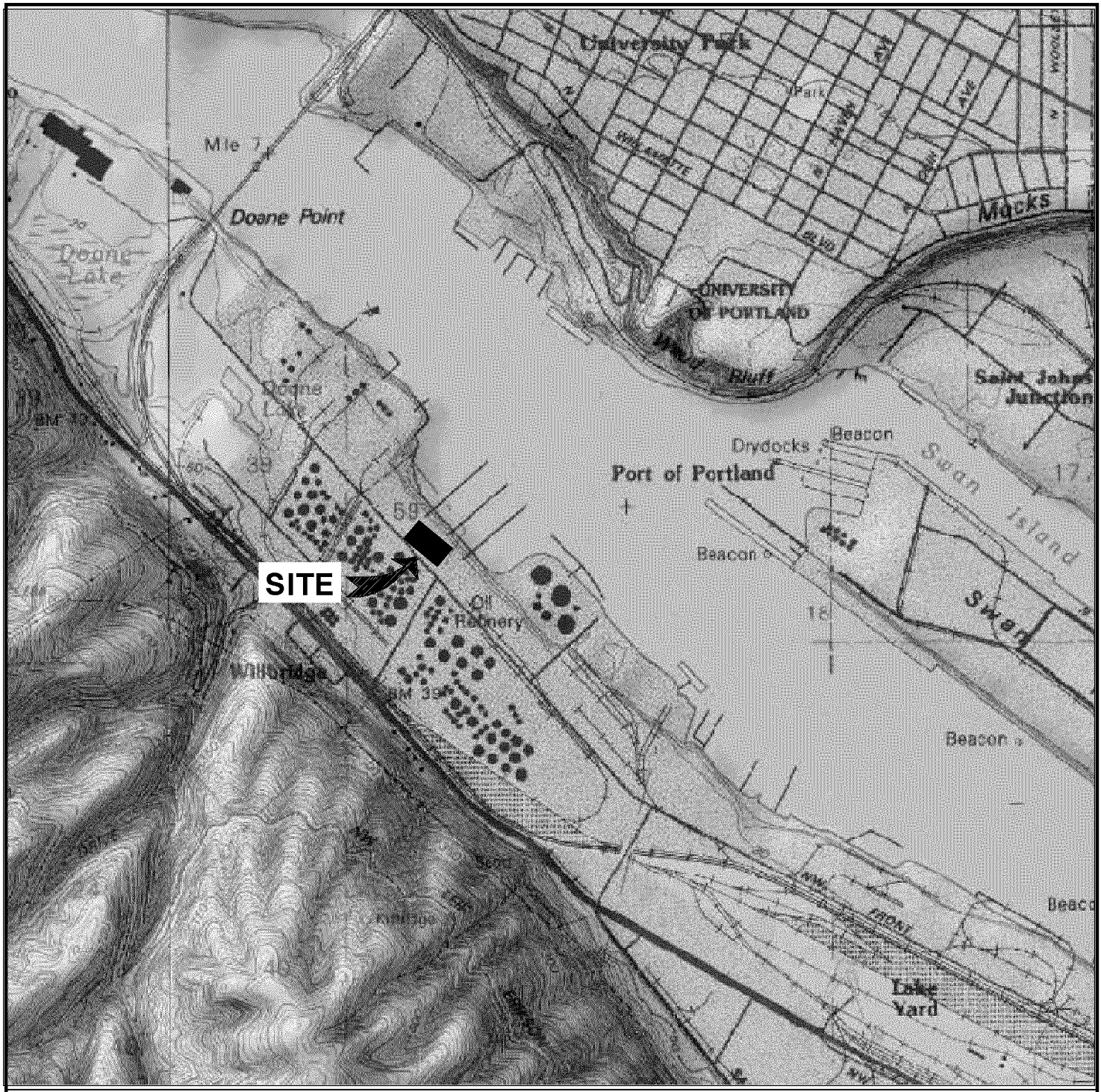
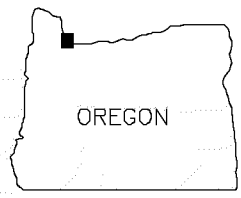
FIGURES





QUADRANGLE LOCATION

REFERENCE: USGS 7.5 MINUTE QUADRANGLE
PORTLAND, OREGON; 1999

N

0 1/4 1/2

SCALE (MILES)

Stantec
7730 SW MOHAWK STREET
TUALATIN, OREGON
PHONE: (503) 691-2030/692-7074 (FAX)

FOR:
ConocoPhillips
FACILITY 0922 - PORTLAND (RM&R 0922)
5528 NW DOANE AVENUE
PORTLAND, OREGON

SITE LOCATION MAP

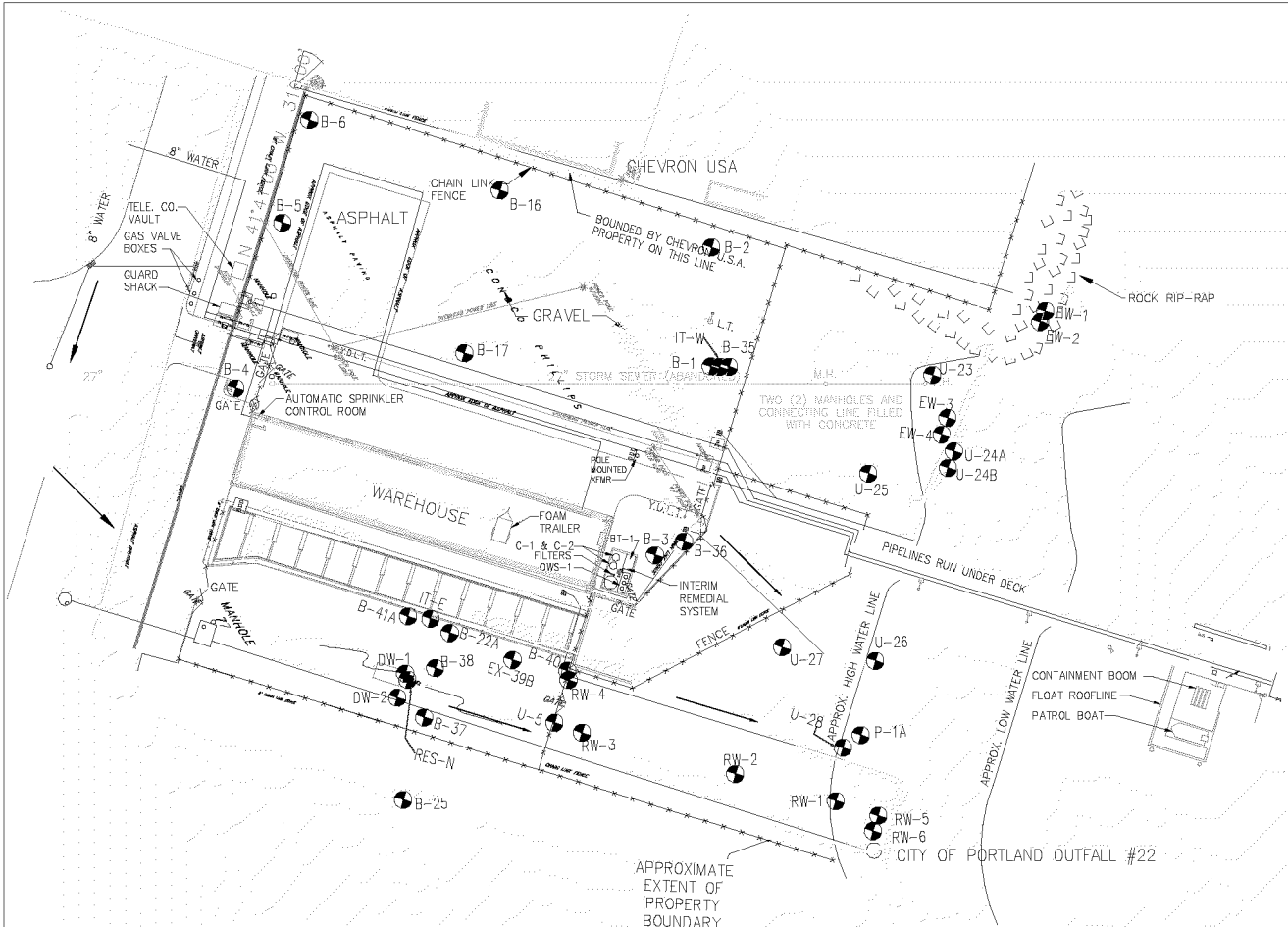
FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
15CP.00922.40.8521	DJH	FAF	MAT	9/2/08

Q:/15CP/CLIENTS/CONOCO PHILLIPS/15CP

15CP-00922-40-8521-1SLM.DWG

COP0016683



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CONSTRUCTION NOTES:

LEGEND:

MONITORING WELL LOCATIONS AND IDENTIFICATION

REV	DESCRIPTION	DATE	DATE	APPD.

FILE NAME: Date Chkd Dsgn Date

CLIENT/PROJECT:

CONOCOPHILLIPS #0922
525 NW DOANE AVE
PORTLAND, OREGON 97210

TITLE:

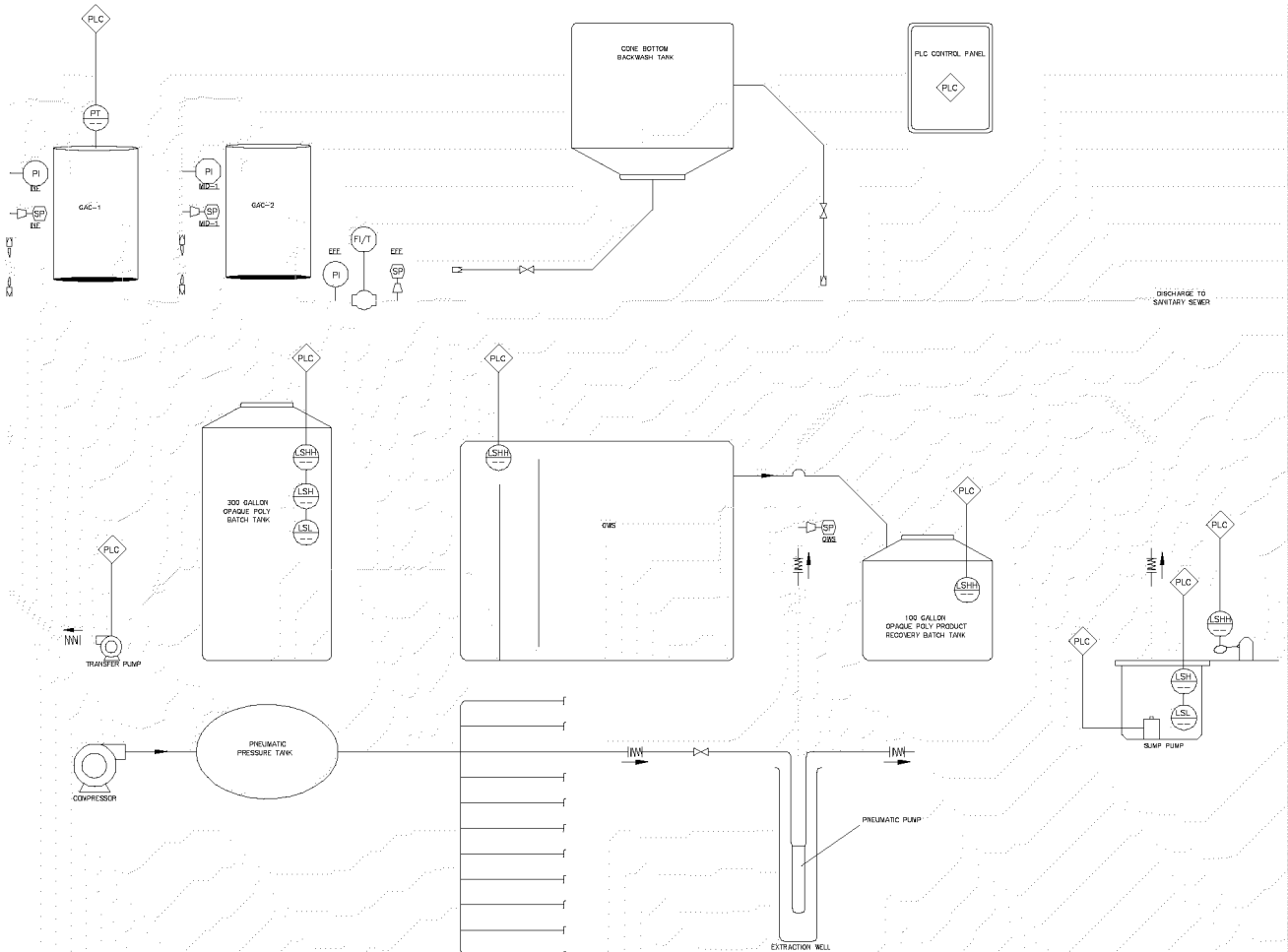
SITE PLAN

PROJECT No. 15CP.00922 SCALE: 1" = 100'

DRAWING No. 1 SHEET: 1 Revision: 1

FIGURE 2

COP0016684



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CONSTRUCTION NOTES:

THIS DRAWING IS A DIAGRAM OF THE PROCESS AND FLOW OF A GROUND WATER EXTRACTION AND TREATMENT SYSTEM AT THE SITE REFERENCED BELOW.

LEGEND:

- PLC - PROGRAMABLE LOGIC CONTROLLER
- EFF - EFFLUENT
- SP - SAMPLE PORT
- PI - PRESSURE INDICATOR
- FI/T - FLOW INDICATOR / TOTALIZER
- GAC - GRANULAR ACTIVATED CARBON
- PT - PRESSURE TRANSMITTER
- LSL - LEVEL SWITCH LOW
- LSH - LEVEL SWITCH HIGH
- LSHH - LEVEL SWITCH HIGH HIGH
- OWS - OIL WATER SEPARATOR
- TYP. - TYPICAL

REV	DESCRIPTION	DATE	DATE	APPD.

FILE NAME: Dwn. Chkd. Dsgn. Date

CLIENT/PROJECT:

CONOCOPHILLIPS #0922
525 NW DOANE AVE
PORTLAND, OREGON 97210

TITLE:

PROCESS AND INSTRUMENTATION DIAGRAM

PROJECT No. 15CP.00922 SCALE: NOT TO SCALE

DRAWING No. 1 SHEET: 1 Revision: 1

FIGURE 3

COP0016685

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TABLES

Table 1
GWET System Operating Data
Portland Terminal RM&R No. 0922
5528 NW Doane Avenue
Portland, OR 97210

Date	Notes	Totalizer Reading (gals)	System Flow (gals)	Average System Flow Rate (gpm)	60" Outfall (# Events)	Former 27" Outfall (# Events)	SPH Removed (Gallons)	Cumulative SPH Removed (gals)
1/17/08	a	29,647,978	--	--	--	--	55	4320
2/14/08		30,459,328	811,350	20.1	--	--	--	--
3/15/08		31,336,428	877,100	20.3	--	--	55	4375
4/17/08		32,035,128	698,700	14.7	--	--	--	--
5/15/08		32,732,128	697,000	17.3	--	--	--	--
6/30/08		33,534,728	802,600	12.1	--	--	--	--
7/28/08		34,152,028	617,300	15.3	--	--	--	--
8/29/08		34,776,028	624,000	13.5	--	--	15	4390
9/30/08		35,346,328	570,300	12.4	--	--	10	4400

Reporting Period: 3rd Quarter 2008

Period Extracted (gals):	**1,811,600**
Period Average Discharge Rate (gpm):	**13.7**
Total Liquid Extracted Historical (gals):	**35,346,328**
Average Historical Discharge Rate (gpm):	**15.4**

Definitions:

--	Data not available or not applicable
gals	Gallons
psi	pounds per square inch (gauge)
gpm	Gallons Per Minute
SPH	Separate Phase Hydrocarbons
#	Number

Notes:

a Totalizer reading for December 2007 was 12,080,900. Not consistent with future readings.

Permits:

Treated water is discharged to the Sanitary Sewer under City of Portland Environmental Services Permit # 500.015.

COP0016687

Table 2
GWET System Groundwater Analytical Data
Portland Terminal RM&R No. 0922
5528 Doane Avenue
Portland, Oregon

Date Sampled	Sample ID	Notes	HEM (mg/L)	HEM Polar (mg/L)	HEM Non-Polar (mg/L)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-o (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	BTEX (µg/L)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Hardness $CaCO_3$ (mg/L)	Total Iron (mg/L)	Ferrous Iron (mg/L)	Ferric Iron (mg/L)
7/15/2008	OWS		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/15/2008	INF		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/15/2008	MID		ND	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
7/15/2008	EFF		ND	--	--	--	--	--	ND	ND	ND	ND	ND	**6.29**	--	--	--	--	--	--	--
8/15/2008	OWS		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/15/2008	INF		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/15/2008	MIDFLUENT		ND	--	--	--	--	--	ND	ND	ND	ND	ND	**6.56**	--	--	--	--	--	--	--
8/15/2008	Effluent		ND	--	--	--	--	--	ND	ND	ND	ND	ND	**6.58**	--	--	--	--	--	--	--
9/15/2008	OWS		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/15/2008	INF		ND	--	--	--	--	--	ND	ND	ND	**1.36**	ND	--	--	--	--	--	--	--	--
9/15/2008	MIDFLUENT		ND	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
9/15/2008	Effluent		ND	--	--	--	--	--	ND	ND	ND	ND	ND	**6.53**	--	--	--	--	--	--	--
POTW Discharge Limits:			**10**			**NA**	**NA**	**NA**	**50 Benzene/750 Total BTEX**					**5.0-11.5**	--	--	--		--	--	--

Definition:

BTEX	Benzene, Toluene, ethyl-Benzene, and Total Xylenes
HEM	Oil & grease
µg/L	Micrograms per liter
mg/L	Milligrams per liter
MRL	Method reporting level
--	Not analyzed or not applicable
ND	Non-Detect (concentration is below method reporting level)
pH	Concentration of hydrogen ions
TPH-d	Total petroleum hydrocarbons as diesel (diesel range organics)
TPH-g	Total petroleum hydrocarbons as gasoline (gasoline range organics)
TPH-o	Total petroleum hydrocarbons as motor oil (motor oil range organics)
ORP	Oxidation Reduction Potential
DO	Dissolved Oxygen
mV	Millivolts
NTU	Nephalo Turbidity Units

COP0016688

ATTACHMENT 1
DAILY GWET SYSTEM O&M LOGS

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 6-30-8 Personnel: al
Discharge Totalizer Reading: 2,115,600 (0740)

if Backflush performed V1

PSI @ System Pump: ~~[illegible]~~ PSI @ System Pump end: 34.4
PSI @ Primary Vessel: ~~[illegible]~~ PSI @ Primary Vessel end: 16.1

Vessel 1 West: 0/1 Vessel 2 Middle: Ø Vessel 3 East: 1/2

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0740 OK 2pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

*Backflush V1 √system EW1 bump start, EW2 OK,
Drain H2O from Prod. Tank. EW3 OK, RW5 OK, RW6 OK, RW2 Bump,
Skim OWS RW4 Bump; RW3 OK, Ex396 OK stuck
DTW: U-26 12.92, U-5 18.73, B-37 19.05, B-18 Not Found
System Control Panel: Serial # 210205 Model: H2CP Water Treatment E 210205
Product Tank Level 38gal (110gal in drums)

Date: 7-1-8 Personnel: CA Normans Notes
Discharge Totalizer Reading: 2,143,300

if Backflush performed

PSI @ System Pump: 48.2 PSI @ System Pump end:
PSI @ Primary Vessel: 37.2 PSI @ Primary Vessel end:

Vessel 1 West: 1 Vessel 2 Middle: Ø Vessel 3 East: 2

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-1-8 Personnel: CW/Arby Lewis Arby's Notes
Discharge Totalizer Reading: 2143800
if Backflush performed Y N
PSI @ System Pump: 48.5 PSI @ System Pump end: ?
PSI @ Primary Vessel: 34 PSI @ Primary Vessel end: ?
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:
1 Ø 2

Storm Water Outfalls	Sheen Observation	
	NO	YES
6" Pipe exp. Outfall 22 - 60"	0913 OK Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
Drain CBT Backflush

River Gauge on CP Dock 8.5' 1315
MCV 1740062

Date: 7-2-8 Personnel: Arby
Discharge Totalizer Reading: 1455 2174506
if Backflush performed
PSI @ System Pump: 39.9 PSI @ System Pump end:
PSI @ Primary Vessel: 21.1 PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

3

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1438 OK Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Drained Prod. Tank H_2O, Drained CBT, Skimmers.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-3-8 Personnel: Arby
Discharge Totalizer Reading: 2,195,215 1430
if Backflush performed Y
PSI @ System Pump: 55.8 PSI @ System Pump end: 22.8
PSI @ Primary Vessel: PSI @ Primary Vessel end: 8.5
Vessel 1 West: (1) Vessel 2 Middle: Ø Vessel 3 East: (2)

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1438 OK Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
Pumps V-d all OK, Bump Start EW-1,

4

Date: 7-5-8 Personnel: Arby
Discharge Totalizer Reading: 2,246,629
if Backflush performed Y
PSI @ System Pump: 1447 57.2 58.4 PSI @ System Pump end: 19.1
PSI @ Primary Vessel: 48.7 55.4 PSI @ Primary Vessel end: 7.2
Vessel 1 West: (1) Vessel 2 Middle: Ø Vessel 3 East: (2)

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1505 OK Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
RW3 OK RW4 OK Ex 396 Bump, RW2 OK, RW1 Bumped
RW6 OK RW5 OK EW3 OK EW2 OK EW-1 Bumped.

5

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-7-6 Personnel: Arby
Discharge Totalizer Reading: 2,284,732 (1010) (1158) 2,286,431

if Backflush performed

PSI @ System Pump: 63.2 PSI @ System Pump end: 20.8
PSI @ Primary Vessel: 54.5 PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1016 ok P,CS	
Former 27"		

6

Comments on recovery-well pumps, fluid levels, booms etc.:

Skim ows
RW3 ok, RW4 Bump Start, Ex 396 Bump Start, RW2 ok
RW-1 Not ok Need to clean, RW6 ok, RW5 ok, EW3 Bump Start
EW2 ok, EW1 Bump to start

Date: 7-8-6 Personnel: Arby
Discharge Totalizer Reading: 2,310,590

if Backflush performed

PSI @ System Pump: 41.7 PSI @ System Pump end: 21.0
PSI @ Primary Vessel: 29.3 PSI @ Primary Vessel end: 8.9
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0941 ok P,CS	
Former 27"		

7

Comments on recovery-well pumps, fluid levels, booms etc.:

Skim ows, Drain CBT
Notes: in field book

Met w/Mike Noll Grant Spirk Brett

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-9-8	Personnel: Arby		
Discharge Totalizer Reading: 2332399 (1244)			
	1156	if Backflush performed	
PSI @ System Pump:	34.9	PSI @ System Pump end:	
PSI @ Primary Vessel:	19.2	PSI @ Primary Vessel end:	
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:	

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1206 ok Pics	
Former 27"		

8

Comments on recovery-well pumps, fluid levels, booms etc.:

Drain CBT. Partial drain H_2O from Product Tank.
ER396 Pump Start, RW4 ok but?, RW3 ok, AW2 ok, RW1 ok, RW6 ok
RW5 ok, EW3 Pump to start, EW2 ok, EW1 Pump to Start
EW3 50"X30"X30"; EW2 51"x30"x30"; EW1 50.5"X30"X30"
MCV: 470.X96" x 72.5 EW4 50.5 x 30X 30
Mike Noll called Re: Vault Dimensions as per Myran

Date: 7-10-8	Personnel: Arby		
Discharge Totalizer Reading: 2,334,300			
		if Backflush performed	
PSI @ System Pump:	35.6	PSI @ System Pump end:	
PSI @ Primary Vessel:	22.7	PSI @ Primary Vessel end:	
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:	

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1410 ok Pics	
Former 27"		

9

Comments on recovery-well pumps, fluid levels, booms etc.:

EW2 High Level alarm; EW1 Alarm; EW3 Not Pumping
Conoco side all wells pumping, Met w/Carey Re: PLC

Drain H_2O from Product Tank

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-11-6 Personnel: Arby
Discharge Totalizer Reading: 2,362,021 (1325)

if Backflush performed

PSI @ System Pump: 51.0
PSI @ Primary Vessel: 39.8
PSI @ System Pump end:
PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
below Pipe Outfall 22 - 60"	1312 OK PICS	
Former 27"		

10

Comments on recovery-well pumps, fluid levels, booms etc.:

EW3 OK, EW2 OK, EW1 OK
RW 5, 6, 1, 2, 3, 4 OK Ex 396 Bump to Start

Date: 7-12-6 Personnel: Arby
Discharge Totalizer Reading: 2384 128

0936

if Backflush performed Y

PSI @ System Pump: 61.4
PSI @ Primary Vessel: 56.7
PSI @ System Pump end: 19.9
PSI @ Primary Vessel end: 10.5
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

11

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1015 OK PICS	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

EW2, EW3, EW1 - Bump to Start
Rest. OK

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-14-8 Personnel: Arby / Norman Arby's Notes
Discharge Totalizer Reading: 2 432 287 (0730)

		if Backflush performed
PSI @ System Pump: 55.4		PSI @ System Pump end:
PSI @ Primary Vessel: 45		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0811 ok Pics	
Former 27"		

12

Comments on recovery-well pumps, fluid levels, booms etc.:

Drain CBT. EW1,2,3 Bump to Start; RW1 Bump, Ex396 Bump
RW3,4,2,5,6 OK
Change out 3 bags of spent booms.

MCU TL2: 1,~~7~~77,828 ← 1,777,828 OK Grant + Arcadis visit

Date: 7/15/8 Personnel: Arby / Norman Arbys Notes
Discharge Totalizer Reading: 2,458,762

		if Backflush performed
PSI @ System Pump: ~~[illegible]~~ 67.1		PSI @ System Pump end: 20.3
PSI @ Primary Vessel: ~~[illegible]~~		PSI @ Primary Vessel end: 12.0
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0811 OK	
Former 27"		

13

Comments on recovery-well pumps, fluid levels, booms etc.:

Skim ows, Drain H2O from Product Tank, Solids high in OWS.

DMR Sample
~~DMR Sample 2,457,900 Norman's Notes~~

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-15-8 Personnel: cs / Arby Normans Notes
Discharge Totalizer Reading: 0930 2,457,900

		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

13

Comments on recovery-well pumps, fluid levels, booms etc.:

DMR Sample 0930 Final 0945 Mid 2,457,900

Date: 7-16-8 Personnel: cs / Arby
Discharge Totalizer Reading: 2,480,700

		if Backflush performed
PSI @ System Pump: 37.6		PSI @ System Pump end:
PSI @ Primary Vessel: 29		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

14

Comments on recovery-well pumps, fluid levels, booms etc.:

Pulled EW-3 Cleaned, Replaced. Ret Vault HL Switches. EW3 Strong.

EW-1 Well Float Switch Disconnected

Alarms @ Ops EW1 LSHH EW-1 Vault LSHH

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-17-8	Personnel: CR		
Discharge Totalizer Reading: 2502100			
		1120	if Backflush performed
PSI @ System Pump: 53.7		54.7	PSI @ System Pump end:
PSI @ Primary Vessel: 26.3			PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:		Vessel 3 East:
1	Ø		2

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0758 OK pics	
Former 27"		

15

Comments on recovery-well pumps, fluid levels, booms etc.:

RW5 OK, RW6 OK, EW3 OK, EW2 OK, EW-1 Not pumping, RW-1 Needs work, RW2 working but sputters, RW3 OK, RW4 OK. Ea 396 OK,

Replaced 8 sections Soft Boom → to shed, Need 36 sections Boom. Dash and Bill onsite

Date: 7-18-8	Personnel: CR		
Discharge Totalizer Reading: 2532300			
		0855 / 1730	if Backflush performed V1
PSI @ System Pump: ~~25.3~~		65.4 / 70	PSI @ System Pump end: 21.3
PSI @ Primary Vessel: ~~26.0~~	58.7		PSI @ Primary Vessel end: 10.0
Vessel 1 West:	Vessel 2 Middle:		Vessel 3 East:
1	Ø		2

16

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	[redacted]	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

CP Ops called 0800 Re: EW3 well Alarms

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-21-8 Personnel: cas
Discharge Totalizer Reading: 2 588 500

if Backflush performed VI

PSI @ System Pump: 74-8 PSI @ System Pump end: 21-7
PSI @ Primary Vessel: PSI @ Primary Vessel end: 11-3
Vessel 1 West: (1) Vessel 2 Middle: (0) Vessel 3 East: (2)

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.: 17

Strm OWS ; Drain CBT

Gauging of sheet pile wall wells.
Met Nate ~~off~~ offsite re: past trials of system.
Built Manifold for Backflushing.
product Tank 45 gal

Date: 7-22-8 Personnel: cas
Discharge Totalizer Reading: 2,608,600

if Backflush performed

PSI @ System Pump: 33-8 PSI @ System Pump end:
PSI @ Primary Vessel: 13-8 PSI @ Primary Vessel end:
Vessel 1 West: 1 Vessel 2 Middle: 0 Vessel 3 East: 2

18

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0825 OK Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

CCS Remove Black Booms downstream of Dock as per CP.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-23-8 Personnel: CW
Discharge Totalizer Reading: 2,637,800

if Backflush performed

PSI @ System Pump: 55.2 PSI @ System Pump end:
PSI @ Primary Vessel: 40.9 PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
1	Ø	2

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1945 OK pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.: 19

OF 22 Rusty Plume - No sheen -

Conference Call Re: O+M w/ Rusty, Noll, Chevron etc...
Lunch w/ CCS $50 + 25 insuff. start funds $75 Not submitted -
CCS Moved Black Booms to Sand Lot -

Date: 07-24-08 Personnel: CW
Discharge Totalizer Reading: 26586700 (1713)

if Backflush performed VI

PSI @ System Pump: PSI @ System Pump end:
PSI @ Primary Vessel: PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
1	Ø	2

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	OK 1711 pics	
Former 27"		

20

Comments on recovery-well pumps, fluid levels, booms etc.:

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-25-8 Personnel: CAS

Discharge Totalizer Reading: 2,675,700 (1453)
1502

if Backflush performed

PSI @ System Pump: 43.7 PSI @ System Pump end:

PSI @ Primary Vessel: 14.8 PSI @ Primary Vessel end:

Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

1 2

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1458 ok No Sheen	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

21

Date: 7-26 Personnel: CAS

Discharge Totalizer Reading: 2,693,900 (12:54)

if Backflush performed

PSI @ System Pump: 28.0 PSI @ System Pump end:

PSI @ Primary Vessel: PSI @ Primary Vessel end:

Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

22

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5526 Doane Ave., Portland, OR 97210

Date: 7-26-16	Personnel: CM	
Discharge Totalizer Reading: 2,732,900		
		if Backflush performed
PSI @ System Pump: 51.2		PSI @ System Pump end:
PSI @ Primary Vessel: 34.0		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
1	0	2

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0901 OK Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Skimmers, cleaned ~~6" PVC~~ 4" PVC
Drained H2O from Product Tank
Cleaned Diaphram pump at sump
Restart RW1, EW2, EW-3
Well Maintenance Front/Doane
Met w/Strahs Bill Clift Re MW-12

Date:	Personnel:	
Discharge Totalizer Reading:		
		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5526 Doane Ave., Portland, OR 97210

Date: 7-29-08 Personnel: CNS
Discharge Totalizer Reading: 2,761,300

	if Backflush performed
PSI @ System Pump: 21.5	PSI @ System Pump end: X
PSI @ Primary Vessel: 11.6	PSI @ Primary Vessel end: X

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
off	off/Broke	Single

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	X 2 Pics	
Former 27"	—	—

24

Comments on recovery-well pumps, fluid levels, booms etc.:

Partial Backflush on V1 to Fluff Carbon, Changed over to Vessel 3 Single. Started to Drain V1 for Carbon Change scheduled 7-31-08.
1.0 15CP00922.74 Offsite Travel
~~0.5~~ 15CP00922.75 Onsite Carbon.
0.5 Onsite - 71 Sheen Monitoring

Date: 7-30-08 Personnel: CNS
Discharge Totalizer Reading: 2,774500

	if Backflush performed
PSI @ System Pump: 24.8	PSI @ System Pump end:
PSI @ Primary Vessel: 10.2	PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
Draining	Broke	Single

25

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	No Sheen Pics	
Former 27"	No Sheen	

Comments on recovery-well pumps, fluid levels, booms etc.:

Outfall Boomed Areas - Bright green dusty substance. Maybe Algae Stem.
Draining V1 - Applied air.

EW-1 No Running Water high - bump Start
EW-2 OK, EW-5 OK, RW-6 OK

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-31-08 Personnel: CNS
Discharge Totalizer Reading: 2,799,500

	if Backflush performed
PSI @ System Pump: 29.8	PSI @ System Pump end:
PSI @ Primary Vessel: 12.1 V3	PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
off	Brake	Single

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	None - 2 pics	
Former 27"	—	—

Comments on recovery-well pumps, fluid levels, booms etc.:
Carbon Δ V1, Samples to Lab, Status, 8 drums to shed, Internals look good - No Pitting, No breaks, backflushed diffuser

MCU: 1822364

26

Date: 8-1-08 Personnel: CNS
Discharge Totalizer Reading: 2,822,700

	if Backflush performed
PSI @ System Pump: 32.9	PSI @ System Pump end:
PSI @ Primary Vessel (3) 10.0	PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
Fresh/Sweep	Brake	Primary

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1440 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
Backflush lines from V1, Seal up V1, Reconfigure to V3 primary V1 Secondary, Skim ows, Drained product Tank, Product Tank 50 gal, Cleaned area of containment pad, checked 3 cycles OK

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 7-31-08 Personnel: CMC 5.5
Discharge Totalizer Reading: 2,799,500

if Backflush performed

PSI @ System Pump: 29.8 PSI @ System Pump end:
PSI @ Primary Vessel: 12.1 V3 PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
off	Brute	Single

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	None - 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Carbon Δ V1, Samples to Lab, Status, 8 drums to shed, Internals look good - No Pitting, No breaks, Backflushed diffuser

MW: 1,822,364

26

Date: 8-1-08 Personnel: CMC 3.0
Discharge Totalizer Reading: 2,822,700

if Backflush performed

PSI @ System Pump: 32.9 PSI @ System Pump end:
PSI @ Primary Vessel (3) 10.0 PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
Fresh/Sweep	Brute	Primary

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1440 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Backflush Pics from V1, Scale up V1, Reconfiger to V3 primary V1 Secondary, Skim ows, Drained product Tank, Product Tank 50 gal, Cleaned area of containment pad, checked 3 cycles OK

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-4-08 Personnel: CNS/AbyLewis 5.5
Discharge Totalizer Reading: 2,880,500
if Backflush performed V3
PSI @ System Pump: 39.8 PSI @ System Pump end: 17.4
PSI @ Primary Vessel: 15.5 PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:
2nd broke 1st

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0906 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
Pulled RW-4 - very fouled w/ Iron - cleaned all internals → OK
Pulled RW-1 - broken cotter pin on float rod, cleaned → OK
@ Needs Stainless cotter pin
backflushed V-3 to prolong life - All Conoco side pumps on.
Product Tank 50 gal.

Date: 8-5-8 Personnel: CNS 0.5
Discharge Totalizer Reading: 2,900,900
if Backflush performed
PSI @ System Pump: 26.4 PSI @ System Pump end:
PSI @ Primary Vessel: 10.1 PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:
2 0 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
0705 Outfall 22 - 60"	2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-6-8 Personnel:
Discharge Totalizer Reading:

	if Backflush performed
PSI @ System Pump:	PSI @ System Pump end:
PSI @ Primary Vessel:	PSI @ Primary Vessel end:

Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

MH12 Work Lining

Date: 8-7-8 Personnel: CNR 0.5
Discharge Totalizer Reading: 2937500

	if Backflush performed
PSI @ System Pump: 43.8	PSI @ System Pump end:
PSI @ Primary Vessel: 19.3	PSI @ Primary Vessel end:

Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
0720 Outfall 22 - 60"	X 2 pcs Black Boom	
Former 27"	X None Boom On	

Comments on recovery-well pumps, fluid levels, booms etc.:

RW-1, EW-1, E-3 Need Work EX396 Pump Start

MCV TLZ 1,839,614

Drain Cone Bottom Tank

COP0016707

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-8-8 Personnel: CNS 0.75
Discharge Totalizer Reading: 2,958,800

	if Backflush performed
PSI @ System Pump: 59.8	PSI @ System Pump end: 15.8
PSI @ Primary Vessel: ~~[illegible]~~ ?	PSI @ Primary Vessel end: 11.2
Vessel 1 West: Indary	Vessel 2 Middle: Broke
Vessel 3 East: Primary	

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Backflush V3
Skim ows

Date: 8-11-8 Personnel: CNS 4.75
Discharge Totalizer Reading: 3,020,800

	if Backflush performed
PSI @ System Pump: 38.8	PSI @ System Pump end:
PSI @ Primary Vessel: 13.2	PSI @ Primary Vessel end:
Vessel 1 West: 2	Vessel 2 Middle: Ø
Vessel 3 East: 1	

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	2 pics 0745	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Opened Cone Bottom Tank Drain - Pulled RW-1 adjust air valve
Pump start EW1, EW2, EW3 OK, MCV TL2: 1,849,800
Ex 396 OK, RW-4 OK, RW3 OK, RW5 OK, RW6 OK, RW2 OK. [10,000 gal 4 days]
Drain H2O from product Tank

Product Tank 55 gal

COP0016708

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-12-16 Personnel: [illegible] 1.25
Discharge Totalizer Reading: 3,042,800

	if Backflush performed
PSI @ System Pump: 48.2	PSI @ System Pump end:
PSI @ Primary Vessel: 20.0	PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	2 pics	
Former 27"	—	—

Comments on recovery-well pumps, fluid levels, booms etc.:

Skimmers, put away drum,

Pump ✓: RW5 RW6 OK; RW3 Flow test Pumping good;
RW1 RW2 EX39b RW4 Bump Start

~~Recap~~ Retried large Logs upstream of booms.

Date: 8-13-16 Personnel: CA 1.0
Discharge Totalizer Reading: 3,064,800

	if Backflush performed
PSI @ System Pump: 55.1 (1530)	PSI @ System Pump end:
PSI @ Primary Vessel: 31.0	PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	2 pics 1345	
Former 27"	2 pics 1405	

Comments on recovery-well pumps, fluid levels, booms etc.:

EW 1, 2, 3 Bump to Start

MCV TLZ: 1854832
RW-3 Very weak
RW 1 Sputtery but pumping, RW2 OK, RW5,6 OK
RW4 Bump Start, EX39b Bump Start

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-14-08	Personnel: CNS	1.5
Discharge Totalizer Reading: 3086400		
		if Backflush performed
PSI @ System Pump: 61.5		PSI @ System Pump end:
PSI @ Primary Vessel: 46.4		PSI @ Primary Vessel end:
Vessel 1 West: 2	Vessel 2 Middle: Ø	Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	None 2 pics 1512	
Former 27"	Not Vid	Not Vid

Comments on recovery-well pumps, fluid levels, booms etc.:

RW-4 working manually.
RW 5, 6, 1, 2, 3 Seem OK
Ex 396 OK
No V on Chevron side

New File JSAs for sheen inspection and Otm.

Date: 8-15-08	Personnel: CNS	4.5
Discharge Totalizer Reading: 3100300		
		if Backflush performed V1
PSI @ System Pump: 62.9		PSI @ System Pump end: 18.9
PSI @ Primary Vessel: 50.8		PSI @ Primary Vessel end: 10.2
Vessel 1 West: 2	Vessel 2 Middle: Ø	Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	None 2 pics *Note	
Former 27"	Not Vid	Not Vid

Comments on recovery-well pumps, fluid levels, booms etc.:

DMR Sample: MID 0800 FINAL 0810; System Clearcut Sample 0900;
Spent boom Sample 0830;
Backflush V1 Aggressively. Clean up Pad

Outfall 22 area Floating particles - No petroleum sheen
Several pics -

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-18-6 Personnel: CH / Arby Lightning 4.5
Discharge Totalizer Reading: 3,161,700 No work 0730-1000

if Backflush performed VS

PSI @ System Pump: 67.2 PSI @ System Pump end: 24.2
PSI @ Primary Vessel: PSI @ Primary Vessel end: 13.3

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1036 OK Pics	
Former 27"	OK	

Comments on recovery-well pumps, fluid levels, booms etc.:

RW4 Needs work, Ex 396 Bump to start, RW3 OK, RW2 Bump to Start, RW-1 Sputtery, RW5 OK, RW6 OK, EW3 OK, EW1 OK, EW2 OK.

Pulled RW-1 Full cleaned - Replaced ball floats Need ring
MCV TLZ 1865-90 2

Date: 8-19-6 Personnel: CH 3.25
Discharge Totalizer Reading: 3,162,600

if Backflush performed

PSI @ System Pump: 32.6 PSI @ System Pump end:
PSI @ Primary Vessel: 14.5 PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1044 OK Pics	
Former 27"	1049 OK Pics	

Comments on recovery-well pumps, fluid levels, booms etc.:

Bump Start EW1, EW2, EW3
RW5, 6 OK RW2 OK RW3, 4 OK Ex396 OK
Former 27" loc Nosheen Terra Hydro Onsite
Ordered OEO HH Parts moving Booms for Chev, Piling work.
BNSF Contact Chris Bonne 360772 3258
CP Lube side Dave Hawk x 1542

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 6-20-6 Personnel: ar 0.75
Discharge Totalizer Reading: 3,199,800

	if Backflush performed
PSI @ System Pump: 52.1	PSI @ System Pump end:
PSI @ Primary Vessel: 34.8	PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0739 OK pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.: Met w/ Steve Adams re decant MH12 water to Sep 003 OK
Drain CBT,
Drain H2O from Product Tank
Skim OWS - PID .9-1.3 background.
Open OWS: Breathing zone 1.5-1.8
in Tank 14-20. 2 minutes
Breathing zone 1.3-1.4

Date: 6-21-6 Personnel: CS 3.5
Discharge Totalizer Reading: 3 220 500

	if Backflush performed
PSI @ System Pump: 71.9	PSI @ System Pump end: 26.6
PSI @ Primary Vessel: 28.3	PSI @ Primary Vessel end: 13.1

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1240 OK pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
Stratus onsite for video MH12 to Sep 002 and Clearout 4" Sewer line
Drain Product Tank H2O Skim OWS

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-22-8 Personnel: CA 1.0
Discharge Totalizer Reading: 3 240 100 (0727)

if Backflush performed

PSI @ System Pump: 28.3 PSI @ System Pump end:
PSI @ Primary Vessel: 10.0 PSI @ Primary Vessel end:
Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Product Removal: U-13, U-4, U229A, GP-3, GP-4, SUMP
Gauge: U29A, U29B, U29C, U27, U28, U26, PIA,
U-26, U-25, U-23, U-22A, U22B, U24A, U24B
System ✓
Increase Cheuron side air supply 45-70 PSI
MCU: 1,874,990 Prod. 65gal EW 2 543685 EW3 97857

Date: 8-25-8 Personnel: CA 1.0
Discharge Totalizer Reading: 3,300,800

if Backflush performed ✓ 1

PSI @ System Pump: 74.8 PSI @ System Pump end: 28.5
PSI @ Primary Vessel: 70.0 PSI @ Primary Vessel end: 19.4
Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0835 ok Nosheen Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

COP0016713

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8/26/8	Personnel: CA		10.25
Discharge Totalizer Reading: 3,320,700			
	0900	1515	if Backflush performed
PSI @ System Pump:	41.8	48.4	PSI @ System Pump end:
PSI @ Primary Vessel:	16	28.00	PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:		Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0630 OK	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

CCS - Hard booms, Sorbent booms Day 1

Date: 8/27/8	Personnel: CA		11.25
Discharge Totalizer Reading: 3,345,700			
	V3		if Backflush performed
PSI @ System Pump:	68.7		PSI @ System Pump end:
PSI @ Primary Vessel:	63.0		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:		Vessel 3 East:
2/1	Ø		1/Ø

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

CCS - booms day 2
Switch Carbon to V1 only.
Steatus - Clean out of Recovery wells -
Could not pull EW4 of RW-3. Rest OK.
Drained liquids into Sump. ¼ drum sediments into drum

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8-28-8	Personnel: CA	5.25
Discharge Totalizer Reading: 3,356,900		
		if Backflush performed V3+V1
PSI @ System Pump:		PSI @ System Pump end: 20,4
PSI @ Primary Vessel:		PSI @ Primary Vessel end: 9,8
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
1/2	Ø	Ø/1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0900 OK	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Drain CBT.

Ex396 OK Needs Tubing + cable. RW-4 Needs cable attachment.

RW3 Stuck Not Pumping, RW2 OK RW1 Bump Start Needs Tubing,

RW5 Good 1' From Bottom, RW6 Good 1' From Bottom

Removed Sump and cleaned slinger, pump, Sediments into cans on pad.

One 1" diaphragm pump inoperable. EW1 Stuck, EW2 off line, EW3 OK

Date: 9-29-8	Personnel: CA	1.25
Discharge Totalizer Reading: 3,375,500		
		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	OK No sheen 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Ex396 lowered to activate, RW4 OK, RW3 ?, RW2 OK, RW1 Bump Start,

RW5 OK, RW6 OK, EW1 OK Stuck, EW2 offline, EW3 OK, EW4 OFF Pump

Drain CBT, Drain H2O from Product Tank

Prod. Tank 65 gal

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 8/31/18 Personnel: Arby Lewis [redacted]
Discharge Totalizer Reading: 3,421,544
if Backflush performed J3
PSI @ System Pump: PSI @ System Pump end:
PSI @ Primary Vessel: PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:
2 Ø 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

mcv TLZ: 1,896,502 Product Tank 65gal.

Date: 9/2/18 Personnel: cs 0.5
Discharge Totalizer Reading: 3,458,500
if Backflush performed
PSI @ System Pump: 430 PSI @ System Pump end:
PSI @ Primary Vessel: 20.6 PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:
2 Ø 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0920 OK No Sheen Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Drained CBT
RW 5, 6, 4, 3, 2 OK RW3 Need to √ but Running, Ex 396 OK

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9/3/8 Personnel: CA
Discharge Totalizer Reading: 3,478,800

	if Backflush performed
PSI @ System Pump: 53.3	PSI @ System Pump end:
PSI @ Primary Vessel: 28.9	PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle: Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Booms good 2 Pics Outfall 22 - 60"	0900 No Sheen 2 Pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Assembled New 1" diaphram somp pump.
System √: EW-1 OK, EW2 off line, EW-3 Slow cycle but at water at bottom of casing, EW4 No pump, RW-1 Lowered to adjust - set @ 2" from bottom - Need Tubing, RW-2 OK, RW-4 OK, RW5 OK, RW6 OK, RW 3 - Tested - Not pumping - Just blowing air out water outlet - pump fouled - Disconnected/Offline.

Date: 9-4-8 Personnel: as
Discharge Totalizer Reading: 3,495,300

	if Backflush performed
PSI @ System Pump: 55.2	PSI @ System Pump end:
PSI @ Primary Vessel: 27.5	PSI @ Primary Vessel end:
Vessel 1 West: 2	Vessel 2 Middle: 0 Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0648 2 pics OK No Sheen	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Site Diagram Proofs. City of Portland Ray Taylor on site to inspect OF22.
Located for MH27

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9/5/18 Personnel: ed
Discharge Totalizer Reading: 3513000

if Backflush performed V3

PSI @ System Pump: 26.2 PSI @ System Pump end:
PSI @ Primary Vessel: 14.8 PSI @ Primary Vessel end:
Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	OK No sheen Pics 0913	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Chevron side - marine surveyors?

Date: 9/8/18 Personnel: ed
Discharge Totalizer Reading: 3,563,800 3569000

if Backflush performed V3

PSI @ System Pump: 54.8 PSI @ System Pump end: 29.2
PSI @ Primary Vessel: 39.3 PSI @ Primary Vessel end: 18.6
Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	No sheen. Ok Pics 0841	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

System V: RW4 ok RW3 offline, Ex 396 Ok Needs Tubing, RW2 ok,
RW1 ok RW5 ok RW6 ok EW2 offline EW1 Not cycling EW4 OFFline EW-304
G000558
MH77 Locate w/ City of Portland Jody @ 1430
center of 60" is 7' From west edge MH77.
Product Tank: 68 gallons Chevron side Booms → Pics to Arcadis
MCV: 1,914,000

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-9-8 Personnel: CNS
Discharge Totalizer Reading: 3,580,200

		if Backflush performed
PSI @ System Pump: 31.3		PSI @ System Pump end:
PSI @ Primary Vessel: 9.6		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	No Sheen Pics 1040	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.: Arcadis-Tarathydra workin ~~Chevron Booms, Tarathydr~~ checked piling for me No Spines

Cop issued dig permit for soil sampling.
Stratos on site for hole Borings - Var Clear to 8'
Samples HA77-1 1010 HA77-2 1015
HA77-3 1018 HA77-4 1020 all @ 9'
All PID Ø VOC Ø LEL No Odors.
2 Drums in Sandlot.

Date: 9-10-8 Personnel: as
Discharge Totalizer Reading: 3599200

		if Backflush performed
PSI @ System Pump: 47.4		PSI @ System Pump end:
PSI @ Primary Vessel: 27.5↑		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	No sheen Pics 0912	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Cop Notified me Ali Dirks city of Portland was on site earlier to inspect Outfall 22.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-11-8	Personnel: CW		
Discharge Totalizer Reading: 3,614,700			
	@715	1243	if Backflush performed
PSI @ System Pump:	55.1	39.2	PSI @ System Pump end:
PSI @ Primary Vessel:	31.2	21.7	PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:		Vessel 3 East:
2	Ø		0

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	OK No sheen pics 0733	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Opened OWS to air out, CCS for System Cleanout.
@ 0545 @ OWS Breathing Zone 0.1 VOC 20.9 O2
1pm Status out to drop off supplies. Insite Form on Site -
Cleanout pics
Removed 70 gal from Product Tank, Removed 110 gal from Annus
Sent to ORRCO 2240 gal 1940 liquid + 300 Solids

Date: 9-12-8	Personnel: ab		
Discharge Totalizer Reading:			
			if Backflush performed
PSI @ System Pump:			PSI @ System Pump end:
PSI @ Primary Vessel:			PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:		Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	No sheen 0730 No pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Status, Insite form sub: Veolia ES Foreman Greg 541-210-1878
Video MH #7 to OF 22 - Bolts @ 8' 2 sets of 4.
0900 H+S Meeting w/ Status - Mike Noll on site.
Stop Work used @ 11am ± Status Not prepared - No documents
on hand for outfall berm - and No 8"→4" Vac hose adapter.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-13-8 Personnel: CAS
Discharge Totalizer Reading: 3649200

if Backflush performed ✓3

PSI @ System Pump: 30.5 PSI @ System Pump end: 30.5
PSI @ Primary Vessel: 17.8 PSI @ Primary Vessel end: 17.8
Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	No Sheen 2 pics 0933	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
Onsite to backflush ✓3.

Date: 9-15-8 Personnel: CAS
Discharge Totalizer Reading:

if Backflush performed

PSI @ System Pump: PSI @ System Pump end:
PSI @ Primary Vessel: PSI @ Primary Vessel end:
Vessel 1 West: Vessel 2 Middle: Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1345 No Sheen No pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:
OMR Samples In, Mid, EF.

Drain CBT,
Purchased pH meter and buffers to calibrate @ 4.0 and 7.0.
Extech Instruments Mod PH100
EFFLUENT 1630 pH 6.53 TL2 3,686,500

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-16-8 Personnel: [illegible]
Discharge Totalizer Reading: 3,698,100

		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1024 OK 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

City - Ray Taylor Notified to enter stormsewer 9-18 @ 10am -

System ✓ : EW-5 OK EW-1 Not working casing Full RW5, 6 OK RW-2 OK
EW-4 No pump EW-2 offline casing Full RW-1 Not Pumping - Blowing air
RW3 offline RW-4 OK
Ex 396 OK

spoke w/ Arnie Cop Re: CFR
MCU: 1,927,704 sump - Dry repaire D Dolphin Ring

Date: 9-17-8 Personnel: [illegible]
Discharge Totalizer Reading:

		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Onsite for 60" CIPP Coordination - met w/ Jeff F and Tom L.
re: City's notice to enter stormsewer

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-18-06 Personnel: CM
Discharge Totalizer Reading: 3,727,600

if Backflush performed

PSI @ System Pump: 50.5 PSI @ System Pump end:
PSI @ Primary Vessel: 23 PSI @ Primary Vessel end:

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
2	Ø	1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0858	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Review POTW Permit
Identified IF-1 and IF-2. Grant Spurlock and Mike Hansen stopped by. River level had been up to bottom of pipe earlier. Army Corp released Upper Willamette. City Entry MH 27 to Outfall 22. BES, Stratus, Stantec, CP Meet @ 1:30. Site Walk: PID VOC 1-3 at edge, 3 minutes; 0.0 VOC @ face.

Date: 9-19-06 Personnel: CM
Discharge Totalizer Reading: 3,741,600

if Backflush performed V3

PSI @ System Pump: 52.1 PSI @ System Pump end: 27.4
PSI @ Primary Vessel: 27↑ PSI @ Primary Vessel end: 9.9↑

Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
(2)	Ø	(1)

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	No Sheen.	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

pulled pump from RW-1; worked on EW-1 and EW-2 w/ Arcby.

Stratus: filled soil borings w/ pea gravel, moved drums to shed, Loaded 4 drums catch basin, Load 8 drums spent carbon from 7-31.
60" CIPP Site walk w/ Insituform, Mike Hill, Stratus, Stantec

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-22-8	Personnel: [illegible]		OHM onsite: 0.25
Discharge Totalizer Reading:			Offsite 1.25
		if Backflush performed	
PSI @ System Pump: 40		PSI @ System Pump end:	
PSI @ Primary Vessel:		PSI @ Primary Vessel end:	
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:	
2	0	1	

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

GWM - gauging for Semi-Annual/Monthly Sheetpile Wall Monitoring.

Date: 9-23-05	Personnel: [illegible]		OHM onsite: 0.75
Discharge Totalizer Reading:			offsite: 1.25
		if Backflush performed	
PSI @ System Pump:		PSI @ System Pump end:	
PSI @ Primary Vessel:		PSI @ Primary Vessel end:	
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:	

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	1045 No Sheen.	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

GWM - Sampling

Disconnect plumbing/pressure gauges from Broken Vessel #2.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-24-8 Personnel: [illegible] O+M Onsite: 2.5
Discharge Totalizer Reading: 3,834,000 O+M offsite: Ø

if Backflush performed

PSI @ System Pump: 55.2 PSI @ System Pump end:
PSI @ Primary Vessel: Ø PSI @ Primary Vessel end:
Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"	0958 No Sheen 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

GWM Continued.
Stratus: Delivered New Carbon Vessel

Met W/ John - CFR on Dock Project. Removed Floats/Ends from Booms in Sandbt.
brown Plume @ outfall 22 Not Sheen - Reported to Rick and H.O. No CP Release.
City of Portland to Sample Outfall 22.

Date: 4-25-08 Personnel: [illegible] O+M Onsite: 0.25
Discharge Totalizer Reading: 3,846,000 O+M offsite: Ø

if Backflush performed

PSI @ System Pump: 61.2 PSI @ System Pump end:
PSI @ Primary Vessel: Ø PSI @ Primary Vessel end:
Vessel 1 West: 2 Vessel 2 Middle: Ø Vessel 3 East: 1

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

GWM Continued.

CCS: Work on Booms. 7.5 hours. Reconfigered booms.
Installed New rigging, repaired where needed.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-26-05	Personnel: CK	Onsite: 1.0 Offsite:
Discharge Totalizer Reading: 3,960,900		
		if Backflush performed J3
PSI @ System Pump: [redacted]		PSI @ System Pump end: 30.8
PSI @ Primary Vessel:		PSI @ Primary Vessel end: Ø
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Booms OK Outfall 22 - 60"	0700 Washed 2 pics.	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

To Ferguson for Carbon Vessel plumbing parts.

River level @ Boom check piece.

Date: 9-27	Personnel: CK	Onsite: Ø Offsite: Ø
Discharge Totalizer Reading:		
		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Observe Ingibu Form Install for City of Portland.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-28-06	Personnel: CA	Otm Onsite: Ø Otm Offsite: Ø
Discharge Totalizer Reading:		

		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Recorded and transferred observations from Infoform Install to Richard Scott.

Date: 9-29-06	Personnel: CA	Otm Osite: Ø Otm Offsite:
Discharge Totalizer Reading: 3,910,600		

		if Backflush performed
PSI @ System Pump: 48.3		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:
(2)	Ø	(1)

Storm Water Outfalls	Sheen Observation	
	NO	YES
Booms OK Outfall 22 - 60"	0723 No Sheen 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Achy onsite: Plumbing New Carbon Vessel.

Shut system off for about 3 hours - Restart OK.

Remediation System Operations and Maintenance Log
ConocoPhillips Portland Terminal - RM&R Site 0922, 5528 Doane Ave., Portland, OR 97210

Date: 9-30-9 Personnel: aa otm offsite: otm offsite:
Discharge Totalizer Reading: 3,927,200

		if Backflush performed
PSI @ System Pump: 48.7		PSI @ System Pump end:
PSI @ Primary Vessel: 21.9A		PSI @ Primary Vessel end:
Vessel 1 West: 2	Vessel 2 Middle: Ø	Vessel 3 East: 0

Storm Water Outfalls	Sheen Observation	
	NO	YES
Booms Ok Outfall 22 - 60"	ok No sheen 2 pics	
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

System ✓: EW-2 offline, EW-1 Not pumping, EW-3 OK, EW4 No Pump
RW-5 ok, RW-6 OK, RW-1 No Pump, RW-2 gurgling Need to ✓ Flow,
RW-3 Offline stuck, RW-4 OK, Ex 39b No pumping.
CCS: Haul off hard boom to WM Hillsboro.
MCV TLZ: 1,991,700 Product Tank: Approx 5-gal

Date: Personnel:
Discharge Totalizer Reading:

		if Backflush performed
PSI @ System Pump:		PSI @ System Pump end:
PSI @ Primary Vessel:		PSI @ Primary Vessel end:
Vessel 1 West:	Vessel 2 Middle:	Vessel 3 East:

Storm Water Outfalls	Sheen Observation	
	NO	YES
Outfall 22 - 60"		
Former 27"		

Comments on recovery-well pumps, fluid levels, booms etc.:

Stantec

ATTACHMENT 2
CERTIFIED LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

July 18, 2008

Bill Edmund
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 07/15/08 13:30. The following list is a summary of the Work Orders contained in this report, generated on 07/18/08 15:41.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRG0454	Portland Terminal	0922 - COP

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Final	PRG0454-01	Water	07/15/08 09:30	07/15/08 13:30

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0454-01RE1 (Final)			**Water**			**Sampled: 07/15/08 09:30**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8070585	07/17/08 09:34	07/17/08 19:22	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*104%*		*70 - 130 %*	"			"

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0454-01 (Final)			**Water**				**Sampled: 07/15/08 09:30**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8070517	07/16/08 09:00	07/18/08 10:30	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0454-01 (Final)			**Water**			**Sampled: 07/15/08 09:30**				
pH	150.1/9040A	**6.29**	-----		pH Units	1x	8070492	07/15/08 16:19	07/15/08 17:14	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070585 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8070585-BLK1)								**Extracted: 07/17/08 09:34**						
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	07/17/08 17:59	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 103%*			*Limits: 70-130%*	"							*07/17/08 17:59*	
LCS (8070585-BS1)								**Extracted: 07/17/08 09:34**						
Benzene	EPA 8021B	16.4	---	0.500	ug/l	1x	--	20.0	81.9%	(75-125)	--	--	07/17/08 16:09	
Toluene	"	16.8	---	0.500	"	"	--	"	83.8%	(80-120)	--	--	"	
Ethylbenzene	"	17.5	---	0.500	"	"	--	"	87.7%	(80-130)	--	--	"	
Xylenes (total)	"	53.6	---	1.00	"	"	--	60.0	89.4%	"	--	--	"	
o-Xylene	"	17.7	---	1.00	"	"	--	20.0	88.6%	"	--	--	"	
m,p-Xylene	"	35.9	---	1.00	"	"	--	40.0	89.7%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 89.6%*			*Limits: 70-130%*	"							*07/17/08 16:09*	
LCS Dup (8070585-BSD1)								**Extracted: 07/17/08 09:34**						
Benzene	EPA 8021B	19.8	---	0.500	ug/l	1x	--	20.0	99.2%	(75-125)	19.1%	(20)	07/17/08 16:37	
Toluene	"	19.9	---	0.500	"	"	--	"	99.6%	(80-120)	17.2%	"	"	
Ethylbenzene	"	21.1	---	0.500	"	"	--	"	105%	(80-130)	18.2%	"	"	
Xylenes (total)	"	63.2	---	1.00	"	"	--	60.0	105%	"	16.5%	"	"	
o-Xylene	"	21.0	---	1.00	"	"	--	20.0	105%	"	16.9%	"	"	
m,p-Xylene	"	42.3	---	1.00	"	"	--	40.0	106%	"	16.3%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 116%*			*Limits: 70-130%*	"							*07/17/08 16:37*	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070517 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8070517-BLK1)								**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	07/18/08 10:30	
LCS (8070517-BS1)								**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	38.6	---		mg/l	1x	--	40.0	96.5%	(78-114)	--	--	07/18/08 10:30	
Matrix Spike (8070517-MS1)				**QC Source: PRG0435-01**				**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	85.0	---		mg/l	1x	16.4	40.0	172%	(78-114)	--	--	07/18/08 10:30	M7
Matrix Spike (8070517-MS3)				**QC Source: PRG0435-01**				**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	54.6	---		mg/l	1x	16.4	40.0	95.5%	(78-114)	--	--	07/18/08 10:30	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070492 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8070492-DUP1)				**QC Source: PRG0433-01**				**Extracted: 07/15/08 13:36**						
pH	150.1/9040A	7.33	---		pH Units	1x	7.24	--	--	--	1.24%	(25)	07/15/08 13:52	

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Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:41

Notes and Definitions

Report Specific Notes:

M7 - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRG0454

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Bill Edmund	Site Contact: Norman Swanson	Date: 7-15-08	COC No:
~~SECOR International Inc.~~ Stantec Consulting Corp	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier:	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
FINAL	7-15-08	0930	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 2,457,900

13.0°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	SECOR Stantec	7-15-08 1330	[signature]	TAP	7/15/08 13:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Sample Receipt Checklist

Received by: (section A)
Date: 7/15/08
Time: 13:30
Initials: JI

Unpacked by: (section B)
Date: 7/15/08
Initials: JI

Logged-in by:
Date: 7/15/08
Initials: BLE

Work Order No. PRG0454
Client: Stantec Consulting Corp.
Project: Portland Terminal

Temperature out of range:
___ Not enough Ice
___ No Ice
___ Ice Melted
X W/in 4 Hours
___ Other: _____

***ESI Clients (see Section C)

Cooler Temperature (IR): 13.0 °C plastic glass NA (oil/air OR ESI client) Temperature Blank: _____ °C DIGI #1 #2

A

Custody Seals: (#___)

Signature: Y N Dated: _____
X None

Container Type:
1 #Cooler(s)
___ #Box(s)
___ None (___ #Other: _____)

Coolant Type:
___ Gel/ Blue Ice
X Loose Ice
___ None

Packing Material:
X Bubble Bags
___ Styrofoam Cubbies
___ Peanuts
___ None (___ Other: _____)

Received from:
___ TA Courier
___ Senvoy
___ UPS
___ Fed Ex
X Client
___ TDP
___ USPS
___ SDS
___ Mid-Valley
___ GS/TA
___ GS/Senvoy
___ Other: _____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Cyanide checked?	Y	N	NA
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided DIGI #1 #2

All preserved bottles checked Y N NA (voas/soils/all unp.)
All preserved accordingly? Y N (see NOD) NA (voas/soils/all unp.)

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Reviewed:

COP001674

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

July 18, 2008

Bill Edmund
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 07/15/08 13:30. The following list is a summary of the Work Orders contained in this report, generated on 07/18/08 15:45.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRG0455	Portland Terminal	0922 - COP

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MID	PRG0455-01	Water	07/15/08 09:45	07/15/08 13:30

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0455-01RE1 (MID)			**Water**			**Sampled: 07/15/08 09:45**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8070585	07/17/08 09:34	07/17/08 19:50	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*107%*		*70 - 130%*	"			"

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0455-01 (MID)			**Water**				**Sampled: 07/15/08 09:45**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8070517	07/16/08 09:00	07/18/08 10:30	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRG0455-01 (MID)			**Water**			**Sampled: 07/15/08 09:45**				
pH	150.1/9040A	**6.34**	-----		pH Units	1x	8070492	07/15/08 16:19	07/15/08 17:14	

TestAmerica Portland

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7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070585 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8070585-BLK1)								**Extracted: 07/17/08 09:34**						
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	07/17/08 17:59	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 103%*			*Limits: 70-130%*	"							*07/17/08 17:59*	
LCS (8070585-BS1)								**Extracted: 07/17/08 09:34**						
Benzene	EPA 8021B	16.4	---	0.500	ug/l	1x	--	20.0	81.9%	(75-125)	--	--	07/17/08 16:09	
Toluene	"	16.8	---	0.500	"	"	--	"	83.8%	(80-120)	--	--	"	
Ethylbenzene	"	17.5	---	0.500	"	"	--	"	87.7%	(80-130)	--	--	"	
Xylenes (total)	"	53.6	---	1.00	"	"	--	60.0	89.4%	"	--	--	"	
o-Xylene	"	17.7	---	1.00	"	"	--	20.0	88.6%	"	--	--	"	
m,p-Xylene	"	35.9	---	1.00	"	"	--	40.0	89.7%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 89.6%*			*Limits: 70-130%*	"							*07/17/08 16:09*	
LCS Dup (8070585-BSD1)								**Extracted: 07/17/08 09:34**						
Benzene	EPA 8021B	19.8	---	0.500	ug/l	1x	--	20.0	99.2%	(75-125)	19.1%	(20)	07/17/08 16:37	
Toluene	"	19.9	---	0.500	"	"	--	"	99.6%	(80-120)	17.2%	"	"	
Ethylbenzene	"	21.1	---	0.500	"	"	--	"	105%	(80-130)	18.2%	"	"	
Xylenes (total)	"	63.2	---	1.00	"	"	--	60.0	105%	"	16.5%	"	"	
o-Xylene	"	21.0	---	1.00	"	"	--	20.0	105%	"	16.9%	"	"	
m,p-Xylene	"	42.3	---	1.00	"	"	--	40.0	106%	"	16.3%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 116%*			*Limits: 70-130%*	"							*07/17/08 16:37*	

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070517 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8070517-BLK1)								**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	07/18/08 10:30	
LCS (8070517-BS1)								**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	38.6	---		mg/l	1x	--	40.0	96.5%	(78-114)	--	--	07/18/08 10:30	
Matrix Spike (8070517-MS1)				**QC Source: PRG0435-01**				**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	85.0	---		mg/l	1x	16.4	40.0	172%	(78-114)	--	--	07/18/08 10:30	M7
Matrix Spike (8070517-MS3)				**QC Source: PRG0435-01**				**Extracted: 07/16/08 07:08**						
Oil & Grease	EPA 1664	54.6	---		mg/l	1x	16.4	40.0	95.5%	(78-114)	--	--	07/18/08 10:30	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8070492 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8070492-DUP1)					**QC Source: PRG0433-01**				**Extracted: 07/15/08 13:36**					
pH	150.1/9040A	7.33	---		pH Units	1x	7.24	--	--	--	1.24%	(25)	07/15/08 13:52	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
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ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Bill Edmund	07/18/08 15:45

Notes and Definitions

Report Specific Notes:

M7 - The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

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9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRG0455

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Bill Edmund	Site Contact: Norman Swanson	Date: 7-15-08	COC No:
SECOR International Inc. Stantec Consulting Corp	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier:	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W) _____			
(503) 691-2030 Phone	TAT if different from Below ___3 Days___			
(503) 692-7074 FAX	☐ 2 weeks			SDG No.
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
MID	7-15-08	0945	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 2,457,900

13.0°C

Relinquished by:	Company: SECOR Stantec	Date/Time: 7/15/13:30	Received by:	Company: TAP	Date/Time: 7/15/08 13:30
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Sample Receipt Checklist

Received by: (Section A) Date: 7/15/08 Time: 13:30 Initials: JI

Unpacked by: (Section B) Date: 7/15/08 Initials: JI

Logged-in by: Date: 7/15/08 Initials: BLF

Work Order No. PRG0455

Client: Stantec Consulting Corp.

Project: Portland Terminal

Temperature out of range.

___Not enough Ice
___No Ice
___Ice Melted
X Within 4 Hours
___Other: _____

***ESI Clients (see Section C)

Cooler Temperature (IR): 13.0 °C (plastic) glass NA (oil/air OR ESI client) Temperature Blank: _____ °C DIGI #1 #2

A

Custody Seals: (#____)

Signature: Y N Dated: _____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

____Gel/ Blue Ice

X Loose Ice

____None

Packing Material:

X Bubble Bags

____Styrofoam Cubbies

____Peanuts

____None (___Other:_____)

Received from:

____TA Courier
____Senvoy
____UPS
____Fed Ex
X Client
____TDP
____USPS
____SDS
____Mid-Valley
____GS/TA
____GS/Senvoy
____Other:

_____

B

Sample Status:

(If N circled, see NOD)

General:

Intact?	(Y)	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	

For Analyses Requested:

Cyanide checked?	Y	N	(NA)
Correct Type & Preservation?	(Y)	N	
Adequate Volume?	(Y)	N	
Within Hold Time?	(Y)	N	

Volatiles/ Oil Quality:

VOAs/ Syringes free of Headspace?	(Y)	N	NA
TB on COC?	(not provided)	Y	N	NA

Metals:

HNO3 Preserved?	Y	N	(NA)
Dissolved Metals Filtered?	Y	N	(NA)

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided DIGI #1 #2

All preserved bottles checked Y N NA (voas soils all unp.)

All preserved accordingly? Y N (see NOD) NA (voas soils all unp.)

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Review:

COP001675

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

August 20, 2008

Rick Fetterly
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 08/15/08 09:40. The following list is a summary of the Work Orders contained in this report, generated on 08/20/08 17:10.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRH0518	Portland Terminal	0922 COP

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MIDFLUENT	PRH0518-01	Water	08/15/08 08:00	08/15/08 09:40

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0518-01 (MIDFLUENT)			**Water**			**Sampled: 08/15/08 08:00**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8080503	08/15/08 13:12	08/16/08 09:51	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*93.1%*		*70 - 130%*	"			"

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0518-01 (MIDFLUENT)			**Water**				**Sampled: 08/15/08 08:00**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8080516	08/18/08 10:45	08/18/08 13:12	

TestAmerica Portland

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Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0518-01 (MIDFLUENT)			**Water**			**Sampled: 08/15/08 08:00**				
pH	150.1/9040A	**6.56**	-----		pH Units	1x	8080497	08/15/08 11:41	08/15/08 12:02	

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080503 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8080503-BLK1)									**Extracted: 08/15/08 13:12**					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	08/15/08 20:58	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 70-130%*	"							*08/15/08 20:58*	
LCS (8080503-BS1)									**Extracted: 08/15/08 13:12**					
Benzene	EPA 8021B	17.6	---	0.500	ug/l	1x	--	20.0	87.9%	(75-125)	--	--	08/15/08 19:07	
Toluene	"	18.6	---	0.500	"	"	--	"	92.9%	(80-120)	--	--	"	
Ethylbenzene	"	19.5	---	0.500	"	"	--	"	97.4%	(80-130)	--	--	"	
Xylenes (total)	"	59.2	---	1.00	"	"	--	60.0	98.7%	"	--	--	"	
o-Xylene	"	19.6	---	1.00	"	"	--	20.0	98.2%	"	--	--	"	
m,p-Xylene	"	39.6	---	1.00	"	"	--	40.0	99.0%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 70-130%*	"							*08/15/08 19:07*	
LCS Dup (8080503-BSD1)									**Extracted: 08/15/08 13:12**					
Benzene	EPA 8021B	18.7	---	0.500	ug/l	1x	--	20.0	93.7%	(75-125)	6.33%	(20)	08/15/08 19:35	
Toluene	"	19.7	---	0.500	"	"	--	"	98.4%	(80-120)	5.81%	"	"	
Ethylbenzene	"	20.6	---	0.500	"	"	--	"	103%	(80-130)	5.50%	"	"	
Xylenes (total)	"	62.0	---	1.00	"	"	--	60.0	103%	"	4.49%	"	"	
o-Xylene	"	20.5	---	1.00	"	"	--	20.0	103%	"	4.47%	"	"	
m,p-Xylene	"	41.4	---	1.00	"	"	--	40.0	104%	"	4.50%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 105%*			*Limits: 70-130%*	"							*08/15/08 19:35*	

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7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8H15019 **Soil Preparation Method: 8060296**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8H15019-IBL1)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	0.000116	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/15/08 15:47	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	0.000207	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/15/08 15:47*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL2)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/15/08 18:38	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/15/08 18:38*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL3)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 02:57	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/16/08 02:57*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL4)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 08:01	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/16/08 08:01*	
a,a,a-TFT (PID)					*60-130%*	"							"	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8H15019 **Soil Preparation Method: 8060296**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8H15019-IBL5)							**Extracted: 08/15/08 00:00**							
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 11:13	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s):	*4-BFB (PID)*				*Limits:*	*70-130%*	"						*08/16/08 11:13*	
	a,a,a-TFT (PID)					*60-130%*	"						"	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080516 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8080516-BLK1)								**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	08/18/08 13:12	
LCS (8080516-BS1)								**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	37.6	---		mg/l	1x	--	40.1	93.8%	(78-114)	--	--	08/18/08 13:12	
Matrix Spike (8080516-MS1)				**QC Source: PRH0460-04**				**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	38.5	---		mg/l	1x	0.400	40.1	95.0%	(78-114)	--	--	08/18/08 13:12	
Matrix Spike (8080516-MS3)				**QC Source: PRH0460-04**				**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	38.1	---		mg/l	1x	0.400	40.1	94.0%	(78-114)	--	--	08/18/08 13:12	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080497 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8080497-DUP1)					**QC Source: PRH0516-01**				**Extracted: 08/15/08 11:41**					
pH	150.1/9040A	6.58	---		pH Units	1x	6.62	--	--	--	0.606%	(25)	08/15/08 12:02	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 17:10

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRH0518

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Bill Edmund**	**Site Contact: Norman Swanson**	**Date:** 8/15/08	COC No:
Stantec Consulting Corporation, *formerly SECOR*	**Tel/Fax: (503) 691-2030**	**Lab Contact: Estella Rieben**	**Carrier:**	1 of 1 COCs
7730 SW Mohawk St	**Analysis Turnaround Time**			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W) _____			
(503) 691-2030 Phone	TAT if different from Below ___3 Days___			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
MIDFLUENT	8/15/08	0800	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 3,100,300

Please email results to Norman.Swanson@Stantec.com

17.2

Relinquished by:	Company: ~~SECOR~~ Stantec 0940	Date/Time: 8/15/08	Received by:	Company: TAP	Date/Time: 8/15/08 0940
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016763

TestAmerica Sample Receipt Checklist

Cooler ID(s):

Received by: *(section A)* Date: 8-15-08 Time: 9:40A Initials: BLE

Unpacked by: *(section B)* Date: 8-15-08 Initials: X

Logged-in by: Date: 8/15/08 Initials: BLE

Work Order No. PRH0518

Client: Stantec

Project: Portland Terminal

***ESI Clients *(see Section C)*

Temperature out of range:

___Not enough Ice
___*No Ice*
___*Ice Melted*
X *W/in 4 Hours*
___*Other:*

Digi #1
Digi #2

Cooler Temperature (IR): 1.7,2 °C plastic glass NA *(oil/air samples, ESI client)*

Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

____Gel Ice

X Loose Ice

____None

Packing Material:

X Bubble Bags

____Styrofoam Cubbies

____Peanuts

____None (____Other:_____)

Received from:

____TA Courier
____Senvoy
____UPS
____Fed Ex
X Client
____TDP
____DHL
____SDS
____Mid-Valley
____GS/TA
____GS/Senvoy
____Other:

_____

B

Sample Status:
(If N circled, see NOD)

General:

Intact?	(Y)	N	
# Containers Match COC?	(Y)	N	none given
IDs Match COC?	Y	(N)	

For Analyses Requested:

Cyanide Checked?	Y	N	(NA)
Correct Type & Preservation?	(Y)	N	
Adequate Volume?	(Y)	N	
Within Hold Time?	(Y)	N	

Volatiles/ Oil Quality:

VOAs/ Syringes free of Headspace?	(Y)	N	NA
TB on COC?	(not provided)	Y	N	NA

Metals:

HNO3 Preserved?	Y	N	(NA)
Dissolved Metals Filtered?	Y	N	(NA)

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided

All preserved bottles checked Y N NA *(voas/soils/all unp.)*

All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: NOT ENOUGH VOL FOR QC

PM Reviewed:_____ (Initial/Date)

COP0016764

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

August 20, 2008

Rick Fetterly
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 08/15/08 09:40. The following list is a summary of the Work Orders contained in this report, generated on 08/20/08 16:59.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRH0516	Portland Terminal	0922 - COP

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFFLUENT	PRH0516-01	Water	08/15/08 08:10	08/15/08 09:40

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0516-01 (EFFLUENT)			**Water**			**Sampled: 08/15/08 08:10**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8080503	08/15/08 13:12	08/16/08 09:24	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*94.9%*		*70 - 130%*	"			"

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Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0516-01 (EFFLUENT)			**Water**			**Sampled: 08/15/08 08:10**				
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8080516	08/18/08 10:45	08/18/08 13:12	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Conventional Chemistry Parameters per APHA/EPA Methods

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRH0516-01 (EFFLUENT)			**Water**			**Sampled: 08/15/08 08:10**				
pH	150.1/9040A	**6.62**	-----		pH Units	1x	8080497	08/15/08 11:41	08/15/08 12:02	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080503 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8080503-BLK1)								**Extracted: 08/15/08 13:12**						
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	08/15/08 20:58	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 70-130%*	"							*08/15/08 20:58*	
LCS (8080503-BS1)								**Extracted: 08/15/08 13:12**						
Benzene	EPA 8021B	17.6	---	0.500	ug/l	1x	--	20.0	87.9%	(75-125)	--	--	08/15/08 19:07	
Toluene	"	18.6	---	0.500	"	"	--	"	92.9%	(80-120)	--	--	"	
Ethylbenzene	"	19.5	---	0.500	"	"	--	"	97.4%	(80-130)	--	--	"	
Xylenes (total)	"	59.2	---	1.00	"	"	--	60.0	98.7%	"	--	--	"	
o-Xylene	"	19.6	---	1.00	"	"	--	20.0	98.2%	"	--	--	"	
m,p-Xylene	"	39.6	---	1.00	"	"	--	40.0	99.0%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*			*Limits: 70-130%*	"							*08/15/08 19:07*	
LCS Dup (8080503-BSD1)								**Extracted: 08/15/08 13:12**						
Benzene	EPA 8021B	18.7	---	0.500	ug/l	1x	--	20.0	93.7%	(75-125)	6.33%	(20)	08/15/08 19:35	
Toluene	"	19.7	---	0.500	"	"	--	"	98.4%	(80-120)	5.81%	"	"	
Ethylbenzene	"	20.6	---	0.500	"	"	--	"	103%	(80-130)	5.50%	"	"	
Xylenes (total)	"	62.0	---	1.00	"	"	--	60.0	103%	"	4.49%	"	"	
o-Xylene	"	20.5	---	1.00	"	"	--	20.0	103%	"	4.47%	"	"	
m,p-Xylene	"	41.4	---	1.00	"	"	--	40.0	104%	"	4.50%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 105%*			*Limits: 70-130%*	"							*08/15/08 19:35*	

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Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8H15019 **Soil Preparation Method: 8060296**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8H15019-IBL1)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	0.000116	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/15/08 15:47	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	0.000207	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/15/08 15:47*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL2)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/15/08 18:38	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/15/08 18:38*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL3)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 02:57	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/16/08 02:57*	
a,a,a-TFT (PID)					*60-130%*	"							"	
Instrument Blank (8H15019-IBL4)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 08:01	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)					*Limits: 70-130%*	"							*08/16/08 08:01*	
a,a,a-TFT (PID)					*60-130%*	"							"	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8H15019 **Soil Preparation Method: 8060296**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8H15019-IBL5)									**Extracted: 08/15/08 00:00**					
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	08/16/08 11:13	
Toluene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	0.00200	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s):	*4-BFB (PID)*				*Limits:*	*70-130%*	"						*08/16/08 11:13*	
	a,a,a-TFT (PID)					*60-130%*	"						"	

TestAmerica Portland

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080516 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8080516-BLK1)								**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	08/18/08 13:12	
LCS (8080516-BS1)								**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	37.6	---		mg/l	1x	--	40.1	93.8%	(78-114)	--	--	08/18/08 13:12	
Matrix Spike (8080516-MS1)				**QC Source: PRH0460-04**				**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	38.5	---		mg/l	1x	0.400	40.1	95.0%	(78-114)	--	--	08/18/08 13:12	
Matrix Spike (8080516-MS3)				**QC Source: PRH0460-04**				**Extracted: 08/18/08 08:15**						
Oil & Grease	EPA 1664	38.1	---		mg/l	1x	0.400	40.1	94.0%	(78-114)	--	--	08/18/08 13:12	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Conventional Chemistry Parameters per APHA/EPA Methods - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8080497 **Water Preparation Method: General Preparation**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8080497-DUP1)					**QC Source: PRH0516-01**				**Extracted: 08/15/08 11:41**					
pH	150.1/9040A	6.58	---		pH Units	1x	6.62	--	--	--	0.606%	(25)	08/15/08 12:02	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - COP	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	08/20/08 16:59

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PRH0516

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Bill Edmund**	**Site Contact: Norman Swanson**	**Date:** 8/15/08	COC No:
Stantec Consulting Corporation, *formerly SECOR*	**Tel/Fax: (503) 691-2030**	**Lab Contact: Estella Rieben**	**Carrier:**	1 of 1 COCs
7730 SW Mohawk St	**Analysis Turnaround Time**			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	pH (EPA Method 150.1/9040A)	Sample Specific Notes:
EFFLUENT	8/15/08	0810	G	W	5		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 3,100,300

Please email results to Norman.Swanson@Stantec.com

17.2°

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	~~SECOR~~ STANTEC	8/15/08 0940		TAP	8/15/08 0940
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016776

TestAmerica Sample Receipt Checklist

Received by: *(section A)* Date: 8-15-08 Time: 9:40A Initials: BE

Unpacked by: *(section B)* Date: 8-15-08 Initials: K

Logged-in by: Date: 8/15/08 Initials: BLE

Work Order No. PRH0516

Client: Stantec

Project: Portland Terminal

***ESI Clients *(see Section C)*

Temperature out of range:

___Not enough Ice
___*No Ice*
___*Ice Melted*
X *W/in 4 Hours*
___*Other:*

Digi #1
Digi #2

Cooler Temperature (IR): 17.2 °C plastic glass NA *(oil/air samples, ESI client)*

Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)
____#Box(s)
____None (___#Other:_____)

Coolant Type:

____Gel Ice
X Loose Ice
____None

Packing Material:

X Bubble Bags
____Styrofoam Cubbies
____Peanuts
____None (____Other:_____)

Received from:

____TA Courier
____Senvoy
____UPS
____Fed Ex
X Client
____TDP
____DHL
____SDS
____Mid-Valley
____GS/TA
____GS/Senvoy
____Other:
_____

B

Sample Status:
(If N circled, see NOD)

General:

Intact?	(Y)	N	
# Containers Match COC?	(Y)	N	none given
IDs Match COC?	(Y)	N	

For Analyses Requested:

Cyanide Checked?	Y	N	(NA)
Correct Type & Preservation?	(Y)	N	
Adequate Volume?	(Y)	N	
Within Hold Time?	(Y)	N	

Volatiles/ Oil Quality:

VOAs/ Syringes free of Headspace?	(Y)	N	NA
TB on COC? (not provided)	Y	N	NA

Metals:

HNO3 Preserved?	Y	N	(NA)
Dissolved Metals Filtered?	Y	N	(NA)

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided

All preserved bottles checked Y N NA *(voas/soils/all unp.)*
All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments:_____

*PM Reviewed:*_____ *(Initial/Date)*

COP0016777

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

September 29, 2008

Rick Fetterly
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 09/15/08 17:25. The following list is a summary of the Work Orders contained in this report, generated on 09/29/08 15:24.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRI0531	Portland Terminal	0922 - ConocoPhillips

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica
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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/29/08 15:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MIDFLUENT	PRI0531-01	Water	09/15/08 12:45	09/15/08 17:25
INFLUENT	PRI0531-02	Water	09/15/08 12:55	09/15/08 17:25

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/29/08 15:24

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRI0531-01RE1 (MIDFLUENT)			**Water**			**Sampled: 09/15/08 12:45**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8090805	09/22/08 19:58	09/24/08 06:49	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*84.3%*		*70 - 130%*	"			"
PRI0531-02RE1 (INFLUENT)			**Water**			**Sampled: 09/15/08 12:55**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8090805	09/22/08 19:58	09/24/08 07:16	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	**1.36**	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*85.6%*		*70 - 130%*	"			"

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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COP0016780

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/29/08 15:24

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRI0531-01 (MIDFLUENT)			**Water**				**Sampled: 09/15/08 12:45**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8090579	09/17/08 11:45	09/18/08 07:08	
PRI0531-02 (INFLUENT)			**Water**				**Sampled: 09/15/08 12:55**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8090579	09/17/08 11:45	09/18/08 07:08	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/29/08 15:24

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8090805 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8090805-BLK1)									**Extracted: 09/22/08 19:58**					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	09/24/08 01:49	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 80.7%*			*Limits: 70-130%*	"							*09/24/08 01:49*	
LCS (8090805-BS1)									**Extracted: 09/22/08 19:58**					
Benzene	EPA 8021B	19.4	---	0.500	ug/l	1x	--	20.0	97.0%	(75-125)	--	--	09/24/08 04:05	
Toluene	"	20.2	---	0.500	"	"	--	"	101%	(80-120)	--	--	"	
Ethylbenzene	"	21.0	---	0.500	"	"	--	"	105%	(80-130)	--	--	"	
Xylenes (total)	"	62.6	---	1.00	"	"	--	60.0	104%	"	--	--	"	
o-Xylene	"	20.9	---	1.00	"	"	--	20.0	104%	"	--	--	"	
m,p-Xylene	"	41.8	---	1.00	"	"	--	40.0	104%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 98.4%*			*Limits: 70-130%*	"							*09/24/08 04:05*	
LCS Dup (8090805-BSD1)									**Extracted: 09/22/08 19:58**					
Benzene	EPA 8021B	19.2	---	0.500	ug/l	1x	--	20.0	95.9%	(75-125)	1.19%	(20)	09/24/08 04:33	
Toluene	"	20.1	---	0.500	"	"	--	"	101%	(80-120)	0.669%	"	"	
Ethylbenzene	"	20.7	---	0.500	"	"	--	"	104%	(80-130)	1.13%	"	"	
Xylenes (total)	"	62.2	---	1.00	"	"	--	60.0	104%	"	0.659%	"	"	
o-Xylene	"	20.8	---	1.00	"	"	--	20.0	104%	"	0.168%	"	"	
m,p-Xylene	"	41.4	---	1.00	"	"	--	40.0	103%	"	0.905%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 98.7%*			*Limits: 70-130%*	"							*09/24/08 04:33*	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/29/08 15:24

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8I23019 **Soil Preparation Method: 8060296**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (8I23019-IBL7)							**Extracted: 09/23/08 00:00**							
Benzene	EPA 8021B	ND	---	0.000500	mg/kg wet	0.02x	--	--	--	--	--	--	09/23/08 03:14	
Toluene	"	0.0000980	---	0.00100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	0.000200	---	0.00100	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	0.000592	---	0.00200	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	0.000390	---	0.00100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	0.000202	---	0.00100	"	"	--	--	--	--	--	--	"	
Surrogate(s):	*4-BFB (PID)*				*Limits:*	*70-130%*	"						*09/23/08 03:14*	
	a,a,a-TFT (PID)					*60-130%*	"						"	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/29/08 15:24

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8090579 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8090579-BLK1)								**Extracted: 09/17/08 08:00**						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	09/18/08 07:08	
LCS (8090579-BS1)								**Extracted: 09/17/08 08:00**						
Oil & Grease	EPA 1664	37.8	---		mg/l	1x	--	40.1	94.3%	(78-114)	--	--	09/18/08 07:08	
Matrix Spike (8090579-MS1)				**QC Source: PRI0394-04**				**Extracted: 09/17/08 08:00**						
Oil & Grease	EPA 1664	36.5	---		mg/l	1x	ND	40.1	91.0%	(78-114)	--	--	09/18/08 07:08	
Matrix Spike (8090579-MS3)				**QC Source: PRI0394-04**				**Extracted: 09/17/08 08:00**						
Oil & Grease	EPA 1664	34.6	---		mg/l	1x	ND	40.1	86.3%	(78-114)	--	--	09/18/08 07:08	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/29/08 15:24

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PRIO531

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: ~~Bill Edmund~~ Rick Fetterly	Site Contact: Norman Swanson	Date: 9-15-08	COC No:
Stantec Consulting Corporation *formerly SECOR*	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier:	1 of 1 COCs
7730 SW Mohawk St	**Analysis Turnaround Time**			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below [redacted]			
(503) 692-7074 FAX	☐ 2 weeks STD			SDG No.
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	[redacted]	Sample Specific Notes:
MIDFLUENT	9-15-08	1245	G	W	4		X	X	X	
INFLUENT	9-15-08	1255	G	W	4		X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: Please Dispose of empty containers. Thank!

Totalizer Reading: 3,693,400

MIDFLUENT pH: 6.63 @1635
INFLUENT pH: 6.67

Please email results to Rick.Fetterly@Stantec.com and Norman.Swanson@Stantec.com

Relinquished by:	Company: SECOR Stantec	Date/Time: 9-15-08/1725	Received by:	Company: TAP	Date/Time: 9/15/08 17:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time: 1.0°C
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016786

TestAmerica Sample Receipt Checklist

Cooler ID(s):

Received by: *(section A)* Date: 9/15/10 Time: 11:25 Initials: JI

Unpacked by: *(section B)* Date: 9/15/10 Initials: JI

Logged-in by: Date: 9/15/10 Initials: JI

Work Order No. PRI0531

Client: Stantec

Project: Portland Terminal

Temperature out of range:
___Not enough Ice
___No Ice
___Ice Melted
___W/in 4 Hours
___Other:

***ESI Clients *(see Section C)*

Digi #1

Digi #2

Cooler Temperature (IR): 1.0 °C plastic glass NA *(oil/air samples, ESI client)*

Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

____Gel Ice

X Loose Ice

____None

Packing Material:

X Bubble Bags

____Styrofoam Cubbies

____Peanuts

____None (____Other:_____)

Received from:

____TA Courier

____Senvoy

____UPS

____Fed Ex

X Client

____TDP

____DHL

____SDS

____Mid-Valley

____GS/TA

____GS/Senvoy

____Other:

_____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Cyanide Checked?	Y	N	NA
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided Digi: # 1 #2

All preserved bottles checked Y N NA *(voas/soils/all unp.)*

All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments:_____

*PM Reviewed:*_____ *(Initial/Date)*

COP0016787

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

ORELAP#: OR100021

September 18, 2008

Rick Fetterly
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 09/15/08 17:25. The following list is a summary of the Work Orders contained in this report, generated on 09/18/08 14:51.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PRI0530	Portland Terminal	0922 - ConocoPhillips

TestAmerica Portland

Vanessa Frahs

Vanessa Frahs For Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/18/08 14:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFFLUENT	PRI0530-01	Water	09/15/08 16:30	09/15/08 17:25

TestAmerica Portland

Vanessa Frahs

Vanessa Frahs For Estella Rieben, Project Manager

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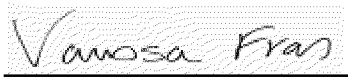
Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/18/08 14:51

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRI0530-01 (EFFLUENT)			**Water**			**Sampled: 09/15/08 16:30**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	8090629	09/17/08 15:19	09/18/08 10:03	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*72.6%*		*70 - 130%*	"			"

TestAmerica Portland



Vanessa Frahs For Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/18/08 14:51

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PRI0530-01 (EFFLUENT)			**Water**			**Sampled: 09/15/08 16:30**				
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	8090579	09/17/08 11:45	09/18/08 07:08	

TestAmerica Portland

Vanessa Frahs

Vanessa Frahs For Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/18/08 14:51

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8090629 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8090629-BLK1)									**Extracted: 09/17/08 15:19**					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	09/18/08 06:50	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 88.4%*			*Limits: 70-130%*	"							*09/18/08 06:50*	
LCS (8090629-BS1)									**Extracted: 09/17/08 15:19**					
Benzene	EPA 8021B	18.9	---	0.500	ug/l	1x	--	20.0	94.4%	(75-125)	--	--	09/18/08 05:01	
Toluene	"	20.0	---	0.500	"	"	--	"	100%	(80-120)	--	--	"	
Ethylbenzene	"	21.0	---	0.500	"	"	--	"	105%	(80-130)	--	--	"	
Xylenes (total)	"	63.9	---	1.00	"	"	--	60.0	106%	"	--	--	"	
o-Xylene	"	21.2	---	1.00	"	"	--	20.0	106%	"	--	--	"	
m,p-Xylene	"	42.6	---	1.00	"	"	--	40.0	107%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 96.1%*			*Limits: 70-130%*	"							*09/18/08 05:01*	
LCS Dup (8090629-BSD1)									**Extracted: 09/17/08 15:19**					
Benzene	EPA 8021B	19.8	---	0.500	ug/l	1x	--	20.0	98.8%	(75-125)	4.64%	(20)	09/18/08 05:28	
Toluene	"	20.7	---	0.500	"	"	--	"	104%	(80-120)	3.47%	"	"	
Ethylbenzene	"	21.8	---	0.500	"	"	--	"	109%	(80-130)	3.54%	"	"	
Xylenes (total)	"	65.3	---	1.00	"	"	--	60.0	109%	"	2.22%	"	"	
o-Xylene	"	21.7	---	1.00	"	"	--	20.0	108%	"	1.99%	"	"	
m,p-Xylene	"	43.7	---	1.00	"	"	--	40.0	109%	"	2.33%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 96.3%*			*Limits: 70-130%*	"							*09/18/08 05:28*	

TestAmerica Portland

Vanessa Frahs For Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/18/08 14:51

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 8090579 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8090579-BLK1)									**Extracted: 09/17/08 08:00**					
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	09/18/08 07:08	
LCS (8090579-BS1)									**Extracted: 09/17/08 08:00**					
Oil & Grease	EPA 1664	37.8	---		mg/l	1x	--	40.1	94.3%	(78-114)	--	--	09/18/08 07:08	
Matrix Spike (8090579-MS1)				**QC Source: PRI0394-04**					**Extracted: 09/17/08 08:00**					
Oil & Grease	EPA 1664	36.5	---		mg/l	1x	ND	40.1	91.0%	(78-114)	--	--	09/18/08 07:08	
Matrix Spike (8090579-MS3)				**QC Source: PRI0394-04**					**Extracted: 09/17/08 08:00**					
Oil & Grease	EPA 1664	34.6	---		mg/l	1x	ND	40.1	86.3%	(78-114)	--	--	09/18/08 07:08	

TestAmerica Portland

Vanessa Frahs For Estella Rieben, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	09/18/08 14:51

Notes and Definitions

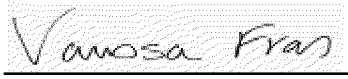
Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland



Vanessa Frahs For Estella Rieben, Project Manager

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PRIO530

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: ~~Bill Edmund~~ Rick Fetterly	Site Contact: Norman Swanson	Date: 9-15-08	COC No
Stantec Consulting Corporation, *formerly SECOR*	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier:	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to SECOR do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664A)	BTEX (EPA Method 8021B)	[redacted]	Sample Specific Notes:
EFFLUENT	9-15-08	1630	G	W	4		X	X		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: **Totalizer Reading:** 3,686,500 pH: 6.53 Field Meter

Please email results to Rick.Fetterly@Stantec.com and Norman.Swanson@Stantec.com

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Norman Swanson	~~SECOR~~ Stantec	9-15-8/1725	Jennifer Hall	TAP	9/15/08 17:25
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time: 1.0°C
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016795

TestAmerica Sample Receipt Checklist

Cooler ID(s):

Received by: *(section A)* Date: 9/15/08 Time: 17:25 Initials: JI

Unpacked by: *(section B)* Date: 9/15/08 Initials: JI

Logged-in by: Date: 9/15/08 Initials: JI

Work Order No. PRI0530

Client: Stantec

Project: Portland Terminal

Temperature out of range:

___Not enough Ice
___*No Ice*
___*Ice Melted*
___*W/in 4 Hours*
___*Other:*

***ESI Clients *(see Section C)*

Digi #1

Digi #2

Cooler Temperature (IR): 1.0 °C plastic (glass) NA *(oil/air samples, ESI client)*

Temperature Blank: _____ °C

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

____Gel Ice

X Loose Ice

____None

Packing Material:

X Bubble Bags

____Styrofoam Cubbies

____Peanuts

____None (____Other:_____)

Received from:

____TA Courier
____Senvoy
____UPS
____Fed Ex
X Client
____TDP
____DHL
____SDS
____Mid-Valley
____GS/TA
____GS/Senvoy
____Other:

_____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	(Y)	N	
# Containers Match COC?	(Y)	N	none given
IDs Match COC?	(Y)	N	
For Analyses Requested:			
Cyanide Checked?	Y	N	(NA)
Correct Type & Preservation?	(Y)	N	
Adequate Volume?	(Y)	N	
Within Hold Time?	(Y)	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	(Y)	N	NA
TB on COC? (not provided)	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	(NA)
Dissolved Metals Filtered?	Y	N	(NA)

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided Digi: # 1 #2

All preserved bottles checked Y N NA *(voas/soils/all unp.)*

All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Reviewed: _____ *(Initial/Date)*

COP0016796

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

Stantec

February 16, 2009

Mr. Michael Romero
Oregon Department of Environmental Quality – NW Region Cleanup Section
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201

Reference: **Contaminated Media Management Plan**
ConocoPhillips Portland Terminal
5528 NW Doane Avenue, Portland, Oregon 97210
Stantec Project Number: 15CP.00922.79

Dear Mr. Romero:

Stantec Consulting Corporation (Stantec) has prepared this plan on behalf of ConocoPhillips Company (ConocoPhillips) to establish procedures for managing contaminated soil, groundwater, and wastewater that are generated at the ConocoPhillips Portland Terminal (the Terminal) during remedial activities or invasive terminal construction or maintenance activities. Invasive activities are defined herein as those that penetrate paved or unpaved surfaces at a facility and potentially encounter subsurface contaminated soil and/or water/groundwater. Examples of remedial or invasive terminal construction or maintenance activities include test pits, trenches, excavations, post holes, hand auger borings, direct push soil borings, hollow-stem auger soil borings, air rotary borings, other soil borings (including direct push, hollow-stem auger, bucket auger, sonic, air rotary, air rotary casing hammer, reverse air rotary, mud rotary, and rock coring), tank cleaning, catch basin and oil/water separator cleaning, storm drain flushing and cleaning, and subsurface storm sewer pipe lining projects. The Terminal is located at 5528 NW Doane Avenue (the Site) in Portland, Multnomah County, Oregon (Figure 1—Site Location Map). The approximate 30-acre Site is situated on the west bank of the Willamette River at River Mile (RM) 7.5, within the boundaries of the Portland Harbor Superfund Site study area. The main terminal area has an estimated 870,000 square feet of surface area; and an additional approximately 117,000 square feet of property along the Willamette River, which is leased from the Port of Portland for a marine dock fuel loading/unloading facility.

BACKGROUND

The Portland Harbor Superfund Site is an approximate 12-mile stretch of the Willamette River−extending from downtown Portland to the confluence of the Columbia River−that has been heavily developed by various industries over the past century. The ConocoPhillips Terminal is situated within this stretch of the Willamette River and is part of the Willbridge Bulk Fuels Facility Area.

Chevron Products Company (Chevron), Unocal Oil Company (Unocal) and Shell Oil Products Company (Shell) were required by the Oregon Department of Environmental Quality (Oregon DEQ) to perform a Remedial Investigation (RI) and Feasibility Study (FS) for the Willbridge Bulk Fuels Area as part of Consent Order WMCSR-NWR-94-06. The Consent Order (CO) was signed by Oregon DEQ, Chevron, Shell, and Unocal on April 6, 1994. When the CO was signed, the Willbridge Facility was composed of the Chevron Willbridge Light Products Terminal, the Unocal Portland Terminal, and the Shell Willbridge Plant. Following signing of the CO, control of the Shell Willbridge Plant was transferred to GATX Terminals Corporation

(GATX) by sale agreement on November 23, 1994, with Shell retaining a portion of the environmental responsibility for the terminal. On March 1, 2003, the GATX terminal was sold to Kinder Morgan Liquid Terminals LLC (KMLT). Control of the Unocal Portland Terminal was transferred to Tosco Refining Company (Tosco) by sale agreement on March 31, 1997, with Tosco assuming remedial responsibility for the Terminal and Unocal retaining environmental liability. Subsequently, the Tosco facility was purchased by Phillips Petroleum Company on September 18, 2001. Phillips Petroleum Company and Conoco, Inc. subsequently merged on September 1, 2002 forming ConocoPhillips, which is now responsible for the remediation of the former Unocal terminal. ConocoPhillips, Chevron, and KMLT are working together−collectively referred to as the Willbridge Terminals Group (WTG)−to complete the RI/FS in their portion of the Willbridge Bulk Fuels Facility Area.

During December 2000, the Portland Harbor was added to the National Priorities List (NPL). The final NPL listing specifies that U.S. Environmental Protection Agency Region IX (USEPA) is the lead agency for the in-water portion of the remedial investigation and feasibility studies, while Oregon DEQ is the lead agency for the upland portions (including the WTG area).

Consistent with the Joint Source Control Strategy (JSCS) developed jointly by Oregon DEQ and USEPA in December 2005, identification and mitigation of upland sources of contamination to the Willamette River and associated aquatic sediments is necessary to facilitate future cleanup actions in the Portland Harbor. As the lead agency for upland sources, Oregon DEQ recently requested each WTG company to prepare and submit a Contaminated Media Management Plan for handling all soil and water/groundwater wastes generated during RI/FS field activities and other intrusive terminal construction or maintenance projects. This Plan addresses management of contaminated soil and/or water/groundwater and associated wastes generated by RI/FS field activities and by invasive terminal construction or maintenance projects.

SITE SETTING

As noted above, the Terminal occupies approximately 30 acres on the west bank of the Willamette River at RM 7.5, within the boundaries of the Portland Harbor Superfund Site study area. Overall, the topography gently slopes toward the Willamette River. The main terminal area has an estimated 870,000 square feet of surface area; an estimated 25-30 percent is paved or otherwise impervious to water. In addition, the Terminal leases approximately 117,000 square feet of property along the Willamette River from the Port of Portland for the marine dock; an estimated 20 percent of this area is paved or otherwise impervious.

The Terminal's petroleum product storage consists of 102 active and 15 out-of-service aboveground storage tanks (ASTs) situated in six tank farms; three refined product/additive tank farms (i.e., Tank Farm 1, Tank Farm 2, and Tank Farm 3) and three lube oil tank farms (Lower Lube Cell, Upper Lube Cell, and Tank Farm F). These features are shown on Figure 3−Drainage Areas Site Plan. The ASTs are welded and riveted steel construction and contain different grades of gasoline products, diesel and biodiesel fuels, heating oil, black oil, lube oil and lube blend/base stocks, reprocessed fuel oil (RFO), additives, ethanol, slop oil, and transmix. The maximum total capacity of the tanks is approximately 768,416 barrels (32,273,475 gallons) with the capacity of the largest tank being approximately 82,517 barrels (3,450,580 gallons). A complete listing of tanks and their respective contents is provided in Table 1−Bulk Storage Tanks. The Terminal also has two 5,000-gallon underground storage tanks (USTs)−which store slop oils and flush oils−that are located beneath the materials testing laboratory.

POTENTIAL WASTES

The Terminal manages a variety of petroleum products, including gasoline, distillates, motor oils, lubricant oils and greases and additives. Petroleum-handling operations at the Terminal began in 1908; and asphalt was produced at the terminal from 1968 to 1975. Oil recovered from the Terminal's process stream oil/water separator, tank cleaning operations, and other operational- and maintenance-related activities is either stored temporarily in on-site storage tanks or shipped off-site for recycling or disposal. Recovered oils, which are

also known as slop oils, primarily consist of oils skimmed from the process separator (Sep. #003; see Figure 2—Facility Site Plan) or recovered from tank cleaning and other maintenance activities. Slop oils are handled at the Terminal or sold to outside vendors for fuel blending. Tank bottom sludges are drummed or removed by vacuum truck and transported to an approved recycling or disposal facility.

PURPOSES OF PLAN

The purposes of this Contaminated Media Management Plan (the Plan) are to: 1) assure that contaminated soil and/or water/groundwater generated at the Terminal during RI/FS activities or by invasive Terminal construction or maintenance activities are managed appropriately; 2) ensure that environmental impacts of infrastructure repair or improvement projects at the Terminal are considered as part of the planning process; and 3) ensure that opportunities to obtain more information on Site contamination—for both RI/FS and groundwater source control evaluation purposes—are considered and discussed with Oregon DEQ prior to proceeding with proposed work. Appropriate processing of Terminal process water generated after rainfall events is addressed separately in the Terminal NPDES permit, and are not included here. Soil and water/groundwater wastes may be generated as a result of activities that penetrate the paved or unpaved surface and encounter contaminated soil and/or water/groundwater at the Terminal. Such activities might include exploratory drilling and/or test pit excavation; repairs, maintenance, and installation of underground utilities; landscaping or irrigation system installations; installation of remedial systems; remedial excavation of surface spills; or Terminal maintenance activities. It is intended to be used for construction projects, such as excavation for aboveground pipeline support structure footings and excavation and shoring around manholes during preparation for storm sewer lining.

This Plan was prepared by Stantec on behalf of ConocoPhillips to fulfill a site-specific request by Oregon DEQ made during the June 26, 2008 WTG meeting in Portland, Oregon. Terminal environmental management and operational management personnel should ensure that the Stantec Project Manager (Rick Fetterly, 503-612-2505 [office] or 503-550-5917 [cell]) and ConocoPhillips Environmental Site Manager (Ed Ralston, 916-558-7633 [office] or 916-365-3756 [cell]) are advised of planned infrastructure repair or improvement projects that entail invasive field activities as early in the planning process as possible. In turn, Stantec will inform the Oregon DEQ Project Manager (Michael Romero, 503-229-5563) of the planned work.

SOIL MANAGEMENT PLAN

The following procedures describe typical and preferred methods for dealing with soil at the Portland terminal. The actual procedures employed may vary slightly from the following procedures based on several factors including but not limited to size of excavation, amount of soil removed, location of removed soil, and timing of soil removal (routine, planned work vs. non-routine response work). ConocoPhillips and Stantec will make every effort to comply with the following procedures to the extent possible and will notify Oregon DEQ as soon as possible of any contingencies resulting in a deviation from these procedures.

All soil that is visibly stained or exudes noticeable petroleum odors will assumed to be contaminated. Therefore, special handling procedures will be required for this presumed petroleum-contaminated soil (PCS). Procedures for handling PCS are described in the following subsections. All soil that is removed from the site will be tested for total petroleum hydrocarbons (TPH) and metals before transport and disposal at a ConocoPhillips and Oregon DEQ approved disposal facility. Terminal activities that involve removing a small amount of gravel or aggregate material from just below the surface, the gravel or aggregate can be re-used as fill on-site without testing as long as it is not in contact with the native soils beneath the aggregate.

PCS Containment and Handling

Whenever possible, PCS removed from beneath the paved or unpaved surfaces at the Terminal generally will not be returned to its prior location. Therefore, the PCS requires special handling, including off-site disposal. Soil excavated at the Terminal that will not be returned to the cavity should be direct-loaded into trucks,

whenever possible, for off-site disposal. Trucks should be loaded in a manner that prevents the spilling, tracking, or dispersal of soil. All loads must be covered prior to exiting the Terminal. If temporary stockpiling is required, soil stockpiles must be placed on 8-mil or thicker plastic (e.g., Visqueen®, or equivalent) sheeting and these stockpiles must be covered by plastic sheeting prior to leaving the site at the end of each day of construction. Temporary berms and water collection sumps will be installed as necessary to prevent runoff of impacted water. Once loading the stockpiled soil for off-site transport or placement of stockpiled soil beneath the surface cap has been completed, the plastic sheeting must be collected and placed in a truck for transport to an approved waste treatment storage and disposal facility (TSDF). Any soil spilled during removal activities must be cleaned up to the maximum extent practicable and placed in a truck for off-site disposal.

To assure the expeditious removal of PCS that may be encountered beneath paved or unpaved surfaces at the Terminal, the Terminal environmental or maintenance management should inform Stantec's Project Manager of the planned excavation as soon as practicable. Stantec will make arrangements to collect subsurface soil samples (via drill rig or hand auger, depending on planned depth of excavation) from the proposed excavation area. The soil samples will be analyzed by a ConocoPhillips preferred analytical laboratory for required waste profile analytes, and the results provided to the appropriate local waste TSDF. Both approved hazardous waste and non-hazardous waste TSDFs are located in the greater Portland metropolitan area.

Drill cuttings generated during drilling activities will be placed in 55-gallon steel open head drums with lockable lids. The drummed cuttings will be located at a central location pending determination of appropriate disposition. Waste profiling procedures will be similar to those used above.

Disposal Facility Procurement

In the event that contaminated soil will be removed from the site, a permit from an acceptable disposal facility must be procured. Historically, excess PCS excavated soil has been transported for disposal to the Waste Management Hillsboro Landfill (if determined to be non-hazardous waste) or the Waste Management Arlington, Oregon lined landfill (if determined to be hazardous waste).

Record Keeping

Stantec–or the Terminal's soil removal contractor (if different)–will be required to provide documentation to ConocoPhillips describing all activities related to the excavation, on-site management, transportation, and disposal of PCS generated during activities that require soil management. At a minimum, Stantec–or the Contractor (if different)--must provide the following information:

- A description, including a drawing, describing the location of the activity and approximate dimensions of any excavation.
- Estimated volume of soil excavated and--if applicable--the volume of any soil reused as backfill for the excavation.
- Amount of soil transported off-site for disposal, including weight tickets from the disposal facility to which the soil was transported and a copy of the landfill waste profile and disposal permit.
- A description of the manner in which the disturbed surface at the Terminal was restored in the area affected by the activity.
- Documentation of the origin of any clean fill material brought to the site.
- Photographic documentation of the activities and the finished site condition demonstrating that the ground surface has been restored to its pre-existing condition.

For Stantec soil removal projects, a copy of these documents will be maintained in the Portland Terminal project file at Stantec's Tualatin, Oregon office. ConocoPhillips will also maintain copies of these documents in the waste tracking binder maintained at the Portland Terminal operations office. Other contractors and consultants should maintain these documents in their respective offices. In addition, copies of the documents will be maintained in the Portland Terminal Offices.

GROUNDWATER/WASTEWATER MANAGEMENT PLAN

Groundwater pumped from wells screened in the shallow aquifer at the Terminal or from shallow trenches or excavations will be presumed to be petroleum hydrocarbon-impacted. This also applies to wastewater generated during well development activities, and purge water generated during scheduled groundwater sampling events. Rainwater collecting in trenches can be minimized by covering trenches during rain events and limiting excavation activities whenever practical to periods of light or no rainfall. The extracted water will be pumped into 55-gallon drums or a vacuum truck, which will be relocated to the Chevron groundwater treatment system (GWTS). Procedures for handling petroleum-impacted groundwater and wastewater are described below.

Groundwater/Well Water Drum Handling

Drummed water will be transported to the GWTS or process stream as is, or the contents of the drums will be transferred to a vacuum truck and then transported to the GWTS or offsite for disposal at a licensed TSDF facility. The wastewater will be processed through the GWTS for ultimate disposition to the City of Portland sanitary sewer system.

Process Water Handling

Storm water runoff from Terminal process areas, which constitute an estimated 25 percent of total runoff, will be handled by the Terminal's process water system, where it is treated by an oil/water separator and a DAF-type Hydrocleaner™ before being discharged to the City of Portland sanitary sewer system. As noted in the introductory remarks for this Plan, process water is that storm water which is runoff collected within the Terminal from bermed areas around the dock risers, railcar transfer station containment system, lube cells, tank truck loading and unloading racks/stations, and equipment washing area; as well as minor quantities of runoff which have collected on pump, valve, and flange containment pads within the Terminal's tank farms. This treated water discharge is handled under a separate Terminal permit, and is not included as part of this Plan.

Wastewater that is generated as a result of tank cleaning activities may also be handled by the Terminal's process water system, or transported to a ConocoPhillips approved oil recycling facility.

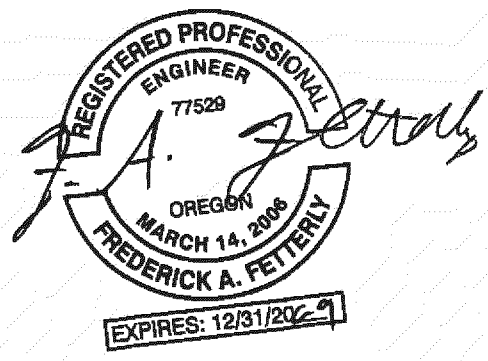
Record Keeping

For development water and purge water, Stantec field personnel will maintain a log to document the total volumes produced from each newly installed well (for development water) or existing well to be sampled (for purge water). Development water data (including volumes removed and relative clarity of the well water) will be entered onto Stantec's well development log form, or equivalent. Purge water data (including quantities removed, well volumes removed, and common water quality indicators−pH, specific conductivity, temperature, dissolved oxygen content, oxidation/reduction potential, etc−will be entered onto individual Water Sample Field Data Sheets, or equivalent. Copies of logs and data sheets will be included as appendices in Stantec's reports to Oregon DEQ. Process water data will be maintained by Terminal operations personnel, and will be reported as required under the Terminal's applicable permits. Terminal records should include quantities and applicable receipts of any process water transported to a ConocoPhillips approved oil recycling facility. Water removed from excavations and trenches during Terminal construction projects will be reported to Oregon DEQ by Stantec.

Reference: **Contaminated Media Management Plan**
ConocoPhillips Portland Terminal

Stantec appreciates the opportunity to assist ConocoPhillips and Oregon DEQ with this project. Please contact the undersigned at (503) 612-2525 if you have any questions or comments.

Sincerely,
Stantec Consulting Corporation



Rick Fetterly, P.E.
Senior Project Manager
ConocoPhillips Portland Terminal Project Manager

CRP/RF:dc/ald

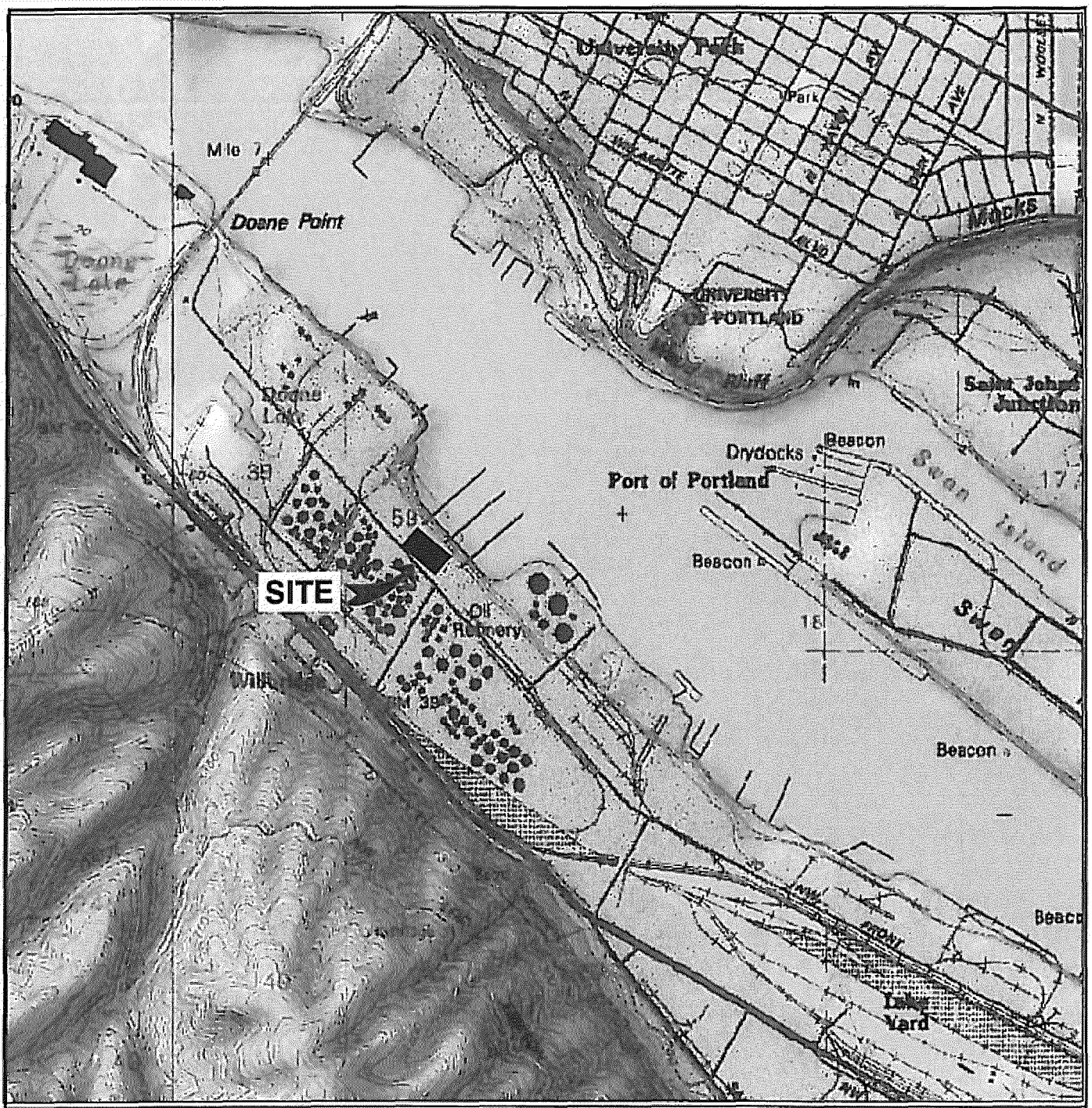
cc: Mr. Ed C. Ralston, ConocoPhillips Risk Management & Remediation, 76 Broadway, Sacramento, CA 95818
Tom Lyons, ConocoPhillips Pipeline & Terminal, Portland Terminal Facility Manager, Portland, OR 97210
Bill Collins, ConocoPhillips Pipeline & Terminal, Regional Environmental Coordinator, Portland, OR 97210
Ms. Kristine Koch, Remedial Project Manager, USEPA Office of Environmental Cleanup, Seattle, WA 98101

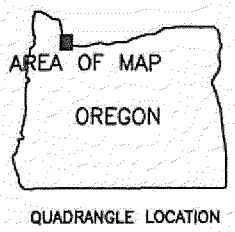
Attachments:

	Figure 1	Site Location Map
	Figure 2	Facility Site Plan
	Figure 3	Drainage Areas Site Plan
	Table 1	Bulk Storage Tanks

Stantec

FIGURES





QUADRANGLE LOCATION

N

0 1/4 1/2

SCALE (MILES)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; PORTLAND, OREGON; 1999

Stantec
7730 SW MOHAWK STREET
TUALATIN, OREGON
PHONE: (503) 691-2030/692-7074 (FAX)

FOR: ConocoPhillips
FACILITY 0922 - PORTLAND (RM&R 0922)
5528 NW DOANE AVENUE
PORTLAND, OREGON

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
15CP.00922.40.8521	DJH	FAF	MAT	9/2/08

Q:/15CP/CLIENTS/CONOCO PHILLIPS/ 15CP

15CP-00922-40-8521-1SLM.DWG

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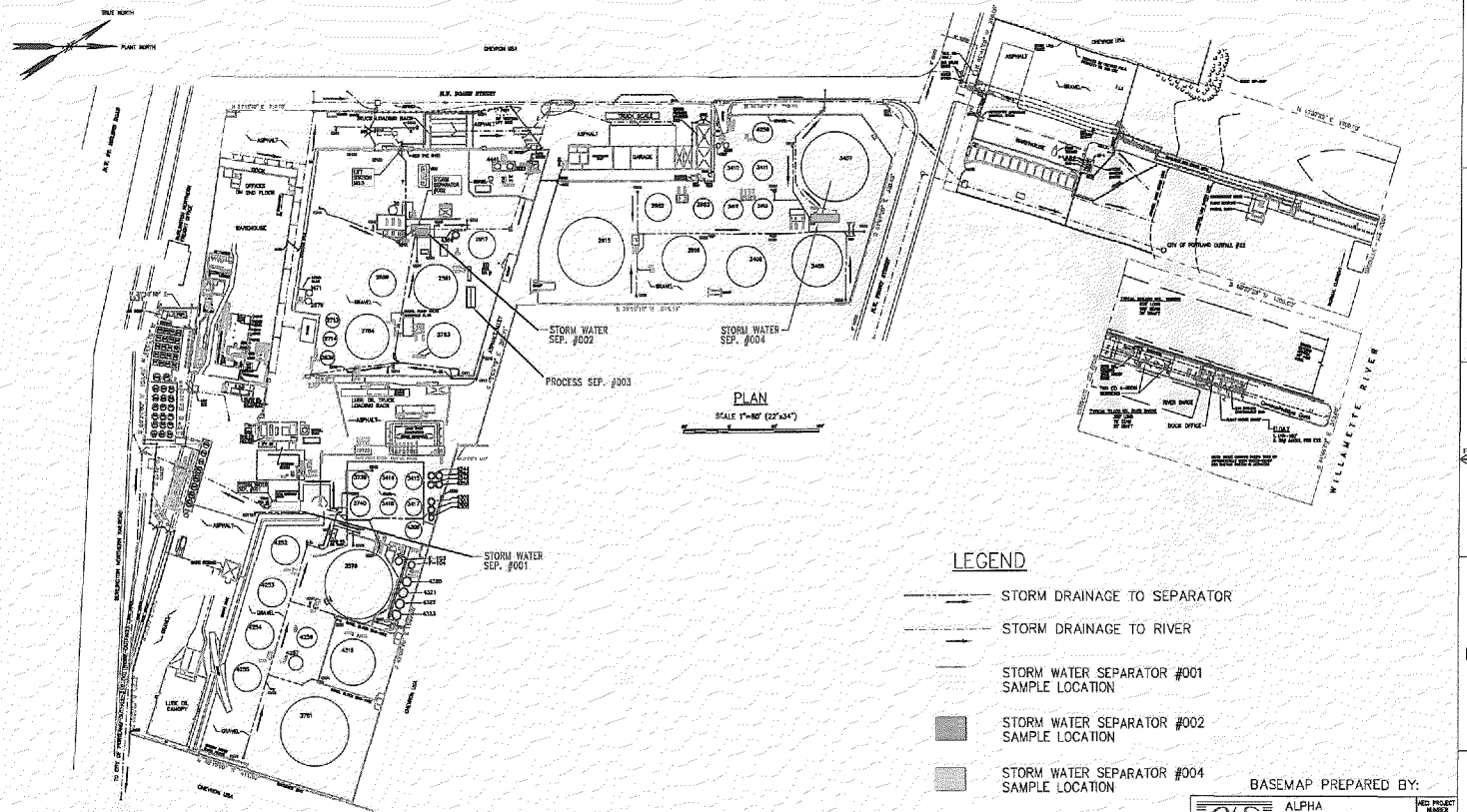


DRAWING NO.	REFERENCE DRAWING
0608-C-7030	DOCK FACILITIES GENERAL ARRANGEMENT
0608-C-7031	TANK FARM NO.1 GENERAL ARRANGEMENT
0608-C-7032	TANK FARM NO.2 GENERAL ARRANGEMENT
0608-C-7033	TANK FARM NO.3 GENERAL ARRANGEMENT

NO.	REVISION DESCRIPTION	REV BY	CHK BY	APPR. BY	DATE
A	UPDATED FOR SWPCP	DAB	RM	WHB	03/02/98
B	ADD LUBE OIL CANOPY AND WASTE STORAGE	DAB	MK	WHB	11/22/95
C	UPDATED TRUEBLOOD	CEW	WHB	WHB	12/06/95

NO.	REVISION DESCRIPTION	REV BY	CHK BY	APPR. BY	DATE

—CONFIDENTIAL—
NOT TO BE DISCLOSED, USED OR DUPLICATED EXCEPT AS AUTHORIZED IN WRITING BY CONOCOPHILLIPS PIPELINE COMPANY

ConocoPhillips Pipe Line Company
5228 SW DOANE AVE.
PORTLAND OR 97210

DR. E.W.PORTLY	CONTRACTOR No.
DSGN. D.A.RYNUM	PROJECT NO. 25-31
CK. WHB AP.	DWG. SCALE AS SHOWN
DATE 03/02/98	PLOT SCALE

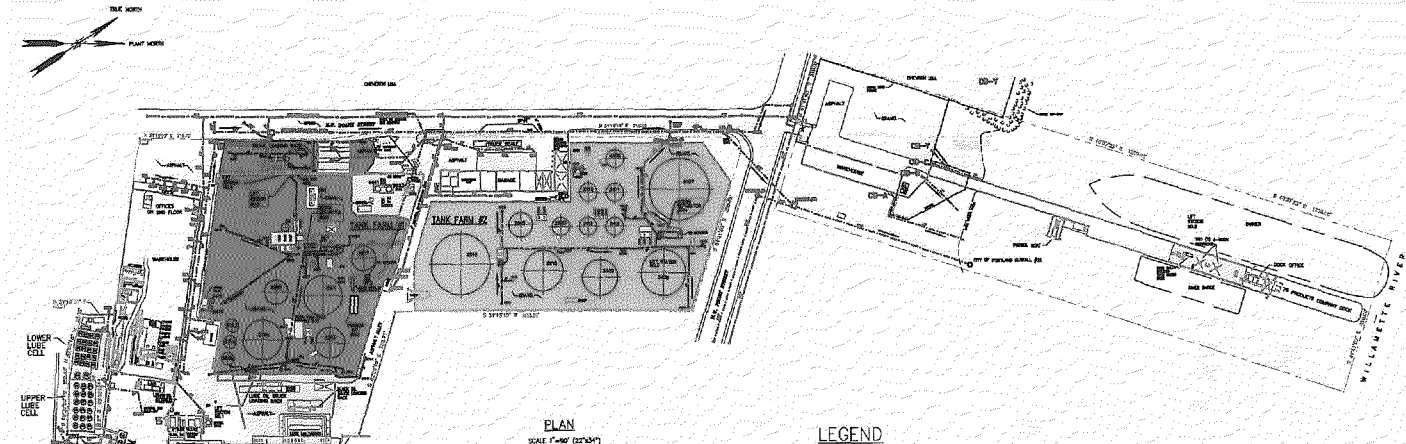
DELTA

DRAWN: PORTLAND TERMINAL

TITLE: FACILITY SITE PLAN
FIGURE 2
FACILITY SAMPLE LOCATIONS

DWG. No. 0608-C-7011-C | SHEET 1 OF 1 | REV. NO. C

COP0016805



PLAN

SCALE 1"=80' (22"x34")

LEGEND

- STORM DRAINAGE TO SEPARATOR AND FLOW DIRECTION
- STORM DRAINAGE TO RIVER AND FLOW DIRECTION
- SANITARY SEWER
- UNTREATED DRAINAGE
- STORM WATER DIRECTED TO STORM WATER SEPARATOR #001
- STORM WATER DIRECTED TO STORM WATER SEPARATOR #002
- PROCESS WATER DIRECTED TO PROCESS SEPARATOR #003
- STORM WATER DIRECTED TO STORM WATER SEPARATOR #004

BASEMAP PREPARED BY:

ALPHA ENGINEERS and CONSTRUCTORS, INC.

AEG PROJECT NUMBER: 25-31

DRAWING NO.	REFERENCE DRAWING
0608-C-7009	DOCK FACILITIES GENERAL ARRANGEMENT
0608-C-7011	TANK FARM NO.1 GENERAL ARRANGEMENT
0608-C-7012	TANK FARM NO.2 GENERAL ARRANGEMENT
0608-C-7013	TANK FARM NO.3 GENERAL ARRANGEMENT

NO.	REVISION DESCRIPTION	REV BY	CHK BY	APPR. BY	DATE
A	FOR REVIEW AND COMMENT	DAB	MK	WHB	03/26/97
B	GENERAL UPDATE	DAB	MK	WHB	03/26/97
C	REVISE STORM DRAINAGE LEGEND	DAB	MK	WHB	07/24/97
D	REMOVED FIGURE NUMBER AND REVISED LOGO	DAB	WHB	WHB	10/14/97
E	ADD LUBE OIL CANOPY AND WASTE STORAGE	CWB	WHB	WHB	11/22/97
F	UPDATED DRAWING	CEN	DAB	WHB	12/16/98

REVISION DESCRIPTION	REV BY	CHK BY	APPR. BY	DATE

—CONFIDENTIAL—
NOT TO BE DISCLOSED, USED OR DUPLICATED EXCEPT AS AUTHORIZED IN WRITING BY CONOCOPHILLIPS PIPELINE COMPANY

ConocoPhillips Pipe Line Company
5528 N.W. DOANE AVE
PORTLAND OREGON

DR. DABYNUM	CONTRACTOR No.
DSGN. DABYNUM	PROJECT NO. 25-31
CK. MK AP. KJP	DWG. SCALE AS SHOWN
DATE 03/16/97	PLOT SCALE

DELTA

PORTLAND TERMINAL

TITLE:
SITE PLAN
FIGURE 3
DRAINAGE AREAS

DWG. No. 0608-C-7010 SHEET 1 OF 1 REV. No. F

COP0016806

Stantec

TABLES

TABLE 1
BULK STORAGE TANKS

Tank Number	Product Stored	Diameter	Height	Type of Construction	Safe Fill Capacity (gal)	Maximum Capacity (gal)	Year of Construction
Tank Farm 1							
31	Residual Fuel Oil	95'-5"	28'-9"	Riveted Steel	1.445,808	1,557,320	1907
36	Slop Oil	16'-0"	14'-7"	Riveted Steel	18,018	21,960	1907
141	Out of Service	95'-5"	34'-0"	Riveted Steel	1,740,816	1,825,780	1908
1471	Guardol 10W	10'-9"	28'-8½"	Riveted Steel	17,289	19,450	1921
2561	Marine Fuel Oil	78'-0"	46'-7"	Riveted Steel	1,556,646	1,668,775	1929
2579	Guardol 10W	10'-9"	29'-8"	Welded Steel	18,047	20,150	1929
2669	Marine Diesel	48'-0"	35'-3"	Riveted Steel	409,668	475,800	1931
2713	Unax AW 46	24'-0"	35'-0"	Welded Steel	110,565	119,870	1937
2714	Guardol 15/40	24'-0"	35'-0"	Welded Steel	110,565	119,870	1937
2783	Decant Oil	60'-0"	46'-7"	Riveted Steel	925,475	984,480	1937
2784	Diesel #2	78'-0"	40'-10"	Riveted Steel	1,338,498	1,456,940	1937
2917	600 Neutral	48'-0"	48'-0"	Welded Steel	628,274	649,965	1938
3623	HiTec 4963A	10'-9"	30'-0"	Welded Steel	18,186	19,930	1950
3639	Guardol 330	25'-0"	36'-0"	Welded Steel	121,341	131,850	1951
4369	Drying Tank for 600 Neutral	10'-9"	30'-0"	Welded Steel	18,144	20,035	1979
4441	Puradd AP-96	10'-9"	30'-0"	Welded Steel	18,690	20,370	1993
Tank Farm 2							
2915[1]	Unleaded Gasoline	120'-0"	42'-0"	Welded Steel	3,276,000	3,450,580	1938
2916	Diesel #2	78'-0"	48'-0"	Welded Steel	1,606,500	1,717,760	1938
2982	Kerosene	48'-0"	36'-0"	Welded Steel	445,116	488,995	1941
2983	150 Neutral	36'-0"	42'-0"	Welded Steel	302,400	320,640	1941
3407	Unleaded Gasoline	120'-0"	40'-0"	Welded Steel	3,066,000	3,272,525	1949
3408[1]	Unleaded Gasoline	90'-0"	40'-0"	Welded Steel	1,752,870	1,850,000	1949
3409	Unleaded Gasoline	70'-0"	40'-0"	Welded Steel	1,002,960	1,119,335	1949
3410	Ethanol	35'-0"	42'-0"	Welded Steel	250,656	291,475	1949
3411	Unleaded Gasoline	35'-0"	42'-0"	Welded Steel	266,658	291,255	1949
3412	Kerosene	35'-0"	42'-0"	Welded Steel	219,324	291,350	1949

1 – Tank is under the jurisdiction of the Department of Transportation

TABLE 1
BULK STORAGE TANKS, CONTINUED

Tank Number	Product Stored	Diameter	Height	Type of Construction	Safe Fill Capacity (gal)	Maximum Capacity (gal)	Year of Construction
Tank Farm 2 (continued)							
3413	Unleaded Gasoline	35'-0"	42'-0"	Welded Steel	266,658	291,225	1949
4223	Slop Oil	10'-9"	30'-0"	Welded Steel	18,690	20,450	1968
4259	Transmix	35'-0"	32'-0"	Welded Steel	175,896	228,650	1968
4327	Gasoline Slops	8'-6"	24'-0"	Welded Steel	10,080	11,970	1974
Tank Farm 3							
3414	150 Neutral	30'-0"	42'-0"	Welded Steel	200,196	222,360	1949
3415	1391 Neutral	30'-0"	42'-0"	Welded Steel	200,196	222,360	1949
3416	150 Neutral	30'-0"	42'-0"	Welded Steel	200,196	222,450	1949
3417	100 Neutral	30'-0"	42'-0"	Welded Steel	200,196	222,450	1949
3579	Industrial Fuel Oil	120'-0"	40'-0"	Welded Steel	3,237,108	3,367,390	1950
3739	150 Bright Stock	30'-0"	42'-0"	Welded Steel	200,196	222,550	1954
3740	600 Neutral	35'-0"	42'-0"	Welded Steel	278,124	302,985	1954
3761	Diesel #2	120'-0"	40'-0"	Welded Steel	3,150,000	3,297,705	1954
4244	Exxon 1391	10'-9"	30'-0"	Welded Steel	17,194	20,350	1968
4245	Drying Tank for 150 Bright Stock	10'-9"	30'-0"	Welded Steel	18,144	20,110	1968
4252	Residual Fuel Oil	50'-0"	32'-0"	Welded Steel	404,250	409,670	1968
4253	Residual Fuel Oil	50'-0"	32'-0"	Welded Steel	404,250	410,005	1968
4254	PS 300	50'-0"	32'-0"	Welded Steel	404,250	410,215	1968
4255	Out of Service	50'-0"	32'-0"	Welded Steel	404,250	410,215	1968
4256	Out of Service	35'-0"	32'-0"	Welded Steel	195,408	229,570	1968
4257	Out of Service	25'-0"	16'-0"	Welded Steel	38,367	57,870	1968
4258	Talusia HR 70	10'-9"	30'-0"	Welded Steel	18,144	20,185	1968
4266	Flush	10'-9"	30'-0"	Welded Steel	18,333	20,020	1968
4302	Exxon 150 Neutral	10'-9"	30'-0"	Welded Steel	18,279	20,250	1971
4303	Exxon 100 Neutral	10'-9"	30'-0"	Welded Steel	18,279	20,250	1971

1 – Tank is under the jurisdiction of the Department of Transportation

TABLE 1
BULK STORAGE TANKS, CONTINUED

Tank Number	Product Stored	Diameter	Height	Type of Construction	Safe Fill Capacity (gal)	Maximum Capacity (gal)	Year of Construction
Tank Farm 3 (continued)							
4305	Out of Service	8'-6"	24'-0"	Welded Steel	8,900	10,250	1971
4306	Exxon 150 Neutral	30'-0"	42'-2½"	Welded Steel	200,196	223,415	1971
4318	Marine Fuel Oil	80'-0"	43'-3"	Welded Steel	1,378,300	1,504,020	1973
4320	Super 10/30	15'-0"	32'-2½"	Welded Steel	35,595	42,120	1973
4321	Uniguide 100	15'-0"	32'-2½"	Welded Steel	35,599	42,170	1973
4322	Hydraulic Tractor Fluid	15'-0"	32'-2½"	Welded Steel	35,593	42,130	1973
4323	Super ATF	15'-0"	32'-2½"	Welded Steel	35,596	42,140	1973
F103	Out of Service	12'-6"	32'-0"	Welded Steel	26,306	29,310	1973
F104	Evergreen 100 Neutral	10'-9"	32'-0"	Welded Steel	17,914	21,685	1973
F-Tank Farm							
4335	FB AW 46 Utility	10'-9"	30'-0"	Welded Steel	17,888	19,985	1973
4336	Unax AW 68	10'-9"	30'-0"	Welded Steel	17,888	19,980	1973
4337	Unax PC AW 46 Utility	10'-9"	30'-0"	Welded Steel	17,888	19,985	1973
4436	Unax AW 68	10'-9"	10'-0"	Welded Steel	17,175	19,920	1990
4437	Unax WR 32	10'-9"	10'-0"	Welded Steel	17,175	19,930	1990
F10	Out of Service	10'-9"	10'-0"	Welded Steel	4,680	6.380	1954
F11	Out of Service	10'-9"	10'-0"	Welded Steel	4,680	6,380	1954
F12	Out of Service	10'-9"	10'-0"	Welded Steel	4,680	6,380	1954
Upper Lube Cell							
3741	Ramar CLF 17	10'-9"	30'-0"	Welded Steel	18,020	20,065	1954
3742	MP 80/90	10'-9"	30'-0"	Welded Steel	18,020	20,045	1954
3743	Out of Service	10'-9"	30'-0"	Welded Steel	18,020	21,030	1954
3744	Golden Bear 100	10'-9"	30'-0"	Welded Steel	18,820	20,385	1954
3745	Lubrizol 7365U	10'-9"	30'-0"	Welded Steel	18,820	20,835	1954
3746	Lubrizol 4998T	10'-9"	30'-0"	Welded Steel	18,820	20,400	1954
3747	HiTec 436	10'-9"	30'-0"	Welded Steel	18,820	20,400	1954

1 – Tank is under the jurisdiction of the Department of Transportation

TABLE 1
BULK STORAGE TANKS, CONTINUED

Tank Number	Product Stored	Diameter	Height	Type of Construction	Safe Fill Capacity (gal)	Maximum Capacity (gal)	Year of Construction
Upper Lube Cell (continued)							
3757	Lubrizol 9802L	10'-9"	30'-0"	Welded Steel	18,020	20,400	1954
3760	Golden Bear 460	10'-9"	30'-0"	Welded Steel	18,200	20,385	1954
4191	Lubrizol 4994C	10'-9"	30'-0"	Welded Steel	18,020	20,400	1964
4192	HiTec 5755	10'-9"	30'-0"	Welded Steel	17,994	20,380	1964
4241	Out of Service	10'-9"	30'-0"	Welded Steel	17,941	20,075	1968
4242	Unax AW 32	10'-9"	30'-0"	Welded Steel	17,941	20,065	1968
4243	PM 220	10'-9"	30'-0"	Welded Steel	17,941	20,065	1968
4281	MP ATF	10'-9"	30'-0"	Welded Steel	17,888	20,080	1969
4332	Super ATF	10'-9"	30'-0"	Welded Steel	17,888	19,980	1973
4333	Hydraulic AW 46	10'-9"	30'-0"	Welded Steel	17,888	19,985	1973
4334	Out of Service	10'-9"	30'-0"	Welded Steel	17,888	19,985	1973
Lower Lube Cell							
4300	Ramar CLF 13	12'-6"	32'-0"	Welded Steel	26,049	28,690	1969
4331	HiTec 6888	12'-6"	32'-0"	Welded Steel	25,992	28,680	1973
4388	600 Neutral Utility	9'-4"	23'-9"	Welded Steel	13,277	15,415	1984
4389	Out of Service	9'-4"	23'-9"	Welded Steel	13,409	15,494	1984
4390	Bar & Chain 150	9'-4"	23'-9"	Welded Steel	13,409	15,490	1985
4391	Uniguide 46 Utility	9'-4"	23'-9"	Welded Steel	13,409	15,485	1985
4392	Firebird 15/40 Utility	9'-4"	23'-9"	Welded Steel	13,409	15,485	1985
4393	150 Neutral Utility	9'-4"	23'-9"	Welded Steel	13,409	15,520	1985
4394	Out of Service	9'-4"	23'-9"	Welded Steel	13,409	15,485	1985
4395	Uniguide 40 Utility	9'-4"	23'-9"	Welded Steel	13,409	15,485	1985
4397	MP 85/140	9'-4"	23'-9"	Welded Steel	13,330	15,010	1985
4398	Talupac Utility	9'-4"	23'-9"	Welded Steel	13,330	14,995	1985
4399	Firebird 15/40 Utility	9'-4"	23'-9"	Welded Steel	13,330	14,990	1985
4400	Guardol 40	9'-4"	23'-9"	Welded Steel	13,568	15,015	1985

1 – Tank is under the jurisdiction of the Department of Transportation

TABLE 1
BULK STORAGE TANKS, CONTINUED

Tank Number	Product Stored	Diameter	Height	Type of Construction	Safe Fill Capacity (gal)	Maximum Capacity (gal)	Year of Construction
Lower Lube Cell (continued)							
4401	Golden Bear 22 Utility	9'-4"	23'-9"	Welded Steel	13,568	14,990	1985
4402	ATF Type F	9'-4"	23'-9"	Welded Steel	13,568	14,985	1985
4403	Firebird 10/30	9'-4"	23'-9"	Welded Steel	13,568	15,035	1985
4404	Out of Service	9'-4"	23'-9"	Welded Steel	13,568	14,995	1985
4405	Lubrizol 5178F	9'-4"	23'-9"	Welded Steel	13,356	15,430	1987
4406	Lubrizol 9990A	9'-4"	23'-9"	Welded Steel	13,356	15,410	1987
4407	Anglomol 9001U	9'-4"	23'-9"	Welded Steel	13,356	15,445	1987
4408	Lubrizol 7075F	9'-4"	23'-9"	Welded Steel	13,356	15,445	1987
Lube Blending Warehouse							
4338	Irganox 820P	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4339	Lubrizol 5704	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4340	HiTec 385	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4341	Acryloid 3105	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4342	Acryloid 154/70	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4343	Lubrizol 6477B	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4344	Emersol 213	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4345	OLOA 1255	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4346	Lubrizol 9692A	3'-6"	14'-0"	Welded Steel	972	1,060	1974
4347	Lubrizol 4998	3'-6"	14'-0"	Welded Steel	972	1,060	1974

1 – Tank is under the jurisdiction of the Department of Transportation

Oregon Department of Environmental Quality
Land Quality - DeqHazWaste.NET

User: bcollins **Role:** Administrator Log Off

P17

RCRA Site ID: ORD087458196

Conoco Phillips Company
5528 NW DOANE AVE
PORTLAND, OR 97210

Open Pre-printed Site ID Form

Reporting Forms Log

Your electronic submission to DEQ was successful. Thank you.

Site ID Form History

Type	Status	Effective	Legal Owner	Submitted	E-Filer	
AR: RY2008	SQG	12/31/2008	ConocoPhillips Company	Yes	Yes	·View ·Print
AR: RY2007	SQG	12/31/2007	ConocoPhillips Company	Yes	Yes	·View ·Print
AR: RY2006	LQG	12/31/2006	ConocoPhillips Company	Yes	Yes	·View ·Print
Revised: RY2005	SQG	12/31/2005	ConocoPhillips Company	Yes	Yes	·View ·Print
Revised: RY2004	SQG	12/31/2004	ConocoPhillips Company	Yes	Yes	·View ·Print
Revised: RY2003	LQG	12/31/2003	ConocoPhillips Company	Yes	Yes	·View ·Print
New: RY2002	SQG	1/1/2003	ConocoPhillips Company	Yes	No	·View ·Print
Withdraw: RY2001	LQG	2/20/2002	Tosco Corporation	Yes	No	·View ·Print
AR: RY2000	LQG	3/15/2001	Tosco Corporation	Yes	No	·View ·Print
AR: RY1999	LQG	2/29/2000	Tosco Corporation	Yes	No	·View ·Print
AR: RY1998	LQG	2/22/1999	Tosco Corporation	Yes	No	·View ·Print
AR: RY1997	LQG	3/3/1998	Tosco Corporation	Yes	No	·View ·Print
New	SQG	3/31/1997	Tosco Corporation	Yes	No	·Amend ·View ·Print
Withdraw: RY1996	CEG	2/7/1997	76 Products Co Pipelines and Terminals	Yes	No	·View ·Print
AR: RY1995	CEG	2/22/1996	76 Products Co Pipelines and Terminals	Yes	No	·View ·Print
AR: RY1994	CEG	2/24/1995	76 Products Co Pipelines and Terminals	Yes	No	·View ·Print
AR: RY1993	SQG	2/3/1994	76 Products Co Pipelines and Terminals	Yes	No	·View ·Print
AR: RY1992	SQG	2/26/1993	76 Products Co Pipelines and Terminals	Yes	No	·View ·Print
New: RY1991	LQG	2/12/1992	76 Products Co Pipelines and Terminals	Yes	No	·View ·Print

Annual Report Form History

— **Reporting Year: 2008, Submitted: Yes**

Sent: 12/17/2008 **Effective:** 12/31/2008

Status Flags		Annual Report Data	Functions
Submitted:	Yes	Site ID Form: Yes	Export Files

E-Filer: Yes
Extension Granted: No

Amend Data

GM - Waste Streams Generated (6)
WR - Waste Streams Received (0)
OI - Off-site Facilities (4)

+ **Reporting Year: 2007, Submitted: Yes**
+ **Reporting Year: 2006, Submitted: Yes**
+ **Reporting Year: 2005, Submitted: Yes**
+ **Reporting Year: 2004, Submitted: Yes**
+ **Reporting Year: 2003, Submitted: Yes**
+ **Reporting Year: 2002, Submitted: Yes**
+ **Reporting Year: 2001, Submitted: Yes**
+ **Reporting Year: 2000, Submitted: Yes**
+ **Reporting Year: 1999, Submitted: Yes**
+ **Reporting Year: 1998, Submitted: Yes**
+ **Reporting Year: 1997, Submitted: Yes**
+ **Reporting Year: 1996, Submitted: Yes**
+ **Reporting Year: 1995, Submitted: Yes**
+ **Reporting Year: 1994, Submitted: Yes**
+ **Reporting Year: 1993, Submitted: Yes**
+ **Reporting Year: 1992, Submitted: Yes**
+ **Reporting Year: 1991, Submitted: Yes**

RCRA Waste Site Identification Form

Site ID

State of Oregon Department of Environmental Quality
Accounting Section
811 SW Sixth Avenue, Portland, OR 97204-1390
Questions: (503)229-6511 in Portland, OR or toll free in Oregon: (800)452-4011 Ext. 6511
Fax: (503)229-6977
TTY: (50)229-6993
Email: hazwaste@deq.state.or.us
Web site: www.DeqHazWaste.net

State of Oregon Department of Environmental Quality

1. Reason for Submittal

- ☐ To provide **New** Notification of Regulated Waste Activity (complete entire form)
  - ☐ Initial Notification ($200 non-refundable fee required)
  - ☐ Change in business ownership (represent the new owner) (No fee required)
  - ☐ Reactivation of RCRA Site ID Number ($200 non-refundable fee required)
- ☐ To provide **Revised** Site Identification Information
- ☐ To **Withdraw** Site Identification Number Effective Date: 12/31/2008
  - ☐ Completion of RCRA waste activity
  - ☐ Change in business ownership (represent the old owner)
- ☒ To provide as a component of the **Annual Hazardous Waste Report** (skip section 11, 12, and 13)

Reporting Year: 2008 If ownership changed: ☒ Filing for entire year ☐ Filing for partial year

2. RCRA Site ID Number: **ORD087458196**

3. Site Location Information

Company Name: Conoco Phillips Company
Site Location: 5528 NW DOANE AVE
PORTLAND, OR 97210
County: MULTNOMAH
Corp. Div. Reg. Nbr.:
NAICS Code: 424710
Employee Count: 55

4. Site Contact Person

Person Name: Tom Lyons
Mailing Address: 5528 NW Doane Ave
Portland, OR 97210
Country: UNITED STATES
Phone Number (Ext): (503) 248-1572
Email Address: thomas.lyons@conocophillips.com

5. Land Owner

Name: ConocoPhillips Company
Mailing Address: 600 N Dairy Ashford Rd
Houston, TX 77079
Country: UNITED STATES
Phone Number (Ext): 281 293 1000
Owner Type: ☒ Private ☐ Federal ☐ State ☐ County ☐ District ☐ Municipal ☐ Tribal ☐ Other

COR0016815

RCRA Waste Site Identification Form

Site ID

RCRA Site ID Number: ORD087458196

6a. Legal Owner

Name: ConocoPhillips Company
Mailing Address: 600 N Dairy Ashford Rd
Houston, TX 77079
Country: UNITED STATES
Phone Number (Ext): 281 293 1000
Owner Since: 01/01/2003
Owner Type: ☒ Private ☐ Federal ☐ State ☐ County ☐ District ☐ Municipal ☐ Tribal ☐ Other

7. Site Operator

Name: ConocoPhillips Company
Mailing Address: 600 N Dairy Ashford Rd
Houston, TX 77079
Country: UNITED STATES
Phone Number (Ext): 281 293 1000
Operator Since:
Operator Type: ☒ Private ☐ Federal ☐ State ☐ County ☐ District ☐ Municipal ☐ Tribal ☐ Other

8a. Hazardous Waste Facility Contact

Person Name: Thomas Lyons
Organization: ConocoPhillips Company
Mailing Address: 5528 NW Doane Ave
Portland, OR 97210
Country: UNITED STATES
Phone Number (Ext): (503) 248-1572
Email Address: thomas.lyons@conocophillips.com

8b. Hazardous Waste Facility Contact

Person Name: Thomas Lyons
Organization: ConocoPhillips Company
Mailing Address: 5528 NW Doane Ave
Portland, OR 97210
Country: UNITED STATES
Phone Number (Ext): (503) 248-1572
Email Address: thomas.lyons@conocophillips.com

COP0016816

RCRA Waste Site Identification Form

Site ID

RCRA Site ID Number: ORD087458196

10. Hazardous Waste Activities (Mark the appropriate boxes for activities that apply to your site.)

1. Generator of Hazardous Waste

- ☐ a. LQG: Large Quantity Generator (Generates greater than 2,200 lbs/mo or more than 2.2 lbs of acute hazardous waste)
- ☒ b. SQG: Small Quantity Generator: (Generates between 220-2,200 lbs/mo or more than 2,200 lbs accumulated on-site)
- ☐ c. CEG: Conditionally Exempt Generator: (Generates between 0-220 lbs/mo, less than 2.2 lbs of acute hazardous waste and less than 2,200 lbs accumulated on-site)

2. Are you a hazardous waste generator due to remediation of environmental contamination or a business closure?

☐ Yes ☒ No

If yes, find out about expedited annual reporting at: www.deq.state.or.us/wmc/hw/factsheets/HWFeesForCleanups.pdf

☐ **3. Importer of Hazardous Waste**

☐ **4. Generator of Mixed Waste (hazardous and radioactive)**

5. Transporter of Hazardous Waste

- ☐ a. Transports hazardous waste generated at this facility
- ☐ b. Transports for commercial purposes
- ☐ c. Hazardous Waste Transfer Facility

☐ **6. Treatment, Storage, Disposal (TSD) Facility**

(Note: A RCRA Permit is required for this activity)

7. Recycler of Hazardous Waste

- ☐ a. Recycles HW generated at this facility
- ☐ b. Recycles HW generated by other facilities

8. Hazardous waste management in RCRA permit exempt units (e.g. elementary neutralization units, waste water treatment units, or accumulation tanks or containers)

- ☐ a. Manages HW generated at this facility
- ☐ b. Manages HW generated by other facilities

9. Exempt Boiler and/or Industrial Furnace

- ☐ a. Small Quantity On-Site Burner Exemption
- ☐ b. Smelting, Melting, Refining Furnace Exemption

☐ **10. Underground Injection Control**

If yes, there may be addition reporting requirements at: www.deq.state.or.us/wq/groundwa/uichome.htm

11. Description of Hazardous Wastes

1. Waste Codes for Federally Regulated Hazardous Wastes: Identify the federal hazardous waste codes that best describe your waste (e.g., D001 - Ignitable, D002 - Corrosive, D003 - Reactive, etc.) List additional federal codes in the comments section.

D001, D018, D008

2. Waste Codes for State Regulated(i.e., non-federal) Hazardous Wastes: Identify the Oregon state-only hazardous waste codes that best describe your waste (e.g., ORX001, ORX007, ORP003, ORU001, etc.)

12. Universal Waste Activities (Mark the appropriate boxes for activities that apply to your site.)

☐ **1. Large Quantity Handler of Universal Waste**

(Accumulates a total of 11,000 lbs. or more of universal waste at any time, at the location at which it was generated)

☐ **2. Off-site Universal Waste Collection Site**

(Accumulates a total of 2,000 lbs. or more of universal waste received from off-site). If yes, there are additional notification requirements at: www.deq.state.or.us/wmc/documents/uwnotification.pdf

☐ **3. Pesticide Collection Program**

(Collects and accumulates waste pesticides from off-site). If yes, there are additional notification requirements at: www.deq.state.or.us/wmc/documents/uwnotification.pdf

☐ **4. Destination Facility for Universal Waste**

(A facility that treats, disposes of, or recycles universal wastes on-site)

5. Mark all boxes that apply

	Generate	Accumulate
a. Batteries	☐	☐
b. Mercury containing thermostats	☐	☐
c. Lamps	☐	☐
d. Pesticides	☐	☐

13. Used Oil Activities (Mark the appropriate boxes for activities that apply to your site.)

☐ **1. Used Oil Collection Center**

☐ **2. Used Oil Transporter**

☐ **3. Used Oil Transfer Facility**

4. Used Oil Processor/Re-refiner

Indicate type(s) of activity(s)

- ☐ a. Processor
- ☐ b. Re-refiner

☐ **5. Off-Specification Used Oil Burner (not used oil space heaters operating according to CFR 279.23)**

6. Used Oil Fuel Marketer

Indicate type(s) of activity(s)

- ☐ a. Marketer who directs shipments of off-specification used oil to off-specification used oil burner
- ☐ b. Marketer who first claims the used oil to meet the specifications

COP0016817

RCRA Waste Site Identification Form

Site ID

RCRA Site ID Number: ORD087458196

14. Comments

15. Certification

This form cannot be processed without a signature

I certify that under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature **Date**

Name (print or type) **Title**

If you have special accommodation needs or require this documentin an alternative format, please contact the Hazardous Waste Section in Portland at 503-229-6938 or toll-free within the State of Oregon at 1-800-452-4011, extension 6938

16. Electronic Submittals

DEQ will issue a PIN number and electronic filing instructions in a letter addressed to the Forms Contact in Section 8 on this form. The electronic reporting system may be used for your company's annual reporting and site identification updates.

COR0016818

Generation and Management Answer Sheet — GM

Please enter your RCRA Site ID number and your site name in the box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Complete one answer sheet for each waste stream that was generated.

Reference the instructions as you complete this form. Please type or print legibly in blue or black ink.

Please Enter:

Your RCRA Site ID Number: ORD087458196 **Year:** 2008

Site Name: Conoco Phillips Company

For DEQ Use Only:

Date Received:

A. Description of Hazardous Waste Stream — Sequence Number: 1

A-1. What is your waste stream identification?

A-2. Briefly describe the hazardous waste stream:
Spent hexane

A-3. Which EPA hazardous waste codes are associated with this waste stream?
D001

A-4. Which Oregon state-only hazardous waste code is associated with this waste stream?

A-5. Which source code best describes the type of process or activity from which this waste stream was generated? G22

A-5.a. If you specified source code G25 in question A-5, please enter the management method code from the on-site hazardous waste management system:

A-5.b. If you specified source code G62 in question A-5, please enter the country of origin from which this waste was received:

A-6. Which form code best corresponds to the physical form or chemical composition of this waste stream? W203

A-7. If there were toxic substances in this waste stream that your facility reported on its 2002 Toxic Chemical Release Inventory (TRI) Reporting Form (Form R), please provide the CAS numbers reported:

A-8. Did this waste stream contain mercury? ☐ Yes ☒ No

A-8.a. If you answered yes to question A-8, please provide a reasonable estimate of the percentage of mercury in this waste stream: 0.00

B. Hazardous Waste Management Activities

B-1. What is the total quantity of this waste stream generated in the reporting year and what is the unit of measure?

Quantity: 420.33 ☒ Pounds ☐ Gallons ☐ Tons ☐ Cubic Yards ☐ Kilograms

B-1.a. If the waste stream is measured in gallons or cubic yards, what is its density?

Density: ☐ Pounds/gallon ☐ Specific gravity ☐ Pounds/cubic yard

B-2. Was the waste stream managed on-site, off-site, or both?

☐ On-site ☒ Off-site ☐ Both

B-3. If all or part of this waste stream was managed on-site, how much was managed on-site and how was it managed?

Quantity: Management Method Code:

B-4. Indicate the quantity of this waste stream that was remaining on-site at the end of the calendar year you are reporting:

0.00

B-5. Indicate the quantity of this waste stream that was carried forward from the previous reporting year: 0.00

COP0016819

Generation and Management Answer Sheet

GM

ORD087458196 Year: 2008

B-6. Please provide the following information for each off-site shipment of waste:

Shipment_DT	Manifest_NR	Reported_QT	Transporter_ID_NR	Mgmt_System_CD	RCRA_Site_ID_NR
09/09/2008	000634964 JJ	200.16	WAH000014944	H050	WAD991281767
11/19/2008	005379534 JJ	220.17	WAH000014944	H050	WAD991281767

C. Comments

Use the Comments section to provide any additional comments, information or explanations as necessary. In your comments always provide the reference to the specific question number:

A-5 Spent hexane mixture generated in teh lubricants laboratory

COR0016820

Generation and Management Answer Sheet

GM

Please enter your RCRA Site ID number and your site name in the box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Complete one answer sheet for each waste stream that was generated.

Reference the instructions as you complete this form. Please type or print legibly in blue or black ink.

Please Enter:

Your RCRA Site ID Number: ORD087458196 Year: 2008

Site Name: Conoco Phillips Company

For DEQ Use Only:

Date Received:

A. Description of Hazardous Waste Stream

Sequence Number: 2

A-1. What is your waste stream identification?

A-2. Briefly describe the hazardous waste stream:
Spent hexane and methanol

A-3. Which EPA hazardous waste codes are associated with this waste stream?
D001

A-4. Which Oregon state-only hazardous waste code is associated with this waste stream?

A-5. Which source code best describes the type of process or activity from which this waste stream was generated? G22

A-5.a. If you specified source code G25 in question A-5, please enter the management method code from the on-site hazardous waste management system:

A-5.b. If you specified source code G62 in question A-5, please enter the country of origin from which this waste was received:

A-6. Which form code best corresponds to the physical form or chemical composition of this waste stream? W203

A-7. If there were toxic substances in this waste stream that your facility reported on its 2002 Toxic Chemical Release Inventory (TRI) Reporting Form (Form R), please provide the CAS numbers reported:

A-8. Did this waste stream contain mercury? ☐ Yes ☒ No

A-8.a. If you answered yes to question A-8, please provide a reasonable estimate of the percentage of mercury in this waste stream: 0.00

B. Hazardous Waste Management Activities

B-1. What is the total quantity of this waste stream generated in the reporting year and what is the unit of measure?

Quantity: 573.78 ☒ Pounds ☐ Gallons ☐ Tons ☐ Cubic Yards ☐ Kilograms

B-1.a. If the waste stream is measured in gallons or cubic yards, what is its density?

Density: ☐ Pounds/gallon ☐ Specific gravity ☐ Pounds/cubic yard

B-2. Was the waste stream managed on-site, off-site, or both?

☐ On-site ☒ Off-site ☐ Both

B-3. If all or part of this waste stream was managed on-site, how much was managed on-site and how was it managed?

Quantity: Management Method Code:

B-4. Indicate the quantity of this waste stream that was remaining on-site at the end of the calendar year you are reporting:

0.00

B-5. Indicate the quantity of this waste stream that was carried forward from the previous reporting year: 0.00

COP0016821

B-6. Please provide the following information for each off-site shipment of waste:

Shipment DT	Manifest NR	Reported QT	Transporter ID NR	Mgmt System CD	RCRA Site ID NR
01/22/2008	000634832 JJ	153.45	WAH000014944	H050	WAD991281767
04/09/2008	000634885 JJ	200.16	WAH000014944	H050	WAD991281767
07/02/2008	000634925 JJ	220.17	WAH000014944	H050	WAD991281767

C. Comments

Use the Comments section to provide any additional comments, information or explanations as necessary. In your comments always provide the reference to the specific question number:

A-5 Mixture of spent hexanee and methanol generated in teh lubricants laboroatory for glassware cleaning and viscosity measurement. The majority of this waste stream in hexane.

Generation and Management Answer Sheet

GM

Please enter your RCRA Site ID number and your site name in the box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Complete one answer sheet for each waste stream that was generated.

Reference the instructions as you complete this form. Please type or print legibly in blue or black ink.

Please Enter:

Your RCRA Site ID Number: ORD087458196 Year: 2008

Site Name: Conoco Phillips Company

For DEQ Use Only:

Date Received: _____

A. Description of Hazardous Waste Stream

Sequence Number: 3

A-1. What is your waste stream identification?

A-2. Briefly describe the hazardous waste stream:
Spent ink and ink wash solvent

A-3. Which EPA hazardous waste codes are associated with this waste stream?
D001 D007 F003

A-4. Which Oregon state-only hazardous waste code is associated with this waste stream?

A-5. Which source code best describes the type of process or activity from which this waste stream was generated? G09

A-5.a. If you specified source code G25 in question A-5, please enter the management method code from the on-site hazardous waste management system:

A-5.b. If you specified source code G62 in question A-5, please enter the country of origin from which this waste was received:

A-6. Which form code best corresponds to the physical form or chemical composition of this waste stream? W209

A-7. If there were toxic substances in this waste stream that your facility reported on its 2002 Toxic Chemical Release Inventory (TRI) Reporting Form (Form R), please provide the CAS numbers reported:

A-8. Did this waste stream contain mercury? ☐ Yes ☒ No

A-8.a. If you answered yes to question A-8, please provide a reasonable estimate of the percentage of mercury in this waste stream: 0.00

B. Hazardous Waste Management Activities

B-1. What is the total quantity of this waste stream generated in the reporting year and what is the unit of measure?
Quantity: 5.00 ☒ Pounds ☐ Gallons ☐ Tons ☐ Cubic Yards ☐ Kilograms

B-1.a. If the waste stream is measured in gallons or cubic yards, what is its density?
Density: ☐ Pounds/gallon ☐ Specific gravity ☐ Pounds/cubic yard

B-2. Was the waste stream managed on-site, off-site, or both?
☐ On-site ☒ Off-site ☐ Both

B-3. If all or part of this waste stream was managed on-site, how much was managed on-site and how was it managed?
Quantity: Management Method Code:

B-4. Indicate the quantity of this waste stream that was remaining on-site at the end of the calendar year you are reporting:
0.00

B-5. Indicate the quantity of this waste stream that was carried forward from the previous reporting year: 0.00

COP0016823

Generation and Management Answer Sheet

GM

ORD087458196 Year: 2008

B-6. Please provide the following information for each off-site shipment of waste:

Shipment_DT	Manifest_NR	Reported_QT	Transporter_ID_NR	Mgmt_System_CD	RCRA_Site_ID_NR
03/14/2008	000634558 JJ	5.00	WAH000014944	H050	WAD991281767

C. Comments

Use the Comments section to provide any additional comments, information or explanations as necessary. In your comments always provide the reference to the specific question number:

A-5 Ink and ink wash solvent generated in lubricants plant from the carbon printer

Generation and Management Answer Sheet

GM

Please enter your RCRA Site ID number and your site name in the box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Complete one answer sheet for each waste stream that was generated.

Reference the instructions as you complete this form. Please type or print legibly in blue or black ink.

Please Enter:

Your RCRA Site ID Number: ORD087458196 Year: 2008

Site Name: Conoco Phillips Company

For DEQ Use Only:

Date Received: _____

A. Description of Hazardous Waste Stream

Sequence Number: 4

A-1. What is your waste stream identification?

A-2. Briefly describe the hazardous waste stream:
Spent parts cleaning solvent

A-3. Which EPA hazardous waste codes are associated with this waste stream?
D001

A-4. Which Oregon state-only hazardous waste code is associated with this waste stream?

A-5. Which source code best describes the type of process or activity from which this waste stream was generated? G13

A-5.a. If you specified source code G25 in question A-5, please enter the management method code from the on-site hazardous waste management system:

A-5.b. If you specified source code G62 in question A-5, please enter the country of origin from which this waste was received:

A-6. Which form code best corresponds to the physical form or chemical composition of this waste stream? W211

A-7. If there were toxic substances in this waste stream that your facility reported on its 2002 Toxic Chemical Release Inventory (TRI) Reporting Form (Form R), please provide the CAS numbers reported:

A-8. Did this waste stream contain mercury? ☐ Yes ☒ No

A-8.a. If you answered yes to question A-8, please provide a reasonable estimate of the percentage of mercury in this waste stream: 0.00

B. Hazardous Waste Management Activities

B-1. What is the total quantity of this waste stream generated in the reporting year and what is the unit of measure?

Quantity: 200.10 ☒ Pounds ☐ Gallons ☐ Tons ☐ Cubic Yards ☐ Kilograms

B-1.a. If the waste stream is measured in gallons or cubic yards, what is its density?

Density: ☐ Pounds/gallon ☐ Specific gravity ☐ Pounds/cubic yard

B-2. Was the waste stream managed on-site, off-site, or both?

☐ On-site ☒ Off-site ☐ Both

B-3. If all or part of this waste stream was managed on-site, how much was managed on-site and how was it managed?

Quantity: Management Method Code:

B-4. Indicate the quantity of this waste stream that was remaining on-site at the end of the calendar year you are reporting:

0.00

B-5. Indicate the quantity of this waste stream that was carried forward from the previous reporting year: 0.00

COP0016825

Generation and Management Answer Sheet

GM

ORD087458196 Year: 2008

B-6. Please provide the following information for each off-site shipment of waste:

Shipment_DT	Manifest_NR	Reported_QT	Transporter_ID_NR	Mgmt_System_CD	RCRA_Site_ID_NR
09/22/2008	000145708 SK	100.05	TXR000050930	H020	ORD981766124
11/18/2008	001423415 SK	100.05	TXR000050930	H020	ORD981766124

C. Comments

Use the Comments section to provide any additional comments, information or explanations as necessary. In your comments always provide the reference to the specific question number:

A-5 Spent parts cleaning solvent is generated in the maintenance building during periodic cleaining of parts. The solvent is petroleum naphtha.

COP0016826

Generation and Management Answer Sheet

GM

Please enter your RCRA Site ID number and your site name in the box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Complete one answer sheet for each waste stream that was generated.

Reference the instructions as you complete this form. Please type or print legibly in blue or black ink.

Please Enter:

Your RCRA Site ID Number: ORD087458196 Year: 2008

Site Name: Conoco Phillips Company

For DEQ Use Only:

Date Received:

A. Description of Hazardous Waste Stream

Sequence Number: 5

A-1. What is your waste stream identification?

A-2. Briefly describe the hazardous waste stream:
Lead contaminated paint chips and debris

A-3. Which EPA hazardous waste codes are associated with this waste stream?
D008

A-4. Which Oregon state-only hazardous waste code is associated with this waste stream?

A-5. Which source code best describes the type of process or activity from which this waste stream was generated? G06

A-5.a. If you specified source code G25 in question A-5, please enter the management method code from the on-site hazardous waste management system:

A-5.b. If you specified source code G62 in question A-5, please enter the country of origin from which this waste was received:

A-6. Which form code best corresponds to the physical form or chemical composition of this waste stream? W209

A-7. If there were toxic substances in this waste stream that your facility reported on its 2002 Toxic Chemical Release Inventory (TRI) Reporting Form (Form R), please provide the CAS numbers reported:

A-8. Did this waste stream contain mercury? ☐ Yes ☒ No

A-8.a. If you answered yes to question A-8, please provide a reasonable estimate of the percentage of mercury in this waste stream: 0.00

B. Hazardous Waste Management Activities

B-1. What is the total quantity of this waste stream generated in the reporting year and what is the unit of measure?

Quantity: 1300.00 ☒ Pounds ☐ Gallons ☐ Tons ☐ Cubic Yards ☐ Kilograms

B-1.a. If the waste stream is measured in gallons or cubic yards, what is its density?

Density: ☐ Pounds/gallon ☐ Specific gravity ☐ Pounds/cubic yard

B-2. Was the waste stream managed on-site, off-site, or both?

☐ On-site ☒ Off-site ☐ Both

B-3. If all or part of this waste stream was managed on-site, how much was managed on-site and how was it managed?

Quantity: Management Method Code:

B-4. Indicate the quantity of this waste stream that was remaining on-site at the end of the calendar year you are reporting:

0.00

B-5. Indicate the quantity of this waste stream that was carried forward from the previous reporting year: 0.00

COP0016827

B-6. Please provide the following information for each off-site shipment of waste:

Shipment DT	Manifest NR	Reported QT	Transporter ID NR	Mgmt System CD	RCRA Site ID NR
08/15/2008	000634941 JJ	1300.00	WAH000014944	H132	WAD991281767

C. Comments

Use the Comments section to provide any additional comments, information or explanations as necessary. In your comments always provide the reference to the specific question number:

Generation and Management Answer Sheet — GM

Please enter your RCRA Site ID number and your site name in the box at the right, before making as many two-sided copies of this answer sheet as you will need to report each of your waste streams. Complete one answer sheet for each waste stream that was generated.

Reference the instructions as you complete this form. Please type or print legibly in blue or black ink.

Please Enter:

Your RCRA Site ID Number: ORD087458196 Year: 2008

Site Name: Conoco Phillips Company

For DEQ Use Only:

Date Received: _____

A. Description of Hazardous Waste Stream — Sequence Number: 6

A-1. What is your waste stream identification?

A-2. Briefly describe the hazardous waste stream:
Partially used laboratory chemicals

A-3. Which EPA hazardous waste codes are associated with this waste stream?
D001 D003

A-4. Which Oregon state-only hazardous waste code is associated with this waste stream?

A-5. Which source code best describes the type of process or activity from which this waste stream was generated? G11

A-5.a. If you specified source code G25 in question A-5, please enter the management method code from the on-site hazardous waste management system:

A-5.b. If you specified source code G62 in question A-5, please enter the country of origin from which this waste was received:

A-6. Which form code best corresponds to the physical form or chemical composition of this waste stream? W211

A-7. If there were toxic substances in this waste stream that your facility reported on its 2002 Toxic Chemical Release Inventory (TRI) Reporting Form (Form R), please provide the CAS numbers reported:
108-88-3

A-8. Did this waste stream contain mercury? ☐ Yes ☒ No

A-8.a. If you answered yes to question A-8, please provide a reasonable estimate of the percentage of mercury in this waste stream: 0.00

B. Hazardous Waste Management Activities

B-1. What is the total quantity of this waste stream generated in the reporting year and what is the unit of measure?
Quantity: 8.50 ☒ Pounds ☐ Gallons ☐ Tons ☐ Cubic Yards ☐ Kilograms

B-1.a. If the waste stream is measured in gallons or cubic yards, what is its density?
Density: ☐ Pounds/gallon ☐ Specific gravity ☐ Pounds/cubic yard

B-2. Was the waste stream managed on-site, off-site, or both?
☐ On-site ☒ Off-site ☐ Both

B-3. If all or part of this waste stream was managed on-site, how much was managed on-site and how was it managed?
Quantity: Management Method Code:

B-4. Indicate the quantity of this waste stream that was remaining on-site at the end of the calendar year you are reporting:
0.00

B-5. Indicate the quantity of this waste stream that was carried forward from the previous reporting year: 0.00

COP0016829

B-6. Please provide the following information for each off-site shipment of waste:

Shipment_DT	Manifest_NR	Reported_QT	Transporter_ID_NR	Mgmt_System_CD	RCRA_Site_ID_NR
10/01/2008	000634973 JJ	1.00	WAH000014944	H040	WAD991281767
10/01/2008	000634973 JJ	7.50	WAH000014944	H050	WAD991281767

C. Comments

Use the Comments section to provide any additional comments, information or explanations as necessary. In your comments always provide the reference to the specific question number.

A-5 This waste stream includes partially used laboratory chemicals no longer used in the lubricants laboratory. More specifically, this waste stream includes 1 lb. of calcium hydroxide and 7.5 lbs. varoius petroleum distillates formerly used in the lubricants laboratory to primarily clean glasswear or equipment (i.e., 1 L cyclohexanol, 1 L ethyl acetate, 100 ml of petroleum distillates, 100 ml of ethanol and 200 ml of toluene). The wastes were discarded as part of general housekeeping and laboratory cleanup effort.

Oregon Department of Environmental Quality
Land Quality - DeqHazWaste.NET

HOME **FORMS** PROFILE ADMIN

Production Database ««Reporting Forms Log **OI Facilities**

User: bcollins **Role:** Administrator Log Off

P16

RCRA Site ID: ORD087458196

Conoco Phillips Company
5528 NW DOANE AVE
PORTLAND, OR 97210

Reporting Year: **2008** Find Site ID Number:

Print OI Form

OI Facilities

Site ID Number	Name/Site Address	Generator	Transporter	TSD	
ORD981766124	SAFETY KLEEN SYSTEMS INC 7-148-01 16540 SE 130TH AVE CLACKAMAS, OR 97015	No	No	Yes	View
TXR000050930	SAFETY KLEEN SYSTEMS INC 5400 LEGACY DRIVE CLUSTER II B3 PLANO, TX 75024	No	Yes	No	View
WAD991281767	BURLINGTON ENVIRONMENTAL INC KENT 20245 77TH AVE S KENT, WA 980321386	No	No	Yes	View
WAH000014944	COWLITZ CLEAN SWEEP INC INTERNATIONAL WA 60 INTERNATIONAL WAY LONGVIEW, WA 98632	No	Yes	No	View

Help Support eXchangeNetwork.net

Ver. 2.0 Production DeqHazWaste.net - With eXchangeNetwork.net WasteX

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ORD087458196	1	1-888-423-6316	000634832 JJK

GENERATOR

5. Generator's Name and Mailing Address
5528 N.W Doane
Portland, OR 97210
CONOCOPHILLIPS

Generator's Site Address (if different than mailing address)
CONOCOPHILLIPS
5528 N.W Doane
Portland, OR 97210

Generator's Phone: (503) 248-1548 (503) 248-1548

6. Transporter 1 Company Name: Cowlitz Clean Sweep (360)423-6316 U.S. EPA ID Number: WAH000014944

7. Transporter 2 Company Name: ~~BM Transportation~~ Burlington Environmental Inc. (253)383-3044 U.S. EPA ID Number: WAR000001743

8. Designated Facility Name and Site Address
Burlington Environmental Inc (253)872-8030 U.S. EPA ID Number: WAD991281767
20243 77th Ave. South
Facility's Phone: Kent, WA 98032

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ WASTE FLAMMABLE LIQUIDS, N.O.S (Hexane, Methanol), 3, UN1993, PG II	001	DM	023	G	D001	F003	
X	2.							
	3.							
	4.							

Special Handling Instructions and Additional Information
A: Approval # 372421-00
A: ERG#: 128
A: RQ= 100 Lbs.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: STEVEN Adams Signature: Steven Adams Month: 01 Day: 22 Year: 08

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MARK Berndt Signature: Mark Berndt Month: 01 Day: 22 Year: 08

Transporter 2 Printed/Typed Name: Martin D. Elliott Signature: Martin D. Elliott Month: 01 Day: 28 Year: 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name Signature Month Day Year

COP0016832

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ORD087458196	1	1-888-423-6316	000634558 JJK

GENERATOR

5. Generator's Name and Mailing Address: 5528 N.W Doane, Portland, OR 97210 — CONOCOPHILLIPS

Generator's Site Address (if different than mailing address): CONOCOPHILLIPS, 5528 N.W Doane, Portland, OR 97210

Generator's Phone: (503) 248-1548 — (503) 248-1548

6. Transporter 1 Company Name: Cowlitz Clean Sweep — (360)423-6316 — U.S. EPA ID Number: WAH000014944

7. Transporter 2 Company Name: Burlington Environmental ~~Transportation~~ Inc. — (253)383-3044 — U.S. EPA ID Number: WAR000001743

8. Designated Facility Name and Site Address: Burlington Environmental Inc., 20245 77th Ave. South, Kent, WA 98032 — (253)872-8090 — U.S. EPA ID Number: WAD991281767

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1992, WASTE FLAMMABLE LIQUIDS, TOXIC, N.O.S (Methanol, Chromium), 3 (6.1), PGII	1	DF	5	P	D001 D007 D003		
X	2. ~~UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S (Polychlorinated biphenyls), 9, PG III~~ UN3432 Polychlorinated Biphenyls, Solid, 9, PG II	1	~~DM~~ DF	5	K			
X	3. UN2794, BATTERIES, WET, FILLED WITH ACID, UNIVERSAL WASTE), 8, PG III	1	DF	10	P			
	4. ~~UNIVERSAL WASTE~~ Non PCB light ballast for recycle. PG III	1	DF	10	P			

14. Special Handling Instructions and Additional Information

9a, 1: Approval # 374143-00 — 9a, 2: Approval # 381863-00 — 9a, 3: Approval # 381631-00

9a, 1: ERG#: 131 — 9a, 2: ERG # 171 — 9a, 3: ERG 154

9a, 4: Approval # 381448-00

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: STEVEN ADAMS — Signature: Steven Adams — Month 03 Day 14 Year 08

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brad Rutherford — Signature: Brad Rutherford — Month 03 Day 14 Year 08

Transporter 2 Printed/Typed Name: Martin D. Flindt — Signature: Martin D. Flindt — Month 03 Day 14 Year 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 — 2. H141 — 3. H141 — 4. H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: — Signature: — Month 13 Day 14 Year 08

COP0016833

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ORD087458196	1	1-888-423-6316	000634885 JJK

GENERATOR

5. Generator's Name and Mailing Address: 5528 N.W Doane, Portland, OR 97210 — CONOCOPHILLIPS

Generator's Site Address (if different than mailing address): CONOCOPHILLIPS, 5528 N.W Doane, Portland, OR 97210

Generator's Phone: (503) 248-1548 | (503) 248-1548

6. Transporter 1 Company Name: Cowlitz Clean Sweep — (360)423-6316 — U.S. EPA ID Number: WAH000014944

7. Transporter 2 Company Name: Burlington Environmental ~~Transportation~~ Inc. — (253)383-3044 — U.S. EPA ID Number: WAR000001743

8. Designated Facility Name and Site Address: Burlington Environmental Inc, 20243 77th Ave. South, Kent, WA 98032 — (253)872-8030 — U.S. EPA ID Number: WAD991281767

Facility's Phone:

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S (Hexane, Methanol), 3, PGII	1	DM	30	G	D001 F003		
	2. UNIVERSAL WASTE LIGHT TUBES	2	CF	30	P			
	3. UNIVERSAL WASTE LAMPS (HID BULBS)	1	CF	003	P			
	4.							

9a, 1: Approval # 372421-00 — 9a, 2: Approval # CCSTUBES-03 — 9a, 3: Approval #380412-00

9a, 1: ERG#: 128 — 9a, 2: Total feet — 9a, 3: Total

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: STEVE ADAMS — Signature: Steve Adams — Month: 04 — Day: 09 — Year: 08

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit:

Transporter signature (for exports only): — Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steve Warner — Signature: Steve Warner — Month: 04 — Day: 09 — Year: 08

Transporter 2 Printed/Typed Name: Martin D. Flindt — Signature: Martin D. Flindt — Month: 04 — Day: 09 — Year: 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a

Printed/Typed Name — Signature — Month: 04 — Day: 16 — Year: 08

COP0016834

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number ORD087456196	2. Page 1 of 1	3. Emergency Response Phone 1-888-423-6316	4. Manifest Tracking Number 000634925 JJK

GENERATOR

5. Generator's Name and Mailing Address: CONOCOPHILLIPS, 5528 N.W Doane, Portland, OR 97210
Generator's Site Address (if different than mailing address): CONOCOPHILLIPS, 5528 N.W Doane, Portland, OR 97210
Generator's Phone: (503) 248-1548 (503) 248-1548

6. Transporter 1 Company Name: Cowlitz Clean Sweep (360)423-6316 U.S. EPA ID Number: WAH000014944

7. Transporter 2 Company Name: Burlington Environmental, INC. (253)383-3044 U.S. EPA ID Number: WAR000001743

8. Designated Facility Name and Site Address: Burlington Environmental, INC. (253)872-8030 U.S. EPA ID Number: WAD991281767
20245 77th Ave. South
Kent, WA 98032
Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ,UN1593 Waste Flammable Liquids, Hexane, Medicinal,N.O.S.,3 PGI	1	DM	33	G	D001	F003	
X	2. UN3028, Batteries, Dry Containing Potassium Hydroxide Solid,8, PGIII, Universal Waste	1	DF	5	P			
X	3. UN2794, Batteries, Wet, Filled with Acid,8,PGIII, Universal Waste	1	DF	10	P			
	4.							

14. Special Handling Instructions and Additional Information
A: Approval # 372421-00 B: Approval CCSNICADUW-01 C: Approval# 381631-00
A: ERG#: 128 B: ERG# 154 C: ERG# 154
A: RQ= 100 Lbs.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: STEVEN ADAMS Signature: Steven Adams Month: 07 Day: 02 Year: 08

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brad Rutherford Signature: Brad Rutherford Month: 07 Day: 02 Year: 08

Transporter 2 Printed/Typed Name: Martin D. Flindt Signature: Martin D. Flindt Month: 07 Day: 02 Year: 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Signature: Month: Day: Year:

COP0016835

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. Manifest Tracking Number
	ORD087458196		1-888-423-6316	000634941 JJK

GENERATOR

5. Generator's Name and Mailing Address: 5528 N.W Doane, Portland, OR 97210 — CONOCOPHILLIPS

Generator's Site Address (if different than mailing address): CONOCOPHILLIPS, 5528 N.W Doane, Portland, OR 97210

Generator's Phone: (503) 248-1548 | (503) 248-1548

6. Transporter 1 Company Name: Cowlitz Clean Sweep — (360)423-6316 — U.S. EPA ID Number: WAH000014944

7. Transporter 2 Company Name: Burlington Environmental Inc. — (253)383-3044 — U.S. EPA ID Number: WAR000001743

8. Designated Facility Name and Site Address: Burlington Environmental Inc., 20245 77th Ave. South, Kent, WA 98032 — (253)872-8030 — U.S. EPA ID Number: WAD991281767

Facility's Phone:

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3077, Hazardous Waste, Solid, 9 N.O.S. PGIII (LEAD)	13	DM	1300	P	D008		
	2. ~~Material Not Regulated by DOT (Sulfur 200 Destroyer)~~ (Washington State Dangerous Waste Only, Toxic)		~~DM~~		~~P~~	~~D002~~		
	3.							
	4.							

14. Special Handling Instructions and Additional Information

9A: Approval # 349837-02 — 9B: Approval # 389242-00

9A: ERG#: 171 — 9B: ERG #

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Steven Adams — Signature: Steven Adams — Month: 08 — Day: 15 — Year: 08

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brad Rutherford — Signature: Brad Rutherford — Month: 08 — Day: 15 — Year: 08

Transporter 2 Printed/Typed Name: Darrel E. Whitmore — Signature: Darrel E. Whitmore — Month: 08 — Day: 15 — Year: 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] — Signature: [illegible] — Month: 8 — Day: 27 — Year: 08

COR0016000

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
ORD087158196	1	1-888-423-6316	000634964 JJK

GENERATOR

5. Generator's Name and Mailing Address
1528 N.W Doane
Portland, OR 97210
Generator's Phone: (503) 248-1548

Generator's Site Address (if different than mailing address)
CONOCOPHILLIPS
CONOCOPHILLIPS
1528 N.W Doane
Portland, OR 97210
(503) 282-1548

6. Transporter 1 Company Name: Cowlitz Clean Sweep — (360)423-6316 — U.S. EPA ID Number: WAD988491644

7. Transporter 2 Company Name: Burlington Environmental Inc — (253)853-3044 — U.S. EPA ID Number: WAD000617737

8. Designated Facility Name and Site Address: Burlington Environmental Inc. 2234 17th Ave. South Seattle WA 98134 — (206)623-5050 — U.S. EPA ID Number: WAD981767[illegible]
Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3077, Hazwaste Waste Flammable Liquids, NOS, PGII	1	DM	33	G	D001 [illegible]
	2. Universal Waste Light Tubes	2	CW	110	LF	
	3. ~~Universal Waste HID Bulbs KM~~	~~2~~		~~15~~	~~EA~~	
	4. UN 3077 Universal Waste HID lamps, Environmentally hazardous substances, solid, N.O.S. 9 PGIII (lead mercury)	2	CW	15	P	

14. Special Handling Instructions and Additional Information
963: Approval #3804112-00
963: ERG #171
963: Approval #[illegible]
963: ERG: 128
963: RQ= 100 Lbs.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Steve Adams — Signature: [signature] — Month: 09 Day: 19 Year: 08

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kevin Manzano — Signature: Kevin Manzano — Month: 09 Day: 19 Year: 08

Transporter 2 Printed/Typed Name: Bob Boyd — Signature: [signature] — Month: 10 Day: 13 Year: 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Line 2: UOM - should be P.
Line 4: container type - should be LF.
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H141	H141

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: — Signature: [signature] — Month: 10 Day: 16 Year: 08

COR0016807

7-18-01

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ORD087458196	1	1-800-468-1760	000145708 SKS

5. Generator's Name and Mailing Address / Generator's Site Address (if different than mailing address)

CONOCOPHILLIPS
5528 NW DOANE AVE
PORTLAND OR 97210
Generator's Phone: 503-248-1558

6. Transporter 1 Company Name — U.S. EPA ID Number
SAFETY-KLEEN SYSTEMS, INC. — TXR000050930

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
SAFETY-KLEEN SYSTEMS, INC. 714801
16540 SE 130TH AVE BLDG B
CLACKAMAS OR 97015
Facility's Phone: 503-657-7033 — ORD981766124

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. WASTE COMBUSTIBLE LIQUID, N.O.S (PETROLEUM NAPHTHA) NA1993 PGIII RQ(D001)	1	DM	15	G	D001 D018 D039 D040
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

SK TRCK#109929073 0037459764 0003148609 0639 27

1)ERG#128

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: STEVE ADAMS — Signature: [signature] — Month 09 Day 27 Year 01

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: GREGORY S [illegible] — Signature: [signature] — Month 09 Day 27 Year 01

Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: KURT [illegible] — Signature: [signature] — Month 9 Day 27 Year 01

DESIGNATED FACILITY TO GENERATOR

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

COR0016000

7-148-01

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	ORD087458196	1	1-800-468-1760	00142341 5 SKS

GENERATOR

5. Generator's Name and Mailing Address
CONOCOPHILLIPS
5328 NW DOANE AVE
PORTLAND OR 97210
Generator's Phone: 503-248-1558

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: SAFETY-KLEEN SYSTEMS, INC. U.S. EPA ID Number: TXR000050930

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address: SAFETY-KLEEN SYSTEMS, INC. 714801
16540 SE 130TH AVE BLDG B
CLACKAMAS OR 97015
Facility's Phone: 503-657-7033
U.S. EPA ID Number: ORD981766124

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. WASTE COMBUSTIBLE LIQUID, N.O.S. (PETROLEUM NAPHTHA) NA1993 PGIII RQ(D001)	1	DM	15	G	D001 D018 D039 D040
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information SK TRCK#110038259 0037751188 0003148669 0847 27
1)ERG#128

SEE ATTACHMENT

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: R F Taylor III Signature: R F Taylor II Month: 11 Day: 18 Year: 08

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Gregory S Dawson Signature: Gregory S Dawson Month: 11 Day: 18 Year: 08

Transporter 2 Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name R. Peterson Signature Day: 18 Year: 08

NERATOR

COR0016830

12-30 PD

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number ORD087452196	2. Page 1 of 1	3. Emergency Response Phone 1-352-323-6316	4. Manifest Tracking Number 000634973 JJK

GENERATOR

5. Generator's Name and Mailing Address: 5525 N W Doane, Portland, OR 97210 — CONOCOPHILLIPS

Generator's Site Address (if different than mailing address): CONOCOPHILLIPS, 5525 N W Doane, Portland, OR 97210

Generator's Phone: (503) 242-1546 (503) 242-1546

6. Transporter 1 Company Name: Cowlitz Clean Sweep (360) 423-6316 — U.S. EPA ID Number: WAD000818641

7. Transporter 2 Company Name: Burlington Environmental Transportation (253) 383-3011 — U.S. EPA ID Number: WAD000817411

8. Designated Facility Name and Site Address: Burlington Environmental Inc., 20215 72nd Ave. South, Kent, WA 98032 — (253) 872-8080 — U.S. EPA ID Number: WAD981260787

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. UN1993 Waste Flammable Liquids N O S, PGII	1	DM	.50	G P	D001		
	2. UN1404 Waste Calcium Hydride, 4.3 PGII Unwanted partially used lab reagent	1	DM	.75	P	D001	D003	
	3. Material Not Regulated By DOT 1% Solution Boric Acid	1	DF	.50	G			
	4.							

14. Special Handling Instructions and Additional Information

9a1: Approval # CCSTWS3-08 9a2: Approval # 323041-00 9a3: Approval 3036.00

9a1: ERG 128 9a2: ERG 138

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: STEVEN ADAMS — Signature: Steven Adams — Month 10 Day 01 Year 08

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brad Rutherford — Signature: Brad Rutherford — Month 10 Day 01 Year 08

Transporter 2 Printed/Typed Name: Bob Boyd — Signature: Bob Boyd — Month 10 Day 12 Year 08

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H141 2. H141 3. H141 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name Signature Month 10 Day 17 Year 08

COP0016840

#3

ATTACHMENT TO HAZARDOUS WASTE MANIFEST #: D00634973 Page: 1 of 1

LABPACK / COMMERCIAL PRODUCT PACK Drum #: 1 Drum Type/Size _____ Project # _____ Date: _____

Generator: Conoco Phillips Profile #: CCSIWS3-00

EPA ID#: ORD087458196 DOT Proper Shipping Name: UN1993 Waste Flammable Liquid N.O.S. 3 PGII

Constituents: _____ (circle RQ constituent, otherwise specify): _____

Haz. Class: 3 Add. Label: _____ DOT ID# 1993 Packing Group: II RQ= _____ lb. Approval: _____

State Codes: (circle all applicable) WL01 WL02 Other Codes: _____

A	B	C 1	C 2	C 3	D 1	D 2	D 3	E.	F.	G.	H.	I.
		DOT			EPA		State					DOT
Item #	Description (chemical and physical)	haz. class (sub. haz. class)	ID #	Packing Group	Waste Code	Sub. Cat.	Waste Code	Gas / Solid / Liquid	# of Cont.	Container Type / Size	Waste Amount	ERCLA RQ (lb)
1	Cyclohexanol	3	1993	I	D001			L	2	GL/500ml	1L	
2	Ethyl Acetate	3	1173	II	D001			L	1	GL/1L	1L	
3	Petroleum Distillates	3	1268	II	D001			L	1	GL/100mL	100ml	
4	Ethanol	3	1170	II	D001			L	1	GL/100ml	100ml	
5	Toluene	3	1294	II	D001			L	1	GL/200ml	200ml	

REVISED

For all labpacks with RCRA codes, use LDR Form LP.

The following wastes are excluded from 40 CFR 268.42(c) alternative treatment standard (NCIN) per Appendix IV and will require form EZ: D009, F019, K0033-6, K062, K071, K100, K106, P010-12, P076, P078, U134.

Note: All RCRA labpacks must meet 40 CFR 264.316 and 265.316.
DOT's labpack exemption (49 CFR 173.12) includes only Class 3, 4.1, 4.2, PGII, III, 4.3, 5.1, 6.1, PGII, III, 8 or 9, transported by highway only.
Only the same hazard class can be packaged in an outer package (drum). Inner packages must be < = 5.3 gallons in metal or plastic.
The following hazardous materials are excluded from DOT's labpack exemption: 6.1 PG I, 4.2 PG 1, bromine pentafluoride, bromine trifluoride, chloric acid, and fuming sulfuric acid.

ass, PL = plastic, CB = cardboard, CBT = CB tube, P = paper G = gallon, QT = quart, PT = pint, L = liter, ml = milliliter, lb = pound, oz = ounce, g = gram

COP0016841

Please print or type: (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number ORD087458196	2. Page 1 of 1	3. Emergency Response Phone 1-888-423-6316	4. Manifest Tracking Number 005379534 JJK

GENERATOR

5. Generator's Name and Mailing Address: 5528 N.W Doane, Portland, OR 97210 — CONOCOPHILLIPS
Generator's Site Address (if different than mailing address): CONOCOPHILLIPS, 5528 N.W Doane, Portland, OR 97210
Generator's Phone: (503) 248-1548 (503) 248-1548

6. Transporter 1 Company Name: Cowlitz Clean Sweep (360)423-6316 — U.S. EPA ID Number: WAH000014944

7. Transporter 2 Company Name: Burlington Environmental LLC (253)383-3044 — U.S. EPA ID Number: WAR000001743

8. Designated Facility Name and Site Address: Burlington Environmental Inc. 20245 77th Ave. South Kent, WA 98032 (253)872-8030 — U.S. EPA ID Number: WAD991281767
Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1993, Waste Flammable Liquids,3 N.O.S. (Hexane) PGII	1	DM	33	G	D001
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
9b1: Approval # 330041-03
9b1: ERG#: 128
9b1: RQ= 100 Lbs.

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Steven Adams — Signature: Steven Adams — Month 11 Day 19 Year 08

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Brad Rutherford — Signature: Brad Rutherford — Month 11 Day 19 Year 08
Transporter 2 Printed/Typed Name: Martin D. Flindt — Signature: Mart D. Flindt — Month 11 Day 19 Year 08

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Adele Fish — Signature: [signature] — Month 12 Day 2 Year 08

COP0016842

Waste Received Summary

Reportable Waste Only

Generator 46829 CONOCO PHILLIPS
Site Address 5528 N.W. DOANE ST
PORTLAND, OR 97210
Epa Id ORD087458196

Profile # 330041-03 Name of Waste SPENT HEXANE Form W219
DW / EHW DW Source G01
EPA Codes D001 Origin 1
StateCodes Sp Grav 0.8
Wste Catgs AF01 AF02
TrtMCodes H061 H050

Manifests Received at TSDF BURLINGTON ENVIRONMENTAL, LLC. - KENT FACILITY Initial System Code H061
EPA Id WAD991281767 Final System Code H050

Received	Manifest #		Receipt #	Pounds	Recycle %
10/16/2008	000634964JJK	1	KNT-5115M	200.16	
12/02/2008	005379534JJK	1	KNT-7909M	220.17	
	Subtotal for TSDF and System Code			420.33	0

Profile # 349837-02 Name of Waste LEAD PAINT CHIPS AND DEBRIS Form W002
DW / EHW DW Source G06
EPA Codes D008 Origin 1
StateCodes Sp Grav 1.35
Wste Catgs STAB02
TrtMCodes H111 H132

Manifests Received at TSDF BURLINGTON ENVIRONMENTAL, LLC. - KENT FACILITY Initial System Code H111
EPA Id WAD991281767 Final System Code H132

2007 Waste Reported in '07 →

Received	Manifest #		Receipt #	Pounds	Recycle %
01/08/2008	000634807JJK	1	KNT-5193J	180.00	
08/27/2008	000634941JJK	1	KNT-1703M	1,300.00	
	Subtotal for TSDF and System Code			1,480.00	0

Profile # 372421-00 Name of Waste WASTE HEXANE AND METHANOL Form W211
DW / EHW DW Source G13
EPA Codes D001 F003 Origin 1
StateCodes Sp Grav 0.8
Wste Catgs AF01 AF02 AF03 AF04
TrtMCodes H061 H050

Manifests Received at TSDF BURLINGTON ENVIRONMENTAL, LLC. - KENT FACILITY Initial System Code H061
EPA Id WAD991281767 Final System Code H050

Received	Manifest #		Receipt #	Pounds	Recycle %
02/04/2008	000634832JJK	1	KNT-7083J	153.45	
04/16/2008	000634885JJK	1	KNT-2119K	200.16	
07/09/2008	000634925JJK	1	KNT-7662K	220.17	
	Subtotal for TSDF and System Code			573.79	0

Waste Received Summary

Reportable Waste Only

Generator 46829 CONOCO PHILLIPS
Site Address 5528 N.W. DOANE ST
PORTLAND, OR 97210
Epa Id ORD087468196

Profile # 374143-00 Name of Waste INK AND INKWASH (SOLVENT) Form W209
DW / EHW DW Source G13
EPA Codes D001 D007 F003 Origin 1
StateCodes Sp Grav 1
Wste Catgs AF01 AF02 AF03 AF04
TrtMCodes H061 H050

Manifests Received at TSDF BURLINGTON ENVIRONMENTAL, LLC. - KENT FACILITY Initial System Code H061
EPA Id WAD991281767 Final System Code H050

Received	Manifest #		Receipt #	Pounds	Recycle %
03/24/2008	000634558JJK	1	KNT-0311K	5.00	

Profile # 393041-00 Name of Waste CALCIUM HYDRIDE Form W409
DW / EHW DW Source G11
EPA Codes D001 D003 Origin 1
StateCodes Sp Grav 1.7
Wste Catgs INC15
TrtMCodes H141 H040

Manifests Received at TSDF BURLINGTON ENVIRONMENTAL, LLC. - KENT FACILITY Initial System Code H141
EPA Id WAD991281767 Final System Code H040

Received	Manifest #		Receipt #	Pounds	Recycle %
10/16/2008	000634973JJK	2	KNT-5114M	1.00	

Profile # CCSIWS3-00 Name of Waste FLAMMABLE LIQUIDS CLASS 3 Form W001
DW / EHW DW Source G12
EPA Codes D001 Origin 2
StateCodes Sp Grav 0.9
Wste Catgs AF06 AF07 INC14
TrtMCodes H061 H050

Manifests Received at TSDF BURLINGTON ENVIRONMENTAL, LLC. - KENT FACILITY Initial System Code H061
EPA Id WAD991281767 Final System Code H050

Received	Manifest #		Receipt #	Pounds	Recycle %
10/16/2008	000634973JJK	1	KNT-5114M	7.50	

** Generator Waste Stream Total 2,487.63 lbs

Safety - Klein

H141 initial cash

Drums to holding tank then to Dalton - Illinois

↳ recycled Solvent

H020

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin, OR 97062
Tel: (503) 691-2030
Fax:(503) 692-7074

Stantec

l e t t e r o f t r a n s m i t t a l

attention: Mr. Eric DeBerry date: January 21, 2009

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922 Permit No.: 500.015

re: Discharge Monitoring Report (DMR) – January 2009

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of Stantec Consulting Corporation (Stantec) on January 15, 2009. A grab sample (labeled EFFLUENT) was collected at the treated effluent sample port (1A) on the process piping directly into laboratory-prepared containers. The sample containers were sealed, labeled, entered into Stantec's chain-of-custody, placed in a cooler with ice, and transported to a licensed analytical laboratory. The effluent samples were analyzed for: HEM Oil and Grease by U.S. Environmental Protection Agency (EPA) Method 1664; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B. Laboratory analysis was performed by TestAmerica Laboratories in Beaverton, Oregon. A copy of the laboratory analytical report and completed chain-of-custody documentation is attached. Additionally, the effluent was tested for pH on site using a portable meter (Extech Instruments PH100).

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015., dated October 2, 2007. The attached DMR is being submitted as the self-monitoring report. All parameters monitored were found to be within the limits listed in the facility's discharge permit.

If you have any questions regarding the enclosed DMR, please feel free to contact the undersigned at (503) 691-2030.

signators:	Norman Swanson	Rick Fetterly, PE
titles:	Staff Scientist	Senior Project Manager

NS/RF:dc

cc: Mike Noll, DXT SERVICES Inc., Snohomish, WA
Grant Sprick, ARCADIS, Portland, OR

COP0016846

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: Feb 15, 2009

SAMPLING PERIOD: January 2009

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
1/15/2009	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664	ND mg/L	4.76	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	Field Meter	6.55 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 0005 (BTE) 0.001 (X)	0.75 mg/L	N/A	
Totalized Reading	Field	37,131,728		NA	N/A	Field Reading 483,100

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 1/23/09

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210
ORELAP#: OR100021

January 20, 2009

Rick Fetterly
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 01/15/09 15:10. The following list is a summary of the Work Orders contained in this report, generated on 01/20/09 17:20.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PSA0447	Portland Terminal	0922 - ConocoPhillips

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	01/20/09 17:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFFLUENT	PSA0447-01	Water	01/15/09 11:15	01/15/09 15:10

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	01/20/09 17:20

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL^A	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PSA0447-01 (EFFLUENT)			**Water**			**Sampled: 01/15/09 11:15**				
Benzene	EPA 8021B	ND	-----	0.500	ug/l	1x	9010550	01/19/09 15:05	01/19/09 23:07	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*81.0%*		*70 - 130 %*	"			"

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	01/20/09 17:20

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL^	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PSA0447-01 (EFFLUENT)			**Water**				**Sampled: 01/15/09 11:15**			
Oil & Grease	EPA 1664	ND	-----	4.76	mg/l	1x	9010521	01/19/09 16:00	01/19/09 16:20	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	01/20/09 17:20

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 9010550 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9010550-BLK1)													Extracted: 01/19/09 15:05	
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	01/19/09 21:20	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 81.4%*			*Limits: 70-130%*	"							*01/19/09 21:20*	
LCS (9010550-BS1)													Extracted: 01/19/09 15:05	
Benzene	EPA 8021B	15.6	---	0.500	ug/l	1x	--	20.0	77.9%	(75-125)	--	--	01/19/09 20:27	
Toluene	"	16.6	---	0.500	"	"	--	"	82.9%	(80-120)	--	--	"	
Ethylbenzene	"	17.5	---	0.500	"	"	--	"	87.4%	(80-130)	--	--	"	
Xylenes (total)	"	53.3	---	1.00	"	"	--	60.0	88.8%	"	--	--	"	
o-Xylene	"	17.6	---	1.00	"	"	--	20.0	87.9%	"	--	--	"	
m,p-Xylene	"	35.7	---	1.00	"	"	--	40.0	89.2%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 93.2%*			*Limits: 70-130%*	"							*01/19/09 20:27*	
LCS Dup (9010550-BSD1)													Extracted: 01/19/09 15:05	
Benzene	EPA 8021B	17.6	---	0.500	ug/l	1x	--	20.0	88.0%	(75-125)	12.2%	(20)	01/19/09 20:53	
Toluene	"	18.5	---	0.500	"	"	--	"	92.4%	(80-120)	10.9%	"	"	
Ethylbenzene	"	19.5	---	0.500	"	"	--	"	97.5%	(80-130)	10.9%	"	"	
Xylenes (total)	"	58.8	---	1.00	"	"	--	60.0	98.1%	"	9.94%	"	"	
o-Xylene	"	19.4	---	1.00	"	"	--	20.0	97.2%	"	10.0%	"	"	
m,p-Xylene	"	39.4	---	1.00	"	"	--	40.0	98.5%	"	9.90%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 83.3%*			*Limits: 70-130%*	"							*01/19/09 20:53*	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	01/20/09 17:20

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 9010521 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	%REC	(Limits)	%RPD	(Limits)	Analyzed	Notes
Blank (9010521-BLK1)								Extracted: 01/19/09 14:00						
Oil & Grease	EPA 1664	ND	---	5.00	mg/l	1x	--	--	--	--	--	--	01/19/09 16:20	
LCS (9010521-BS1)								Extracted: 01/19/09 14:00						
Oil & Grease	EPA 1664	37.3	---		mg/l	1x	--	40.0	93.2%	(78-114)	--	--	01/19/09 16:20	
Matrix Spike (9010521-MS1)					QC Source: PSA0169-01			Extracted: 01/19/09 14:00						
Oil & Grease	EPA 1664	42.6	---		mg/l	1x	4.42	40.0	95.4%	(78-114)	--	--	01/19/09 16:20	
Matrix Spike Dup (9010521-MSD1)					QC Source: PSA0169-01			Extracted: 01/19/09 14:00						
Oil & Grease	EPA 1664	42.9	---		mg/l	1x	4.42	40.0	96.2%	(78-114)	0.702%	(18)	01/19/09 16:20	

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	01/20/09 17:20

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland

Estella K Rieben

Estella Rieben, Project Manager

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TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503.906.9200 fax 503.906.9210

Chain of Custody Record

PSP0447

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Rick Fetterly	Site Contact: Norman Swanson	Date: 1-15-09	COC No:
Stantec Consulting Corporation	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier: TA	1 of 1 COCs
7730 SW Mohawk St	Analysis Turnaround Time			Job No
Tualatin, OR 97062	Calendar (C) or Work Days (W)			
(503) 691-2030 Phone	TAT if different from Below 3 Days			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to Stantec, do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664)	BTEX (EPA Method 8021B)	Sample Specific Notes:
EFFLUENT	1-15-09	1115	G	WW	5		X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
Rick.Fetterly@Stantec.com, Norman.Swanson@Stantec.com, and Robert.Lund@Stantec.com

Totalizer Reading: 483,100

pH by field meter: 6.55

Please send results to:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Stantec	1-15-09 1305		TAP	1-15-09 1305
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAP	1-15-09 1510		TAP	1/15/09 1510
Relinquished by:	Company:	Date/Time	Received by:	Company:	Date/Time

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8

TestAmerica Sample Receipt Checklist

Cooler ID(s):

Received by: *(section A)*
Date: 1/15/09
Time: 1510
Initials: BJE

Unpacked by: *(section B)*
Date: 1/15/09
Initials: BJE

Logged-in by:
Date: 1/15/09
Initials: BJE

Work Order No: PSA00447
Client: Stantec
Project: Portland Terminal

Temperature out of range:
___Not enough Ice
___No Ice
___Ice Melted
___W/in 4 Hours
___Other:

***ESI Clients *(see Section C)*

Digi #1
Digi #2

Cooler Temperature (IR): 3.9 °C plastic (glass) NA *(oil/air samples, ESI client)*

Temperature Blank: _____ °C

A

Custody Seals: (#___)

Signature: Y N Dated: _____

X None

Container Type:
1 #Cooler(s)
___#Box(s)
___None (___#Other:_____)

Coolant Type:
___Gel Ice
X Loose Ice
___None

Packing Material:
X Bubble Bags
___Styrofoam Cubbies
___Peanuts
___None (___Other:_____)

Received from:
X TA Courier
___Senvoy
___UPS
___Fed Ex
___Client
___TDP
___DHL
___SDS
___Mid-Valley
___GS/TA
___GS/Senvoy
___Other:
_____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	(Y)	N	
# Containers Match COC?	(Y)	N	none given
IDs Match COC?	(Y)	N	
For Analyses Requested:			
Cyanide Checked?	Y	N	(NA)
Correct Type & Preservation?	(Y)	N	
Adequate Volume?	(Y)	N	
Within Hold Time?	(Y)	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	(Y)	N	NA
TB on COC? (not provided)	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	(NA)
Dissolved Metals Filtered?	Y	N	(NA)

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided Digi: # 1 #2

All preserved bottles checked Y N NA *(voas/soils/all unp.)*
All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments: _____

PM Reviewed: _____ *(Initial/Date)*

COP00168569

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin, OR 97062
Tel: (503) 691-2030
Fax:(503) 692-7074

Stantec

letter of transmittal

attention: Mr. Eric DeBerry date: February 20, 2009

company: Industrial Source Control Division
Water Pollution Control

address: 6543 N. Burlington Avenue
Portland, OR 97203-5452

project: ConocoPhillips (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal

job no.: 15CP.00922 Permit No.: 500.015

re: Discharge Monitoring Report (DMR) – February 2009

enclosed:

( )	Proposal	( )	As Requested
( )	Contract	( )	Review
(X)	Report	(X)	Your Information
( )	Letter	( )	Approval
( )	Other:	( )	Signature
		( )	Return
		( )	Other:

Mr. DeBerry:

Water samples were collected by a representative of Stantec Consulting Corporation (Stantec) on February 16, 2009. A grab sample (labeled EFFLUENT) was collected at the treated effluent sample port (1A) on the process piping directly into laboratory-prepared containers. The sample containers were sealed, labeled, entered into Stantec's chain-of-custody, placed in a cooler with ice, and transported to a licensed analytical laboratory. The effluent samples were analyzed for: HEM Oil and Grease by U.S. Environmental Protection Agency (EPA) Method 1664; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B. Laboratory analysis was performed by TestAmerica Laboratories in Beaverton, Oregon. A copy of the laboratory analytical report and completed chain-of-custody documentation is attached. Additionally, the effluent was tested for pH on site using a portable meter (Extech Instruments PH100).

The monitoring was conducted in accordance with the City of Portland Industrial Wastewater Discharge Permit No. 500.015., dated October 2, 2007. The attached DMR is being submitted as the self-monitoring report. All parameters monitored were found to be within the limits listed in the facility's discharge permit.

If you have any questions regarding the enclosed DMR, please feel free to contact the undersigned at (503) 691-2030.

signators: Norman Swanson
titles: Staff Scientist

Rick Fetterly, PE
Senior Project Manager

NS/RF:dc

cc: Ed Ralston, Conoco Phillips, Risk Management and Remediation, Sacramento, CA
Grant Sprick, ARCADIS, Portland, OR

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CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: Tosco/Chevron Remediation Site

PERMIT NUMBER: 500.015

REPORT DUE DATE: March 15, 2009

SAMPLING PERIOD: February 2009

For Industrial Source Control Division Use Only

Date Postmarked/Received **Date Entered**

Entered By:

Comments:

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
2/16/2009	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) [1]	EPA 1664	ND mg/L	4.76	N/A	N/A	
HEM Oil and Grease (Non-Polar)	APHA/EPA			110 mg/L	N/A	
HEM Oil and Grease (Polar)	APHA/EPA				N/A	
pH	Field Meter	6.42 SU		5.0 – 11.5	N/A	
BTEX	EPA 8021B	ND mg/L	0. 0005 (BTE) 0.001 (X)	0.75 mg/L	N/A	
Totalized Reading	Field	37,886,728		NA	N/A	Field Reading 1,238,100

1 If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____ Date: 3/4/09

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210
ORELAP#: OR100021

February 19, 2009

Rick Fetterly
Stantec
7730 SW Mohawk Street
Tualatin, OR 97062

RE: Portland Terminal

Enclosed are the results of analyses for samples received by the laboratory on 02/16/09 15:15. The following list is a summary of the Work Orders contained in this report, generated on 02/19/09 16:48.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
PSB0438	Portland Terminal	0922 - ConocoPhillips

TestAmerica Portland

Vanessa Frahs

Vanessa Frahs For Estella Rieben, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	02/19/09 16:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Effluent	PSB0438-01	Water	02/16/09 13:10	02/16/09 15:15

TestAmerica Portland

Vanessa Frahs

Vanessa Frahs For Estella Rieben, Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	02/19/09 16:48

BTEX per EPA Method 8021B

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PSB0438-01 (Effluent)			Water			Sampled: 02/16/09 13:10				
Benzene	EPA 8021B	ND	—	0.500	ug/l	1x	9020518	02/17/09 11:02	02/19/09 02:24	
Toluene	"	ND	—	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	—	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	—	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB (PID)				*83.8%*		*70 - 130 %*	"			"

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	02/19/09 16:48

Oil and Grease Analysis per EPA Method 1664

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PSB0438-01 (Effluent)			**Water**			**Sampled: 02/16/09 13:10**				
Oil & Grease	EPA 1664	ND	—	4.76	mg/l	1x	9020564	02/18/09 17:00	02/19/09 12:10	

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Vanessa Frahs For Estella Rieben, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	02/19/09 16:48

BTEX per EPA Method 8021B - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 9020518 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9020518-BLK1)									Extracted: 02/17/09 11:02					
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	---	---	---	---	---	---	02/18/09 21:57	
Toluene	"	ND	---	0.500	"	"	---	---	---	---	---	---	"	
Ethylbenzene	"	ND	---	0.500	"	"	---	---	---	---	---	---	"	
Xylenes (total)	"	ND	---	1.00	"	"	---	---	---	---	---	---	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 86.7%*		*Limits: 70-130%*	"								*02/18/09 21:57*	
LCS (9020518-BS1)									Extracted: 02/17/09 11:02					
Benzene	EPA 8021B	17.8	---	0.500	ug/l	1x	---	20.0	89.0%	(75-125)	---	---	02/18/09 20:37	
Toluene	"	18.5	---	0.500	"	"	---	"	92.4%	(80-120)	---	---	"	
Ethylbenzene	"	19.0	---	0.500	"	"	---	"	95.2%	(80-130)	---	---	"	
Xylenes (total)	"	58.0	---	1.00	"	"	---	60.0	96.7%	"	---	---	"	
o-Xylene	"	19.1	---	1.00	"	"	---	20.0	95.7%	"	---	---	"	
m,p-Xylene	"	38.9	---	1.00	"	"	---	40.0	97.2%	"	---	---	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 102%*		*Limits: 70-130%*	"								*02/18/09 20:37*	
Matrix Spike (9020518-MS1)							QC Source: PSB0393-05		Extracted: 02/17/09 11:02					
Benzene	EPA 8021B	230	---	0.500	ug/l	1x	221	20.0	42.4%	(65-144)	---	---	02/19/09 07:15	M2
Toluene	"	20.6	---	0.500	"	"	3.76	"	84.0%	(70-135)	---	---	"	
Ethylbenzene	"	18.8	---	0.500	"	"	2.78	"	80.1%	(65-145)	---	---	"	
Xylenes (total)	"	57.6	---	1.00	"	"	6.10	60.0	85.8%	(60-145)	---	---	"	
o-Xylene	"	20.1	---	1.00	"	"	1.55	20.0	92.5%	"	---	---	"	
m,p-Xylene	"	37.5	---	1.00	"	"	4.55	40.0	82.5%	"	---	---	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 126%*		*Limits: 70-130%*	"								*02/19/09 07:15*	
Matrix Spike Dup (9020518-MSD1)							QC Source: PSB0393-05		Extracted: 02/17/09 11:02					
Benzene	EPA 8021B	235	---	0.500	ug/l	1x	221	20.0	71.7%	(65-144)	2.53%	(20)	02/19/09 07:42	
Toluene	"	21.3	---	0.500	"	"	3.76	"	87.9%	(70-135)	3.78%	"	"	
Ethylbenzene	"	20.4	---	0.500	"	"	2.78	"	88.0%	(65-145)	8.10%	"	"	
Xylenes (total)	"	61.9	---	1.00	"	"	6.10	60.0	93.0%	(60-145)	7.16%	"	"	
o-Xylene	"	21.0	---	1.00	"	"	1.55	20.0	97.0%	"	4.38%	"	"	
m,p-Xylene	"	40.9	---	1.00	"	"	4.55	40.0	90.9%	"	8.62%	"	"	
Surrogate(s): 4-BFB (PID)		*Recovery: 129%*		*Limits: 70-130%*	"								*02/19/09 07:42*	

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Vanessa Frahs

Vanessa Frahs For Estella Rieben, Project Manager

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	02/19/09 16:48

Oil and Grease Analysis per EPA Method 1664 - Laboratory Quality Control Results

TestAmerica Portland

QC Batch: 9020564 **Water Preparation Method: O&G prep CE**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (9020564-BLK1)							Extracted: 02/18/09 15:00							
Oil & Grease	EPA 1664	ND	--	5.00	mg/l	1x	--	--	--	--	--	--	02/19/09 12:10	
LCS (9020564-BS1)							Extracted: 02/18/09 15:00							
Oil & Grease	EPA 1664	38.0	--		mg/l	1x	--	40.0	95.0%	(78-114)	--	--	02/19/09 12:10	
Matrix Spike (9020564-MS1)					QC Source: PSB0253-01		Extracted: 02/18/09 15:00							
Oil & Grease	EPA 1664	28.2	--		mg/l	1x	1.33	40.0	67.2%	(78-114)	--	--	02/19/09 12:10	M8
Matrix Spike Dup (9020564-MSD1)					QC Source: PSB0253-01		Extracted: 02/18/09 15:00							
Oil & Grease	EPA 1664	29.2	--		mg/l	1x	1.33	40.0	69.7%	(78-114)	3.48%	(18)	02/19/09 12:10	M8

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Stantec	Project Name:	**Portland Terminal**	
7730 SW Mohawk Street	Project Number:	0922 - ConocoPhillips	Report Created:
Tualatin, OR 97062	Project Manager:	Rick Fetterly	02/19/09 16:48

Notes and Definitions

Report Specific Notes:

M2 - The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

M8 - The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Vanessa Frahs

Vanessa Frahs For Estella Rieben, Project Manager

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PSB0438

TestAmerica Portland
9405 SW Nimbus Avenue

Beaverton, OR 97008
phone 503 906 9200 fax 503.906 9210

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Rick Fetterly	Site Contact: Norman Swanson	Date:	COC No:
Stantec Consulting Corporation	Tel/Fax: (503) 691-2030	Lab Contact: Estella Rieben	Carrier:	____ of ____ COC's
7730 SW Mohawk St	Analysis Turnaround Time			Job No.
Tualatin, OR 97062	Calendar (C) or Work Days (W) ____			
(503) 691-2030 Phone	TAT if different from Below ___3 Days ___			SDG No.
(503) 692-7074 FAX	☐ 2 weeks			
Project Name: 0922 Portland Terminal	☐ 1 week			
Site:0922	☐ 2 days			
P O # Direct bill to Stantec, do not send invoice to CP	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	HEM Oil and Grease (EPA Method 1664)	BTEX (EPA Method 8021B)
EFFLUENT	2/11/09	13:10	G	WW	4		X	X

Sample Specific Notes:

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ■

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

Totalizer Reading: 1,233,100

pH by field meter: 6.42

Please send results to: Rick.Fetterly@Stantec.com, Norman.Swanson@Stantec.com, and Robert.Lund@Stantec.com

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Stantec	2/10/09 1355		TAT	2/11/09 @ 13:55
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAT	2/11/09 @ 15:05		TAT	2/11/09 @ 15:05
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

COP0016866

TestAmerica Sample Receipt Checklist

Received by: *(section A)*
Date: 2/16/09
Time: 1515
Initials: BLE

Unpacked by: *(section B)*
Date: 2/16/09
Initials: BLE

Logged-in by:
Date: 2/16/09
Initials: BLE

Work Order No. PSB0438
Client: Stantec
Project: Portland Terminal

Temperature out of range:
___Not enough Ice
___No Ice
___Ice Melted
___W/in 4 Hours
___Other:_____

***ESI Clients *(see Section C)*

Digi #1
Digi #2

Cooler Temperature (IR): 7.1 °C plastic glass NA *(oil/air samples, ESI client)*

Temperature Blank: _____ °C

A

Custody Seals: (#___)

Signature: Y N Dated:_____
X None

Container Type:
1 #Cooler(s)
___#Box(s)
___None (___#Other:_____)

Coolant Type:
___Gel Ice
X Loose Ice
___None

Packing Material:
X Bubble Bags
___Styrofoam Cubbies
___Peanuts
___None (___Other:_____)

Received from:
X TA Courier
___Senvoy
___UPS
___Fed Ex
___Client
___TDP
___DHL
___SDS
___Mid-Valley
___GS/TA
___GS/Senvoy
___Other:
_____

B

Sample Status:
(If N circled, see NOD)

General:			
Intact?	Y	N	
# Containers Match COC?	Y	N	none given
IDs Match COC?	Y	N	
For Analyses Requested:			
Cyanide Checked?	Y	N	NA
Correct Type & Preservation?	Y	N	
Adequate Volume?	Y	N	
Within Hold Time?	Y	N	
HF Dilution Required?	Y	N	
Volatiles/ Oil Quality:			
VOAs/ Syringes free of Headspace?	Y	N	NA
TB on COC? not provided	Y	N	NA
Metals:			
HNO3 Preserved?	Y	N	NA
Dissolved Metals Filtered?	Y	N	NA

C

***ESI Clients Only:

Temperature Blank: _____ °C not provided Digi: # 1 #2

All preserved bottles checked Y N NA *(voas/soils/all unp.)*
All preserved accordingly? Y N *(see NOD)* NA *(voas/soils/all unp.)*

FED EX/ UPS: Was the tracking paper keepable? YES NO

If circled NO, what is the Tracking number? _____

FED EX Goldstreak UPS DHL Other: _____

Project Managers:

Comments:_____

*PM Reviewed:*_____ *(Initial/Date)*

COP0016867

Incident ID: 92813

Short Description:	Portland Product Terminal - Oil Found in Seperator 2 [E]
Responsible Dept\Unit:	Terminals : Terminals - West Coast Division : Portland Product Terminal
Incident Type:	Incident
Status:	Closed
Potential Risk Rating:	I - Low

General

Responsible Supervisor:	STEVEN KOBER
High Learning Value Event Status:	Not Reviewed for HLVE
Location:	
Specific Location:	Lift Station 1
Date Occurred: (mm/dd/yyyy)	2/24/2009 6:00:00 AM
Date Reported: (mm/dd/yyyy)	2/25/2009 6:00:00 AM
Date Entered:	2/25/2009 7:17:19 AM (GMT-08:00)
REPORTEDBY:	STEVEN KOBER
Incident Description:	At 0600 hrs, A Portland operator noticed oil in storm-water oil/water separator 2 that is jointly shared by the Tacoma Lubricants Plant and the CPPL Portland Refined Products Terminal. As this separator would not ordinarily have oil in it an investigation was started to discover the cause. It was discovered that after the pump in lift station 1 was started to transfer water to separator 2 a maintenance technician found a ball valve that is used to prevent line freeze was left open and closed the valve. It is estimated that approximately three gallons of oil was floating in separator two. The separator was emptied by vacuum truck and steam cleaned. Three drums of stained gravel were removed from the area of the valve and clean gravel put down. An investigation is underway to determine if a recent lube oil spill allowed oil to enter the drain to lift station one. Notifications were made to the Portland Environmental Coordinator, Area Supervisor and the District Director.
Weather:	Rain
Lighting:	Day
Address:	5528 NW Doane Ave.
City:	Portland
Country:	United States
Zip/Postal Code:	97210
Entered By:	KOBER, STEVEN
Immediate Actions Taken:	The separator was emptied by vacuum truck and steam cleaned. Three drums of stained gravel were removed from the area of the valve and clean gravel put down. An investigation is underway to determine if a recent lube oil spill allowed oil to enter the drain to lift station one. Notifications were made to the Portland Environmental Coordinator, Area Supervisor and the District Director.

Sub Types

Check All That Apply:	General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Environmental Expert

Name	Response
VALERIE UYEDA	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Sewer: Process Sewer	NO	

People

Contractor Involvement : No Data is Available

		Consequence Number						
Name	Employee Type	Injury / Illness	Property	Transportation	Security	Quality	Environmental	
CUSTER, COLLEEN	Employee						15967 Open View	

Witnesses

Name	Employee,Contractor,or Other	Phone
Matthew Paul	COP Employee	503-248-1531

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
15967 Open View	Environmental	...	CUSTER, COLLEEN G	Closed

Pending Consequences : No Data is Available

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

Summary

Equipment:	1
Employees:	1
Contractors:	None
Witnesses:	1
Investigations:	None

COP0016869

Stantec Consulting Corporation
7730 Southwest Mohawk Street
Tualatin OR 97062
Tel: (503) 691-2030
Fax: (503) 692-7074

March 12, 2009

Grant V. Sprick, P.E. (OR)
Senior Project Manager
ARCADIS
111 SW Columbia Street, Suite 725
Portland, Oregon 97201

Brett Hunter
Chevron

Subject: 0922 Portland Terminal Transition – Recommendations and Lessons learned by Stantec during Sheen Monitoring and GWET System Operation

Stantec has prepared this document to assist Arcadis/Chevron with the transition of responsibility for the ConocoPhillips (CoP) Portland Terminal dock area. The document summarizes the general tasks and areas of responsibility in the dock area and summarizes Stantec/CoP's efforts to date in these areas. The intent of this document is to provide Arcadis/Chevron with sufficient information and site history to be able to independently address typical occurrences in the CoP dock area.

Sheen Monitoring and Response

At present, Outfall 22 is checked on a daily basis for sheen. The following sections describe the outfall and containment area and Stantec's responses to sheen events.

Outfall 22 Description

Outfall 22 is located just southeast of the CoP Willbridge Terminal facility dock at river mile (RM) 7.5. Outfall #22 is a 60-inch diameter concrete storm sewer discharging to Willbridge Cove on the Willamette River; it receives storm water discharges from the CoP Portland Terminal and the Chevron U.S.A. Inc. (Chevron) Willbridge Terminal via feeder storm water sewers, as well as from several other sources located along NW St. Helens Road, NW Doane Avenue, and NW Front Street.

Containment Area Description

The outfall end of the storm water pipe is enclosed by several sets of floating containment (outer) and absorbent (inner) booms, which have been maintained by CoP as a precautionary measure to preclude any release of fugitive oily sheens to the river. The outer booms are constructed of hard plastic and were most recently replaced in August 2008. The hard booms are periodically adjusted based on fluctuations in the river stage elevation in order to ensure complete contact with the water surface. Adjustment of the hard booms requires a small skiff provided by a contractor. The softer absorbent inner booms were most recently replaced following sheen events in mid-January of 2009. Inner booms are typically replaced following each major sheen event.

Sheen Events and Responses

Between January 2008 and January 2009, Stantec reported and responded to a total of 15 sheen events at Outfall 22. Following the initial observation of sheen, Stantec contacted the following entities:

- National Response Center (NRC)/U.S. Coast Guard – 1-800-424-8802
- Oregon Department of Environmental Quality (ODEQ) – 503-823-7180
- Oregon Spill Response Center (OSR) – 1-800-452-0311
- Arcadis/Chevron – Grant Sprick – 503-220-8201

The preceding contact information is contained in a flow chart that was revised to replace Stantec/CoP with Arcadis/Chevron. The revised flow chart was submitted to Arcadis and Chevron on February 11, 2009. **In the event of any future sheen events on CoP property, Arcadis should contact Rick Fetterly of Stantec at 503-612-2505 following notifications to NRC, ODEQ and OSR**.

Net samples of the sheen were collected for each sheen event. Samples were usually collected at Outfall 22 and at least one point upstream of Outfall 22 (usually Manhole 77). Net samples were submitted to TDI Brooks Laboratories of College Station, Texas for forensic analyses.

For each sheen event, the degree of response depended on the type and extent of sheen. Smaller sheen plumes with a darker, heavier appearance were often absorbed by the placement of absorbent pads. For sheens that have extended well beyond the shore or outside of containment, the services of a cleanup contractor equipped with a skiff to access the sheen were required. Lighter, rainbow-colored sheens were not easily absorbed by pads, however, the sheens dissipated rapidly following a period of extended sunlight.

Complete documentation of Stantec's sheen responses and sheen analytical results are presented in Stantec's Sheen Response Reports to be submitted separately.

GWET System Overview

The existing groundwater extraction and treatment (GWET) system was designed in June 2001 to: (1) remove separate-phase product (SPH) and petroleum-impacted groundwater in the vicinity of a 60-inch concrete storm sewer (whose discharge point to the Willamette River is City of Portland Outfall 22) and former 27-inch wood stave storm sewer; and (2) maintain a constant water table elevation upgradient of cutoff walls installed at the outfalls of both storm sewers. Groundwater is extracted from up to 11 recovery and extraction wells (RWs and EWs), each equipped with a pneumatic submersible pump. Extracted total fluids (both SPH and petroleum-impacted groundwater) are pumped to the GWET system for treatment using one oil/water separator (OWS) and 2-3 liquid-phase 1,800- to 2,000-pound (lb.) granular activated carbon (GAC) vessels operated in series. The remedial system also includes a 100-gallon (gal) product recovery tank, a 200-gal batch water tank, and a 2000-gal cone bottom tank (CBT). Treated water is discharged to the City of Portland sanitary sewer system for ultimate treatment at the Columbia Boulevard Publicly Owned Treatment Works (POTW). Wastewater discharge permit number 500.015 was issued by City of Portland Bureau of Environmental Services (BES) for the "CoP (Formerly Tosco)-Chevron Remediation Site, Willbridge Terminal".

In accordance with the requirements of BES permit number 500.015, Stantec/CoP has been completing monthly sampling of the GWET system effluent and completing a monthly Discharge Monitoring Report (DMR) prepared by Stantec and signed by an appropriate representative of CoP. As part of the dockside transition, Stantec collected the February 2009 GWET effluent sample under Arcadis' observation and at the time of this writing has completed a draft of the February 2009 DMR. BES was contacted regarding the transfer of responsibilities for the GWET system to Arcadis and provided a form to be completed by

Arcadis/Chevron to transfer the permit. Following completion and submittal of the permit transfer form, Arcadis has agreed to assume responsibility for the GWET sampling and DMR completion beginning in March 2009.

GWET System Maintenance Issues

Iron Fouling

The GWET system is susceptible to iron fouling resulting from oxidation that may be exacerbated by introduction of compressed air into the pneumatic submersible pumps. The fouling may be reduced if the system is modified to extract groundwater without the assistance of compressed air. Chemical reagents are also available that may reduce the extent of iron fouling.

Stantec/CoP recommends a bench pilot test be conducted of any proposed chemical reagent to ensure the pH of the treated stream is within parameters defined by the discharge permit.

The iron fouling impacts both the carbon vessels and the pneumatic submersible pumps hindering the GWET system efficiency and performance. Carbon vessels typically require backflushing every other day. The need for backflushing can be determined by reading the pressure gauges on the carbon vessels. Freshly backflushed carbon results in carbon vessel pressures of approximately 10-20 pounds per square inch (psi). The carbon vessels should be backflushed when the pressure approaches 40-50 psi. The carbon vessels are rated for a maximum pressure of 75 psi. The vessels are equipped with high pressure alarms that activate in the operations control center when the pressure exceeds 60 psi. Current terminal operating procedures prescribe contacting Stantec field personnel in the event of a high pressure alarm.

- **Recommendation**: As the transition progresses, the procedures should be modified to prescribe contacting Arcadis/Chevron personnel. In addition, Arcadis/Chevron personnel should become familiar with the CoP terminal operations center, personnel and alarm locations.

Pneumatic Submersible Pump Issues

Each RW/EW is equipped with an appropriately sized pneumatic submersible pump. All pumps are manufactured by QED Environmental who has been a sole source provider of pumps for the terminal. Air is supplied to the pneumatic submersible pumps from a compressor located inside the CoP terminal property. Operation of the compressor is controlled solely by terminal personnel and the GWET system is not equipped with valves or other devices to regulate the flow or pressure of the compressed air. Stantec/CoP recommends discussions with CoP terminal personnel to allow for a method of compressor control that is accessible to Arcadis personnel in the event that the existing treatment system continues to operate for an extended period of time.

The pneumatic submersible pumps are susceptible to fouling from iron and soils and are typically removed from the RW/EWs and cleaned on a weekly basis. The RW/EWs on the Chevron side are located inside vaults that meet the Occupational Safety and Health Administration (OSHA) definition of a confined space so multiple personnel are required on days when the pumps are removed.

Complete specifications for the pneumatic submersible pumps will be provided to Arcadis in separate correspondence.

Reference: 0922 Portland Terminal Transition

December 2008 Freeze Issues

In the early morning hours of December 15, 2008, the outside air temperature dropped to below 20 degrees Fahrenheit resulting in extensive freeze damage to several GWET system components including flow meters, valves and metal connecting pipes. All of these damaged components were replaced; however, the potential for additional freeze damage exists in the event that temperatures again drop well below freezing and the GWET system remains situated in its current outdoor location.

Upgrade Recommendations

Given the overall age of the system and the documented problems with iron fouling, climate issues and submersible pump maintenance, a system upgrade is highly recommended.

- Iron fouling can be reduced by either employing an extraction method that does not require compressed air or by chemical additives.
- Submersible pump access issues can be addressed by employing a method to control each extraction point centrally such as a liquid ring pump. As a liquid ring pump does not depend on compressed air for operation, the potential for iron fouling may also be reduced.
- Freeze damage can be reduced by locating the upgraded system inside the asphalt shed located immediately to the south of the existing treatment compound.

Stantec and CoP appreciate the opportunity to assist Arcadis and Chevron with this transition. Please feel free to contact the undersigned if you have any comments or concerns.

Sincerely,
STANTEC CONSULTING CORPORATION

Rick Fetterly, P.E.
Senior Project Manager

FEF/ald

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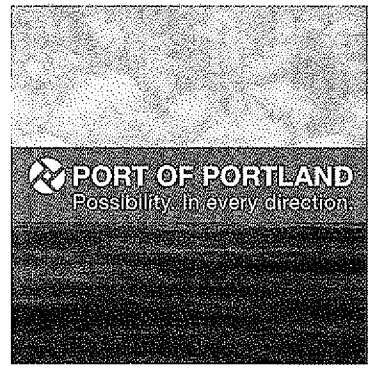

March 16, 2009

Chicago Title Insurance Company
Attn: Cheryle Stahel-Eastman
1210 SW Fifth, Suite 2130
Portland, Oregon 97204

VIA MESSENGER

Re: Sale by Port of Portland to
ConocoPhillips Company
Escrow No. 50-460518-CE

Dear Cheryle:

The Port of Portland (the "**Port**") has entered into an agreement for the sale of property to ConocoPhillips Company (the "**Buyer**"). The terms of the purchase and sale are set forth in the enclosed Purchase and Sale Agreement effective March 16, 2009 between the Port and Buyer (the "**Agreement**"), a copy of which is attached for your reference.

The property is located in the city of Portland, Multnomah County, Oregon (the "**Property**") and is more particularly described in your Second Supplemental Preliminary Title Report Order No. 460518 (the "**Title Report**").

You are asked to open an escrow account and act as escrow agent to effect the consummation of the purchase transaction in accordance with the terms and conditions of the Agreement and the closing instructions which I will send to your attention within the next week. Pursuant to the Agreement, the Buyer will be depositing earnest money of $39,000 with Chicago Title Insurance Company within three (3) days of execution of the Agreement. The Buyer's lease of the Property is paid through March 31, 2009, and closing of the sale should occur before the lease expires on April 9, 2009.

Our ConocoPhillips Company contact for this transaction is:

Stephen Matthews
Property Tax, Real Estate, Right of Way & Claims
3900 Kilroy Airport Way, Suite 210
Long Beach, CA 90806
Phone: 562-290-1517
Facsimile No.: 562-290-1580
Email: Stephen.E.Matthews@conocophillips.com

121 NW Everett Portland OR 97209
Box 3529 Portland OR 97208
503 944 7000

Printed on 100% recycled stock

If you have any questions, do not hesitate to call me. Thank you for your assistance with this transaction.

Sincerely,

Debra Crawford, Property Manager
Port of Portland
Phone: (503) 944-7536
Fax: (503) 944-7466
Email: debra.crawford@portofportland.com

Enclosures

cc: Juli Killgore, Port
Stephen Matthews, ConocoPhillips

2009-024

SALE AGREEMENT AND RECEIPT FOR EARNEST MONEY

BETWEEN

THE PORT OF PORTLAND

AND

CONOCOPHILLIPS COMPANY

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PORT OF PORTLAND
and
CONOCOPHILLIPS COMPANY

SALE AGREEMENT AND RECEIPT FOR EARNEST MONEY

This SALE AGREEMENT AND RECEIPT FOR EARNEST MONEY ("**Sale Agreement**"), dated March 16, 2009 ("**Effective Date**"), is by and between THE PORT OF PORTLAND, a port district of the State of Oregon (the "**Port**"), and CONOCOPHILLIPS COMPANY, a corporation organized under the laws of the State of Delaware and authorized to do business in Oregon ("**Buyer**").

AGREEMENT

1. SALE AND PURCHASE

1.1 Description of Property

Buyer agrees to purchase from the Port and the Port agrees to sell to Buyer, on the terms and conditions set forth in this Sale Agreement, a parcel of land consisting of approximately TWO and SEVENTY HUNDRETHS (2.70) acres (approximately 117,522 square feet), together with all improvements located thereon, located along the Willamette River on the northwest corner of Doane Avenue and Front Avenue in the City of Portland, Multnomah County, Oregon, in the area commonly known as the Tanker Basin, as described and shown on Port Drawing WR 2008-1 attached hereto as **Exhibit A** (the "**Property**").

1.2 Submersible Land

The Port and Buyer acknowledge that, due to historical filling in this area of the Willamette River, including the filling of a historical slough, there is a dispute between the Port and the Oregon Department of State Land ("**DSL**") regarding the ownership of the submersible land off the Property ("**Submersible Land**"). The Port will work diligently with DSL to attempt to resolve this issue of ownership. In the event any portion of the Submersible Land is determined to contain contamination that is made part of the Portland Harbor Superfund Site In-water Liabilities defined in Section 1.8 and is not addressed as a Pre-existing Hazardous Substance Release pursuant to Section 1.7, the parties reserve their rights with respect to current or future claims as set forth in Section 1.8.

1.3 Purchase Price

The total purchase price for the Property is conclusively agreed by the parties to be SEVEN HUNDRED EIGHTY THOUSAND DOLLARS ($780,000.00) ("**Purchase Price**").

1.4 Existing Lease; Buyer's Use of the Property

Buyer currently leases the Property from the Port pursuant to that certain Standard Ground Lease dated April 10, 1989, Port Agreement #89-035, between the Port and Union Oil Company of California dba Unocal (predecessor of Buyer) (as amended, the "**Lease**"). Buyer operates on the Property a fuel dock and facility for receiving, handling, storing, and distributing petroleum products, including limited maintenance and storage (the "**ConocoPhillips Facility**").

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It is contemplated that Buyer shall continue to operate the ConocoPhillips Facility following the Closing (defined in Section 4). The parties acknowledge that in the event that Closing occurs, the Lease shall be terminated effective on the Closing Date (defined in Section 4). However, in the event the transaction contemplated in this Sale Agreement is not completed and Closing does not occur, the Lease shall remain in full force and effect and continue to be binding upon the parties in accordance with its terms.

1.5 DSL Rights

Without limiting the scope of the Port's obligations in Section 1.2, Buyer acknowledges that DSL may require the owner of the Property to take action or enter into an agreement with DSL for the use of the wharf and any other Buyer improvements within that area adjacent to the Property consisting of DSL-owned riverbed in the Willamette River. Buyer shall be solely responsible at its cost for meeting any such obligations.

1.6 Property Condition and Release of Claims

The Port makes no warranties or representations regarding the condition of the Property, including, without limitation, its environmental condition or the suitability of the Property for Buyer's intended uses. Buyer acknowledges that up to the Effective Date of this Sale Agreement Buyer leased the Property from the Port pursuant to the Lease, that Buyer has constructed and operates the improvements on the Property and the associated improvements located on adjacent submerged and submersible lands of the Willamette River, including without limitation a fuel dock and buildings, tanks, pipelines, maintenance and storage facilities for receiving, handling, storing, and distributing Hazardous Substances (as defined in Section 1.7), and a sheetpile retaining wall, and that Buyer, as successor in interest, has continuously occupied and controlled the use of the Property since April 9, 1928. Buyer has inspected and accepts the Property, including all improvements located on the Property, in their **"AS-IS" "WHERE-IS"** condition as of the date of Closing. Buyer assumes and releases the Port with respect to all risks of the condition of the Property, known and unknown, including without limitation any Hazardous Substance Releases (as defined in Section 1.7) on the Property. The Port shall have no liability to Buyer and Buyer shall have no claim against the Port, for any loss, damage or injury caused by the condition of the Property. The Port hereby specifically disclaims any warranty, guarantee or representation, oral or written, either past, present, or future, of, as to, or concerning the nature and/or condition of the Property, including, without limitation, environmental condition; soil and geology of the Property; zoning of the Property; inspections or testing of the Property; land use restrictions, permitting, or governmental approvals relating to the Property or any portion thereof; boundaries and acreage of the Property; availability of utilities and services; access rights, the Property's compliance with laws, regulations, ordinances, permits or codes; the suitability of the Property for any structure which Buyer may construct thereon; and the condition, suitability, or fitness for a particular purpose (whether or not known to the Port) of any improvement or other property located on the Property; and the ability to obtain any permits which may be required to use, develop, occupy, rehabilitate or otherwise modify the Property. Without limiting the generality of the foregoing and without creating any representations or warranties concerning the Property, the Port hereby notifies Buyer that the Property may be beneath the flood plain of the Willamette River, may be located upon an earthquake fault, may consist, in whole or in part, of land created from river dredged materials (which may or may not have sufficiently settled to allow any form of improvement), and that Hazardous Substance Releases exist at and in the vicinity of the Property, and Buyer accepts all risk, loss and liability associated with such

conditions. The provisions of this Section 1.6 shall survive Closing and shall not merge into the Deed (defined in Section 8). The provisions of this Section 1.6 shall not apply to the Portland Harbor Superfund Site In-water Liabilities and the parties' reservation of rights with respect to current or future claims set forth in Section 1.8 below.

1.7 Upland Hazardous Substance Releases

Buyer acknowledges that it has been and is in the process of performing remedial investigation and remedial actions regarding Hazardous Substance Releases to, on, under or from the Property under the supervision of the Oregon Department of Environmental Quality ("**DEQ**") and with the involvement of the United States Environmental Protection Agency, including the environmental work located in part on the Submersible Land (the "**Pre-existing Hazardous Substance Releases**"). For purposes of this Sale Agreement, "**Hazardous Substance Releases**" means the spilling, discharge, deposit, injection, dumping, emitting, releasing, placing, leaking, migrating, leaching, and seeping of any Hazardous Substance into the air or into or on any land, sediment or waters, except any release in compliance with Environmental Laws (defined below) and/or specifically authorized by a current and valid permit issued under Environmental Laws with which Buyer is in compliance at the time of such release, but not including within the exception any such release in respect of which the State of Oregon has determined that application of the State's Hazardous Substance removal and remedial action rules might be necessary in order to protect public health, safety or welfare, or the environment. For purposes of this Sale Agreement, "**Hazardous Substance**" means any and all substances, pollutants, contaminants, materials or products defined or designated as hazardous, toxic, radioactive, dangerous or regulated wastes or materials or any other similar term in or under any applicable Environmental Laws. For purposes of this Sale Agreement, "**Environmental Laws**" means any and all federal, State of Oregon, regional and local laws, regulations, rules, permit terms, codes, ordinances and legally enforceable guidance documents, now or hereafter in effect, as the same may be amended from time to time, and applicable decisional law, which govern materials, substances, regulated wastes, emissions, pollutants, water, storm water, ground water, wellfield and wellhead protection, cultural resources protection, animals or plants, noise, or products and relate to the protection of health, safety or the environment and natural resources, including land, sediments, water, groundwater, and stormwater.

1.8 Portland Harbor Superfund Site In-water Liabilities

The Property and the Submersible Land are within or adjacent to the Willbridge Cove area off the Portland Harbor Superfund Site which is undergoing a remedial investigation and feasibility study under a Settlement and Administration Order on Consent for Remedial Investigation and Feasibility Study dated April 27, 2006 (the "**SAOC**"), which both Buyer and the Port have signed, and in respect of which designated natural resource trustees have determined that natural resource damages have occurred that warrant assessment and restoration and/or compensatory damages (the "**NRDA Claims**") (collectively herein the "**Portland Harbor Superfund Site In-water Liabilities**"). The parties reserve any current or future claims they have or may have against each other with regard to the Portland Harbor Superfund Site In-water Liabilities, including but not limited to any claims regarding costs incurred by the parties in implementing the SAOC and in responding to the NRDA Claims, and any claims for removal, remediation or restoration of the Hazardous Substance Releases in the Portland Harbor Superfund Site, but specifically excluding the Pre-existing Hazardous Substance Releases addressed in Section 1.7. The parties acknowledge, however, that they will consider in good

faith use of a harborwide non-judicial allocation process among potentially responsible parties to resolve any liabilities they might have to each other in respect of the Portland Harbor Superfund Site In-water Liabilities that might relate to the Willbridge Cove area off the Property.

1.9 Environmental Indemnity

Buyer agrees to defend (using legal counsel reasonably acceptable to the Port),, indemnify, and hold harmless the Port from and against and reimburse the Port for any and all Environmental Costs (defined below), which may be imposed upon, claimed against, or incurred or suffered by the Port, associated with a claim by a third party, that arise from or are in any way connected with the environmental condition of the Property, including the Pre-existing Hazardous Substance Releases, except for any Environmental Costs or claims resulting from a Hazardous Substance Release deposited on the Property by the Port or the Port's agents. Buyer represents after diligent inquiry that as of the Effective Date of this Sale Agreement it is not aware of any such Environmental Costs or claims resulting from a Hazardous Substance Release deposited on the Property by the Port or the Port's agents. For purposes of this Sale Agreement, "**Environmental Costs**" means damages, costs, fines and fees and expenses arising from or related to any Hazardous Substance Release, including but not limited to any costs arising out of (i) any claimed violation of or non-compliance with Environmental Laws; (ii) any claim of third parties, including government agencies for relief under Environmental Laws; (iii) any claim for preliminary or final injunctive relief; (iv) any claim for any costs of agency oversight, investigation, removal, source control, remedial action, restoration of Hazardous Substance Releases; and (v) any claim for expenses of obligations incurred before, at and after any administrative or civil trial or appeal therefrom, whether or not taxable as costs, including without limitation, attorneys' and paralegal fees, witness fess (expert or otherwise), deposition costs, copying, telephone and telefax charges and document management costs and expenses. The provisions of this Section 1.9 shall survive Closing and shall not merge into the Deed. The provisions of this Section 1.9 will not apply to the Portland Harbor Superfund Site In-water Liabilities and the parties' reservation of rights with respect to current and future claims set forth in Section 1.8 above.

1.10 Permit for Interim Remedial Action Work

The Port and Buyer acknowledge being parties to that certain "Permit for Interim Remedial Action Work and Agreement for Easement" between the State of Oregon (by and through DSL), the Port, Buyer, and Chevron U.S.A. Inc., dated July 13, 2005 ("Permit"). To the extent the Permit may apply to any portion of the Property, or the Submersible Land, that is a part of or affected by the Pre-existing Hazardous Substance Releases identified in Section 1.7, the Port shall not be responsible for the remedial actions contemplated by the Permit and shall be indemnified in respect thereof pursuant to Section 1.9. In the event the Permit may apply to any portion of the Property that is part of or affected by the Portland Harbor Superfund Site In-water Liabilities, it shall be subject to the parties' reservation of rights with respect to current and future claims set forth in Section 1.8 above.

2. EARNEST MONEY

Within three (3) Business Days (defined in Section 27) following execution of this Sale Agreement by both parties, Buyer shall deposit with Chicago Title Insurance Company of Oregon, located at 888 SW Fifth Avenue, Suite 930, Portland, Oregon 97204 ("**Escrow Agent**") cash earnest money in the amount of THIRTY-NINE THOUSAND DOLLARS ($39,000)

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("**Earnest Money**"). The parties agree that the Earnest Money will be deposited in an interest-bearing account which provides no penalty for immediate withdrawal. The Earnest Money and interest accruing thereon shall be credited to the Purchase Price at Closing. In the event Closing does not occur, the Earnest Money and accumulated interest shall be disbursed in accordance with the provisions of Sections 7 and 14 of this Sale Agreement. At Closing, Buyer shall also deliver to the Escrow Agent and the Port, an incumbency certificate for all signatory persons of Buyer and certified copies of any resolutions of Buyer necessary to authorize this Sale Agreement and all required closing documents.

3. PAYMENT OF PURCHASE PRICE

At Closing, Buyer shall pay by immediately available funds the remaining Purchase Price due, after credit for Earnest Money and interest earned thereon is given. In addition to the Purchase Price, Buyer agrees to pay Buyer's share of Closing costs, pursuant to Section 4 of this Sale Agreement.

4. CLOSING

For purposes of this Sale Agreement, "**Close**," "**Closing**," or "**Closed**" shall mean the date on which all of the necessary documents have been deposited with the Escrow Agent and the Escrow Agent has: a) disbursed the full amount of the Purchase Price to the Port; b) recorded, on behalf of Buyer, the Deed referred to in Section 8 for the Property; c) issued or authorized the issuance of the Title Insurance Policy and seller's policy referred to in Section 11; and (d) complied with all other escrow instructions of the Port and Buyer imposed as a condition of Closing. Closing shall occur no later than April 9, 2009 ("**Closing Date**") unless extended by mutual agreement of the parties. This Sale Agreement shall be Closed in the offices of the Escrow Agent. Each party will pay one-half (1/2) of the escrow fee. Buyer shall also pay any recording fees and other Closing costs normally attributable to a buyer, and title insurance premiums shall be paid for between the parties as provided in Section 11. Buyer and the Port shall deliver a fully-executed copy of this Sale Agreement to the Escrow Agent. At or prior to Closing, the Port shall also deliver to the Escrow Agent and Buyer, certified copies of the Port of Portland Commission resolutions authorizing this Sale Agreement and all required closing documents. Buyer and the Port hereby authorize their respective attorneys to execute and deliver to the Escrow Agent any additional or supplemental escrow instructions as may be necessary or convenient to implement the terms of this Sale Agreement and to Close this transaction. In the event of any conflict between such additional or supplemental escrow instructions and the express terms of this Sale Agreement, the terms of this Sale Agreement shall control.

5. PRELIMINARY TITLE REPORT; ENCUMBRANCES

Buyer acknowledges that Buyer has received a copy of the Second Supplemental Preliminary Title Report issued by the Escrow Agent, dated as of February 2, 2009, Order No. 460518, showing the condition of the title to the Property, attached hereto as **Exhibit B** ("**Preliminary Title Report**"), together with copies of all exception documents. Buyer is responsible for determining and verifying the existence of all improvements, encroachments, and encumbrances on the Property, including without limitation those that may or may not be described in this Sale Agreement or the Preliminary Title Report.

6. CONTINGENCIES OF SALE

The following contingencies of sale (each a "**Contingency**" or collectively, "**Contingencies**") must be satisfied or waived not later than the Closing Date or such earlier date as is otherwise indicated below, unless such dates are extended by mutual agreement of the parties.

6.1 Acceptance of Preliminary Title Report

Within thirty (30) days after the Effective Date of this Sale Agreement, Buyer shall have approved or disapproved title to the Property as shown in the Preliminary Title Report. Unless Buyer gives written notice to the Port, on or before the expiration of such thirty-day period, that any of the exceptions listed in the Preliminary Title Report are not acceptable to Buyer ("Title Objections"), Buyer shall be deemed to have accepted the Preliminary Title Report and this contingency shall be deemed waived. If Buyer notifies the Port of any Title Objections, the Port, within ten (10) calendar days thereafter shall notify Buyer in writing whether the Port will cause the Title Objections to be removed at or prior to Closing. If the Port fails to respond to the Buyer's notice of Title Objections, or the Port fails to agree to remove all Title Objections, the Buyer shall have the right to terminate this Sale Agreement within ten (10) calendar days after the Port's ten-day period to respond. The Buyer's failure to terminate this Sale Agreement within such ten-day period shall be deemed a waiver of such Title Objections. The general exceptions in the Preliminary Title Report, together with all special exceptions in the Preliminary Title Report not objected to by the Buyer (or objected to but then waived by Buyer as provided in this Section 6.1), and any matters created or suffered by Buyer, collectively are hereinafter referred to as the "**Permitted Encumbrances.**"

6.2 No Default

No uncured "default" or "event of default," as such terms are defined in the Lease, shall exist under the Lease as of the Closing Date, unless waived by the nondefaulting party in writing.

7. WAIVER/SATISFACTION OF CONDITIONS

The Contingency set forth above in Section 6.1 may be waived only by Buyer. The Contingency set forth in Section 6.2 may be waived only by the nondefaulting party. Unless the Contingencies are satisfied or waived within the time limits as set forth above, this Sale Agreement shall terminate without liability to either party. In the event this Sale Agreement is terminated on the basis of the failure of a Contingency as stated above, and Buyer is not in default under this Sale Agreement, the Earnest Money (together with the interest thereon) shall be refunded to Buyer, and neither party shall have any further liability under this Sale Agreement, except any liabilities which are specifically stated to survive termination.

8. DEED

At Closing, the Port shall execute and deliver to Buyer a Special Warranty Deed ("**Deed**") in substantially the form set forth in **Exhibit C** conveying the Property to Buyer, subject to the Permitted Encumbrances.

9. TAXES

There shall be no proration of taxes, as Buyer is currently responsible for all taxes on the Property as the "Lessee" under the Lease. Buyer shall have full responsibility for payment of all property taxes which accrue on the Property, whether before or after Closing. Buyer is responsible for investigating all tax matters at its own expense, determining all necessary filing

and qualification requirements, meeting all necessary filing due dates, and meeting all other regulatory requirements.

10. RENT

The rent paid under the Lease shall be prorated between the parties, as of the date of Closing, based on a thirty (30)-day month pursuant to the terms of the Lease.

11. TITLE INSURANCE

At Closing, the Port shall authorize the Escrow Agent to issue Buyer a standard (or extended, if Buyer so elects) owner's policy of standard title insurance, insuring the vesting of fee title to the Property in Buyer in the amount of the Purchase Price, subject only to the Permitted Encumbrances ("**Title Insurance Policy**"). The Port will pay the premium for a standard owner's title insurance policy. Buyer shall pay the additional premium charged for extended title insurance coverage, any special endorsements, and any costs associated with obtaining such coverage, such as completing an ALTA survey or other survey work, if Buyer desires to obtain extended title insurance coverage. The Port may obtain, at its option and expense, simultaneous seller's title insurance in the same amount, including a survey endorsement.

12. REPRESENTATIONS AND WARRANTIES OF BUYER

In addition to any other covenants, representations, or warranties of Buyer contained in this Sale Agreement, the following constitute representations and warranties of Buyer to the Port:

12.1 Legal Authority

Buyer has the legal power, right, and authority to enter into this Sale Agreement and the instruments referred to in this Sale Agreement and to consummate the transactions contemplated in this Sale Agreement.

12.2 Corporate Action

All requisite action (corporate, limited liability company, trust, partnership, or otherwise) has been taken by Buyer in connection with entering into this Sale Agreement and the instruments referred to in this Sale Agreement and with the consummation of the transactions contemplated herein. No further consent of any partner, shareholder, board of directors, members, creditor, investor, judicial or administrative body, governmental authority, or other party is required.

12.3 Authorized Agent

The persons executing this Sale Agreement and the instruments referred to in this Sale Agreement on behalf of Buyer have the legal power, right, and actual authority to bind Buyer to the terms and conditions of this Sale Agreement.

12.4 Binding Obligations

This Sale Agreement and all documents required by it to be executed by Buyer are and shall be valid and legally binding obligations of Buyer and shall be enforceable against Buyer and, to the extent permitted by Section 15, Buyer's successors in interest, in accordance with their terms.

12.5 No Conflict

Neither the execution and delivery of this Sale Agreement and documents referred to herein, nor the incurring of the obligations set forth in this Sale Agreement, nor the consummation of the transactions contemplated, nor compliance with the terms of this Sale Agreement and the documents referred to herein conflict with or result in the material breach of any terms, conditions, or provisions of or constitute a default under any bond, note, or other evidence of indebtedness or any contract, indenture, mortgage, deed of trust, loan, partnership agreement, lease, or other agreements or instruments to which Buyer is a party.

13. WARRANTIES OF THE PORT

In addition to any other covenants, representations, or warranties of the Port contained in this Sale Agreement, the following constitute representations and warranties of the Port to the Buyer:

13.1 Legal Authority

The Port has the legal power, right, and authority to enter into this Sale Agreement and the instruments referred to in this Sale Agreement and to consummate the transactions contemplated in this Sale Agreement.

13.2 Port Action

All requisite action has been taken by the Port in connection with entering into this Sale Agreement and the instruments referred to in this Sale Agreement and with the consummation of the transactions contemplated herein. No further consent of any judicial or administrative body, governmental authority, or other party is required.

13.3 Authorized Agent

The persons executing this Sale Agreement and the instruments referred to in this Sale Agreement on behalf of the Port have the legal power, right, and actual authority to bind the Port to the terms and conditions of this Sale Agreement.

13.4 Binding Obligations

This Sale Agreement and all documents required by it to be executed by the Port are and shall be valid and legally binding obligations of the Port and shall be enforceable against the Port and, to the extent permitted by Section 15, the Port's successors in interest, in accordance with their terms.

13.5 No Conflict

Neither the execution and delivery of this Sale Agreement and documents referred to herein, nor the incurring of the obligations set forth in this Sale Agreement, nor the consummation of the transactions contemplated, nor compliance with the terms of this Sale Agreement and the documents referred to herein conflict with or result in the material breach of any terms, conditions, or provisions of or constitute a default under any bond, note, or other evidence of indebtedness or any contract, indenture, mortgage, deed of trust, loan, lease, or other agreements or instruments to which the Port is a party.

14. DEFAULT/FAILURE TO CLOSE

If Closing does not occur as contemplated by this Sale Agreement due to a default by either party, the remedies of the parties shall be as specified below:

14.1 Default by the Port

In the event the sale does not Close by the Closing Date as a result of any default of this Sale Agreement by the Port, Buyer shall be entitled to a return of the Earnest Money, plus the interest thereon, and the Port shall pay all escrow fees. In such an event, this Sale Agreement shall terminate and neither party shall have any further rights or obligations under this Sale Agreement, except pursuant to any indemnity provisions which, by their nature, are intended to survive termination of this Sale Agreement. In the alternative, Buyer shall be entitled to sue the Port for specific performance but not for monetary damages.

14.2 Default by Buyer

In the event the sale does not Close by the Closing Date by reason of any default of this Sale Agreement by Buyer, Buyer and the Port agree that the Port shall be entitled to retain the Earnest Money, plus interest thereon, as liquidated damages, and Buyer shall pay all escrow fees. The Port and Buyer agree that it would be impractical and extremely difficult to estimate the damages that the Port may suffer. Therefore, Buyer and the Port agree that a reasonable estimate of the total damages that the Port would suffer in the event that Buyer defaults and fails to complete the purchase of the Property is and shall be an amount equal to the Earnest Money. In such an event, this Sale Agreement shall terminate and neither party shall have any further rights or obligations under this Sale Agreement, except pursuant to any indemnity provisions which, by their nature, are intended to survive termination of this Sale Agreement. Nothing contained in this Section shall apply post-Closing to any breach of this Sale Agreement by Buyer, nor shall anything herein be construed to limit in any way the Port's rights or Buyer's obligations under the Lease or any other agreements entered into between Buyer and the Port.

14.3 Liquidated Damages

With respect to the liquidated damages referenced in Section 14.2, the parties have specifically negotiated this amount of these damages. This amount shall be the full, agreed, and liquidated damages for the breach of this Sale Agreement by Buyer, and all other claims for money damages are expressly waived by the Port. The payment of this amount as liquidated damages is not intended as a forfeiture or penalty but is intended to constitute liquidated damages to the Port. Notwithstanding the foregoing, nothing herein shall be construed to limit in any way the Port's rights or Buyer's obligations under the Lease or any other agreements entered into between Buyer and the Port.

14.4 Default After Closing

The above Sections 14.1, 14.2, and 14.3 apply only to a default which causes the sale contemplated by this Sale Agreement not to Close. Should a default of any provision of this Sale Agreement occur after Closing, then the non-defaulting party shall have available to it, and shall be entitled to pursue against the defaulting party, all remedies available for breach of contract, both at law and in equity, including, but not limited to, money damages or equitable relief, such as specific performance, where specific performance is available.

15. NO THIRD-PARTY BENEFIT; NO ASSIGNMENT

Nothing in this Sale Agreement gives or shall be construed to give or provide any benefit, direct, indirect, or otherwise, to third parties. Neither this Sale Agreement nor any rights or interest hereunder may be assigned, pledged, or transferred by Buyer without the express written consent of the Port, which consent may be given or withheld in the Port's sole and absolute discretion.

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Neither this Sale Agreement nor any rights or interest hereunder may be assigned, pledged, or transferred by the Port without the express written consent of the Buyer, which consent may not be unreasonably withheld. Any assignment or attempted assignment without the other party's prior written consent shall be void. This provision shall apply to all transfers, including any that may occur by operation of law. Any change in ownership of the controlling interest in Buyer, whether through sale, exchange, merger, consolidation, reorganization, or other transfer, shall be deemed an assignment requiring the Port's consent.

16. LIKE-KIND EXCHANGE

The Port agrees to cooperate reasonably with Buyer if Buyer desires to structure this transaction to constitute a tax-deferred like-kind exchange ("**Exchange**") pursuant to Section 1031 of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder (the "**Code**"), provided that: (1) the Port shall not be required to incur any additional costs, expenses, fees, or liabilities as a result of or connected with the Exchange; (2) the Port shall not be required to acquire title to any property as the consequence of such Exchange; and (3) the Exchange will not delay or otherwise affect the Closing Date. Buyer will defend (using legal counsel acceptable to the Port), indemnify and hold the Port harmless from and against any and all liabilities, claims, demands, causes of action, damages, expenses, and costs incurred or suffered by Buyer, the Port, or any party, including without limitation attorney fees at trial and on appeal, arising out of or in any way related to the Exchange.

17. ATTORNEY FEES

If a suit, action, or other proceeding of any nature whatsoever (including without limitation any administrative proceeding and any proceeding under the U.S. Bankruptcy Code) is instituted in connection with any controversy arising out of this Sale Agreement or to interpret or enforce any rights or obligations hereunder, the prevailing party shall be entitled to recover attorney fees and all other fees, costs, and expenses actually incurred as reasonably necessary in connection therewith, as determined by the court at trial or on any appeal or review, in addition to all other amounts provided by law. Payment of all such fees and costs shall also apply to any administrative proceeding, trial, and/or any appeal or petition for review. Whenever this Sale Agreement requires Buyer to defend the Port, it is agreed that such defense shall be by legal counsel reasonably acceptable to the Port.

18. BROKERS

Buyer and the Port represent and warrant to one another that they have not dealt with any agent or broker in connection with this Sale Agreement, and each party hereby agrees to indemnify and hold harmless the other party from and against all damages, costs, and expenses (including attorney, accountant and paralegal fees) arising in connection with any claim of an agent or broker alleging to have been retained by the indemnifying party in connection with this transaction.

19. NOTICES

All notices required under this Sale Agreement shall be deemed to be properly served if sent by certified mail, return receipt requested, postage prepaid, or delivered by hand (including by overnight courier) to the last address previously furnished by the parties hereto. Until hereafter changed by the parties by notice in writing, notices shall be sent as follows:

To the Port at:

The Port of Portland
Property & Development Services
Attention: Debra Crawford
121 NW Everett
Portland, Oregon 97209
Phone: 503-944-7536
Fax: (503) 944-7466
Email: debra.crawford@portofportland.com

With copies to:

The Port of Portland
Legal Department
Attn: Juli Killgore
121 NW Everett
Portland, Oregon 97209
Phone: 503-944-7030
Fax: (503) 944-7038
Email: juli.killgore@portofportland.com

To Buyer at:

ConocoPhillips Company
Attn: Stephen Matthews
Property Tax, Real Estate, Right of Way & Claims
3900 Kilroy Airport Way, Suite 210
Long Beach, CA 90806
Phone: 562-290-1517
Facsimile No.: 562-290-1580
Email: Stephen.E.Matthews@conocophillips.com

With copies to:

ConocoPhillips Company
Attn: Betsy Learussa
Commercial Development & Asset Utilization Director
600 North Dairy Ashford- TA-02-2018
Houston, Texas 77079
Phone: 281-293-5042

And addressed to Escrow Agent as follows:

Chicago Title Insurance Company of Oregon
Pioneer Tower Commercial Office
Attn: Cheryle Stahel-Eastman

1211 SW Fifth Avenue Suite 2130
Portland OR 97204
Phone: 503-973-7410
Fax: 503-248-0324
Email: eastmanc@ctt.com

The date of service of such notice by mail is agreed to be three (3) days after the date such notice is deposited in a post office of the United States Post Office Department, certified mail, return receipt requested, postage prepaid or, if delivered by hand, then the actual date of hand delivery.

20. PERFORMANCE AND NON-WAIVER

Time is of the essence in the performance of the obligations set forth herein. No waiver of any breach of any covenant or provision contained herein shall be deemed a waiver of any preceding or succeeding breach thereof, or of any other covenant or provision herein contained. No extension of time for performance of any obligation or act shall be deemed an extension of the time of performance of any other obligation or act.

21. MODIFICATION

This Sale Agreement may not be modified or amended, except by the mutual written agreement of the parties, signed by both the Port and Buyer.

22. SURVIVAL; NO MERGER

The waivers, covenants, releases, indemnities, representations, obligations, and warranties contained in this Sale Agreement shall all survive the Closing and shall not merge into the Deed and the recordation of it in the official records.

23. SEVERABILITY

If any provision of this Sale Agreement is held to be invalid or unenforceable, the remainder of this Sale Agreement, or the application of such provision to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby, and each provision of this Sale Agreement shall be valid and enforceable to the fullest extent permitted by law.

24. HEADINGS AND TABLE OF CONTENTS

Section headings and the table of contents contained in this Sale Agreement are only for convenience in reference and are not intended to define or limit the meaning or scope of any provision of this Sale Agreement.

25. EXHIBITS INCORPORATED BY REFERENCE

All Exhibits cited in this Sale Agreement are incorporated by reference into this Sale Agreement for all purposes.

26. DEFINED TERMS

Capitalized terms shall have the meaning given them in the text of this Sale Agreement.

27. BUSINESS DAY

"Business Days" means Monday through Friday and shall exclude Saturday, Sunday and Legal Holidays. Unless referred to as Business Days, all periods of time referred to in this Sale

Agreement shall include Saturdays, Sundays, and Legal Holidays. However, if the last day of any period falls on a Saturday, Sunday, or Legal Holiday, then the period shall be extended to include the next day which is not a Saturday, Sunday or Legal Holiday. **"Legal Holiday"** shall mean any holiday observed by the Federal Government.

28. NO LIMIT ON PORT'S POWERS

Nothing in this Sale Agreement shall limit, in any way, the power and right of the Port to exercise its governmental rights and powers, including its powers of eminent domain.

29. GOVERNING LAW

This Sale Agreement shall be governed, construed and enforced in accordance with the laws of the State of Oregon.

30. ENTIRE AGREEMENT

This Sale Agreement and the agreements and exhibits referenced herein represent the entire agreement between the Port and Buyer relating to Buyer's purchase of the Property, and supersede all prior and contemporaneous agreements and communications regarding that subject. Buyer acknowledges that: (1) neither the Port nor the Port's agents or employees have made any representations or promises with respect to this Sale Agreement or the making or entry into this Sale Agreement, except as expressly set forth in this Sale Agreement; and (2) Buyer has no right to rely upon and has not relied upon any representation or promise not expressly set forth in this Sale Agreement. No claim for liability shall be asserted based on any claimed breach of any representations or promises not expressly set forth in this Sale Agreement. All oral agreements, if any, are void and expressly waived by Buyer. This Sale Agreement has been thoroughly negotiated between the parties; therefore, in the event of ambiguity, there shall be no presumption that such ambiguity should be construed against the drafter.

31. COUNTERPARTS

This Sale Agreement may be executed in several counterparts and all counterparts so executed shall constitute one Sale Agreement binding on the parties hereto. This Sale Agreement or any counterpart may be executed and delivered by facsimile transmission provided that an executed "hard copy" original follows promptly thereafter.

32. LAND USE

THE PROPERTY DESCRIBED IN THIS INSTRUMENT MAY NOT BE WITHIN A FIRE PROTECTION DISTRICT PROTECTING STRUCTURES. THE PROPERTY IS SUBJECT TO LAND USE LAWS AND REGULATIONS THAT, IN FARM OR FOREST ZONES, MAY NOT AUTHORIZE CONSTRUCTION OR SITING OF A RESIDENCE AND THAT LIMIT LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, IN ALL ZONES. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY

THE APPROVED USES OF THE LOT OR PARCEL, TO VERIFY THE EXISTENCE OF FIRE PROTECTION FOR STRUCTURES AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007.

IN WITNESS WHEREOF, the parties hereto have subscribed their names.

BUYER:

CONOCOPHILLIPS COMPANY

By: _____ JPW

As Its: S.A. Vincent, Manager-Commercial Development and Joint Ventures

APPROVED BY COMMISSION:

March 11, 2009
Date

SELLER:

THE PORT OF PORTLAND

By: _____

Bill Wyatt, Executive Director

APPROVED AS TO LEGAL SUFFICIENCY FOR THE PORT OF PORTLAND:

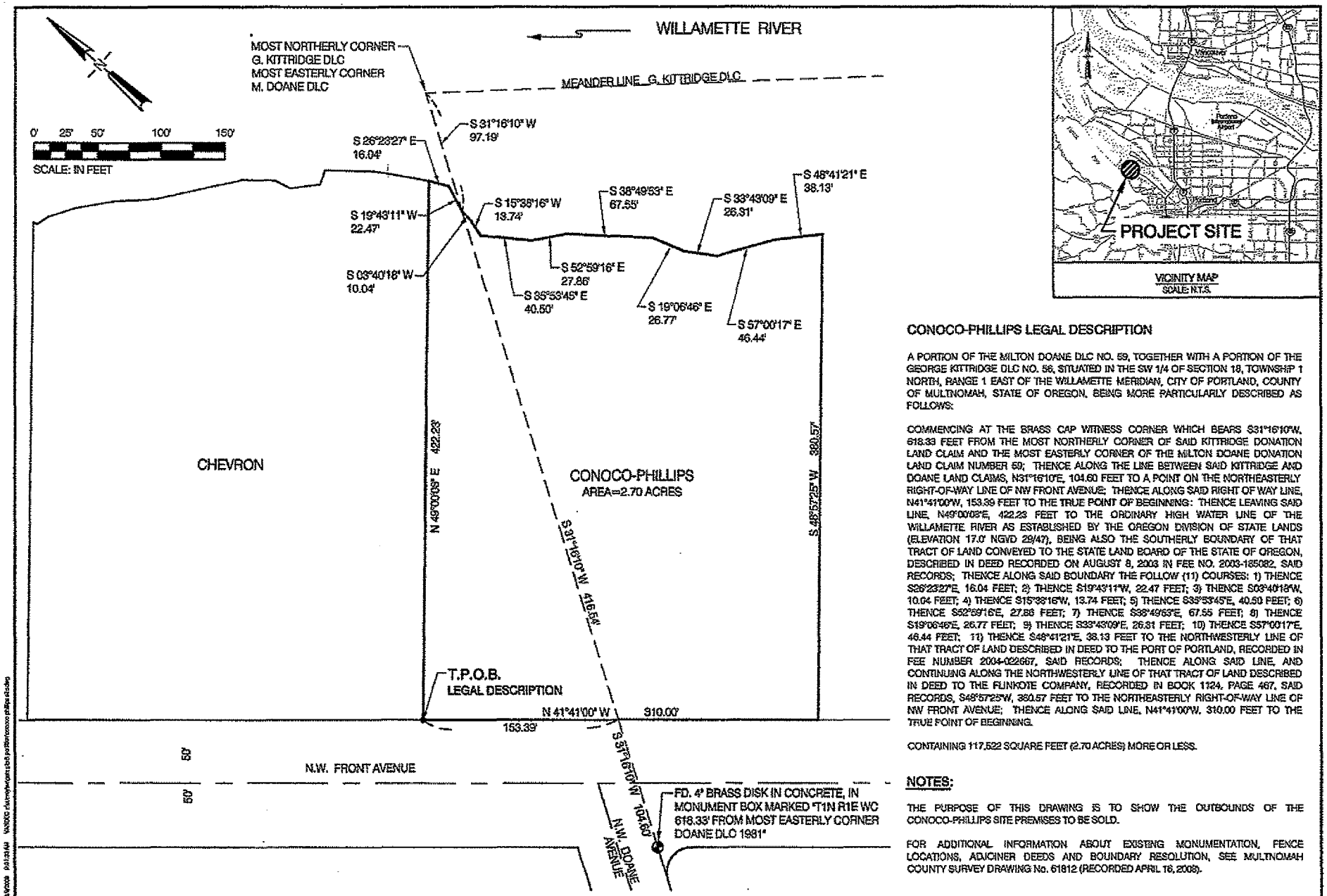
_____
Counsel for The Port of Portland

List of Exhibits

Exhibit A - Property Drawing

Exhibit B – Preliminary Title Report

Exhibit C - Special Warranty Deed Form



VICINITY MAP
SCALE: N.T.S.

CONOCO-PHILLIPS LEGAL DESCRIPTION

A PORTION OF THE MILTON DOANE DLC NO. 59, TOGETHER WITH A PORTION OF THE GEORGE KITTRIDGE DLC NO. 56, SITUATED IN THE SW 1/4 OF SECTION 18, TOWNSHIP 1 NORTH, RANGE 1 EAST OF THE WILLAMETTE MERIDIAN, CITY OF PORTLAND, COUNTY OF MULTNOMAH, STATE OF OREGON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE BRASS CAP WITNESS CORNER WHICH BEARS S31°16'10"W, 618.33 FEET FROM THE MOST NORTHERLY CORNER OF SAID KITTRIDGE DONATION LAND CLAIM AND THE MOST EASTERLY CORNER OF THE MILTON DOANE DONATION LAND CLAIM NUMBER 59; THENCE ALONG THE LINE BETWEEN SAID KITTRIDGE AND DOANE LAND CLAIMS, N31°16'10"E, 104.60 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF NW FRONT AVENUE; THENCE ALONG SAID RIGHT OF WAY LINE, N41°41'00"W, 153.39 FEET TO THE TRUE POINT OF BEGINNING: THENCE LEAVING SAID LINE, N49°00'03"E, 422.23 FEET TO THE ORDINARY HIGH WATER LINE OF THE WILLAMETTE RIVER AS ESTABLISHED BY THE OREGON DIVISION OF STATE LANDS (ELEVATION 17.0' NGVD 29/47), BEING ALSO THE SOUTHERLY BOUNDARY OF THAT TRACT OF LAND CONVEYED TO THE STATE LAND BOARD OF THE STATE OF OREGON, DESCRIBED IN DEED RECORDED ON AUGUST 8, 2003 IN FEE NO. 2003-185082, SAID RECORDS; THENCE ALONG SAID BOUNDARY THE FOLLOW (11) COURSES: 1) THENCE S26°23'27"E, 16.04 FEET; 2) THENCE S19°43'11"W, 22.47 FEET; 3) THENCE S03°40'18"W, 10.04 FEET; 4) THENCE S15°38'16"W, 13.74 FEET; 5) THENCE S38°49'53"E, 40.50 FEET; 6) THENCE S52°59'16"E, 27.86 FEET; 7) THENCE S38°49'53"E, 67.55 FEET; 8) THENCE S19°06'46"E, 26.77 FEET; 9) THENCE S33°43'09"E, 26.31 FEET; 10) THENCE S57°00'17"E, 46.44 FEET; 11) THENCE S48°41'21"E, 38.13 FEET TO THE NORTHWESTERLY LINE OF THAT TRACT OF LAND DESCRIBED IN DEED TO THE PORT OF PORTLAND, RECORDED IN FEE NUMBER 2004-022667, SAID RECORDS; THENCE ALONG SAID LINE, AND CONTINUING ALONG THE NORTHWESTERLY LINE OF THAT TRACT OF LAND DESCRIBED IN DEED TO THE FUNKOTE COMPANY, RECORDED IN BOOK 1124, PAGE 467, SAID RECORDS, S48°57'25"W, 380.57 FEET TO THE NORTHEASTERLY RIGHT-OF-WAY LINE OF NW FRONT AVENUE; THENCE ALONG SAID LINE, N41°41'00"W, 310.00 FEET TO THE TRUE POINT OF BEGINNING.

CONTAINING 117,522 SQUARE FEET (2.70 ACRES) MORE OR LESS.

NOTES:

THE PURPOSE OF THIS DRAWING IS TO SHOW THE OUTBOUNDS OF THE CONOCO-PHILLIPS SITE PREMISES TO BE SOLD.

FOR ADDITIONAL INFORMATION ABOUT EXISTING MONUMENTATION, FENCE LOCATIONS, ADJOINER DEEDS AND BOUNDARY RESOLUTION, SEE MULTNOMAH COUNTY SURVEY DRAWING No. 61812 (RECORDED APRIL 16, 2008).

NO.	DATE	BY	REVISIONS	CKD	APPVD

PORT OF PORTLAND
PORTLAND, OREGON

2003D048 (DESIGN NUMBER) | 1111 (PROJECT TRACER)

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 14, 1981
CHRISTOPHER VANDERWERF
2719
SIGNED: 12/31/2008
EXP: 6/30/2010

DESIGNED BY	
DRAWN BY	C. VANDERWERF
CHECKED BY	D. ANDERSON
DATE	DEC. 2008
SCALE	1"=50'

WILLAMETTE RIVER

CONOCO-PHILLIPS
SITE PREMISES

SUBMITTED BY	TYPE	DRAWING NO.		
DEBRA CRAWFORD (PROPERTY MANAGER)	BS	WR 2008-1	1/1	(SU-1)

Exhibit A

COP0016894

Chicago Title Insurance Company of Oregon

SECOND SUPPLEMENTAL
PRELIMINARY TITLE REPORT
February 2, 2009

TO: Port of Portland
121 NW Everett Street
Portland, OR 97209

Order No.: 460518
Escrow No.: -460518-
Ref: Port of Portland/ConocoPhillips

ATTN.: Patti Freeman

Phone No.: (503)944-7048

Standard Owner's Coverage	to be determined	Premium	to be determined
Municipal Lien Search			$ 25.00

We are prepared to issue a title insurance policy in ALTA (2006) form and amount shown above insuring the title to the property described herein. This report is preliminary to the issuance of a policy of title insurance and shall become null and void unless a policy is issued, and the full premium therefore paid.

Dated as of: January 26, 2009 at 08:00 AM

Vestee: The Port of Portland, a Port District of the State of Oregon, as to the land and ConocoPhillips Company, a Delaware corporation, successor by merger to Tosco Corporation, a Nevada corporation, as to the improvements

Subject to the exceptions, exclusions, conditions and stipulations which are part of said policy, and to exceptions as shown herein.

CHICAGO TITLE INSURANCE COMPANY OF OREGON

By: Emmett Brennan

Emmett Brennan
Title Officer
10135 SE Sunnyside Road, Suite 200
Clackamas, OR 97015
phone (503)653-7300 fax (503)653-7763

Exhibit 6
Page 1
Of 8

9014710030a.rdw

Order No.: 460518

DESCRIPTION

See Legal Description Attached Hereto

GENERAL EXCEPTIONS (Standard Coverage Policies only)

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.

5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

SPECIAL EXCEPTIONS

6. **AMENDED**
Taxes, including the current fiscal year, not assessed because of Port of Portland in Lieu Only Exemption. If the exempt status is terminated under the statute prior to the date on which the assessment roll becomes the tax roll in the year in which said taxes were assessed, an additional tax may be levied.
Levy Code: 001
Property ID No.: R315769
Map No.: 1N1E18C-00900
(Affects land only)

7. **DELETED**

8. **AMENDED**
City Liens, if any, in favor of the City of Portland. None found as of November 5, 2008.

9. Rights of the public and of governmental bodies in and to that portion of the premises herein described lying below the high water mark of the Willamette River.

10. Any adverse claim based on the assertion that any portion of said land has been created by artificial means or has accreted to such portions so created.

11. Easements for existing public utilities in vacated Christobel Street and the conditions imposed thereby,
Disclosed by Ordinance No.: 55456
Entered: October 24, 1928

12. Easements for existing public utilities in vacated Doane Street and the conditions imposed thereby,
Disclosed by Ordinance No.: 56138
Entered: March 20, 1929

13. Easement for ingress and egress above and below the surface of the land as implied by reservation of mineral rights in deed,
Dated: June 20, 1967
Recorded: June 28, 1967
Book: 568
Page: 1121
From: The State of Oregon

14. Revocable Permit to use Street area as contained in City of Portland Ordinance No. 147400, including the terms and

provisions thereof;
Recorded: March 30, 1979
Book: 1341
Page: 763

15. Unrecorded Lease, including the terms and provisions thereof,
Lessor: The Port of Portland
Lessee: Union Oil Company of California, a California corporation
Disclosed by the following: Warranty Deed

The vendee interest in said Lease was assigned by instrument,
Dated: March 31, 1997
Recorded: April 9, 1997
Recorder's Fee No.: 97-052554
To: Tosco Corporation, a Nevada corporation

The above document was re-recorded by instrument,
Recorded: June 13, 1997
Recorder's Fee No.: 97-088026

16. State of Oregon Well Ownership Information Form, including the terms and provisions thereof;
Recorded: December 23, 1998
Recorder's Fee No.: 98-235116

NOTE: Said document sites the property encumbered as Tax Lot 900 (Parcel I) yet recites the legal description for land not covered by this report.

17. State of Oregon Well Ownership Information Form, including the terms and provisions thereof;
Recorded: December 23, 1998
Recorder's Fee No.: 98-235117

NOTE: Said document sites the property encumbered as Tax Lot 900 (Parcel I) yet recites the legal description for land not covered by this report.

18. State of Oregon Well Ownership Information Form, including the terms and provisions thereof;
Recorded: December 23, 1998
Recorder's Fee No.: 98-235118

NOTE: Said document sites the property encumbered as Tax Lot 900 (Parcel I) yet recites the legal description for land not covered by this report.

19. Land Use Document No. 00-00003 GW HS, including the terms and provisions thereof;
Recorded: December 22, 2000
Recorder's Fee No.: 2000-174025

20. Land Use Review Document No. LU 04-045492 GW, including the terms and provisions thereof;
Recorded: November 24, 2004
Recorder's Fee No.: 2004-214250

21. **ADDED**
Land Use Review Document No. LU 07-154597 GW, including the terms and provisions thereof;
Recorded: October 8, 2007
Recorder's Fee No.: 2007-177130

22. Chicago Title Insurance Company will require proof of vesting of ConocoPhillips Company, successor by merger to Tosco Corporation as to the improvements covered by the legal description attached to this report. The last deed of record on said property recorded May 8, 1924, Book 967, Page 278 and vested the Port of Portland. There has never been a deed from the Port of Portland to ConocoPhillips Company or any of its earlier entity names.

Exhibit B
Page 3
Of 8

Order No.: 460518

NOTE: This report is subject to any amendments which might occur when the names of prospective purchasers are submitted to us for examination.

ADDED
NOTE: Property Taxes, paid in full, are as follows:

Fiscal Year:	2008-2009
Amount:	$46,686.80
Levy Code:	001
Account No.:	R315770
Map No.:	1N1E18C-00900-A1

(Affects improvements only)

NOTE: Effective January 1, 2008, Chapter 864, Oregon Laws 2007 mandates withholding of Oregon income taxes from sellers who do not continue to be Oregon residents or qualify for an exemption. Please read the Information for Sellers flyer that accompanies this report. Unless the seller completes a form qualifying him/her for a lesser amount or an exemption, escrow may be required by law to withhold 4% of the sales price and forward it to the Oregon Department of Revenue.

NOTE: Property address is identified as:
5528 N.W. Doane Avenue, Portland, Oregon 97210

END OF REPORT

cc:
Port of Portland

eb/eb
February 2, 2009

Exhibit B
Page 4
Of 6

9014711746.rdw

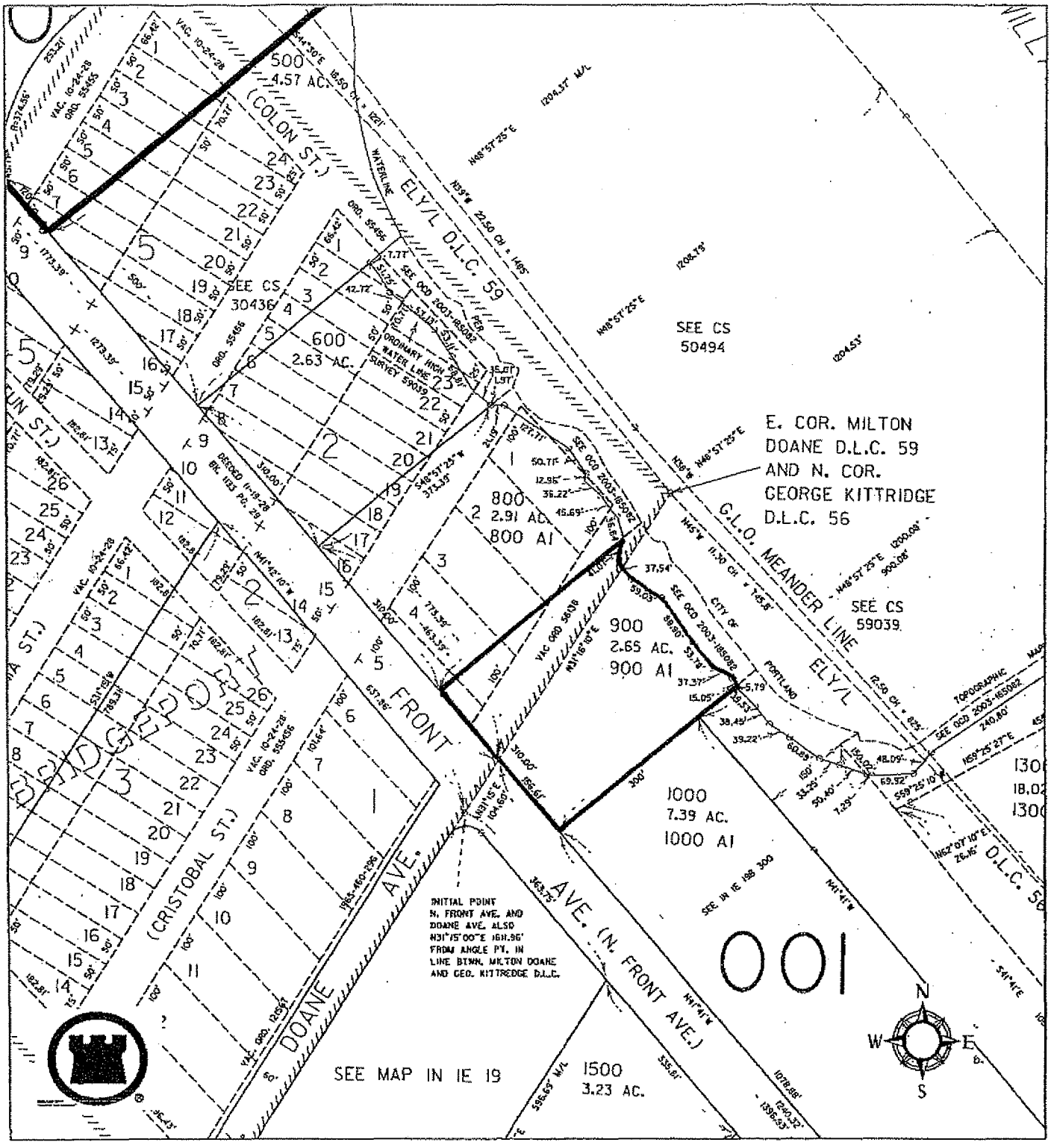
Order No.: 460518

LEGAL DESCRIPTION

A portion of the Milton Doane Donation Land Claim No. 59, TOGETHER WITH a portion of the George Kittridge Donation Land Claim No. 56, situated in the Southwest one-quarter of Section 18, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, being more particularly described as follows:

Commencing at the brass cap witness corner which bears South 31°16'10" West, 618.33 feet from the most Northerly corner of said Kittridge Donation Land Claim and the most Easterly corner of the Milton Doane Donation Land Claim No. 59; thence along the line between said Kittridge and Doane Land Claims, North 31°16'10" East, 104.60 feet to a point on the Northeasterly right-of-way line of NW Front Avenue; thence along said right-of-way line, North 41°41'00" West, 153.39 feet to the true point of beginning; thence leaving said line, North 49°00'08" East, 422.23 feet to the ordinary high water line of the Willamette River as established by the Oregon Division of State Lands (elevation 17.0' NGVD 29/47), being also the Southerly boundary of that tract of land conveyed to the State Land Board of the State of Oregon, described in deed recorded on August 8, 2003 in Fee No. 2003-185082, said records; thence along said boundary the following (11) courses: 1) thence South 26°23'27" East, 16.04 feet; 2) thence South 19°43'11" West, 22.47 feet; 3) thence South 03°40'18" West, 10.04 feet; 4) thence South 15°38'16" West, 13.74 feet; 5) thence South 35°53'45" East, 40.50 feet; 6) thence South 52°59'16" East, 27.86 feet; 7) thence South 38°49'53" East, 67.55 feet; 8) thence South 19°06'46" East, 26.77 feet; 9) thence South 33°43'09" East, 26.31 feet; 10) thence South 57°00'17" East, 46.44 feet; 11) thence South 48°41'21" East, 38.13 feet to the Northwesterly line of that tract of land described in deed to the Port of Portland recorded in Fee No. 2004-022667, said records; thence along said line, and continuing along the Northwesterly line of that tract of land described in deed to the Flinkote Company, recorded in Book 1124, Page 467, said records, South 48°57'25" West, 380.57 feet to the Northeasterly right-of-way line of NW Front Avenue; thence along said line, North 41°41'00" West, 310.00 feet to the true point of beginning.

EXCEPTING THEREFROM all minerals and all mineral rights in said property, which said rights were retained by the State of Oregon in Deed recorded June 28, 1967, Book 568, Page 1121.



CHICAGO TITLE

"This plat is for your aid in locating your land with reference to streets and other parcels.
While this plat is believed to be correct, the company assumes no liability for any loss occurring by reason of reliance thereon."

Map No. 1N1E18C 00900

CHICAGO TITLE INSURANCE COMPANY
10135 S.E. SUNNYSIDE ROAD Suite 200
CLACKAMAS, OREGON 97015

Exhibit B
Page 6
Of 8

COP0016900

Effective Date: 5/1/2008

Fidelity National Financial, Inc.

Privacy Statement

Fidelity National Financial, Inc. and its subsidiaries ("FNF") respect the privacy and security of your non-public personal information ("Personal Information") and protecting your Personal Information is one of our top priorities. This Privacy Statement explains FNF's privacy practices, including how we use the Personal Information we receive from you and from other specified sources, and to whom it may be disclosed. FNF follows the privacy practices described in this Privacy Statement and, depending on the business performed, FNF companies may share information as described herein.

Personal Information Collected

We may collect Personal Information about you from the following sources:

- Information we receive from you on applications or other forms, such as your name, address, social security number, tax identification number, asset information, and income information;
- Information we receive from you through our Internet websites, such as your name, address, email address, Internet Protocol address, the website links you used to get to our websites, and your activity while using or reviewing our websites;
- Information about your transactions with or services performed by us, our affiliates, or others, such as information concerning your policy, premiums, payment history, information about your home or other real property, information from lenders and other third parties involved in such transaction, account balances, and credit card information; and
- Information we receive from consumer or other reporting agencies and publicly recorded documents.

Disclosure of Personal Information

We may provide your Personal Information (excluding information we receive from consumer or other credit reporting agencies) to various individuals and companies, as permitted by law, without obtaining your prior authorization. Such laws do not allow consumers to restrict these disclosures. Disclosures may include, without limitation, the following:

- To insurance agents, brokers, representatives, support organizations, or others to provide you with services you have requested, and to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure in connection with an insurance transaction;
- To third-party contractors or service providers for the purpose of determining your eligibility for an insurance benefit or payment and/or providing you with services you have requested;
- To an insurance regulatory authority, or a law enforcement or other governmental authority, in a civil action, in connection with a subpoena or a governmental investigation;
- To companies that perform marketing services on our behalf or to other financial institutions with which we have joint marketing agreements and/or
- To lenders, lien holders, judgment credits, or other parties claiming an encumbrance or an interest in title whose claim or interest must be determined, settled, paid or released prior to a title or escrow closing.

We may also disclose your Personal Information to others when we believe, in good faith, that such disclosure is reasonably necessary to comply with the law or to protect the safety of our customers, employees, or property and/or to comply with the judicial proceeding, court order or legal process.

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9014710050.rdw

Effective Date: 5/1/2008

Disclosure to Affiliated Companies

We are permitted by law to share your name, address and facts about your transaction with other FNF companies, such as insurance companies, agents, and other real estate service providers to provide you with services you have requested, for marketing or product development research, or to market products or services to you. We do not, however, disclose information we collect from consumer or credit reporting agencies with our affiliates or others without your consent, in conformity with applicable law, unless such disclosure is otherwise permitted by law.

Disclosure to Nonaffiliated Third Parties

We do not disclosure Personal Information about our customers or former customers to nonaffiliated third parties, except as outlined herein or as otherwise permitted by law.

Confidentiality and Security of Personal Information

We restrict access to Personal Information about you to those employees who need to know that information to provide products or services to you. We maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard Personal Information.

Access to Personal Information/
Requests for Correction, Amendment, or Deletion of Personal Information

As required by applicable law, we will afford you the right to access your Personal Information, under certain circumstances to find out to whom your Personal Information has been disclosed, and request correction or deletion of your Personal Information.

However, FNF's current policy is to maintain customers' Personal Information for no less than your state's required record retention requirements for the purpose of handling future coverage claims.

For your protection, all requests made under this section must be in writing and must include your notarized signature to establish your identity.

Where permitted by law, we may charge a reasonable fee to cover the costs incurred in respond to such requests. Please send requests to:

Chief Privacy Officer
Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, FL 32204

Changes to this Privacy Statement

This Privacy Statement may be amended from time to time consistent with applicable privacy laws. When we amend this Privacy Statement, we will post a notice of such changes on our website. The effective date of this Privacy Statement, as stated above, indicates the last time this Privacy Statement was revised or materially changed.

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After Recording, Return To:
ConocoPhillips Company
Attn: Stephen Matthews
Property Tax, Real Estate, Right of Way & Claims
3900 Kilroy Airport Way, Suite 210
Long Beach, CA 90806

Send Tax Statements to:
ConocoPhillips Company
Attn: Stephen Matthews
Property Tax, Real Estate, Right of Way & Claims
3900 Kilroy Airport Way, Suite 210
Long Beach, CA 90806

SPECIAL WARRANTY DEED

THE PORT OF PORTLAND, a port district of the State of Oregon (hereinafter "Grantor"), conveys and specially warrants to CONOCOPHILLIPS COMPANY, a Delaware corporation (hereinafter "Grantee"), the real property described in **Exhibit A**, attached hereto and incorporated herein (hereinafter the "Property"). The Property is free of encumbrances created or suffered by Grantor, except as specifically set forth herein.

The true, actual, and whole consideration for the transfer is Seven Hundred Eighty Thousand Dollars ($780,000.00).

The Property is conveyed subject to the general and special exceptions as shown in **Exhibit B** attached hereto and incorporated herein, and any matters created or suffered by Grantee.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO

INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007.

IN WITNESS HEREOF, Grantor has caused this Deed to be executed this _____ day of _____, 2009.

PORT OF PORTLAND

By _____
Bill Wyatt, Executive Director

STATE OF OREGON)
) ss.
County of Multnomah)

This instrument was acknowledged before me on this ___ day of _____, 2009, by Bill Wyatt, as the Executive Director of the Port of Portland.

_____
Notary Public for Oregon
My Commission Expires_____

"EXHIBIT A"

Property Legal Description

A portion of the Milton Doane Donation Land Claim No. 59, TOGETHER WITH a portion of the George Kittridge Donation Land Claim No. 56, situated in the Southwest one-quarter of Section 18, Township 1 North, Range 1 East of the Willamette Meridian, in the City of Portland, County of Multnomah and State of Oregon, being more particularly described as follows:

Commencing at the brass cap witness corner which bears South 31°16'10" West, 618.33 feet from the most Northerly corner of said Kittridge Donation Land Claim and the most Easterly corner of the Milton Doane Donation Land Claim No. 59; thence along the line between said Kittridge and Doane Land Claims, North 31°16'10" East, 104.60 feet to a point on the Northeasterly right-of-way line of NW Front Avenue; thence along said right-of-way line, North 41°41'00" West, 153.39 feet to the true point of beginning; thence leaving said line, North 49°00'08" East, 422.23 feet to the ordinary high water line of the Willamette River as established by the Oregon Division of State Lands (elevation 17.0' NGVD 29/47), being also the Southerly boundary of that tract of land conveyed to the State Land Board of the State of Oregon, described in deed recorded on August 8, 2003 in Fee No. 2003-185082, said records; thence along said boundary the following (11) courses: 1) thence South 26°23'27" East, 16.04 feet; 2) thence South 19°43'11" West, 22.47 feet; 3) thence South 03°40'18" West, 10.04 feet; 4) thence South 15°38'16" West, 13.74 feet; 5) thence South 35°53'45" East, 40.50 feet; 6) thence South 52°59'16" East, 27.86 feet; 7) thence South 38°49'53" East, 67.55 feet; 8) thence South 19°06'46" East, 26.77 feet; 9) thence South 33°43'09" East, 26.31 feet; 10) thence South 57°00'17" East, 46.44 feet; 11) thence South 48°41'21" East, 38.13 feet to the Northwesterly line of that tract of land described in deed to the Port of Portland recorded in Fee No. 2004-022667, said records; thence along said line, and continuing along the Northwesterly line of that tract of land described in deed to the Flinkote Company, recorded in Book 1124, Page 467, said records, South 48°57'25" West, 380.57 feet to the Northeasterly right-of-way line of NW Front Avenue; thence along said line, North 41°41'00" West, 310.00 feet to the true point of beginning.

Containing 117,522 square feet (2.70 acres) more or less.

EXCEPT ALL MINERALS AND ALL MINERAL RIGHTS IN SAID PROPERTY, WHICH SAID RIGHTS WERE RETAINED BY THE STATE OF OREGON IN DEED RECORDED JUNE 28, 1967, Book 568, PAGE 1121.

EXCEPTING THEREFROM THE OWNERSHIP OF THE STATE OF OREGON IN THAT PORTION LYING BELOW THE LINE OF MEAN HIGH WATER.

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"EXHIBIT B"
GENERAL AND SPECIAL EXCEPTIONS

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.

5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

SPECIAL EXCEPTIONS

1. Taxes, including the current fiscal year, not assessed because of Port of Portland in Lieu Only Exemption. If the exempt status is terminated under the statute prior to the date on which the assessment roll becomes the tax roll in the year in which said taxes were assessed, an additional tax may be levied.
   Levy Code: 001
   Property ID No.: R315769
   Map No.: 1N1E18C-00900
   (Affects land only)

2. City Liens, if any, in favor of the City of Portland.

3. Rights of the public and of governmental bodies in and to that portion of the premises herein described lying below the high water mark of the Willamette River.

4. Any adverse claim based on the assertion that any portion of said land has been created by artificial means or has accreted to such portions so created.

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COP0016906

5. Easements for existing public utilities in vacated Christobel Street and the conditions imposed thereby,
   Disclosed by Ordinance No.: 55456
   Entered: October 24, 1928

6. Easements for existing public utilities in vacated Doane Street and the conditions imposed thereby,
   Disclosed by Ordinance No.: 56138
   Entered: March 20, 1929

7. Easement for ingress and egress above and below the surface of the land as implied by reservation of mineral rights in deed,
   Dated: June 20, 1967
   Recorded: June 28, 1967
   Book: 568
   Page: 1121
   From: The State of Oregon

8. Revocable Permit to use Street area as contained in City of Portland Ordinance No. 147400, including the terms and provisions thereof;
   Recorded: March 30, 1979
   Book: 1341
   Page: 763

9. Unrecorded Lease, including the terms and provisions thereof,
   Lessor: The Port of Portland
   Lessee: Union Oil Company of California, a California corporation
   Disclosed by the following: Warranty Deed

   The vendee interest in said Lease was assigned by instrument,
   Dated: March 31, 1997
   Recorded: April 9, 1997
   Recorder's Fee No.: 97-052554
   To: Tosco Corporation, a Nevada corporation

   The above document was re-recorded by instrument,
   Recorded: June 13, 1997
   Recorder's Fee No.: 97-088026

10. State of Oregon Well Ownership Information Form, including the terms and provisions thereof;
    Recorded: December 23, 1998
    Recorder's Fee No.: 98-235116

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NOTE: Said document sites the property encumbered as Tax Lot 900 (Parcel I) yet recites the legal description for land not covered by this report.

11. State of Oregon Well Ownership Information Form, including the terms and provisions thereof;
Recorded: December 23, 1998
Recorder's Fee No.: 98-235117

NOTE: Said document sites the property encumbered as Tax Lot 900 (Parcel I) yet recites the legal description for land not covered by this report.

12. State of Oregon Well Ownership Information Form, including the terms and provisions thereof;
Recorded: December 23, 1998
Recorder's Fee No.: 98-235118

NOTE: Said document sites the property encumbered as Tax Lot 900 (Parcel I) yet recites the legal description for land not covered by this report.

13. Land Use Document No. 00-00003 GW HS, including the terms and provisions thereof;
Recorded: December 22, 2000
Recorder's Fee No.: 2000-174025

14. Land Use Review Document No. LU 04-045492 GW, including the terms and provisions thereof;
Recorded: November 24, 2004
Recorder's Fee No.: 2004-214250

15. Land Use Review Document No. LU 07-154597 GW, including the terms and provisions thereof;
Recorded: October 8, 2007
Recorder's Fee No.: 2007-177130

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Mike Noll

From: Ralston, Ed C.:
Sent: Tuesday, April 21, 2009 7:19 AM
To: RSC:HSE RM&R Information Management
Cc: Shaw, Francesca R
Subject: FW: Portland Tk3408 - DOT Breakout Tank

Please upload and confirm:

00922
E. Ralston
Correspondence - proposed tank repairs - Tank 3408

From: Uyeda, Valerie J
Sent: Wednesday, February 04, 2009 9:40 AM
To: Collins, Bill H
Cc: Ralston, Ed C.:
Subject: FW: Portland Tk3408 - DOT Breakout Tank

Hi Bill:

I meant to copy you on this e-mail. Please get the tank repair schedule to Ed so he can communicate with the agency. Thanks.

- Val -

From: Ralston, Ed C.:
Sent: Wednesday, February 04, 2009 9:37 AM
To: Uyeda, Valerie J
Cc: Smith, Myron - Environmental:
Subject: RE: Portland Tk3408 - DOT Breakout Tank

Valerie - Myron and I participated in a conference call with Bill Collins and all regarding this tank. Based on our current groundwater data, it appears that the contamination is historical. The GW data has shown consistent concentrations for several years and nothing looks anomalous that would indicate the tank actually had a new leak. We, however, will continue to evaluate our GW data for anomalies. I have not talked to the agency yet, but will notify them of our intent to repair the tank once I get a schedule from Bill. The agency will most likely want us to do some angle borings around the tank (apparently the agency had requested borings during a previous tank repair a few years ago).

Hope I have answered your question. Let me know if you need more information. Thanks. Ed

Ed Ralston
Risk Management & Remediation
ConocoPhillips
76 Broadway
Sacramento, CA 95818
916-558-7633
916-558-7639

THINK SAFETY, ACT SAFELY!

From: Uyeda, Valerie J
Sent: Wednesday, February 04, 2009 9:20 AM
To: Ralston, Ed C.:
Cc: Smith, Myron - Environmental:
Subject: FW: Portland Tk3408 - DOT Breakout Tank

Hi Ed:

Do you have any new information about this situation? Have we determined that it is historical contamination? Thanks.

- Val -

From: Collins, Bill H
Sent: Friday, January 16, 2009 10:54 AM
To: Meier, Craig B.
Cc: Spicher, Scott S.; Uyeda, Valerie J
Subject: RE: Portland Tk3408 - DOT Breakout Tank

Just to be clear, if the hot bottom can't be attributed to a hole in the tank bottom (i.e., a new leak), I'm not aware of any required notifications to DEQ since the leak would be attributed to historical issues currently addressed by the ongoing RM&R effort. RM&R, however, may wish to report to the DEQ project manager for the site and see if sampling etc. is required for characterization purposes. If the leak is a new one (i.e., there is a hole in the bottom) then there would likely be additional reporting, but it is my understanding after speaking to persons onsite that no hole has been located.

From: Collins, Bill H
Sent: Friday, January 16, 2009 10:12 AM
To: Meier, Craig B.
Cc: Spicher, Scott S.; Newton, Robert:; Tucker, Michael Lynn; Uyeda, Valerie J; Noll, Michael D(DXT Services); Ralston, Ed C.:; Smith, Myron - Environmental:
Subject: RE: Portland Tk3408 - DOT Breakout Tank

Craig,

Have we found a hole in the bottom of the tank? If so, we should fix the hole. Beyond that, I'm not aware of any regulations that would require further repairs (i.e., a new floor), although if the floor is in such bad condition that you feel a leak may happen in the near future, it would be in our best interest to be proactive and make the fix now (i.e., the cost of a new bottom would be less than the costs etc. related to dealing with a new leak).

The Portland Terminal is already a recognized site so far as DEQ goes with ongoing remediation. When this issue came up a few years ago (I can't remember which tank), DEQ asked that we collect samples from beneath the tank for characterization purposes. They did not require we collect samples through the floor from inside the tank because of the obvious safety risk, but instead asked that we collect samples from outside of the tank using angled borings. Any such characterization would need to be coordinated through RM&R. RM&R may also want to notify DEQ of the hot bottom. I've forwarded this response on to them as well.

Bill Collins

From: Meier, Craig B.
Sent: Friday, January 16, 2009 11:09 AM
To: Tullio, Todd L <Todd.L.Tullio@conocophillips.com>;Uyeda, Valerie J <Valerie.J.Uyeda@conocophillips.com>;Spicher, Scott S. <Scott.S.Spicher@conocophillips.com>
Cc: Newton, Robert: <Robert.A.Newton@conocophillips.com>;Tucker, Michael Lynn <Mike.Tucker@conocophillips.com>
Subject: Portland Tk3408 - DOT Breakout Tank

This tank has just been inspected and LEL's have been detected under the floor at 22 locations across the floor. Are there any regulatory reporting requirements that need to be taken?

Incident ID: 97413

Short Description: Portland Product Terminal - Storm Water Testing Results Exceeded Benchmark [E-N/A]

Status: Closed

Responsible Dept\Unit: Terminals : Terminals - West Coast Division : Portland Product Terminal

Incident Type: Incident

Potential Risk Rating: I - Low

General

Responsible Supervisor:	THOMAS LYONS
High Learning Value Event Status:	Not Reviewed for HLVE
Location:	
Specific Location:	Separators 001 & 002
Date Occurred: (mm/dd/yyyy)	4/23/2009 8:00:00 AM
Date Reported: (mm/dd/yyyy)	4/24/2009 2:24:35 PM
Date Entered:	4/24/2009 2:31:52 PM (GMT-07:00)
REPORTEDBY:	THOMAS LYONS
Incident Description:	Quarterly storm water samples were obtained from API separators 001, 002 & 004. The permit benchmark (guideline concentration) is 10 mg/L for Oil & Grease. Two of the separators had high readings: separator 001 = 15.7 mg/L; separator 002 = 18.6 mg/L. Terminal is required to investigate the cause of the elevated pollutant levels within 30 days and submit an Action Plan for agency approval.
Weather:	Cloudy
Lighting:	Day
Address:	5528 NW Doans Avenue
City:	Portland
Country:	United States
State/Province:	Oregon
Zip/Postal Code:	97210
Entered By:	LYONS, THOMAS

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Environmental Expert

Name	Response
VALERIE UYEDA	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment: No Data is Available

People

Contractor Involvement : No Data is Available

		Consequence Number						
Name	Employee Type	Injury / Illness	Property	Transportation	Security	Quality	Environmental	
UYEDA, VALERIE	Employee						16723	Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Tom Lyons	Employee	503-248-1572

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
16723 Open View	Environmental	...	UYEDA, VALERIE J	Closed

Pending Consequences : No Data is Available

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

Summary

Equipment:	None
Employees:	1
Contractors:	None
Witnesses:	1
Investigations:	None
Recordable:	No
Last Updated Date :	6/30/2009 11:32:45 AM (GMT-07:00)

Consequence

Injury/Illness:	None
Environmental:	1
Community:	None

COP0016912

Incident ID: 97801

Short Description:	Portland Product Terminal - Pipe Release of Bunker/Fuel Oil [E]
Responsible Dept\Unit:	Terminals : Terminals - West Coast Division : Portland Product Terminal
Incident Type:	Incident
Status:	Closed
Potential Risk Rating:	I - Low

General

Responsible Supervisor:	THOMAS LYONS
High Learning Value Event Status:	Not Reviewed for HLVE
Location:	
Specific Location:	West Side of Tank Farm #3
Date Occurred: (mm/dd/yyyy)	4/28/2009 3:10:00 PM
Date Reported: (mm/dd/yyyy)	4/29/2009 11:00:00 AM
Date Entered:	4/29/2009 12:04:06 PM (GMT-07:00)
REPORTEDBY:	THOMAS LYONS
Incident Description:	On April 28 at 3PM, during daily inspection rounds, a bunker/fuel oil (PS300 fuel oil) drip was discovered in tank farm #3 at the Portland Terminal. A 6" (asbestos) insulated, non-heated horizontal pipe about five feet above grade was dripping oil onto a pipe support and soil below. The pipe was immediately isolated and within a few hours purged back to tankage. The small area (1' x 6') of saturated soil was completely recovered into a drum. The estimated release volume based on the recovered saturated soil is 1 quart (bunker/fuel oil). Notifications were made to all internal stakeholders including: Operations Management, Environmental, RM&R (Portland Terminal has a Contaminated Media Management Plan agreement with the State of Oregon to manage any contaminated soil using RM&R contract manager) and Commercial. Removal of insulation by a qualified remediation contractor, inspection and repairs are planned for later today.
Weather:	Clear
Lighting:	Day
Address:	5528 NW Doane
City:	Portland
Country:	United States
Zip/Postal Code:	98604
Incident Flags:	Hydrocarbon Loss of Containment
Entered By:	LYONS, THOMAS
Immediate Actions Taken:	The pipe was immediately isolated and within a few hours purged back to tankage. The small area (1' x 6') of saturated soil was completely recovered into a drum. The estimated release volume based on the recovered saturated soil is 1 quart (bunker/fuel oil). Notifications were made to all internal stakeholders including: Operations Management, Environmental, RM&R (Portland Terminal has a Contaminated Media Management Plan agreement with the State of Oregon to

manage any contaminated soil using RM&R contract manager) and Commercial.

Removal of insulation by a qualified remediation contractor, inspection and repairs are planned for later today.

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Environmental Expert

Name	Response
VALERIE UYEDA	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment: No Data is Available

People

Contractor Involvement : No Data is Available

		Consequence Number						
Name	Employee Type	Injury / Illness	Property	Transportation	Security	Quality	Environmental	
CUSTER, COLLEEN	Employee						16719	Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Tom Lyons	Employee	503-248-1572

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
16719 Open View	Environmental	...	CUSTER, COLLEEN G	Closed

Pending Consequences : No Data is Available

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

COP0016914

Incident ID: 98184

Short Description:	Portland Product Terminal - Dome-Out at Truck Rack w/Release [E]
Responsible Dept\Unit:	Terminals : Terminals - West Coast Division : Portland Product Terminal
Incident Type:	Incident
Status:	Closed
Potential Risk Rating:	I - Low

General

Responsible Supervisor:	THOMAS LYONS
High Learning Value Event Status:	Not Reviewed for HLVE
Location:	
Specific Location:	Truck Loading Rack
Date Occurred: (mm/dd/yyyy)	5/3/2009 12:35:00 PM
Date Reported: (mm/dd/yyyy)	5/4/2009 11:17:00 AM
Date Entered:	5/4/2009 12:49:00 PM (GMT-07:00)
REPORTEDBY:	THOMAS LYONS
Incident Description:	On May 3rd at 12:35 PM, at the Portland Oregon truck rack, a driver domed out and spilled approximately 2 gallons of diesel onto containment from the top of the truck. The driver had preset 2600 gallons in an 1800 gallon compartment. Terminal Operators recovered product and tested the area for vapors before resuming normal operations. The driver was locked out. The driver's truck was inspected and verification of the proper operation of the overfill senseor performed. The truck was released but locked out until a third party equipment certification is completed including inspection of probe placement. Rack equipment was also throughly inspected and found to be in good working order. Internal notifications were immediately made to all affected stake holders. No external notifications were required.
Weather:	Clear
Lighting:	Day
Address:	5528 NW Doane Avenue
City:	Portland
Country:	United States
State/Province:	Oregon
Zip/Postal Code:	97210
Incident Flags:	Truck, Motor Carrier Incidents
Entered By:	LYONS, THOMAS
	Terminal Operators recovered product and tested the area for vapors before resuming normal operations. The driver was locked out.
Immediate Actions Taken:	The driver's truck was inspected and verification of the proper operation of the overfill senseor performed. The truck was released but locked out until a third party equipment certification is completed including inspection of probe placement. Rack equipment was also throughly inspected and found to be in good working order.

Internal notifications were immediately made to all affected stake holders. No external notifications were required

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Environmental Expert

Name	Response
VALERIE UYEDA	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Loading Rack: Overfill Protection	NO	

People

		Consequence Number					
Name	Employee Type	Injury / Illness	Property	Transportation	Security	Quality	Environmental
CUSTER, COLLEEN	Employee						17026 Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Sara Pimentel	Contractor (driver)	503-281-2828

Contractor Involvement

Contractor	Involvement Type
PIONEER OIL	Other

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
17026 Open View	Environmental	...	CUSTER, COLLEEN G	Closed

Pending Consequences : No Data is Available

Investigation

Investigations: No Data is Available

COP0016916

Smith, Myron - Environmental:

From: Fetterly, Rick [Rick.Fetterly@stantec.com]
Sent: Wednesday, June 10, 2009 10:04 PM
To: Smith, Myron - Environmental:
Cc: Edmund, Bill
Subject: 0922 Portland Terminal - 60" Lining job concerns for 6-11 and 6-12 conference calls

Myron,

Here are the issues that stand out in my mind regarding Arcadis, the lining project and potential ramifications for CoP.

1. TWIC access and qualifications – As you know TWIC requirements are now in fully effect and strictly enforced. Arcadis, I'm sure is aware of this, but since this job puts a lot more personnel on the site that probably won't be certified, they should be continually reminded of this. Non-TWIC certified personnel must be escorted everywhere they go, including the restrooms. This means that a Non-TWIC certified person will not be able to use a portajohn close to the work site but must be escorted back to the restrooms in the maintenance area. If Arcadis is using female personnel or subcontractors that are not TWIC certified, they will need to be escorted to the facilities by a TWIC certified female employee.
2. Temporary Fencing vs. Manned Security – As previously discussed, the Coast Guard is requiring either 24-hour security or a temporary fence that matches the existing permanent fence from the time that the permanent fence is first removed until such time that permanent fencing is replaced following completion of the job. According to Scott Flaherty, temporary fencing with razor wire is not readily available. It may be possible to string razor wire over the temporary fence, but this was not considered to be a valid option by Stantec as a result of hazards associated with working with razor wire. Any temporary fencing that is constructed should be inspected and approved by the Coast Guard prior to the first incidence of leaving the site unattended.
3. West Sandlot Retaining Wall – The western boundary of the sandlot is defined by an interlocking concrete retaining wall that protects a cluster of product lines extending from the terminal to the dock area. There are two potential risks to the integrity of the retaining wall that may result from the proposed lining activities.
   a. Surcharges resulting from heavy equipment around Manhole 77 – Surcharges produced by the retaining wall may compress the soil and cause the wall to fail in the direction of the pipes resulting in the concrete blocks and soil striking the pipes.
   b. Excavation near Manhole 77 may result in removal of soils supporting the retaining wall and may cause the wall to fail in the eastern direction. While not as catastrophic as Case a, repair of the wall would be costly and temporary shoring may still be required to protect the pipes.

   The designer of the retaining wall should be contracted to evaluate both of these cases. They should provide you with a maximum surcharge that can be applied to the wall, a minimum safe distance from the wall for excavation and maximum depth and volume of soils that can be safely removed without potentially undermining the wall.
4. Schedule – What day does Arcadis plan to start? Grant's e-mail indicates site prep and safety training are to start on Monday the 15th, however, the safety conference call is not scheduled until Friday, June 26. As I recall, the first step of the site prep is the removal of the permanent fence and installation of the temp fence, which based on my comments in 2 are rife with safety and security concerns. Is it not more prudent to have a safety meeting/conference call prior to the start of any work on site? Also, The Gantt chart that Scott and I worked out for the project initially had a timetable of three weeks from start to finish. Grant expects the work to take up to six weeks. I do believe this schedule is safer and more realistic and our schedule was based on a need to rush completion prior to the onset of winter weather, but it would be useful to see Arcadis' work chart if available.
5. Comity of Variances, JSAs, safety plans and work plans – Specific items Stantec/Stratus prepared and obtained for the job include a knife use variance and critical lift plan among others. Is CoP comfortable with Arcadis implementing these plans or do they need to prepare their own plans?

yes

July

Not our safety watch? ask tom lyons

This list is not exhaustive and I'm sure additional concerns will arise during our Thursday and Friday discussions. I look forward to working with you, Tom and Arcadis on this project.

Respectfully,

Rick Fetterly, P.E.
Senior Project Manager
Stantec
7730 Southwest Mohawk Street
Tualatin OR 97062
Ph: (503) 612-2505
Fx: (503) 692-7074
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#1 : make sure arcadis is fully aware and will comply

2: check with arcadis

- ⊛ list of people who will be on site
  - credentials; ie: TWICS, OSHA HazWop etc.
  - show credentials to terminal personnel
  - set time each day (morning) for ID check and at end of work
    - sign in/out book, wear COP visitors badge
    - have permanent badge, leave on board where you sign in/out

3: we need load factors etc., eng. to determine maybe no equip. west of manhole to the open pipe chase

4: confirm dates, mw's need to be abandoned?
- ⊛ get actual date of liner install

5: ask Tom Ryan, CUX JSA, HASP, we sign theirs?

check with Terminal
- OSHA HazWoper requirements
- only for people who are working inside the pipe, excavation pit etc.

⊛ asphalt shed temp storage for project
- clean out an area for lay down

6/11/2009

Smith, Myron - Environmental:

Subject:	Portland Terminal Sewer Lining Project
Location:	conference Call number1-866-704-7025 Passcode 713058
Start:	Fri 6/26/2009 11:00 AM
End:	Fri 6/26/2009 11:30 AM
Recurrence:	(none)
Meeting Status:	Accepted
Required Attendees:	Hamada, Paul (LDZX); Smith, Myron - Environmental:; Staab, Bob - Environmental:

When: Friday, June 26, 2009 11:00 AM-11:30 AM (GMT-08:00) Pacific Time (US & Canada).
Where: conference Call number1-866-704-7025 Passcode 713058

~~*~*~*~*~*~*~*~*~*

Discuss the Portland Terminal to make sure we are consistent with the CVX Post-Cap negotiations/status (i.e.. Santa Margarita Ranch)

6/26/09

- is this outside the 1997 PSA/Env Agreement?
- 50/50 split deal documented
- Superfund inputs are both BCA and Tosco related
* - get separate PTTRC access agreement
  * check with CVX as to agreement for 50/50 and access - do they have

COP0016919

ARCADIS
Infrastructure, environment, buildings

AGENDA

Chevron EMC/ConocoPhillips
Outfall 22 Storm Sewer Repair Project
Portland, Oregon
Project Coordination Meeting Agenda

Date: July 26, 2009

Time: 1:00 pm (Pacific Standard Time)

Location: ConocoPhillips Willbridge Terminal

Phone: 877.999.1272

Password: 7513028#

---

1. **Safety Moment and Introductions**

2. **Overview of Scope of Work**

3. **Construction Schedule and Sequence**

4. **Chevron EMC and ConocoPhillips Guidelines and Expectations**

5. **Health and Safety**
   - Health and Safety Training and Medical Monitoring Documentation
   - Health and Safety Plans (HASPs) and JLAs
   - LPS Training
   - LPO Schedule
   - Near Loss Reporting and Investigation
   - Morning and Afternoon Safety Meetings
   - Short Service Employee Program
   - Equipment Maintenance Program
   - Utility Clearance and Management of Existing Utilities
   - Traffic Control and Routes
   - Confined Space Procedures
   - Site Access and Security (TWIC)

6. **Preconstruction Activities**

COP0016920

- Permitting
- Temporary Erosion Control Installation and Maintenance
- Bolt Removal
- Sewer Cleaning and Videologging
- Monitoring Well Modifications

7. Engineering Support, Construction Quality Assurance, and Project Logistics

- Disposal Facility Coordination
- Waste Manifesting
- Groundwater Management, Collection, and Treatment
- Storm Water Diversion
- Coffer Dam Installation and Management
- Cure In Place Pipe (CIPP) Process and Requirements
- Backfill Material

8. Project Communications

- Contact List
- Public Relations
- Emergency Notifications
- Interaction with Regulatory Agencies

9. Other Discussion Items

6/26/09

(1) - three safety incidents - near miss at end of day - use your LPS training
- stop work will be used when needed

(2) - schedule will be sent out after mtg.
- lining 60" storm sewer

(3) - steel plates over pipes in gravel area outside fence
- install coffer dam - river too high - 2 to 3' water in pipe
- 7/6/09 install coffer dam and baker tank
- 7/7/09 two days clean pipe and cut bolts
- 7/9/09 video pipe, install temp. fence
- 7/13/09 vault modification and pen
  - 5 days
- 7/20/09 give insitu form to wet out the liner
  - two weeks to install
- 7/23/09 - gravel on top of geofabric in sand lot
- 7/24/09 - liner w/resin - drive to Portland
- 7/27/09 - start to installed liner
- 7/28/09 - cut both ends
- 7/30/09 - finish and de mob

5049
5050
5051
4971

June 12, 2009

Mr. Michael Romero
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Subject: Semi-Annual Groundwater Monitoring Report
October 2008 through March 2009
Willbridge Bulk Fuel Facilities, Portland, Oregon
Consent Order WMCSR-NWR-94-06

Dear Mr. Romero:

DELTA

On behalf of the Willbridge Terminal Group (WTG), Delta Consultants (Delta) has prepared this Semi-Annual Groundwater Monitoring Report for the above referenced facilities located in Portland, Oregon (Figure 1). The WTG consists of Chevron Products Company (Chevron), ConocoPhillips Company (ConocoPhillips), and Kinder Morgan Liquid Terminals (Kinder Morgan) (Figure 2). The field sampling activities described in this letter report were completed by Arcadis U.S., Inc (Arcadis) on behalf of Chevron, by Stantec Consulting on behalf of ConocoPhillips, and by Delta on behalf of Kinder Morgan. This sampling event fulfills the requirements outlined in Section 7F of the Oregon Department of Environmental Quality (DEQ) Consent Order WMCSR-NWR-94-06.

This letter report summarizes groundwater monitoring activities that were completed from October 2008 through March 2009. Groundwater monitoring and separate phase hydrocarbon (SPH) recovery were completed January 5 through 7, 2009 (fourth quarter 2008) and March 16 through 25, 2009 (first quarter 2009). Inclement weather prevented the fourth quarter 2008 event from occurring in December and as a result was completed in early January 2009. Groundwater monitoring and sampling activities were conducted in accordance with the following sampling plans:

- *Sampling and Analysis Plan Addendum* dated September 22, 2006.
- *Sheet-Pile Cut-Off/Recovery System Performance Monitoring Plan* dated March 30, 2007.
- *Locality of Facility Work Plan* dated June 26, 2007.

GROUNDWATER MONITORING

Depth-to-water measurements were collected from each monitoring well and recovery wells RW-1 through RW-6 and EW-1 through EW-4 in January and March 2009. Recorded depth-to-water measurements are presented in Tables 1A through 1C. Measurements ranged from 5.01 feet to 32.62 feet above mean sea level across the facilities. Groundwater elevation contours for each quarter are presented in Figures 3 through 6. Evaluation of the groundwater elevation data for this semi-annual period suggests that groundwater flows to the northeast toward the Willamette River.

a member of Inogen Environmental Alliance

4640 SW Macadam Avenue Suite 110 Portland, Oregon 97239 USA
Phone 503.639.8098 / 800.477.7411 Fax 503.639.7619 www.deltaenv.com

The daily mean Willamette River stage, measured at the Morrison Bridge river gauge and converted to the City of Portland (COP) datum ranged from a high of 16.20 feet on January 8, 2009 to a low of 4.34 feet on October 8, 2008. The average river stage elevation was 7.17 feet between October 1, 2008 and March 31, 2009. Precipitation and river stage data are presented in Figure 7.

Separate Phase Hydrocarbons

SPH is measured and removed from each facility on a monthly basis. Monthly SPH removal was conducted on wells containing measureable amounts of SPH between October 2008 and March 2009. SPH thicknesses recorded during this semi-annual event are summarized in Tables 1A through 1C. A summary of monthly SPH removal volume is summarized in Table 1D. Observable sheen and SPH thicknesses are presented in Figures 3 and 5.

In the fourth quarter, nine Chevron wells (B-20, B-30, CR-6, CR-10, CR-15, CR-19, CR-25, GPW-2, and GPW-3) contained measurable thicknesses of SPH, ranging from 0.01 feet in multiple wells to 0.46 feet in CR-10. Additionally, wells CR-11 and CR-16 contained trace SPH. In the first quarter, nine Chevron wells (B-30, CR-6, CR-10, CR-15, CR-19, CR-25, GPW-1, GPW-2, and GPW-4) contained measurable thicknesses of SPH, ranging from 0.01 feet in well GPW-1 to 0.55 feet in well CR-19. SPH occurrences were consistent with historical measurements in all wells during this semi-annual event.

In the fourth quarter, two Kinder Morgan wells (MW-24 and MW-29) had measureable SPH thicknesses of 0.05 foot and 0.01 foot, respectively. Additionally, sheen was observed in wells MW-7, MW-23, and MW-31. In the first quarter, one Kinder Morgan well (MW-7) contained a measurable SPH thickness of 0.02 foot. SPH was observed in well MW-24; however, a thickness could not be measured due to fouling of the oil/water interface probe by highly viscous SPH. Sheen was observed in well MW-28. SPH occurrences were consistent with historical measurements in all wells during this semi-annual event.

In the fourth quarter, two ConocoPhillips wells (B-40, and U-13) contained measurable SPH thicknesses of 0.44 and 0.28 foot, respectively. In the first quarter, four ConocoPhillips wells (B-4, B-27, B-40, and U-13) contained measurable thicknesses of SPH, ranging from 0.02 foot in well B-4 to 0.57 foot in well B-40. Additionally, sheen was observed in wells U-15 and U-17. SPH occurrences were consistent with historical measurements in all wells during this semi-annual event.

SPH recovery is performed in each well where SPH is measured. Manual SPH recovery/removal from monitoring wells consists of bailing, pumping, or the use of a sorbent sock installed in the well. Approximately 194 gallons of SPH have been removed to date by the above-referenced manual recovery methods. Recovered SPH volumes for this reporting period (October 2008 to March 2009) totaled approximately 4.9 gallons.

In addition to the monthly SPH recovery events, SPH recovery is conducted with the aid of a remediation system and series of recovery wells located between the Chevron and ConocoPhillips terminals. Approximately 4,500 gallons of SPH have been removed through this system. During this semi-annual monitoring period, the treatment system recovered 45 gallons of SPH. Recovered SPH is presently stored in an on-site batch tank, and once its capacity is reached it will be transported to Oil-Re-Refining in Portland, Oregon for recycling.

Analytical Sampling Plan

Groundwater was sampled from selected Chevron, ConocoPhillips, and Kinder Morgan monitoring wells. Groundwater samples were not collected from monitoring wells containing observable sheen or measurable quantities of SPH. Groundwater monitoring and sampling procedures are included in Appendix A.

The wells sampled for the fourth quarter monitoring event include the following:

- Chevron: B-7, B-9A, CR-26, CR-27C, and CR-33.
- ConocoPhillips: P-1A, U-22A, U-22B, U-23, U-24A, U-24B, U-25, U-26, U-27, U-28, U-29B, and U-29C.
- Kinder Morgan: MW-34, MW-37, MW-41B, MW-41C, MW-42B, and MW-42C.

The wells sampled for the first quarter monitoring event included the following:

- Chevron: B-7, B-9A, B-10, B-19, B-21, B-28, B-29, B-33, CR-1, and CR-33.
- ConocoPhillips: B-35, B-36, B-37, P-1A, U-2, U-14, U-15, U-16, U-17, U-18, U-20, U-21, U-22A, U-22B, U-23, U-24A, U-24B, U-25, U-26, U-27, U-28, and U-29A.
- Kinder Morgan: MW-8, MW-25, MW-26, MW-33, MW-34, MW-36, MW-37, MW-40.

Each well listed above was tested for:

- Benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) using Environmental Protection Agency (EPA) Method 8260B,
- Polynuclear aromatic hydrocarbons (PAHs) using EPA Method 8270M SIM, and
- Total Resource Conservation Recovery Act (RCRA) metals using EPA Method 6000/7000 Series. RCRA metals included arsenic, cadmium, chromium, copper, lead, manganese, mercury, selenium, silver, and zinc.

Additionally, select wells located on the north side of NW Front Avenue (also referred to as Dock Area wells) were also tested for:

- Total petroleum hydrocarbons (TPH) in the gasoline range (TPH-G) using Northwest Method NWTPH-Gx,
- TPH in the diesel range (TPH-D) and heavy oil range (TPH-O) using Northwest Method NWTPH-Dx with silica gel cleanup, and
- Total organic carbon (TOC) using EPA Method 415.

Groundwater samples were submitted to TestAmerica in Beaverton, Oregon for analytical testing. The analytical laboratory reports are included in Appendix A and the analytical data is summarized in Tables 2 through 4.

Analytical Findings

For comparison purposes only, the semi-annual groundwater monitoring data were screened against the Portland Harbor Joint Source Control Strategy (JSCS) screening level values (SLVs) presented in Table 3-1 of the JSCS guidance document, updated in July 2007. Groundwater trends and evaluation of the sampling data will be further discussed in a Groundwater Pathway Evaluation Report, scheduled to be completed later in 2009.

The Table 3-1 JSCS SLVs used in the screening process for this monitoring report were the human health, fish consumption, EPA 2004 NRWQC organism only; human health, fish consumption, DEQ 2004 Ambient Water Quality Criteria (AWQC) organism only; ecological receptors, EPA NRWQC chronic; ecological receptor, EPA NRWQC chronic; ecological receptor, DEQ 2004 AWQC; and ecological receptor Oak Ridge National Laboratory's Tier II secondary chronic values (SCVs). Tables 5 through 8 include a summary of analytical data collected since 2008, compared with the JSCS SLVs.

Evaluation of the groundwater sampling data shows Chevron wells B-10, B-19, B-33, CR-1, CR-26, CR-27C, and CR-33; Kinder Morgan wells MW-36 and MW-37; and ConocoPhillips wells U-22A, U-23, U-25, U-29A, and U-29B with groundwater sample concentrations above the JSCS SLVs for PAHs. The analytical results from groundwater samples collected from monitoring wells at each terminal exceeded one or more JSCS SLVs for total metals. No groundwater sample collected from the Dock Area monitoring wells exceeded any of the BTEX JSCS SLVs. ConocoPhillips well B-40 was not sampled during the January and March and 2009 sampling events due to measurable SPH in the well. Chevron well B-10 was inaccessible during the fourth quarter 2008 monitoring event and subsequently not sampled.

ISSUES

The following issues were encountered during the fourth quarter 2008 and first quarter 2009 monitoring events:

- Due to inclement weather conditions occurring in late December 2008, the scheduled fourth quarter 2008 groundwater sampling event was postponed until hazardous weather conditions were minimized for field personnel. As a result, the fourth quarter 2008 sampling event was conducted in early January 2009.
- Each monitoring well was sampled as required with two exceptions. First, a sample was not collected from Chevron well B-10 which was inaccessible during the fourth quarter 2008. Second, a sample was not collected from ConocoPhillips well B-40 because of measurable SPH.
- SPH was not measured in Kinder Morgan well MW-24 due to high viscosity SPH fouling the probe.

UPCOMING ACTIVITIES

The following tasks are planned for the second and third quarter of 2009:

- Measure depth to water and SPH in all WTG wells during the second quarter (June 2009) and third quarter (September 2009) monitoring events. Second quarter 2009 gauging is tentatively scheduled for June 15, 2009.
- Sample selected WTG wells during the third quarter (September 2009) semiannual sampling event following just the *Sampling and Analysis Plan Addendum*. Third quarter 2009 monitoring is tentatively scheduled for September 14, 2009.
- Perform monthly SPH recovery from wells that have historically contained SPH.
- Continue operation of the remediation system located between the Chevron and ConocoPhillips terminals.

LIMITATIONS

The conclusions and recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are determined in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other fourth party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

Sincerely,
DELTA CONSULTANTS

Cale Fleming
(cfleming@deltaenv.com)
Staff Scientist

Jessica Eckart, R.G.
(jeckart@deltaenv.com)
Project Manager

Attachments:

Table 1A	Groundwater Elevation and SPH Recovery Data Chevron Products Company
Table 1B	Groundwater Elevation and SPH Recovery Data Kinder Morgan Liquid Terminals, LLC
Table 1C	Groundwater Elevation and SPH Recovery Data ConocoPhillips Company
Table 1D	Groundwater Elevation and SPH Recovery Data Willbridge Terminal Group Summary
Table 2	Groundwater Analytical Results – TPH, BTEX and MTBE Compounds
Table 3	Groundwater Analytical Results – PAH Compounds
Table 4	Groundwater Analytical Results – Total Metals
Table 5	Groundwater Screening Level Comparisons– Dock Area Shallow Wells– TPH, VOCs, and Metals
Table 6	Groundwater Screening Level Comparisons– Dock Area Shallow Wells– PAHs
Table 7	Groundwater Screening Level Comparisons– Dock Area Cluster Wells– TPH, VOCs, and Metals
Table 8	Groundwater Screening Level Comparisons– Dock Area Cluster Wells– PAHs
Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation Contours and SPH Thickness Map - Fourth Quarter 2008
Figure 4	Groundwater Elevation Contours Dock Area – Fourth Quarter 2008
Figure 5	Groundwater Elevation Contours and SPH Thickness Map - First Quarter 2009
Figure 6	Groundwater Elevation Contours Dock Area – First Quarter 2009
Figure 7	Precipitation and River Stage Hydrograph
Appendix A	Groundwater Monitoring and Sampling Procedures, Certified Analytical Laboratory Reports and Chain-Of-Custody Documentation (CD Only)

TABLES

TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-7	2/14/2000	18.33	NP	-	17.40	0.1
(35.73)	5/22/2000	18.60	NP	-	17.13	NA
	8/22/2000	19.31	19.30	0.01	16.43	0.1
	11/27/2000	19.47	sheen	-	16.26	NA
	2/20/2001	19.37	NP	-	16.36	NA
	5/15/2001	19.36	sheen	-	16.37	NA
	9/19/2001	19.74	NP	-	15.99	NA
	12/20/2001	18.30	NP	-	17.43	NA
	3/15/2002	18.28	NP	-	17.45	NA
	9/23/2002	18.79	18.78	0.01	16.95	NA
	12/19/2002	19.78	19.79	0.01	15.96	NA
	3/19/2003	18.58	18.57	0.01	17.16	NA
	6/24/2003	19.02	18.97	0.05	16.75	NA
	9/24/2003	19.72	19.71	0.01	16.02	NA
	12/26/2003	18.90	18.85	0.05	16.87	NA
	3/30/2004	18.70	18.66	0.04	17.06	NA
	6/24/2004	19.19	19.18	0.01	16.55	NA
	9/27/2004	19.85	NP	-	15.88	NA
	12/24/2004	19.27	NP	-	16.46	NA
	3/7/2005	19.45	NP	-	16.28	NA
	6/23/2005	19.12	NP	-	16.61	NA
	9/19/2005	19.79	NP	-	15.94	NA
	12/12/2005	19.00	NP	-	16.73	NA
	1/30/2006	17.19	NP	-	18.54	NA
	3/13/2006	18.05	NP	-	17.68	NA
	6/26/2006	18.66	NP	-	17.07	NA
	9/25/2006	16.98	NP	-	18.75	NA
	12/11/2006	16.34	NP	-	19.39	NA
	3/19/2007	16.13	NP	-	19.60	NA
(33.85)	6/18/2007	16.76	NP	-	17.09	NA
	9/17/2007	17.23	NP	-	16.62	NA
	12/17/2007	16.49	NP	-	17.36	NA
	1/22/2008	15.93	Trace	-	17.92	NA
	3/24/2008	15.76	NP	-	18.09	NA
	6/23/2008	16.31	NP	-	17.54	NA
	9/22/2008	16.73	NP	-	17.12	NA
	1/5/2009	**15.59**	**NP**	**-**	**18.26**	**NA**
	3/16/2009	**16.00**	**NP**	**-**	**17.85**	**NA**
B-9	2/14/2000	16.29	16.20	0.09	19.35	0.0
(35.57)	5/22/2000	16.90	NP	-	18.67	NA
	8/22/2000	17.48	NP	-	18.09	NA
	11/27/2000	17.29	NP	-	18.28	NA
	2/20/2001	17.41	NP	-	18.16	NA
	5/15/2001	17.04	NP	-	18.53	NA
	9/19/2001	17.84	NP	-	17.73	NA
	12/20/2001	15.92	NP	-	19.65	NA
	3/5/2002	15.92	NP	-	19.65	NA
	9/23/2002	17.75	NP	-	17.82	NA
	12/19/2002	17.28	NP	-	18.29	NA
	3/19/2003	16.18	NP	-	19.39	NA
	6/24/2003	16.63	NP	-	18.94	NA
	9/24/2003	17.82	NP	-	17.75	NA
	12/26/2003	Well covered by truck				
	3/30/2004	15.93	NP	-	19.64	NA
	6/24/2004	17.12	NP	-	18.45	NA
	9/27/2004	17.97	NP	-	17.60	NA
	12/24/2004	17.32	NP	-	18.25	NA
	3/7/2005	17.42	NP	-	18.15	NA
	6/22/2005	16.19	NP	-	19.38	NA
	9/19/2005	17.77	NP	-	17.80	NA
	12/12/2005	16.81	NP	-	18.76	NA
	1/30/2006	15.02	NP	-	20.55	NA
	3/13/2006	18.65	NP	-	16.92	NA
	6/26/2006	16.64	NP	-	18.93	NA
	9/25/2006	16.45	NP	-	19.12	NA
	12/11/2006	15.39	NP	-	20.18	NA
	3/19/2007	15.45	NP	-	20.12	NA
(33.89)	6/18/2007	16.14	NP	-	17.75	NA
		Abandoned				

COP0016928

TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-9A	9/17/2007	16.23	Trace	-	17.35	NA
(33.58)	12/17/2007	15.53	NP	-	18.05	NA
	1/22/2008	14.93	NP	-	18.65	NA
	3/24/2008	14.90	NP	-	18.68	NA
	6/23/2008	15.37	NP	-	18.21	NA
	9/22/2008	15.94	NP	-	17.64	NA
	1/5/2009	**14.92**	**NP**	**-**	**18.66**	**NA**
	3/16/2009	**15.28**	**NP**	**-**	**18.30**	**NA**
B-10	2/14/2000	15.10	NP	-	19.66	NA
(34.76)	5/22/2000	15.67	NP	-	19.09	NA
	8/22/2000	16.35	NP	-	18.41	NA
	11/27/2000	16.64	NP	-	18.12	NA
	2/20/2001	16.41	NP	-	18.35	NA
	5/15/2001	16.42	NP	-	18.34	NA
	9/19/2001	16.95	NP	-	17.81	NA
	12/20/2001	15.42	NP	-	19.34	NA
	3/15/2002	14.99	NP	-	19.77	NA
	9/23/2002	16.64	NP	-	18.12	NA
	12/19/2002	16.56	NP	-	18.20	NA
	3/19/2003	15.24	NP	-	19.52	NA
	6/24/2003	15.70	NP	-	19.06	NA
	9/24/2003	16.62	NP	-	18.14	NA
	12/26/2003	15.98	NP	-	18.78	NA
	3/30/2004	15.29	NP		19.47	NA
	6/24/2004	16.13	NP	-	18.63	NA
	9/27/2004	16.73	NP	-	18.03	NA
	12/14/2004	16.48	NP	-	18.28	NA
	3/7/2005	Well Inaccessible				
	9/19/2005	16.64	NP	-	18.12	NA
	12/12/2005	15.90	NP	-	18.86	NA
	1/30/2006	14.13	NP	-	20.63	NA
	3/13/2006	14.73	NP	-	20.03	NA
	6/26/2006	15.67	NP	-	19.09	NA
	9/25/2006	16.45	NP	-	18.31	NA
	12/11/2006	15.44	NP	-	19.32	NA
	3/19/2007	14.92	NP	-	19.84	NA
(34.78)	6/18/2007	15.88	NP	-	18.90	NA
	9/17/2007	16.46	NP	-	18.32	NA
	12/17/2007	15.63	NP	-	19.15	NA
	1/22/2008	14.84	14.83	0.01	19.95	NA
	3/24/2008	15.01	NP	-	19.77	NA
	6/23/2008	15.62	NP	-	19.16	NA
	9/22/2008	16.41	NP	-	18.37	NA
	1/5/2009	**Well Inaccessible**				
	3/16/2009	**15.64**	**NP**	**-**	**19.14**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-11	5/22/2000	15.41	NP	-	19.55	NA
(34.96)	8/22/2000	16.14	NP	-	18.82	NA
	11/27/2000	16.57	NP	-	18.39	0.1
	2/20/2001	16.30	sheen	-	18.66	NA
	5/15/2001	16.30	NP	-	18.66	NA
	9/19/2001	16.82	NP	-	18.14	NA
	12/20/2001	15.44	NP	-	19.52	NA
	3/15/2002	14.80	NP	-	20.16	NA
	9/23/2002	16.49	NP	-	18.47	NA
	12/19/2002	16.61	sheen	-	18.35	NA
	3/19/2003	15.11	NP	-	19.85	NA
	6/24/2003	15.52	NP	-	19.44	NA
	9/24/2003	16.48	NP	-	18.48	NA
	12/26/2003	15.85	NP	-	19.11	NA
	3/30/2004	15.09	NP	-	19.87	NA
	6/24/2004	15.98	NP	-	18.98	NA
	9/27/2004	16.67	NP	-	18.29	NA
	12/14/2004	16.34	NP	-	18.62	NA
	3/7/2005	16.14	NP	-	18.82	NA
	6/22/2005	15.80	NP	-	19.16	NA
	9/19/2005	16.48	NP	-	18.48	NA
	12/12/2005	15.79	NP	-	19.17	NA
	1/30/2006	13.94	NP	-	21.02	NA
	3/13/2006	14.53	NP	-	20.43	NA
	6/26/2006	15.49	NP	-	19.47	NA
	9/25/2006	16.36	Trace	-	18.60	NA
	12/11/2006	15.35	NP	-	19.61	NA
	3/19/2007	14.74	NP	-	20.22	NA
(34.99)	6/18/2007	15.74	NP	-	19.25	NA
	9/17/2007	16.54	NP	-	18.45	NA
	12/17/2007	15.60	NP	-	19.39	NA
	1/22/2008	14.55	NP	-	20.44	NA
	3/24/2008	14.85	NP	-	20.14	NA
	6/23/2008	15.49	NP	-	19.50	NA
	9/22/2008	16.31	NP	-	18.68	NA
	1/5/2009	**15.29**	**NP**	**-**	**19.70**	**NA**
	3/16/2009	**15.53**	**NP**	**-**	**19.46**	**NA**
B-12	2/14/2000	15.38	NP	-	19.76	NA
(35.14)	5/22/2000	15.85	NP	-	19.29	NA
	8/22/2000	16.55	NP	-	18.59	NA
	11/27/2000	16.98	NP	-	18.16	NA
	2/20/2001	16.73	NP	-	18.41	NA
	5/15/2001	16.72	NP	-	18.42	NA
	9/19/2001	17.20	NP	-	17.94	NA
	12/20/2001	15.94	NP	-	19.20	NA
	3/15/2002	15.32	NP	-	19.82	NA
	9/23/2002	16.89	NP	-	18.25	NA
	12/19/2002	17.01	NP	-	18.13	NA
	3/19/2003	15.56	NP	-	19.58	NA
	6/24/2003	Not Located				
	9/24/2003	Not Located				
	12/26/2003	Not Located				
	3/30/2004	Not Located				
	6/24/2004	16.40	NP	-	18.74	NA
	9/27/2004	17.00	NP	-	18.14	NA
	12/14/2004	16.75	NP	-	18.39	NA
	3/7/2005	16.52	NP	-	18.62	NA
	9/19/2005	16.87	NP	-	18.27	NA
	12/12/2005	16.20	NP	-	18.94	NA
	1/30/2006	14.49	NP	-	20.65	NA
	3/13/2006	15.02	NP	-	20.12	NA
	6/26/2006	15.95	NP	-	19.19	NA
	9/25/2006	16.78	NP	-	18.36	NA
	12/11/2006	15.84	NP	-	19.30	NA
	3/19/2007	15.24	NP	-	19.90	NA
(35.17)	6/18/2007	16.18	NP	-	18.99	NA
	9/17/2007	16.92	NP	-	18.25	NA
	12/17/2007	16.06	NP	-	19.11	NA
	1/22/2008	15.12	NP	-	20.05	NA
	3/24/2008	15.33	NP	-	19.84	NA
	6/23/2008	15.92	NP	-	19.25	NA
	9/22/2008	16.71	NP	-	18.46	NA
	1/5/2009	**15.73**	**NP**	**-**	**19.44**	**NA**
	3/16/2009	**15.96**	**NP**	**-**	**19.21**	**NA**

TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-13	2/14/2000	15.46	NP	-	19.30	NA
(34.76)	5/22/2000	15.86	NP	-	18.90	NA
	8/22/2000	16.46	NP	-	18.30	NA
	11/27/2000	19.91	NP	-	14.85	NA
	2/20/2001	16.65	NP	-	18.11	NA
	5/15/2001	16.65	NP	-	18.11	NA
	9/19/2001	17.09	NP	-	17.67	NA
	12/22/2001	15.94	NP	-	18.82	NA
	3/15/2002	15.37	NP	-	19.39	NA
	9/23/2002	16.82	NP	-	17.94	NA
	12/19/2002	16.95	NP	-	17.81	NA
	3/19/2003	15.62	NP	-	19.14	NA
	6/24/2003	15.96	NP	-	18.80	NA
	9/24/2003	16.82	NP	-	17.94	NA
	12/26/2003	16.29	NP	-	18.47	NA
	3/30/2004	15.58	NP	-	19.18	NA
	6/24/2004	16.34	NP	-	18.42	NA
	9/27/2004	16.90	NP	-	17.86	NA
	12/24/2004	16.71	NP	-	18.05	NA
	3/7/2005	16.49	NP	-	18.27	NA
	9/19/2005	16.79	NP	-	17.97	NA
	12/12/2005	16.16	NP	-	18.60	NA
	1/30/2006	14.54	NP	-	20.22	NA
	3/13/2006	15.04	NP	-	19.72	NA
	6/26/2006	15.95	NP	-	18.81	NA
	9/25/2006	16.78	NP	-	17.98	NA
	12/11/2006	15.82	NP	-	18.94	NA
	3/19/2007	15.26	NP	-	19.50	NA
(34.87)	6/18/2007	16.14	NP	-	18.73	NA
	Abandoned					
B-14	2/14/2000	17.27	NP	-	19.32	NA
(36.59)	5/22/2000	17.69	NP	-	18.90	NA
	8/22/2000	18.31	NP	-	18.28	NA
	11/27/2000	18.72	NP	-	17.87	NA
	2/20/2001	18.50	NP	-	18.09	NA
	5/15/2001	18.49	NP	-	18.10	NA
	9/19/2001	18.87	NP	-	17.72	NA
	12/22/2001	17.74	NP	-	18.85	NA
	3/15/2002	17.21	NP	-	19.38	NA
	9/23/2002	18.64	NP	-	17.95	NA
	12/19/2002	18.79	NP	-	17.80	NA
	3/19/2003	17.47	NP	-	19.12	NA
	6/24/2003	17.78	NP	-	18.81	NA
	9/24/2003	18.64	NP	-	17.95	NA
	12/26/2003	18.10	NP	-	18.49	NA
	3/30/2004	17.39	NP	-	19.20	NA
	6/24/2004	18.17	NP	-	18.42	NA
	9/27/2004	18.73	NP	-	17.86	NA
	12/14/2004	18.54	NP	-	18.05	NA
	3/7/2005	18.30	NP	-	18.29	NA
	9/19/2005	18.63	NP	-	17.96	NA
	12/12/2005	17.99	NP	-	18.60	NA
	1/30/2006	16.43	NP	-	20.16	NA
	3/13/2006	16.86	NP	-	19.73	NA
	6/26/2006	17.72	NP	-	18.87	NA
	9/25/2006	18.45	NP	-	18.14	NA
	12/11/2006	17.62	NP	-	18.97	NA
	3/19/2007	17.04	NP	-	19.55	NA
(36.62)	6/18/2007	17.92	NP	-	18.70	NA
	9/17/2007	18.58	NP	-	18.04	NA
	12/17/2007	17.81	NP	-	18.81	NA
	1/22/2008	16.98	Trace	-	19.64	NA
	3/24/2008	17.13	NP	-	19.49	NA
	6/23/2008	17.70	NP	-	18.92	NA
	9/22/2008	18.39	NP	-	18.23	NA
	1/5/2009	**17.90**	**NP**	**-**	**18.72**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-15	2/14/2000	16.48	NP	-	19.07	NA
(35.55)	5/22/2000	16.88	NP	-	18.67	NA
	8/22/2000	17.53	NP	-	18.02	NA
	11/27/2000	17.89	NP	-	17.66	NA
	2/20/2001	17.38	NP	-	18.17	NA
	5/15/2001	17.66	NP	-	17.89	NA
	9/19/2001	18.12	NP	-	17.43	NA
	12/20/2001	16.92	NP	-	18.63	NA
	3/15/2002	16.36	NP	-	19.19	NA
	9/23/2002	17.84	NP	-	17.71	NA
	12/19/2002	18.01	NP	-	17.54	NA
	3/19/2003	16.66	NP	-	18.89	NA
	6/24/2003	16.98	NP	-	18.57	NA
	9/24/2003	17.84	NP	-	17.71	NA
	12/26/2003	17.27	NP	-	18.28	NA
	3/30/2004	16.58	NP	-	18.97	NA
	6/24/2004	17.37	NP	-	18.18	NA
	9/27/2004	17.94	NP	-	17.61	NA
	12/14/2004	17.73	NP	-	17.82	NA
	3/7/2005	17.51	NP	-	18.04	NA
	9/19/2005	17.84	NP	-	17.71	NA
	12/12/2005	17.20	NP	-	18.35	NA
	1/30/2006	15.61	NP	-	19.94	NA
	3/13/2006	16.07	NP	-	19.48	NA
	6/26/2006	16.91	NP		18.64	NA
	9/25/2006	17.52	NP	-	18.03	NA
	12/11/2006	16.65	NP	-	18.90	NA
	3/19/2007	16.17	NP	-	19.38	NA
(35.58)	6/18/2007	17.02	NP	-	18.56	NA
	9/17/2007	17.67	NP	-	17.91	NA
	12/17/2007	16.86	NP	-	18.72	NA
	1/22/2008	16.11	NP	-	19.47	NA
	3/24/2008	16.25	NP	-	19.33	NA
	6/23/2008	16.76	NP	-	18.82	NA
	9/22/2008	17.46	NP	-	18.12	NA
	1/5/2009	**16.62**	**NP**	**-**	**18.96**	**NA**
	3/16/2009	**16.80**	**NP**	**-**	**18.78**	**NA**
B-19	2/14/2000	15.99	NP	-	18.18	NA
(34.17)	5/22/2000	16.34	NP	-	17.83	NA
	8/22/2000	17.04	NP	-	17.13	NA
	11/27/2000	17.35	NP	-	16.82	NA
	2/20/2001	17.17	NP	-	17.00	NA
	5/15/2001	17.14	NP	-	17.03	NA
	9/19/2001	17.67	NP	-	16.50	NA
	12/20/2001	16.32	NP	-	17.85	NA
	3/15/2002	15.88	NP	-	18.29	NA
	9/23/2002	17.37	NP	-	16.80	NA
	12/19/2002	18.47	NP	-	15.70	NA
	3/19/2003	16.13	NP	-	18.04	NA
	6/24/2003	16.50	NP	-	17.67	NA
	9/24/2003	17.35	NP	-	16.82	NA
	12/26/2003	16.71	NP	-	17.46	NA
	3/30/2004	16.08	NP	-	18.09	NA
	6/24/2004	16.87	NP	-	17.30	NA
	9/27/2004	17.44	NP	-	16.73	NA
	12/14/2004	17.28	NP	-	16.89	NA
	3/7/2005	17.02	NP	-	17.15	NA
	6/22/2005	16.72	NP	-	17.45	NA
	9/19/2005	17.34	NP	-	16.83	NA
	12/12/2005	16.69	NP	-	17.48	NA
	1/30/2006	15.06	NP	-	19.11	NA
	3/13/2006	15.55	NP	-	18.62	NA
	6/26/2006	16.36	NP	-	17.81	NA
	9/25/2006	16.76	Trace	-	17.41	NA
	12/11/2006	15.94	NP	-	18.23	NA
	3/19/2007	15.50	NP	-	18.67	NA
	6/18/2007	16.31	NP	-	17.86	NA
	9/17/2007	16.93	NP	-	17.24	NA
(34.66)	12/17/2007	16.08	NP	-	18.58	NA
	1/22/2008	15.44	NP	-	19.22	NA
	3/24/2008	15.56	NP	-	19.10	NA
	6/23/2008	16.02	NP	-	18.64	NA
	9/22/2008	16.69	NP	-	17.97	NA
	1/5/2009	**15.72**	**NP**	**-**	**18.94**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
	3/16/2009	**16.01**	**NP**	**-**	**18.65**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-20	2/14/2000	16.62	NP	-	16.70	NA
(33.32)	5/22/2000	16.93	NP	-	16.39	NA
	8/22/2000	17.78	NP	-	15.54	NA
	11/27/2000	17.99	sheen	-	15.33	NA
	2/20/2001	17.79	sheen	-	15.53	NA
	5/15/2001	17.89	NP	-	15.43	NA
	9/19/2001	18.40	NP	-	14.92	NA
	12/20/2001	16.61	NP	-	16.71	NA
	3/15/2002	16.45	NP	-	16.87	NA
	9/23/2002	18.27	NP	-	15.05	NA
	12/19/2002	18.22	NP	-	15.10	NA
	3/19/2003	15.96	NP	-	17.36	NA
	6/24/2003	17.06	NP	-	16.26	NA
	9/24/2003	18.30	NP	-	15.02	NA
	12/26/2003	17.31	NP	-	16.01	NA
	3/30/2004	16.47	NP	-	16.85	NA
	6/24/2004	17.32	NP	-	16.00	NA
	9/27/2004	18.29	NP	-	15.03	NA
	12/14/2004	17.77	NP	-	15.55	NA
	3/7/2005	17.82	NP	-	15.50	NA
	6/23/2005	17.41	NP	-	15.91	NA
	9/19/2005	18.20	NP	-	15.12	NA
	12/12/2005	17.34	NP	-	15.98	NA
	1/30/2006	15.70	NP	-	17.62	NA
	3/13/2006	16.09	NP	-	17.23	NA
	6/26/2006	16.96	NP	-	16.36	NA
	9/25/2006	16.38	NP	-	16.94	NA
	12/11/2006	16.02	NP	-	17.30	NA
	3/19/2007	15.87	NP	-	17.45	NA
(33.33)	6/18/2007	16.29	NP	-	17.04	NA
	9/17/2007	16.59	Trace	-	16.74	NA
	12/17/2007	16.07	NP	-	17.26	NA
	1/22/2008	15.63	NP	-	17.70	NA
	3/24/2008	15.48	NP	-	17.85	NA
	6/23/2008	15.92	15.91	0.01	17.41	NA
	9/22/2008	16.11	NP	-	17.22	NA
	1/5/2009	**15.16**	**15.07**	**0.09**	**18.24**	**0.0**
	3/16/2009	**15.59**	**NP**	**-**	**17.74**	**0.0**
B-21	2/14/2000	16.22	NP	-	18.57	NA
(34.79)	5/22/2000	16.57	NP	-	18.22	NA
	8/22/2000	17.15	NP	-	17.64	NA
	11/27/2000	17.45	NP	-	17.34	NA
	2/20/2001	19.29	NP	-	15.50	NA
	5/15/2001	17.27	NP	-	17.52	NA
	9/19/2001	17.66	NP	-	17.13	NA
	12/20/2001	16.48	NP	-	18.31	NA
	3/15/2002	16.18	NP	-	18.61	NA
	9/23/2002	17.45	NP	-	17.34	NA
	12/19/2002	17.56	NP	-	17.23	NA
	3/19/2003	16.35	NP	-	18.44	NA
	6/24/2003	16.70	NP	-	18.09	NA
	9/24/2003	17.42	NP	-	17.37	NA
	12/26/2003	16.91	NP	-	17.88	NA
	3/30/2004	16.36	NP	-	18.43	NA
	6/24/2004	17.02	NP	-	17.77	NA
	9/27/2004	17.49	NP	-	17.30	NA
	12/14/2004	17.41	NP	-	17.38	NA
	3/7/2005	17.04	NP	-	17.75	NA
	6/23/2005	16.87	NP	-	17.92	NA
	9/19/2005	17.45	NP	-	17.34	NA
	12/12/2005	16.84	NP	-	17.95	NA
	1/30/2006	15.30	NP	-	19.49	NA
	3/13/2006	15.93	NP	-	18.86	NA
	6/26/2006	16.62	NP	-	18.17	NA
	9/25/2006	16.98	NP	-	17.81	NA
	12/11/2006	16.23	NP	-	18.56	NA
	3/19/2007	15.88	NP	-	18.91	NA
(34.82)	6/18/2007	16.60	NP	-	18.22	NA
	9/17/2007	17.14	NP	-	17.68	NA
	12/17/2007	16.40	NP	-	18.42	NA
	1/22/2008	15.78	NP	-	19.04	NA
	3/24/2008	15.87	NP	-	18.95	NA
	6/23/2008	16.34	NP	-	18.48	NA
	9/22/2008	16.92	NP	-	17.90	NA

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
	1/5/2009	**15.93**	**NP**	**-**	**18.89**	**NA**
	3/16/2009	**16.35**	**NP**	**-**	**18.47**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-24	2/14/2000	15.50	15.49	0.01	19.21	0.0
(34.70)	5/22/2000	15.83	NP	-	18.87	NA
	8/22/2000	16.38	NP	-	18.32	NA
	11/27/2000	16.81	NP	-	17.89	NA
	2/20/2001	16.59	NP	-	18.11	NA
	5/15/2001	16.56	NP	-	18.14	NA
	9/19/2001	16.94	NP	-	17.76	NA
	12/22/2001	16.23	16.07	0.16	18.60	0.0
	3/15/2002	15.54	Sheen	-	19.16	0.0
	9/23/2002	16.86	16.73	0.13	17.94	0.0
	12/19/2002	16.98	NP	-	17.72	NA
	3/19/2003	15.84	15.71	0.13	18.96	0.0
	6/24/2003	15.90	Sheen	-	18.80	0.0
	9/24/2003	16.75	16.71	0.04	17.98	0.0
	12/26/2003	16.32	16.29	0.03	18.40	0.0
	3/30/2004	15.51	NP	-	19.19	NA
	6/24/2004	16.58	16.21	0.37	18.42	NA
	9/27/2004	16.76	16.75	0.01	17.95	0.0
	12/14/2004	16.64	Sheen	-	18.06	0.0
	3/7/2005	16.44	16.43	0.01	18.27	0.004
	6/23/2005	NM	NM	NM	NM	NM
	9/19/2005	16.63	16.61	0.02	18.09	0.004
	12/12/2005	Inaccessible				
	3/13/2006	15.06	15.04	0.02	19.66	0.0
	6/26/2006	15.87	15.84	0.03	18.85	0.0
	9/25/2006	16.60	NP	-	18.10	0.0
	12/11/2006	15.84	Trace	-	18.86	0.0
	3/19/2007	15.21	NP	-	19.49	0.0
	6/18/2007	6.14	Trace	-	28.56	0.0
	9/17/2007	-	-	-	-	0.0
	12/17/2007	16.16	NP	-	18.54	0.0
	1/22/2008	14.25	14.22	0.03	20.47	0.0
	3/24/2008	15.29	15.26	0.03	19.43	0.0
	6/23/2008	15.93	15.90	0.03	18.79	0.0
	9/22/2008	16.61	16.59	0.02	18.11	0.0
	1/5/2009	**15.70**	**NP**	**-**	**19.00**	**0.0**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**0.0**
B-26	2/14/2000	15.49	NP	-	19.81	NA
(35.30)	5/22/2000	15.96	NP	-	19.34	NA
	8/22/2000	16.72	NP	-	18.58	NA
	11/27/2000	17.11	NP	-	18.19	NA
	2/20/2001	16.86	NP	-	18.44	NA
	5/15/2001	16.86	NP	-	18.44	NA
	9/19/2001	17.37	NP	-	17.93	NA
	12/20/2001	15.93	NP	-	19.37	NA
	3/15/2002	15.41	NP	-	19.89	NA
	9/23/2002	17.06	NP	-	18.24	NA
	12/19/2002	17.10	NP	-	18.20	NA
	3/19/2003	15.69	NP	-	19.61	NA
	6/24/2003	16.13	NP	-	19.17	NA
	9/24/2003	17.06	NP	-	18.24	NA
	12/26/2003	16.39	NP	-	18.91	NA
	3/30/2004	16.68	NP	-	18.62	NA
	6/24/2004	16.54	NP	-	18.76	NA
	9/27/2004	17.18	NP	-	18.12	NA
	12/14/2004	16.96	NP	-	18.34	NA
	3/7/2005	16.69	NP	-	18.61	NA
	6/22/2005	16.35	NP	-	18.95	NA
	9/19/2005	17.08	NP	-	18.22	NA
	12/12/2005	16.33	NP	-	18.97	NA
	1/30/2006	14.46	NP	-	20.84	NA
	3/13/2006	15.15	NP	-	20.15	NA
	6/26/2006	16.09	NP	-	19.21	NA
	9/25/2006	16.92	Trace	-	18.38	NA
	12/11/2006	15.83	NP	-	19.47	NA
	3/19/2007	15.32	NP	-	19.98	NA
(35.33)	6/18/2007	16.32	NP	-	19.01	NA
	9/17/2007	17.07	NP	-	18.26	NA
	12/17/2007	16.11	NP	-	19.22	NA
	1/22/2008	15.24	NP	-	20.09	NA
	3/24/2008	15.42	NP	-	19.91	NA
	6/23/2008	16.05	NP	-	19.28	NA
	9/22/2008	16.84	NP	-	18.49	NA
	1/5/2009	**15.70**	**NP**	**-**	**19.63**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
	3/16/2009	**16.10**	**NP**	**-**	**19.23**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-28	2/14/2000	15.45	NP	-	19.81	NA
(35.26)	5/22/2000	14.34	NP	-	20.92	NA
	8/22/2000	16.11	NP	-	19.15	NA
	11/27/2000	16.36	NP	-	18.90	NA
	2/20/2001	16.14	NP	-	19.12	NA
	5/15/2001	16.07	NP	-	19.19	NA
	9/19/2001	16.25	NP	-	19.01	NA
	12/22/2001	15.97	NP	-	19.29	NA
	3/15/2002	15.36	NP	-	19.90	NA
	9/23/2002	16.36	NP	-	18.90	NA
	12/19/2002	16.35	NP	-	18.91	NA
	3/19/2003	15.69	NP	-	19.57	NA
	6/24/2003	15.93	NP	-	19.33	NA
	9/24/2003	16.31	NP	-	18.95	NA
	12/26/2003	16.39	NP	-	18.87	NA
	3/30/2004	15.56	NP	-	19.70	NA
	6/24/2004	16.13	NP	-	19.13	NA
	9/27/2004	16.21	NP	-	19.05	NA
	12/14/2004	16.07	NP	-	19.19	NA
	3/7/2005	16.06	NP	-	19.20	NA
	9/19/2005	16.18	NP	-	19.08	NA
	12/12/2005	15.96	NP	-	19.30	NA
	3/13/2006	14.71	NP	-	20.55	NA
	6/26/2006	14.60	NP	-	20.66	NA
	9/25/2006	16.06	Trace	-	19.20	NA
	12/11/2006	-	-	-	-	-
	3/19/2007	-	-	-	-	-
(35.28)	6/18/2007	-	-	-	-	-
	9/17/2007	16.37	NP	-	18.91	-
	12/17/2007	15.93	NP	-	19.35	-
	1/22/2008	15.15	NP	-	20.13	-
	3/24/2008	15.30	NP	-	19.98	-
	6/23/2008	15.83	NP	-	19.45	-
	9/22/2008	16.14	NP	-	19.14	-
	1/5/2009	**15.82**	**NP**	**-**	**19.46**	**-**
	3/16/2009	**15.90**	**NP**	**-**	**19.38**	**-**
B-29	2/14/2000	15.12	NP	-	22.58	NA
(37.70)	5/22/2000	15.43	NP	-	22.27	NA
	8/22/2000	16.24	NP	-	21.46	NA
	11/27/2000	16.63	NP	-	21.07	NA
	2/20/2001	16.27	NP	-	21.43	NA
	5/15/2001	16.22	NP	-	21.48	NA
	9/19/2001	16.80	NP	-	20.90	NA
	12/22/2001	15.68	NP	-	22.02	NA
	3/15/2002	14.98	NP	-	22.72	NA
	9/23/2002	16.73	NP	-	20.97	NA
	12/19/2002	16.82	NP	-	20.88	NA
	3/19/2003	15.28	NP	-	22.42	NA
	6/24/2003	15.60	NP	-	22.10	NA
	9/24/2003	16.59	NP	-	21.11	NA
	12/26/2003	15.11	NP	-	22.59	NA
	3/30/2004	15.24	NP	-	22.46	NA
	6/24/2004	16.28	NP	-	21.42	NA
	9/27/2004	16.92	NP	-	20.78	NA
	12/14/2004	16.58	NP	-	21.12	NA
	3/7/2005	16.33	NP	-	21.37	NA
	9/19/2005	16.84	NP	-	20.86	NA
	12/12/2005	16.45	NP	-	21.25	NA
	3/13/2006	15.00	NP	-	22.70	NA
	6/26/2006	15.77	NP	-	21.93	NA
	9/25/2006	16.54	NP	-	21.16	NA
	12/11/2006	15.74	Trace	-	21.96	NA
	3/19/2007	14.95	NP	-	22.75	NA
(36.00)	6/18/2007	15.97	NP	-	20.03	NA
	9/17/2007	16.82	NP	-	19.18	NA
	12/17/2007	15.89	NP	-	20.11	NA
	1/22/2008	14.77	NP	-	21.23	NA
	3/24/2008	14.96	NP	-	21.04	NA
	6/23/2008	15.54	NP	-	20.46	NA
	9/22/2008	16.44	NP	-	19.56	NA
	1/5/2009	**14.74**	**NP**	**-**	**21.26**	**NA**
	3/16/2009	**15.78**	**NP**	**-**	**20.22**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-30	2/14/2000	14.76	NP	-	20.63	NA
(35.39)	5/22/2000	15.85	NP	-	19.54	NA
	8/22/2000	16.08	NP	-	19.31	NA
	11/27/2000	16.37	NP	-	19.02	NA
	2/20/2001	15.92	NP	-	19.47	NA
	5/15/2001	15.95	NP	-	19.44	NA
	9/19/2001	16.52	NP	-	18.87	NA
	12/22/2001	14.96	NP	-	20.43	NA
	3/15/2002	14.96	NP	-	20.43	NA
	9/23/2002	16.19	NP	-	19.20	NA
	12/19/2002	16.31	NP	-	19.08	NA
	3/19/2003	14.67	NP	-	20.72	NA
	6/24/2003	15.05	NP	-	20.34	NA
	9/24/2003	16.13	NP	-	19.26	NA
	12/26/2003	15.56	NP	-	19.83	NA
	3/30/2004	14.70	NP	-	20.69	NA
	6/24/2004	15.60	NP	-	19.79	NA
	9/27/2004	16.31	NP	-	19.08	NA
	12/14/2004	16.14	16.11	0.03	18.58	0.005
	3/7/2005	15.77	Sheen	Sheen	19.62	NA
	6/22/2005	15.39	NP	-	20.00	NA
	9/19/2005	16.20	NP	-	19.19	NA
	12/12/2005	15.43	15.43	Sheen	19.96	0.0
	3/13/2006	14.12	14.12	Sheen	21.27	0.0
	6/26/2006	15.08	NP	-	20.31	0.0
	9/25/2006	16.07	NP	-	19.32	0.0
	12/11/2006	14.96	NP	-	20.43	0.0
	3/19/2007	14.30	NP	-	21.09	0.0
	6/18/2007	15.34	NP	-	20.05	0.0
	9/17/2007	16.68	NP	-	18.71	0.0
	12/17/2007	15.69	NP	-	19.70	1.0
	1/22/2008	15.60	15.58	0.02	19.81	0.0
	3/24/2008	14.84	14.83	0.01	20.56	0.0
	6/23/2008	15.50	15.49	0.01	19.90	0.0
	9/22/2008	16.38	16.37	0.01	19.02	0.0
	1/5/2009	**15.19**	**15.18**	**0.01**	**20.21**	**0.0**
	3/16/2009	**15.50**	**15.48**	**0.02**	**19.91**	**0.0**
B-32	2/14/2000	16.37	NP	-	17.86	NA
(34.23)	5/22/2000	26.84	NP	-	7.39	NA
	8/22/2000	17.65	NP	-	16.58	NA
	11/27/2000	17.93	NP	-	16.30	NA
	2/20/2001	17.71	NP	-	16.52	NA
	5/15/2001	17.74	NP	-	16.49	NA
	9/19/2001	18.17	NP	-	16.06	NA
	12/20/2001	16.74	NP	-	17.49	NA
	3/15/2002	16.55	NP	-	17.68	NA
	9/23/2002	18.32	18.32	Sheen	15.91	NA
	12/19/2002	18.15	NP	-	16.08	NA
	3/19/2003	16.83	NP	-	17.40	NA
	6/24/2003	17.09	NP	-	17.14	NA
	9/24/2003	17.99	NP	-	16.24	NA
	12/26/2003	17.20	NP	-	17.03	NA
	3/30/2004	16.78	NP	-	17.45	NA
	6/24/2004	17.41	NP	-	16.82	NA
	9/27/2004	18.01	NP	-	16.22	NA
	12/14/2004	17.89	NP	-	16.34	NA
	3/7/2005	17.65	NP	-	16.58	NA
	6/23/2005	17.39	NP	-	16.84	NA
	9/19/2005	18.00	NP	-	16.23	NA
	12/12/2005	17.13	NP	-	17.10	NA
	1/30/2006	15.81	NP	-	18.42	NA
	3/13/2006	15.98	NP	-	18.25	NA
	6/26/2006	15.81	NP	-	18.42	NA
	9/25/2006	16.71	NP	-	17.52	NA
	12/11/2006	15.66	NP	-	18.57	NA
	3/19/2007	15.82	NP	-	18.41	NA
(34.20)	6/18/2007	16.50	NP	-	17.70	NA
	9/17/2007	16.50	NP	-	17.70	NA
		Abandoned				

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-33	2/14/2000	15.54	15.49	0.05	20.40	0.0
(35.90)	5/22/2000	16.41	NP	-	19.49	NA
	8/22/2000	17.15	NP	-	18.75	NA
	11/27/2000	17.39	NP	-	18.51	NA
	2/20/2001	17.25	NP	-	18.65	NA
	5/15/2001	17.24	NP	-	18.66	NA
	9/19/2001	17.72	NP	-	18.18	NA
	12/20/2001	16.29	NP	-	19.61	NA
	3/15/2002	15.93	NP	-	19.97	NA
	9/23/2002	17.51	NP	-	18.39	NA
	12/19/2002	17.52	NP	-	18.38	NA
	3/19/2003	16.21	NP	-	19.69	NA
	6/24/2003	16.57	NP	-	19.33	NA
	9/24/2003	17.45	NP	-	18.45	NA
	12/26/2003	16.74	NP	-	19.16	NA
	3/30/2004	16.24	NP	-	19.66	NA
	6/24/2004	16.87	NP	-	19.03	NA
	9/27/2004	17.56	NP	-	18.34	NA
	12/14/2004	17.22	NP	-	18.68	NA
	3/7/2005	17.10	NP	-	18.80	NA
	6/22/2005	16.88	NP	-	19.02	NA
	9/19/2005	17.40	NP	-	18.50	NA
	12/12/2005	16.70	NP	-	19.20	NA
	1/30/2006	15.01	NP	-	20.89	NA
	3/13/2006	15.80	NP	-	20.10	NA
	6/26/2006	16.44	NP	-	19.46	NA
	12/11/2006	15.76	NP	-	20.14	NA
	3/19/2007	15.34	NP	-	20.56	NA
(34.34)	6/18/2007	16.21	NP	-	18.13	NA
	9/17/2007	16.82	NP	-	17.52	NA
	12/17/2007	15.95	NP	-	18.39	NA
	1/22/2008	15.35	NP	-	18.99	NA
	3/24/2008	15.31	NP	-	19.03	NA
	6/23/2008	15.91	NP	-	18.43	NA
	9/22/2008	16.54	NP	-	17.80	NA
	1/5/2009	**15.49**	**NP**	**-**	**18.85**	**NA**
	3/16/2009	**15.96**	**NP**	**-**	**18.38**	**NA**
CR-1	2/14/2000	2.38	NP	-	19.70	NA
(22.08)	5/22/2000	3.26	NP	-	18.82	NA
	8/22/2000	4.32	NP	-	17.76	NA
	11/27/2000	4.38	NP	-	17.70	NA
	2/20/2001	6.50	NP	-	15.58	NA
	5/15/2001	4.25	NP	-	17.83	NA
	9/19/2001	4.79	NP	-	17.29	NA
	12/22/2001	3.05	NP	-	19.03	NA
	3/15/2002	2.77	NP	-	19.31	NA
	9/23/2002	4.34	NP	-	17.74	NA
	12/19/2002	3.84	NP	-	18.24	NA
	3/19/2003	2.85	NP	-	19.23	NA
	6/24/2003	3.38	NP	-	18.70	NA
	9/24/2003	4.33	NP	-	17.75	NA
	12/26/2003	3.32	NP	-	18.76	NA
	3/30/2004	3.14	NP	-	18.94	NA
	6/24/2004	3.68	NP	-	18.40	NA
	9/27/2004	4.39	NP	-	17.69	NA
	12/14/2004	3.74	NP	-	18.34	NA
	3/7/2005	3.93	NP	-	18.15	NA
	6/23/2005	3.75	NP	-	18.33	NA
	9/19/2005	4.44	NP	-	17.64	NA
	12/12/2005	3.45	NP	-	18.63	NA
	1/30/2006	1.50	NP	-	20.58	NA
	3/13/2006	2.32	NP	-	19.76	NA
	6/26/2006	3.28	NP	-	18.80	NA
	9/25/2006	4.25	NP	-	17.83	NA
	12/11/2006	-	-	-	-	-
	3/19/2007	2.71	NP	-	19.37	NA
(21.69)	6/18/2007	3.50	NP	-	18.19	NA
	9/17/2007	4.21	NP	-	17.48	NA
	12/17/2007	3.13	NP	-	18.56	NA
	3/24/2008	2.56	NP	-	19.13	NA
	6/23/2008	3.10	NP	-	18.59	NA
	9/22/2008	3.93	NP	-	17.76	NA
	1/5/2009	**2.29**	**NP**	**-**	**19.40**	**NA**
	3/16/2009	**2.80**	**NP**	**-**	**18.89**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-3	2/14/2000	12.29	12.28	0.01	22.04	0.0
(34.32)	5/22/2000	16.57	NP	-	17.75	NA
	8/22/2000	15.34	NP	-	18.98	NA
	11/27/2000	13.86	NP	-	20.46	NA
	2/20/2001	15.46	NP	-	18.86	NA
	5/15/2001	15.37	NP	-	18.95	NA
	9/19/2001	16.03	NP	-	18.29	NA
	12/22/2001	14.50	NP	-	19.82	NA
	3/15/2002	13.93	NP	-	20.39	NA
	9/23/2002	15.70	NP	-	18.62	NA
	12/19/2002	15.40	NP	-	18.92	NA
	3/19/2003	14.27	NP	-	20.05	NA
	6/24/2003	14.70	NP	-	19.62	NA
	9/24/2003	15.67	NP	-	18.65	NA
	12/26/2003	14.71	NP	-	19.61	NA
	3/30/2004	14.28	NP	-	20.04	NA
	6/24/2004	15.17	NP	-	19.15	NA
	9/27/2004	15.85	NP	-	18.47	NA
	12/14/2004	14.97	NP	-	19.35	NA
	3/7/2005	15.32	NP	-	19.00	NA
	6/22/2005	15.01	NP	-	19.31	NA
	9/19/2005	15.70	NP	-	18.62	NA
	12/12/2005	14.97	NP	-	19.35	NA
	1/30/2006	10.34	NP	-	23.98	NA
	3/13/2006	13.73	NP	-	20.59	NA
	6/26/2006	14.68	NP	-	19.64	NA
	9/25/2006	15.58	NP	-	18.74	NA
	12/11/2006	14.53	NP	-	19.79	NA
	3/19/2007	13.93	NP	-	20.39	NA
(34.31)	6/18/2007	14.94	NP	-	19.37	NA
	9/17/2007	15.75	NP	-	18.56	NA
	12/17/2007	14.76	NP	-	19.55	NA
	1/22/2008	13.81	NP	-	20.50	NA
	3/24/2008	14.02	NP	-	20.29	NA
	6/23/2008	14.66	NP	-	19.65	NA
	9/22/2008	15.51	NP	-	18.80	NA
	1/5/2009	**14.24**	**NP**	**-**	**20.07**	**NA**
	3/16/2009	**14.70**	**NP**	**-**	**19.61**	**NA**
CR-4	2/14/2000	5.08	NP	-	32.06	NA
(37.14)	5/22/2000	5.63	NP	-	31.51	NA
	8/22/2000	7.25	NP	-	29.89	NA
	11/27/2000	8.31	NP	-	28.83	NA
	2/20/2001	6.98	NP	-	30.16	NA
	5/15/2001	6.34	NP	-	30.80	NA
	9/19/2001	8.55	NP	-	28.59	NA
	12/20/2001	5.38	NP	-	31.76	NA
	3/15/2002	4.88	NP	-	32.26	NA
	6/4/2002	6.17	NP	-	30.97	NA
	9/23/2002	7.69	NP	-	29.45	NA
	12/19/2002	7.92	NP	-	29.22	NA
	3/19/2003	4.97	NP	-	32.17	NA
	6/24/2003	5.98	NP	-	31.16	NA
	9/24/2003	7.77	NP	-	29.37	NA
	12/26/2003	4.73	NP	-	32.41	NA
	3/30/2004	4.58	NP	-	32.56	NA
	6/24/2004	6.68	NP	-	30.46	NA
	9/27/2004	7.32	NP	-	29.82	NA
	12/14/2004	6.41	NP	-	30.73	NA
	3/7/2005	6.82	NP	-	30.32	NA
	6/22/2005	6.43	NP	-	30.71	NA
	9/19/2005	7.35	NP	-	29.79	NA
	12/12/2005	2.65	NP	-	34.49	NA
	3/13/2006	NM	NM	NM	NM	NA
	6/26/2006	6.20	NM	NM	NM	NA
	9/25/2006	8.63	NP	-	28.51	NA
	12/11/2006	-	-	-	-	NA
	3/19/2007	5.25	NP	-	31.89	NA
	6/18/2007	6.67	NP	-	30.47	NA
	9/17/2007	8.78	NP	-	28.36	NA
	12/17/2007	9.69	NP	-	27.45	NA
	3/24/2008	----------Well Compromised----------				
	6/23/2008	NM	NM	NM	NM	NA
	9/22/2008	NM	NM	NM	NM	NA
	1/5/2009	**NM**	**NM**	**NM**	**NM**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-6	2/14/2000	11.75	NP	-	23.86	NA
(35.61)	5/22/2000	12.20	NP	-	23.41	NA
	8/22/2000	13.11	NP	-	22.50	NA
	11/27/2000	NM	NM	-	-	NA
	2/20/2001	13.12	13.11	0.01	22.50	0.0 **
	5/15/2001	12.90	NP	-	22.71	NA **
	9/19/2001	13.95	13.91	0.04	21.69	0.0 **
	12/20/2001	13.02	NP	-	22.59	NA
	3/15/2002	11.54	NP	-	24.07	NA
	6/4/2002	12.70	12.69	0.01	22.92	NA
	9/23/2002	14.56	NP	-	21.05	NA
	12/19/2002	13.26	13.23	0.03	22.37	0.04
	3/19/2003	12.01	11.99	0.02	23.62	0.0
	6/24/2003	12.75	12.73	0.02	22.88	0.0
	9/24/2003	13.43	13.40	0.03	22.20	0.0
	12/26/2003	12.73	12.69	0.04	22.91	0.0
	3/30/2004	12.18	sheen	-	23.43	0.0
	6/24/2004	13.21	13.17	0.04	22.43	0.007
	9/27/2004	13.24	13.19	0.05	22.41	0.009
	12/14/2004	13.01	12.97	0.04	22.63	0.007
	3/7/2005	13.07	13.04	0.03	22.56	0.005
	6/21/2005	13.16	13.13	0.03	22.47	0.005
	9/19/2005	13.63	13.60	0.03	22.00	0.005
	12/12/2005	12.47	12.47	Sheen	23.14	0.0
	3/13/2006	11.61	NP	-	24.00	NA
	6/26/2006	12.48	12.48	Sheen	23.13	NA
	9/25/2006	13.68	Trace	-	21.93	NA
	12/11/2006	12.39	12.37	0.02	23.24	NA
	3/19/2007	11.67	11.61	0.06	23.99	NA
	6/18/2007	12.88	12.84	0.04	22.76	NA
	9/17/2007	13.86	Trace	-	21.75	NA
	12/17/2007	12.43	NP	-	23.18	NA
	3/24/2008	11.70	NP	-	23.91	NA
	6/23/2008	12.44	12.43	0.01	23.18	NA
	9/22/2008	13.54	13.50	0.04	22.10	NA
	1/5/2009	**11.79**	**11.72**	**0.07**	**23.88**	**0.0**
	3/16/2009	**12.25**	**12.20**	**0.05**	**23.40**	**0.0**
CR-7	2/14/2000	9.46	9.45	0.01	26.12	0.0
(35.57)	5/22/2000	10.09	NP	-	25.48	NA
	8/22/2000	16.34	NP	-	19.23	NA
	11/27/2000	NM	NM	-	NM	-
	2/20/2001	11.30	sheen	-	24.27	0.0
	5/15/2001	11.21	NP	-	24.36	NA
	9/19/2001	12.46	NP	-	23.11	NA
	12/20/2001	9.92	NP	-	25.65	NA
	3/15/2002	9.60	NP	-	25.97	NA
	6/4/2002	11.01	11.00	0.01	24.57	NA
	9/23/2002	12.23	NP	-	23.34	NA
	12/19/2002	11.45	NP	-	24.12	NA
	3/19/2003	10.53	NP	-	25.04	NA
	6/24/2003	11.23	NP	-	24.34	NA
	9/24/2003	12.60	12.58	0.02	22.99	NA
	12/26/2003	10.90	NP	-	24.67	NA
	3/30/2004	10.77	NP	-	24.80	NA
	6/24/2004	11.78	11.75	0.03	23.81	NA
	9/27/2004	11.58	NP	-	23.99	NA
	12/14/2004	11.14	NP	-	24.43	NA
	3/7/2005	11.57	11.56	0.01	24.01	0.002
	6/21/2005	11.27	11.25	0.02	24.32	0.003
	9/19/2005	12.39	12.38	0.01	23.19	0.002
	12/12/2005	10.90	10.90	Sheen	24.67	0.0
	3/13/2006	9.94	NP	-	25.63	NA
	6/26/2006	11.14	11.14	Sheen	24.43	NA
	9/25/2006	12.42	12.40	0.02	23.17	NA
	12/11/2006	10.74	Trace	-	24.83	NA
	3/19/2007	-	-	-	-	-
	6/18/2007	11.40	Trace	-	24.17	-
	9/17/2007	12.59	Trace	-	22.98	-
	12/17/2007	Inaccessible				
	3/24/2008	10.00	10.00	Trace	25.57	-
	6/23/2008	10.80	NP	-	24.77	-
	9/22/2008	12.19	12.18	0.01	23.39	-
	1/5/2009	**9.79**	**NP**	**-**	**25.78**	**-**
	3/16/2009	**10.77**	**NP**	**-**	**24.80**	**-**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-8	2/14/2000	5.70	NP	-	27.44	NA
(33.14)	5/22/2000	6.23	NP	-	26.91	NA
	8/22/2000	7.44	NP	-	25.70	NA
	11/27/2000	7.61	NP	-	25.53	NA
	2/20/2001	7.03	NP	-	26.11	NA
	5/15/2001	6.98	NP	-	26.16	NA
	9/19/2001	8.29	NP	-	24.85	NA
	12/20/2001	6.18	NP	-	26.96	NA
	3/15/2002	5.77	NP	-	27.37	NA
	6/4/2002	6.82	NP	-	26.32	NA
	9/23/2002	8.04	NP	-	25.10	NA
	12/19/2002	7.36	NP	-	25.78	NA
	3/19/2003	6.12	NP	-	27.02	NA
	6/24/2003	6.84	NP	-	26.30	NA
	9/24/2003	8.24	NP	-	24.90	NA
	12/26/2003	6.99	NP	-	26.15	NA
	3/30/2004	6.31	NP	-	26.83	NA
	6/24/2004	7.19	NP	-	25.95	NA
	9/27/2004	7.42	NP	-	25.72	NA
	12/14/2004	6.80	NP	-	26.34	NA
	3/7/2005	6.86	NP	-	26.28	NA
	6/22/2005	6.71	NP	-	26.43	NA
	9/19/2005	8.03	NP	-	25.11	NA
	12/12/2005	6.96	NP	-	26.18	NA
	3/13/2006	5.33	NP	-	27.81	NA
	6/26/2006	6.78	NP	-	26.36	NA
	9/25/2006	8.06	NP	-	25.08	NA
	12/11/2006	6.25	NP	-	26.89	NA
	3/19/2007	5.90	NP	-	27.24	NA
	6/18/2007	7.15	NP	-	25.99	NA
	9/17/2007	8.23	NP	-	24.91	NA
	12/17/2007	7.32	NP	-	25.82	NA
	3/24/2008	6.63	6.63	Trace	26.51	NA
	6/23/2008	7.12	NP	-	26.02	NA
	9/22/2008	8.81	NP	-	24.33	NA
	1/5/2009	**6.62**	**NP**	**-**	**26.52**	**NA**
	3/16/2009	**5.80**	**NP**	**-**	**27.34**	**NA**
CR-8A	6/26/2006	6.52	NP	**-**	-	NA
(Sump)	9/25/2006	7.12	NP	**-**	-	NA
	12/11/2006	4.53	NP	-	-	NA
	3/19/2007	4.62	NP	-	-	NA
	6/18/2007	6.07	NP	-	-	NA
	9/17/2007	7.38	NP	-	-	NA
	12/17/2007	5.37	NP	-	-	NA
	3/24/2008	4.64	NP	-	-	NA
	6/23/2008	5.92	NP	-	-	NA
	9/22/2008	7.07	7.07	Sheen	-	NA
	1/5/2009	**4.40**	**4.40**	**Sheen**	**-**	**NA**
	3/16/2009	**Inaccessible**				

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-9	2/14/2000	3.02	NP	-	32.70	NA
(35.72)	5/22/2000	3.78	NP	-	31.94	NA
	8/22/2000	6.51	NP	-	29.21	NA
	11/27/2000	5.20	NP	-	30.52	NA
	2/20/2001	4.71	NP	-	31.01	NA
	5/15/2001	4.95	NP	-	30.77	NA
	9/19/2001	7.26	NP	-	28.46	NA
	12/20/2001	3.47	NP	-	32.25	NA
	3/15/2002	3.25	NP	-	32.47	NA
	9/23/2002	7.11	NP	-	28.61	NA
	12/19/2002	4.35	NP	-	31.37	NA
	3/19/2003	3.46	NP	-	32.26	NA
	6/24/2003	5.95	NP	-	29.77	NA
	9/24/2003	6.82	NP	-	28.90	NA
	12/26/2003	3.53	NP	-	32.19	NA
	3/30/2004	3.69	NP	-	32.03	NA
	6/24/2004	6.06	NP	-	29.66	NA
	9/27/2004	6.32	NP	-	29.40	NA
	2/14/2004	3.81	NP	-	31.91	NA
	3/7/2005	4.66	NP	-	31.06	NA
	6/22/2005	6.71	NP	-	29.01	NA
	9/19/2005	6.94	NP	-	28.78	NA
	12/12/2005	4.01	NP	-	31.71	NA
	3/13/2006	3.12	NP	-	32.60	NA
	6/26/2006	5.33	NP	-	30.39	NA
	9/25/2006	7.00	NP	-	28.72	NA
	12/11/2006	4.13	NP	-	31.59	NA
	3/19/2007	3.40	NP	-	32.32	NA
	6/18/2007	5.88	NP	-	29.84	NA
	9/17/2007	-	-	-	-	NA
	12/17/2007	Inaccessible				
	3/24/2008	4.17	NP	-	31.55	NA
	6/23/2008	5.53	NP	-	30.19	NA
	9/22/2008	6.98	NP	-	28.74	NA
	1/5/2009	**3.10**	**NP**	**-**	**32.62**	**NA**
	3/16/2009	**3.78**	**NP**	**-**	**31.94**	**NA**
CR-10	2/14/2000	4.12	4.08	0.04	31.48	0.0
(35.57)	5/22/2000	4.95	NP	-	30.62	NA
	8/22/2000	7.00	6.74	0.26	28.78	0.9
	11/27/2000	NM	NM	-	-	1.1
	2/20/2001	6.27	6.03	0.24	29.49	0.5
	5/15/2001	Covered With a Gravel Pile				0.5
	9/19/2001	10.68	7.92	2.76	27.10	NR ***
	12/22/2001	4.18	4.12	0.06	31.44	NR ***
	3/15/2002	4.03	3.95	0.08	31.60	0.1
	6/4/2002	5.72	5.55	0.17	29.99	0.1
	9/23/2002	9.13	7.04	2.09	28.11	3.0
	12/19/2002	7.44	6.35	1.09	29.00	0.53
	3/19/2003	4.25	4.21	0.04	31.35	0.26
	6/24/2003	5.69	5.58	0.11	29.97	0.05
	9/24/2003	8.15	7.41	0.74	28.01	0.53
	12/26/2003	6.45	4.75	1.70	30.48	6.0
	3/30/2004	5.23	NP	-	30.34	Skimmer
	6/24/2004	6.81	6.79	0.02	28.78	Skimmer
	9/27/2004	6.78	NP	-	28.79	Skimmer
	12/14/2004	6.33	6.30	0.03	29.26	Skimmer
	3/7/2005	6.63	6.62	0.01	28.95	Skimmer
	6/21/2005	5.50	5.46	0.04	30.10	0.02
	9/19/2005	8.33	7.94	0.39	27.55	0.28
	12/12/2005	5.61	5.60	Sheen	29.96	0.02
	3/13/2006	4.78	4.78	Sheen	30.79	0.04
	6/26/2006	6.90	6.90	Sheen	28.67	0.02
	9/25/2006	8.59	7.74	0.85	27.66	0.44
	12/11/2006	4.93	Trace	-	30.64	0.80
	3/19/2007	4.60	4.55	0.05	31.01	0.00
	6/18/2007	6.30	6.26	0.04	29.30	0.03
	9/17/2007	8.55	7.80	0.75	27.62	0.05
	12/17/2007	5.02	-	-	30.55	0.93
	3/24/2008	4.54	4.50	0.04	31.03	0.08
	6/23/2008	5.64	5.60	0.04	29.96	0.01
	9/22/2008	7.65	7.42	0.23	27.94	0.08
	1/5/2009	**4.75**	**4.29**	**0.46**	**30.86**	**0.40**
	3/16/2009	**5.31**	**5.27**	**0.04**	**30.26**	**0.03**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-11	2/14/2000	2.06	NP	-	32.37	NA
(34.43)	5/22/2000	2.04	NP	-	32.39	NA
	8/22/2000	4.13	NP	-	30.30	NA
	11/27/2000	4.47	sheen	-	29.96	0.1
	2/20/2001	3.27	NP	-	31.16	NA
	5/15/2001	3.02	NP	-	31.41	NA
	9/19/2001	5.26	NP	-	29.17	NA
	12/20/2001	2.34	NP	-	32.09	NA
	3/15/2002	2.02	NP	-	32.41	NA
	9/23/2002	5.12	NP	-	29.31	NA
	12/19/2002	3.86	3.84	0.02	30.59	NA
	3/19/2003	2.06	NP	-	32.37	NA
	6/24/2003	3.25	NP	-	31.18	NA
	9/24/2003	4.80	NP	-	29.63	NA
	12/26/2003	well obstructed				
	3/30/2004	2.53	NP	-	31.90	NA
	6/24/2004	3.85	3.84	0.01	30.59	NA
	9/27/2004	4.60	4.59	0.01	29.84	NA
	12/14/2004	3.24	3.22	0.02	31.21	NA
	3/7/2005	3.27	NP	-	31.16	NA
	6/20/2005	3.20	NP	-	31.23	NA
	9/19/2005	4.47	4.47	0.00	29.96	0.0
	12/12/2005	3.20	3.20	Sheen	31.23	0.0
	3/13/2006	1.98	NP	Sheen	32.45	NA
	6/26/2006	2.05	NP	-	32.38	NA
	9/25/2006	2.56	NP	-	31.87	NA
	12/11/2006	2.58	2.56	0.02	31.87	NA
	3/19/2007	2.34	NP	-	32.09	NA
	6/18/2007	2.46	NP	-	31.97	NA
	9/17/2007	3.69	3.64	0.05	30.78	NA
	12/17/2007	1.20	NP	-	33.23	NA
	3/24/2008	0.21	NP	-	34.22	NA
	6/23/2008	2.10	NP	-	32.33	NA
	9/22/2008	4.40	4.30	0.10	30.11	NA
	1/5/2009	**3.57**	**3.57**	**Sheen**	**30.86**	**NA**
	3/16/2009	**5.45**	**NP**	**-**	**28.98**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-12	6/9/1999	4.85	NP	-	30.74	NA
(35.59)	7/8/1999	5.08	NP	-	30.51	NA
	8/16/1999	5.63	NP	-	29.96	NA
	9/20/1999	8.90	NP	-	26.69	NA
	2/9/2000	2.66	NP	-	32.93	NA
	5/9/2000	4.44	NP	-	31.15	NA
	5/15/2000	4.12	NP	-	31.47	NA
	7/11/2000	5.21	NP	-	30.38	NA
	8/14/2000	5.76	NP	-	29.83	NA
	12/12/2000	5.61	NP	-	29.98	NA
	4/3/2001	5.49	NP	-	30.10	NA
	6/8/2001	Covered With a Gravel Pile				
	7/16/2001	Covered With a Gravel Pile				
	8/1/2001	6.14	NP	-	29.45	NA
	9/19/2001	Covered With a Gravel Pile				
	12/22/2001	3.82	NP	-	31.77	NA
	3/15/2002	3.89	NP	-	31.70	NA
	6/4/2002	5.13	NP	-	30.46	NA
	9/23/2002	6.69	NP	-	28.90	NA
	12/19/2002	5.53	NP	-	30.06	NA
	3/19/2003	3.99	NP	-	31.60	NA
	6/24/2003	5.15	NP	-	30.44	NA
	9/24/2003	6.67	NP	-	28.92	NA
	12/26/2003	4.48	NP	-	31.11	NA
	3/30/2004	4.76	NP	-	30.83	NA
	6/24/2004	5.94	NP	-	29.65	NA
	9/27/2004	6.28	NP	-	29.31	NA
	12/14/2004	5.27	NP	-	30.32	NA
	3/7/2005	5.84	NP	-	29.75	NA
	6/21/2005	5.39	NP	-	30.20	NA
	9/19/2005	6.55	NP	-	29.04	NA
	12/12/2005	5.14	NP	-	30.45	NA
	3/13/2006	4.55	NP	-	31.04	NA
	6/26/2006	5.31	NP	-	30.28	NA
	9/25/2006	6.69	NP	-	28.90	NA
	12/11/2006	4.91	NP	-	30.68	NA
	3/19/2007	4.45	NP	-	31.14	NA
	6/18/2007	5.86	NP	-	29.73	NA
	9/17/2007	6.86	NP	-	28.73	NA
	12/17/2007	4.73	NP	-	30.86	NA
	3/24/2008	4.47	4.46	0.01	26.66	NA
	6/23/2008	5.72	NP	-	29.87	NA
	9/22/2008	Inaccessible				NA
	1/5/2009	**3.98**	**NP**	**-**	**31.61**	**NA**
	3/16/2009	**5.29**	**NP**	**-**	**30.30**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-13	6/9/1999	5.08	NP	-	30.38	NA
(35.46)	7/8/1999	5.27	NP	-	30.19	NA
	8/16/1999	5.77	NP	-	29.69	NA
	9/20/1999	9.05	NP	-	26.41	NA
	2/9/2000	3.86	NP	-	31.60	NA
	5/9/2000	4.63	NP	-	30.83	NA
	5/15/2000	4.37	NP	-	31.09	NA
	7/11/2000	5.28	NP	-	30.18	NA
	8/14/2000	5.81	NP	-	29.65	NA
	12/12/2000	5.64	NP	-	29.82	NA
	4/3/2001	5.80	NP	-	29.66	NA
	6/8/2001	5.75	NP	-	29.71	NA
	7/16/2001	6.29	NP	-	29.17	NA
	8/1/2001	6.52	NP	-	28.94	NA
	9/19/2001	Covered With a Gravel Pile				
	12/22/2001	4.34	NP	-	31.12	NA
	3/15/2002	4.38	NP	-	31.08	NA
	6/4/2002	5.66	NP	-	29.80	NA
	9/23/2002	6.83	NP	-	28.63	NA
	12/19/2002	6.09	NP	-	29.37	NA
	3/19/2003	4.71	NP	-	30.75	NA
	6/24/2003	5.66	NP	-	29.80	NA
	9/24/2003	6.90	NP	-	28.56	NA
	12/26/2003	4.93	NP	-	30.53	NA
	3/30/2004	5.29	NP	-	30.17	NA
	6/24/2004	6.24	NP	-	29.22	NA
	9/27/2004	6.49	NP	-	28.97	NA
	12/14/2004	5.81	NP	-	29.65	NA
	3/7/2005	6.16	NP	-	29.30	NA
	6/21/2005	5.70	NP	-	29.76	NA
	9/19/2005	6.81	NP	-	28.65	NA
	12/12/2005	5.38	NP	-	30.08	NA
	3/13/2006	NM	NM	NM	NM	NM
	6/26/2006	NM	NM	NM	NM	NM
	9/25/2006	----------Well not found----------				
	12/11/2006	-	-	-	-	-
	3/19/2007	-	-	-	-	-
	6/18/2007	-	-	-	-	-
	9/17/2007	-	-	-	-	-
	12/17/2007	NM	NM	NM	NM	NM
	3/24/2008	Abandoned				

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-14	6/9/1999	5.03	NP	-	30.40	NA
(35.43)	7/8/1999	5.27	NP	-	30.16	NA
	8/16/1999	5.85	NP	-	29.58	NA
	9/20/1999	6.14	NP	-	29.29	NA
	2/9/2000	3.98	NP	-	31.45	NA
	5/9/2000	4.66	NP	-	30.77	NA
	5/15/2000	4.33	NP	-	31.10	NA
	7/11/2000	5.41	NP	-	30.02	NA
	8/14/2000	6.01	NP	-	29.42	NA
	12/12/2000	5.87	NP	-	29.56	NA
	4/3/2001	5.70	NP	-	29.73	NA
	6/8/2001	5.81	NP	-	29.62	NA
	7/16/2001	6.20	NP	-	29.23	NA
	8/1/2001	6.32	NP	-	29.11	NA
	9/19/2001	6.99	NP	-	28.44	NA
	12/20/2001	4.22	NP	-	31.21	NA
	3/15/2002	4.09	NP	-	31.34	NA
	6/4/2002	5.41	NP	-	30.02	NA
	9/23/2002	6.86	NP	-	28.57	NA
	12/19/2002	5.59	NP	-	29.84	NA
	3/19/2003	4.54	NP	-	30.89	NA
	6/24/2003	5.51	NP	-	29.92	NA
	9/24/2003	7.01	NP	-	28.42	NA
	12/26/2003	4.72	NP	-	30.71	NA
	3/30/2004	5.38	NP	-	30.05	NA
	6/24/2004	6.36	NP	-	29.07	NA
	9/27/2004	6.53	NP	-	28.90	NA
	12/14/2004	5.57	NP	-	29.86	NA
	3/7/2005	6.26	NP	-	29.17	NA
	6/21/2005	5.56	NP	-	29.87	NA
	9/19/2005	6.93	NP	-	28.50	NA
	12/12/2005	5.39	NP	-	30.04	NA
	3/13/2006	4.89	NP	-	30.54	NA
	6/26/2006	5.87	NP	-	29.56	NA
	9/25/2006	7.25	NP	-	28.18	NA
	12/11/2006	5.52	NP	-	29.91	NA
	3/19/2007	5.19	NP	-	30.24	NA
	6/18/2007	6.13	NP	-	29.30	NA
	9/17/2007	7.33	NP	-	28.10	NA
	12/17/2007	5.47	NP	-	29.96	NA
	3/24/2008	4.71	NP	-	30.72	NA
	6/23/2008	5.80	NP	-	29.63	NA
	9/22/2008	7.09	NP	-	28.34	NA
	1/5/2009	**4.38**	**NP**	**-**	**31.05**	**NA**
	3/16/2009	**5.43**	**NP**	**-**	**30.00**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-15	6/9/1999	9.06	NP	-	26.36	NA
(35.42)	7/8/1999	9.44	9.41	0.03	26.00	NR ***
	8/16/1999	10.35	10.08	0.27	25.29	NR ***
	9/20/1999	11.07	10.63	0.44	24.70	NR ***
	2/9/2000	8.32	8.01	0.31	27.35	NR ***
	5/9/2000	8.91	8.66	0.25	26.71	NR ***
	5/15/2000	8.74	8.53	0.21	26.85	NR ***
	5/16/2000	8.60	8.45	0.15	26.94	NR ***
	6/7/2000	9.33	8.99	0.34	26.36	NR ***
	7/11/2000	10.02	9.70	0.32	25.66	NR ***
	8/14/2000	10.76	10.39	0.37	24.96	NR ***
	12/12/2000	10.60	10.56	0.04	24.85	NR ***
	4/3/2001	10.17	10.05	0.12	25.35	NR ***
	6/8/2001	10.56	10.37	0.19	25.01	NR ***
	7/16/2001	10.97	10.77	0.20	24.61	NR ***
	9/19/2001	12.17	11.76	0.41	23.58	NR ***
	12/22/2001	8.66	8.50	0.16	26.89	NR ***
	3/15/2002	8.86	8.42	0.44	26.91	0.3
	6/4/2002	10.52	10.25	0.27	25.12	0.5
	9/23/2002	11.40	11.31	0.09	24.09	0.13
	12/19/2002	9.39	9.37	0.02	26.05	0.03
	3/19/2003	9.11	9.04	0.07	26.37	0.13
	6/24/2003	10.63	10.52	0.11	24.88	0.01
	9/24/2003	12.53	12.32	0.21	23.06	0.01
	12/26/2003	10.34	9.78	0.56	25.53	NA
	3/30/2004	10.34	9.92	0.42	25.42	NA
	6/24/2004	11.26	11.11	0.15	24.28	NA
	9/27/2004	11.85	11.76	0.09	23.64	NA
	12/14/2004	9.96	9.95	0.01	25.47	0.002
	3/7/2005	11.02	10.90	0.12	24.50	0.02
	6/21/2005	10.62	10.49	0.13	24.90	0.02
	9/19/2005	12.10	11.89	0.21	23.49	0.16
	12/12/2005	10.04	10.01	0.03	25.40	0.03
	3/13/2006	9.06	8.93	0.13	26.46	0.05
	6/26/2006	10.79	10.51	0.28	24.85	NA
	9/25/2006	12.18	11.90	0.28	23.46	0.00
	12/11/2006	9.96	9.93	0.03	25.48	0.12
	3/19/2007	6.21	6.08	0.13	29.31	0.20
	6/18/2007	10.81	10.70	0.11	24.70	0.09
	9/17/2007	12.09	12.00	0.09	23.40	0.04
	12/17/2007	9.83	9.83	0.00	25.59	0.03
	3/24/2008	9.22	8.99	0.23	26.38	0.29
	6/23/2008	10.10	9.99	0.11	25.41	0.37
	9/22/2008	11.71	NP	-	23.71	0.29
	1/5/2009	**8.71**	**8.64**	**0.07**	**26.77**	**0.04**
	3/16/2009	**10.08**	**9.95**	**0.13**	**25.44**	**0.00**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-16	6/9/1999	11.05	NP	-	23.72	NA
(34.77)	7/8/1999	11.61	NP	-	23.16	NA
	8/16/1999	11.82	NP	-	22.95	NA
	9/20/1999	12.00	NP	-	22.77	NA
	2/9/2000	10.39	NP	-	24.38	NA
	5/9/2000	11.10	NP	-	23.67	NA
	5/15/2000	11.12	NP	-	23.65	NA
	7/11/2000	11.86	NP	-	22.91	NA
	8/14/2000	11.96	NP	-	22.81	NA
	12/12/2000	11.95	NP	-	22.82	NA
	4/3/2001	11.93	NP	-	22.84	NA
	6/8/2001	NM	NM	-	NM	-
	7/16/2001	12.06	NP	-	22.71	NA
	9/19/2001	12.60	NP	-	22.17	NA
	12/22/2001	10.40	NP	-	24.37	NA
	3/15/2002	10.64	NP	-	24.13	NA
	6/4/2002	11.89	NP	-	22.88	NA
	9/23/2002	12.16	NP	-	22.61	NA
	12/19/2002	10.89	10.87	0.02	23.90	0.01
	3/19/2003	10.54	NP	-	24.23	NA
	6/24/2003	11.81	NP	-	22.96	NA
	9/24/2003	12.42	NP	-	22.35	NA
	12/26/2003	11.29	NP	-	23.48	NA
	3/30/2004	10.83	NP	-	23.94	NA
	6/24/2004	12.04	12.02	0.02	22.75	NA
	9/27/2004	12.03	NP	-	22.74	NA
	12/14/2004	11.08	NP	-	23.69	NA
	3/7/2005	11.88	NP	-	22.89	NA
	6/21/2005	11.59	NP	-	23.18	NA
	9/19/2005	12.35	12.35	0.00	22.42	NA
	12/12/2005	11.00	10.92	0.08	23.83	0.0
	3/13/2006	10.55	NP	-	24.22	NA
	6/26/2006	11.38	NP	-	23.39	NA
	9/25/2006	12.37	NP	-	22.40	NA
	12/11/2006	11.10	11.08	0.02	23.69	NA
	3/19/2007	10.34	NP	-	24.43	NA
	6/18/2007	11.85	NP	-	22.92	NA
	9/17/2007	12.49	NP	-	22.28	NA
	12/17/2007	10.94	NP	-	23.83	NA
	3/24/2008	10.56	10.56	Trace	24.21	NA
	6/23/2008	11.64	NP	-	23.13	NA
	9/22/2008	12.22	NP	-	22.55	NA
	1/5/2009	**9.97**	**9.97**	**Trace**	**24.80**	**NA**
	3/16/2009	**11.56**	**NP**	**-**	**23.21**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-17	6/9/1999	6.90	NP	-	27.56	NA
(34.46)	7/8/1999	7.15	NP	-	27.31	NA
	8/16/1999	7.81	NP	-	26.65	NA
	9/20/1999	8.35	NP	-	26.11	NA
	2/9/2000	6.41	NP	-	28.05	NA
	5/9/2000	6.80	NP	-	27.66	NA
	5/15/2000	6.68	NP	-	27.78	NA
	7/11/2000	7.50	NP	-	26.96	NA
	8/14/2000	8.21	NP	-	26.25	NA
	12/12/2000	8.26	NP	-	26.20	NA
	4/3/2001	7.90	NP	-	26.56	NA
	6/8/2001	NM	NM	-	NM	-
	7/16/2001	8.59	NP	-	25.87	NA
	9/19/2001	9.70	NP	-	24.76	NA
	12/22/2001	6.57	NP	-	27.89	NA
	3/15/2002	6.47	NP	-	27.99	NA
	6/4/2002	7.82	NP	-	26.64	NA
	9/23/2002	8.81	NP	-	25.65	NA
	12/19/2002	7.92	NP	-	26.54	NA
	3/19/2003	6.70	NP	-	27.76	NA
	6/24/2003	7.96	NP	-	26.50	NA
	9/24/2003	9.63	NP	-	24.83	NA
	12/26/2003	7.51	7.10	0.41	27.28	NA
	3/30/2004	7.32	NP	-	27.14	NA
	6/24/2004	8.65	NP	-	25.81	NA
	9/27/2004	8.32	NP	-	26.14	NA
	12/14/2004	7.44	NP	-	27.02	NA
	3/7/2005	8.28	NP	-	26.18	NA
	6/21/2005	7.80	NP	-	26.66	NA
	9/19/2005	9.50	NP	-	24.96	NA
	12/12/2005	7.22	NP	-	27.24	NA
	3/13/2006	6.64	NP	-	27.82	NA
	6/26/2006	7.71	NP	-	26.75	NA
	9/25/2006	9.57	NP	-	24.89	NA
	12/11/2006	7.11	NP	-	27.35	NA
	3/19/2007	6.91	NP	-	27.55	NA
	6/18/2007	8.17	NP	-	26.29	NA
	9/17/2007	9.98	NP	-	24.48	NA
	12/17/2007	7.13	NP	-	27.33	NA
	3/24/2008	6.52	NP	-	27.94	NA
	6/23/2008	7.45	NP	-	27.01	NA
	9/22/2008	8.98	NP	-	25.48	NA
	1/5/2009	**6.48**	**NP**	**-**	**27.98**	**NA**
	3/16/2009	**7.36**	**NP**	**-**	**27.10**	**NA**
CR-18	6/9/1999	3.77	NP	-	31.07	NA
(34.84)	7/8/1999	4.14	NP	-	30.70	NA
	8/16/1999	5.19	NP	-	29.65	NA
	9/20/1999	NM	NM	-	NM	-
	2/9/2000	NM	NM	-	NM	-
	5/9/2000	NM	NM	-	NM	-
	5/15/2000	NM	NM	-	NM	-
	7/11/2000	NM	NM	-	NM	-
	8/14/2000	NM	NM	-	NM	-
	12/12/2000	NM	NM	-	NM	-
	4/3/2001	NM	NM	-	NM	-
	6/8/2001	NM	NM	-	NM	-
	7/16/2001	NM	NM	-	NM	-
	9/19/2001	NM	NM	-	NM	-
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	NM	NM	-	NM	-
	12/17/2007	Abandoned				

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-19	6/9/1999	5.10	NP	-	30.39	NA
(35.49)	7/8/1999	6.24	5.27	0.97	30.03	NR ***
	8/16/1999	7.65	5.87	1.78	29.26	NR ***
	9/20/1999	8.86	6.38	2.48	28.61	NR ***
	2/9/2000	5.94	3.35	2.59	31.62	NR ***
	5/9/2000	6.19	4.38	1.81	30.75	NR ***
	5/15/2000	4.27	4.22	0.05	31.26	NR ***
	5/16/2000	4.32	4.26	0.06	31.22	NR ***
	6/7/2000	5.57	4.78	0.79	30.55	NR ***
	7/11/2000	6.17	5.35	0.82	29.98	NR ***
	8/14/2000	7.50	5.94	1.56	29.24	NR ***
	12/12/2000	8.69	5.90	2.79	29.03	NR ***
	4/3/2001	8.03	5.61	2.42	29.40	NR ***
	6/8/2001	7.77	5.75	2.02	29.34	NR ***
	7/16/2001	7.99	6.32	1.67	28.84	NR ***
	9/19/2001	8.86	7.14	1.72	28.01	NR ***
	12/22/2001	4.62	4.24	0.38	31.17	NR ***
	3/15/2002	4.47	4.13	0.34	31.29	0.25
	6/4/2002	6.92	5.39	1.53	29.79	1.50
	9/23/2002	8.48	6.91	1.57	28.27	0.53
	12/19/2002	7.09	6.17	0.92	29.14	0.26
	3/19/2003	4.83	4.40	0.43	31.00	0.26
	6/24/2003	6.51	5.50	1.01	29.79	0.75
	9/24/2003	7.68	6.99	0.69	28.36	0.26
	12/26/2003	7.41	5.21	2.20	29.84	2.50
	3/30/2004	7.12	5.49	1.63	29.67	2.50
	6/24/2004	7.40	6.62	0.78	28.71	2.50
	9/27/2004	8.28	7.65	0.63	27.71	2.50
	12/14/2004	6.63	6.37	0.26	29.07	0.04
	3/7/2005	6.94	6.92	0.02	28.57	0.003
	6/21/2005	6.43	5.83	0.60	29.54	0.1
	9/19/2005	8.80	7.32	1.48	27.87	0.3
	12/12/2005	5.19	5.19	Sheen	30.30	0.01
	3/13/2006	4.45	NP	Sheen	31.04	0.10
	6/26/2006	6.00	5.93	0.07	29.55	0.04
	9/25/2006	8.13	7.39	0.74	27.95	0.36
	12/11/2006	4.78	Trace	-	30.71	0.50
	3/19/2007	4.63	NP	-	30.86	0.30
	6/18/2007	6.51	6.29	0.22	29.16	0.38
	9/17/2007	7.89	7.54	0.35	27.88	0.03
	12/17/2007	5.94	NP	0.00	29.55	0.00
	3/24/2008	4.89	4.83	0.06	30.65	0.70
	6/23/2008	6.21	6.00	0.21	29.45	0.57
	9/22/2008	7.97	7.49	0.48	27.90	0.70
	1/5/2009	**5.05**	**4.60**	**0.45**	**30.80**	**0.30**
	3/16/2009	**6.24**	**5.69**	**0.55**	**29.69**	**0.42**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-20	7/8/1999	7.69	NP	-	27.45	NA
(35.14)	8/16/1999	8.50	NP	-	26.64	NA
	9/20/1999	9.14	NP	-	26.00	NA
	2/9/2000	6.67	NP	-	28.47	NA
	5/9/2000	7.25	NP	-	27.89	NA
	5/15/2000	6.98	NP	-	28.16	NA
	7/11/2000	8.15	NP	-	26.99	NA
	8/14/2000	8.95	NP	-	26.19	NA
	12/12/2000	9.12	NP	-	26.02	NA
	4/3/2001	8.75	NP	-	26.39	NA
	6/8/2001	9.04	NP	-	26.10	NA
	7/16/2001	9.51	NP	-	25.63	NA
	9/19/2001	10.91	NP	-	24.23	NA
	12/20/2001	6.96	NP	-	28.18	NA
	3/15/2002	6.91	NP	-	28.23	NA
	6/4/2002	8.74	NP	-	26.40	NA
	9/23/2002	10.29	NP	-	24.85	NA
	12/19/2002	8.88	NP	-	26.26	NA
	3/19/2003	7.35	NP	-	27.79	NA
	6/24/2003	9.05	NP	-	26.09	NA
	9/24/2003	11.30	NP	-	23.84	NA
	12/26/2003	8.08	8.06	0.02	27.08	NA
	3/30/2004	8.35	NP	-	26.79	NA
	6/24/2004	9.89	NP	-	25.25	NA
	9/27/2004	9.59	NP	-	25.55	NA
	12/14/2004	8.25	NP	-	26.89	NA
	3/7/2005	9.60	NP	-	25.54	NA
	6/21/2005	8.79	NP	-	26.35	NA
	9/19/2005	10.92	NP	-	24.22	NA
	12/12/2005	8.26	NP	-	26.88	NA
	3/13/2006	7.09	NP	-	28.05	NA
	6/26/2006	8.72	NP	-	26.42	NA
	9/25/2006	11.00	NP	-	24.14	NA
	12/11/2006	8.23	NP	-	26.91	NA
	3/19/2007	7.22	NP	-	27.92	NA
	6/18/2007	9.13	NP	-	26.01	NA
	9/17/2007	11.02	NP	-	24.12	NA
	12/17/2007	7.98	NP	-	27.16	NA
	3/24/2008	6.47	NP	-	28.67	NA
	6/23/2008	8.14	NP	-	27.00	NA
	9/22/2008	10.34	NP	-	24.80	NA
	1/5/2009	**6.78**	**NP**	**-**	**28.36**	**NA**
	3/16/2009	**8.09**	**NP**	**-**	**27.05**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-21A	12/12/2000	5.54	NP	-	28.57	NA
(34.11)	4/5/2001	5.21	5.11	0.10	28.98	NR ***
	6/8/2001	5.61	5.11	0.50	28.90	NR ***
	7/16/2001	6.37	5.25	1.12	28.64	NR ***
	9/19/2001	Covered With Construction Equipment				
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	NM	NM	>1.0E	NM	NM
	6/4/2002	NM	4.85E	>1.5E	NM	NM
	9/23/2002	8.10E	6.10E	2.0E	NM	0.04
	12/19/2002	5.19	4.95	0.24	29.11	0.02
	3/19/2003	3.6E	3.4E	0.2E	NM	0.01
	6/24/2003	5.6E	5.33	0.25E	NM	0.01
	9/24/2003	7.1E	6.80	0.3E	NM	0.01
	12/26/2003	3.75	3.63E	0.12E	NM	0.01
	3/30/2004	5.35	4.99	0.36	29.05	0.25
	6/24/2004	6.52	6.17	0.35	27.87	NA
	9/27/2004	7.09	6.59	0.50	27.42	NA
	12/14/2004	5.69	5.48	0.21	28.59	0.005
	3/7/2005	5.80	5.66	0.14	28.42	0.003
	6/22/2005	5.78	5.53	0.25	28.53	0.006
	9/19/2005	7.41	6.89	0.52	27.12	0.012
	12/12/2005	5.29	5.08	0.21	28.99	0.02
	3/13/2006	4.35	4.18	0.17	29.90	0.01
	6/26/2006	5.35	5.23	0.12	28.86	0.01
	9/25/2006	6.72	NP	-	27.39	0.01
	12/11/2006	4.92	4.68	0.24	29.38	NA
	3/19/2007	5.00	4.50	0.50	29.51	NA
	6/18/2007	-	-	-	-	-
	9/17/2007	7.36	7.30	0.06	26.80	-
	12/17/2007	Inaccessible				0.03
	3/24/2008	4.10	4.05	0.05	30.05	0.09
	6/23/2008	Inaccessible				NA
	9/22/2008	Inaccessible				NA
	1/5/2009	Inaccessible				NA
	3/16/2009	Inaccessible				NA
CR-21B	12/12/2000	6.53	NP	-	27.83	NA
(34.36)	4/3/2001	5.62	NP	-	28.74	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	6.88	NP	-	27.48	NA
	9/19/2001	7.41	NP	-	26.95	NA
	12/20/2001	4.68	NP	-	29.68	NA
	3/15/2002	4.48	NP	-	29.88	NA
	6/4/2002	5.59	NP	-	28.77	NA
	9/23/2002	7.77	NP	-	26.59	NA
	12/19/2002	5.79	NP	-	28.57	NA
	3/19/2003	4.92	NP	-	29.44	NA
	6/24/2003	6.21	NP	-	28.15	NA
	9/24/2003	7.77	NP	-	26.59	NA
	12/26/2003	4.41	NP	-	29.95	NA
	3/30/2004	5.30	NP	-	29.06	NA
	6/24/2004	6.67	NP	-	27.69	NA
	9/27/2004	6.99	NP	-	27.37	NA
	12/14/2004	6.52	NP	-	27.84	NA
	3/7/2005	6.27	NP	-	28.09	NA
	6/22/2005	6.09	NP	-	28.27	NA
	9/19/2005	7.75	NP	-	26.61	NA
	12/12/2005	5.65	NP	-	28.71	NA
	3/13/2006	4.45	NP	-	29.91	NA
	6/26/2006	5.89	NP	-	28.47	NA
	9/25/2006	7.68	NP	-	26.68	NA
	12/11/2006	5.33	NP	-	29.03	NA
	3/19/2007	4.47	NP	-	29.89	NA
	6/18/2007	-	-	-	-	NA
	9/17/2007	-	-	-	-	NA
	12/17/2007	5.13	-	-	29.23	NA
	3/24/2008	Inaccessible				NA
	6/23/2008	Inaccessible				NA
	9/22/2008	Inaccessible				NA
	1/5/2009	Inaccessible				NA
	3/16/2009	Inaccessible				NA

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-22A	12/12/2000	11.92	NP	-	22.88	NA
(34.80)	4/3/2001	11.51	NP	-	23.29	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	11.89	NP	-	22.91	NA
	9/19/2001	12.52	NP	-	22.28	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	10.36	NP	-	24.44	NA
	6/4/2002	11.32	NP	-	23.48	NA
	9/23/2002	12.12	NP	-	22.68	NA
	12/19/2002	11.93	NP	-	22.87	NA
	3/19/2003	10.99	NP	-	23.81	NA
	6/24/2003	11.83	NP	-	22.97	NA
	9/24/2003	12.96	NP	-	21.84	NA
	12/26/2003	11.65	NP	-	23.15	NA
	3/30/2004	11.79	NP	-	23.01	NA
	6/24/2004	12.28	NP	-	22.52	NA
	9/27/2004	12.33	NP	-	22.47	NA
	12/14/2004	11.98	NP	-	22.82	NA
	3/7/2005	12.02	NP	-	22.78	NA
	6/21/2005	11.85	NP	-	22.95	NA
	9/19/2005	12.73	NP	-	22.07	NA
	12/12/2005	11.59	NP	-	23.21	NA
	3/13/2006	10.98	NP	-	23.82	NA
	6/26/2006	11.42	NP	-	23.38	NA
	9/25/2006	12.82	Trace	-	21.98	NA
	12/11/2006	11.42	NP	-	23.38	NA
	3/19/2007	10.84	NP	-	23.96	NA
	6/18/2007	11.93	NP	-	22.87	NA
	9/17/2007	12.67	NP	-	22.13	NA
	12/17/2007	11.19	NP	-	23.61	NA
	3/24/2008	10.66	NP	-	24.14	NA
	6/23/2008	11.37	NP	-	23.43	NA
	9/22/2008	12.48	NP	-	22.32	NA
	1/5/2009	**10.36**	**NP**	**-**	**24.44**	**NA**
	3/16/2009	**11.34**	**NP**	**-**	**23.46**	**NA**
CR-22B	12/12/2000	11.27	NP	-	23.92	NA
(35.19)	4/3/2001	10.70	NP	-	24.49	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	11.31	NP	-	23.88	NA
	9/19/2001	12.02	NP	-	23.17	NA
	12/20/2001	9.63	NP	-	25.56	NA
	3/15/2002	9.52	NP	-	25.67	NA
	6/4/2002	10.59	NP	-	24.60	NA
	9/23/2002	11.57	NP	-	23.62	NA
	12/19/2002	11.39	NP	-	23.80	NA
	3/19/2003	10.02	NP	-	25.17	NA
	6/24/2003	10.52	NP	-	24.67	NA
	9/24/2003	12.24	NP	-	22.95	NA
	12/26/2003	10.64	NP	-	24.55	NA
	3/30/2004	10.33	NP	-	24.86	NA
	6/24/2004	11.26	NP	-	23.93	NA
	9/27/2004	11.25	NP	-	23.94	NA
	12/14/2004	10.87	NP	-	24.32	NA
	3/7/2005	11.13	NP	-	24.06	NA
	6/21/2005	10.90	NP	-	24.29	NA
	9/19/2005	11.84	NP	-	23.35	NA
	12/12/2005	10.59	NP	-	24.60	NA
	3/13/2006	9.65	NP	-	25.54	NA
	6/26/2006	10.71	NP	-	24.48	NA
	9/25/2006	12.02	NP	-	23.17	NA
	12/11/2006	10.39	NP	-	24.80	NA
	3/19/2007	9.64	NP	-	25.55	NA
	6/18/2007	11.00	NP	-	24.19	NA
	9/17/2007	12.10	NP	-	23.09	NA
	12/17/2007	10.24	NP	-	24.95	NA
	3/24/2008	9.64	NP	-	25.55	NA
	6/23/2008	10.42	NP	-	24.77	NA
	9/22/2008	11.82	NP	-	23.37	NA
	1/5/2009	**9.70**	**NP**	**-**	**25.49**	**NA**
	3/16/2009	**10.25**	**NP**	**-**	**24.94**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-23A	12/12/2000	13.56	NP	-	22.79	NA
(36.35)	4/3/2001	13.20	NP	-	23.15	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	13.52	NP	-	22.83	NA
	9/19/2001	14.19	NP	-	22.16	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	11.84	NP	-	24.51	NA
	6/4/2002	12.83	NP	-	23.52	NA
	9/23/2002	13.66	NP	-	22.69	NA
	12/19/2002	13.66	NP	-	22.69	NA
	3/19/2003	11.97	NP	-	24.38	NA
	6/24/2003	12.64	NP	-	23.71	NA
	9/24/2003	13.95	NP	-	22.40	NA
	12/26/2003	12.70	NP	-	23.65	NA
	3/30/2004	12.47	NP	-	23.88	NA
	6/24/2004	13.46	NP	-	22.89	NA
	9/27/2004	13.45	NP	-	22.90	NA
	12/14/2004	13.14	NP	-	23.21	NA
	3/7/2005	13.35	NP	-	23.00	NA
	6/21/2005	12.92	NP	-	23.43	NA
	9/19/2005	13.95	NP	-	22.40	NA
	12/12/2005	12.74	NP	-	23.61	NA
	3/13/2006	11.96	NP	-	24.39	NA
	6/26/2006	12.96	NP	-	23.39	NA
	9/25/2006	13.95	NP	-	22.40	NA
	12/11/2006	12.62	NP	-	23.73	NA
	3/19/2007	11.93	NP	-	24.42	NA
	6/18/2007	13.16	NP	-	23.19	NA
	9/17/2007	14.38	NP	-	21.97	NA
	12/17/2007	12.20	NP	-	24.15	NA
	3/24/2008	12.01	NP	-	24.34	NA
	6/23/2008	12.98	NP	-	23.37	NA
	9/22/2008	Inaccessible				NA
	1/5/2009	**11.39**	**NP**	**-**	**24.96**	**NA**
	3/16/2009	**12.75**	**NP**	**-**	**23.60**	**NA**
CR-23B	12/12/2000	12.57	NP	-	23.70	NA
(36.27)	4/3/2001	12.18	NP	-	24.09	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	12.71	NP	-	23.56	NA
	9/19/2001	13.79	NP	-	22.48	NA
	12/20/2001	11.04	NP	-	25.23	NA
	3/15/2002	10.94	NP	-	25.33	NA
	6/4/2002	12.96	NP	-	23.31	NA
	9/23/2002	12.79	NP	-	23.48	NA
	12/19/2002	12.79	NP	-	23.48	NA
	3/19/2003	12.55	NP	-	23.72	NA
	6/24/2003	12.65	NP	-	23.62	NA
	9/24/2003	13.57	NP	-	22.70	NA
	12/26/2003	11.85	NP	-	24.42	NA
	3/30/2004	11.46	NP	-	24.81	NA
	6/24/2004	12.73	NP	-	23.54	NA
	9/27/2004	12.62	NP	-	23.65	NA
	12/14/2004	12.36	NP	-	23.91	NA
	3/7/2005	12.61	NP	-	23.66	NA
	6/21/2005	12.33	NP	-	23.94	NA
	9/19/2005	13.29	NP	-	22.98	NA
	12/12/2005	12.00	NP	-	24.27	NA
	3/13/2006	10.98	NP	-	25.29	NA
	6/26/2006	12.11	NP	-	24.16	NA
	9/25/2006	13.23	NP	-	23.04	NA
	12/11/2006	11.81	NP	-	24.46	NA
	3/19/2007	11.25	NP	-	25.02	NA
	6/18/2007	12.40	NP	-	23.87	NA
	9/17/2007	13.99	NP	-	22.28	NA
	12/17/2007	11.70	NP	-	24.57	NA
	3/24/2008	11.09	NP	-	25.18	NA
	6/23/2008	11.91	NP	-	24.36	NA
	9/22/2008	NM	NM	NM	NM	NA
	1/5/2009	**11.00**	**NP**	**-**	**25.27**	**NA**
	3/16/2009	**11.80**	**NP**	**-**	**24.47**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-24A	12/12/2000	15.15	NP	-	21.06	NA
(36.21)	4/3/2001	14.46	NP	-	21.75	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	14.64	NP	-	21.57	NA
	9/19/2001	15.11	NP	-	21.10	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	13.29	NP	-	22.92	NA
	6/4/2002	14.07	NP	-	22.14	NA
	9/23/2002	14.82	NP	-	21.39	NA
	12/19/2002	14.72	NP	-	21.49	NA
	3/19/2003	13.53	NP	-	22.68	NA
	6/24/2003	14.04	NP	-	22.17	NA
	9/24/2003	14.88	NP	-	21.33	NA
	12/26/2003	14.17	NP	-	22.04	NA
	3/30/2004	12.61	NP	-	23.60	NA
	6/24/2004	14.45	NP	-	21.76	NA
	9/27/2004	14.65	NP	-	21.56	NA
	12/14/2004	14.45	NP	-	21.76	NA
	3/7/2005	14.24	NP	-	21.97	NA
	6/21/2005	14.13	NP	-	22.08	NA
	9/19/2005	14.77	NP	-	21.44	NA
	12/12/2005	13.09	NP	-	23.12	NA
	3/13/2006	12.95	NP	-	23.26	NA
	6/26/2006	13.75	NP	-	22.46	NA
	9/25/2006	14.65	NP	-	21.56	NA
	12/11/2006	13.05	NP	-	23.16	NA
	3/19/2007	12.69	NP	-	23.52	NA
	6/18/2007	14.14	NP	-	22.07	NA
	9/17/2007	14.98	NP	-	21.23	NA
	12/17/2007	13.67	NP	-	22.54	NA
	3/24/2008	13.11	NP	-	23.10	NA
	6/23/2008	13.73	NP	-	22.48	NA
	9/22/2008	14.81	NP	-	21.40	NA
	1/5/2009	**12.55**	**NP**	**-**	**23.66**	**NA**
	3/16/2009	**13.81**	**NP**	**-**	**22.40**	**NA**
CR-24B	12/12/2000	13.78	NP	-	22.54	NA
(36.32)	4/3/2001	13.40	NP	-	22.92	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	13.77	NP	-	22.55	NA
	9/19/2001	14.44	NP	-	21.88	NA
	12/20/2001	12.41	NP	-	23.91	NA
	3/15/2002	12.06	NP	-	24.26	NA
	6/4/2002	12.94	NP	-	23.38	NA
	9/23/2002	13.42	NP	-	22.90	NA
	12/19/2002	13.78	NP	-	22.54	NA
	3/19/2003	12.52	NP	-	23.80	NA
	6/24/2003	13.06	NP	-	23.26	NA
	9/24/2003	14.32	NP	-	22.00	NA
	12/26/2003	12.97	NP	-	23.35	NA
	3/30/2004	13.52	NP	-	22.80	NA
	6/24/2004	13.58	NP	-	22.74	NA
	9/27/2004	13.61	NP	-	22.71	NA
	12/14/2004	13.41	NP	-	22.91	NA
	3/7/2005	13.66	NP	-	22.66	NA
	6/21/2005	13.20	NP	-	23.12	NA
	9/19/2005	14.03	NP	-	22.29	NA
	12/12/2005	12.95	NP	-	23.37	NA
	3/13/2006	12.03	NP	-	24.29	NA
	6/26/2006	12.87	NP	-	23.45	NA
	9/25/2006	14.03	Trace	-	22.29	NA
	12/11/2006	13.72	NP	-	22.60	NA
	3/19/2007	12.09	NP	-	24.23	NA
	6/18/2007	13.22	NP	-	23.10	NA
	9/17/2007	14.23	NP	-	22.09	NA
	12/17/2007	12.65	NP	-	23.67	NA
	3/24/2008	12.03	NP	-	24.29	NA
	6/23/2008	12.70	NP	-	23.62	NA
	9/22/2008	13.91	NP	-	22.41	NA
	1/5/2009	**12.11**	**NP**	**-**	**24.21**	**NA**
	3/16/2009	**12.84**	**Trace**	**-**	**23.48**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-25	12/12/2000	8.23	NP	-	26.04	NA
(34.27)	4/3/2001	7.69	7.25	0.44	26.93	NR ***
	6/8/2001	7.49	7.15	0.34	27.05	NR ***
	7/16/2001	8.67	7.73	0.94	26.35	NR ***
	9/19/2001	9.02	8.75	0.27	25.47	NR ***
	12/20/2001	6.96	6.81	0.15	27.43	NR ***
	3/15/2002	6.66	6.51	0.15	27.73	0.1
	6/4/2002	7.83	7.62	0.21	26.61	0.25
	9/23/2002	9.02	8.79	0.23	25.43	0.13
	12/19/2002	8.48	8.34	0.14	25.90	0.05
	3/19/2003	6.91	6.74	0.17	27.50	0.2
	6/24/2003	7.79	7.58	0.21	26.65	NR
	9/24/2003	9.06	8.91	0.15	25.33	NR
	12/26/2003	7.51	7.35	0.16	26.89	NR
	3/30/2004	8.00	7.79	0.21	26.44	0.0
	6/24/2004	8.65	8.19	0.46	25.99	0.0
	9/27/2004	8.65	8.42	0.23	25.80	0.0
	12/14/2004	7.62	7.49	0.13	26.75	0.02
	3/7/2005	8.14	7.95	0.19	26.28	0.03
	6/22/2005	8.07	7.79	0.28	26.42	0.05
	9/19/2005	10.34	9.14	1.20	24.89	0.2
	12/12/2005	7.87	7.58	0.29	26.63	0.17
	3/13/2006	6.54	6.40	0.14	27.84	0.05
	6/26/2006	7.83	7.82	0.01	26.45	0.05
	9/25/2006	9.22	9.19	0.03	25.07	0.05
	12/11/2006	7.65	NP	-	26.62	NA
	3/19/2007	7.75	6.70	1.05	27.36	0.90
	6/18/2007	8.13	7.99	0.14	26.25	1.28
	9/17/2007	9.08	9.02	0.06	25.24	0.05
	12/17/2007	7.15	-	0.00	27.12	0.07
	3/24/2008	6.49	6.40	0.09	27.85	0.10
	6/23/2008	7.40	7.35	0.05	26.91	0.06
	9/22/2008	8.97	8.89	0.08	25.36	0.10
	1/5/2009	**6.28**	**6.23**	**0.05**	**28.03**	**0.05**
	3/16/2009	**6.99**	**6.90**	**0.09**	**27.35**	**0.03**
CR-26	9/24/2003	-	-	-	-	-
(33.19)	12/26/2003	-	-	-	-	-
	3/26/2004	-	-	-	-	-
	6/24/2004	20.42	NP	-	12.77	NA
	9/27/2004	21.88	NP	-	11.31	NA
	12/14/2004	22.96	NP	-	-	NA
	3/7/2005	20.81	NP	-	-	NA
	6/22/2005	20.03	NP	-	-	NA
	9/19/2005	22.80	NP	-	-	NA
	12/12/2005	20.92	NP	-	12.27	NA
	1/30/2006	16.21	NP	-	16.98	NA
	3/13/2006	19.80	NP	-	13.39	NA
	6/26/2006	17.53	NP	-	15.66	NA
	9/25/2006	27.34	NP	-	5.85	NA
	12/11/2006	20.37	NP	-	12.82	NA
	3/19/2007	18.99	NP	-	14.20	NA
(33.21)	6/18/2007	20.00	NP	-	13.21	NA
	9/17/2007	24.46	NP	-	8.75	NA
	12/17/2007	26.09	NP	-	7.12	NA
	1/22/2008	22.90	NP	-	10.31	NA
	3/24/2008	20.31	NP	-	12.90	NA
	6/23/2008	16.89	NP	-	16.32	NA
	9/22/2008	23.70	NP	-	9.51	NA
	1/5/2009	**19.38**	**NP**	**-**	**13.83**	**NA**
	3/16/2009	**20.39**	**NP**	**-**	**12.82**	**NA**
CR-27C	1/30/2006	16.70	NP	-	16.58	NA
(33.28)	3/13/2006	19.46	NP	-	13.82	NA
	9/25/2006	21.94	NP	-	11.34	NA
	12/11/2006	20.48	NP	-	12.80	NA
	3/19/2007	19.26	NP	-	14.02	NA
(33.31)	6/18/2007	19.95	NP	-	13.36	NA
	9/17/2007	22.15	NP	-	11.16	NA
	12/17/2007	20.68	NP	-	12.63	NA
	1/22/2008	20.03	NP	-	13.28	NA
	3/24/2008	19.81	NP	-	13.50	NA
	6/23/2008	17.20	NP	-	16.11	NA
	9/22/2008	22.41	NP	-	10.90	NA
	1/5/2009	**17.60**	**NP**	**-**	**15.71**	**NA**
	3/16/2009	**20.34**	**NP**	**-**	**12.97**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-28A	9/17/2007	NM	NM	NM	NM	NM
(34.90)	12/17/2007	16.07	NP	-	18.83	NM
	1/22/2008	15.22	NP	-	19.68	NM
	3/24/2008	15.38	NP	-	19.52	NM
	6/23/2008	15.95	NP	-	18.95	NM
	9/22/2008	16.65	NP	-	18.25	NM
	1/5/2009	**15.86**	**NP**	**-**	**19.04**	**NM**
	3/16/2009	**16.14**	**NP**	**-**	**18.76**	**NM**
CR-28B	1/30/2006	13.52	NP		21.35	NA
(34.87)	3/13/2006	14.54	NP	-	20.33	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	15.39	NP	-	19.48	NA
	3/19/2007	14.81	NP	-	20.06	NA
(34.87)	6/18/2007	15.26	NP	-	19.61	NA
	9/17/2007	16.72	NP	-	18.15	NA
	12/17/2007	15.37	NP	-	19.50	NA
	1/22/2008	14.78	NP	-	20.09	NA
	3/24/2008	14.76	NP	-	20.11	NA
	6/23/2008	14.05	NP	-	20.82	NA
	9/22/2008	16.02	NP	-	18.85	NA
	1/5/2009	**15.78**	**NP**	**-**	**19.09**	**NA**
	3/16/2009	**15.80**	**NP**	**-**	**19.07**	**NA**
CR-28C	1/30/2006	13.11	NP		21.65	NA
(34.76)	3/13/2006	14.02	NP	-	20.74	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	14.80	NP	-	19.96	NA
	3/19/2007	14.10	NP	-	20.66	NA
(34.75)	6/18/2007	14.54	NP	-	20.21	NA
	9/17/2007	16.39	NP	-	18.36	NA
	12/17/2007	14.63	NP	-	20.12	NA
	1/22/2008	13.96	NP	-	20.79	NA
	3/24/2008	13.98	NP	-	20.77	NA
	6/23/2008	13.46	NP	-	21.29	NA
	9/22/2008	15.52	NP	-	19.23	NA
	1/5/2009	**13.30**	**NP**	**-**	**21.45**	**NA**
	3/16/2009	**14.16**	**NP**	**-**	**20.59**	**NA**
CR-29A	1/30/2006	13.03	NP	-	21.13	NA
(34.16)	3/13/2006	13.68	NP	-	20.48	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	14.50	NP	-	19.66	NA
	3/19/2007	13.91	NP	-	20.25	NA
(34.19)	6/18/2007	14.93	NP	-	19.26	NA
	9/17/2007	15.73	NP	-	18.46	NA
	12/17/2007	14.70	NP	-	19.49	NA
	1/22/2008	13.79	NP	-	20.40	NA
	3/24/2008	14.00	NP	-	20.19	NA
	6/23/2008	14.66	NP	-	19.53	NA
	9/22/2008	15.49	NP	-	18.70	NA
	1/5/2009	**14.20**	**NP**	**-**	**19.99**	**NA**
	3/16/2009	**14.68**	**NP**	**-**	**19.51**	**NA**
CR-29B	1/30/2006	14.46	NP	-	19.85	NA
(34.31)	3/13/2006	NM	NP	-	NM	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	15.96	NP	-	18.35	NA
	3/19/2007	15.26	NP	-	19.05	NA
(34.32)	6/18/2007	15.86	NP	-	18.46	NA
	9/17/2007	17.72	NP	-	16.60	NA
	12/17/2007	16.26	NP	-	18.06	NA
	1/22/2008	15.34	NP	-	18.98	NA
	3/24/2008	15.43	NP	-	18.89	NA
	6/23/2008	14.39	NP	-	19.93	NA
	9/22/2008	17.16	NP	-	17.16	NA
	1/5/2009	**14.40**	**NP**	**-**	**19.92**	**NA**
	3/16/2009	**16.30**	**NP**	**-**	**18.02**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-30A	1/30/2006	12.10	NP	-	20.96	NA
(33.06)	3/13/2006	12.95	NP	-	20.11	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	13.66	NP	-	19.40	NA
	3/19/2007	13.17	NP	-	19.89	NA
(33.08)	6/18/2007	14.15	NP	-	18.93	NA
	9/17/2007	18.91	NP	-	14.17	NA
	12/17/2007	13.81	NP	-	19.27	NA
	1/22/2008	13.00	NP	-	20.08	NA
	3/24/2008	13.21	NP	-	19.87	NA
	6/23/2008	13.86	NP	-	19.22	NA
	9/22/2008	14.67	NP	-	18.41	NA
	1/5/2009	**13.11**	**NP**	**-**	**19.97**	**NA**
	3/16/2009	**13.72**	**NP**	**-**	**19.36**	**NA**
CR-30B	1/30/2006	13.97	NP	-	18.33	NA
(32.30)	3/13/2006	16.13	NP	-	16.17	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	16.97	NP	-	15.33	NA
	3/19/2007	15.70	NP	-	16.60	NA
(32.33)	6/18/2007	16.73	NP	-	15.60	NA
	9/17/2007	14.88	NP	-	17.45	NA
	12/17/2007	17.15	NP	-	15.18	NA
	1/22/2008	16.43	NP	-	15.90	NA
	3/24/2008	16.39	NP	-	15.94	NA
	6/23/2008	14.45	NP	-	17.88	NA
	9/22/2008	18.74	NP	-	13.59	NA
	1/5/2009	**14.55**	**NP**	**-**	**17.78**	**NA**
	3/16/2009	**16.89**	**NP**	**-**	**15.44**	**NA**
CR-31A	1/30/2006	1.30	NP	-	20.26	NA
(21.56)	3/13/2006	2.14	NP	-	19.42	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	2.51	NP	-	19.05	NA
	3/19/2007	2.48	NP	-	19.08	NA
(21.58)	6/18/2007	3.37	NP	-	18.21	NA
	9/17/2007	4.02	NP	-	17.56	NA
	12/17/2007	2.94	NP	-	18.64	NA
	1/22/2008	2.30	NP	-	19.28	NA
	3/24/2008	2.42	NP	-	19.16	NA
	6/23/2008	2.97	NP	-	18.61	NA
	9/22/2008	3.74	NP	-	17.84	NA
	1/5/2009	**2.18**	**NP**	**-**	**19.40**	**NA**
	3/16/2009	**2.70**	**NP**	**-**	**18.88**	**NA**
CR-31B	1/30/2006	5.06	NP	-	16.63	NA
(21.69)	3/13/2006	7.75	NP	-	13.94	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	8.68	NP	-	13.01	NA
	3/19/2007	7.30	NP	-	14.39	NA
(21.70)	6/18/2007	8.37	NP	-	13.33	NA
	9/17/2007	10.96	NP	-	10.74	NA
	12/17/2007	8.80	NP	-	12.90	NA
	1/22/2008	8.37	NP	-	13.33	NA
	3/24/2008	8.22	NP	-	13.48	NA
	6/23/2008	5.54	NP	-	16.16	NA
	9/22/2008	10.73	NP	-	10.97	NA
	1/5/2009	**5.58**	**NP**	**-**	**16.12**	**NA**
	3/16/2009	**8.66**	**NP**	**-**	**13.04**	**NA**
CR-32A	1/30/2006	1.56	NP	-	20.13	NA
(21.69)	3/13/2006	2.41	NP	-	19.28	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	2.96	NP	-	18.73	NA
	3/19/2007	2.74	NP	-	18.95	NA
(21.91)	6/18/2007	3.63	NP	-	18.28	NA
	9/17/2007	4.32	NP	-	17.59	NA
	12/17/2007	3.23	NP	-	18.68	NA
	1/22/2008	2.58	NP	-	19.33	NA
	3/24/2008	2.68	NP	-	19.23	NA
	6/23/2008	3.26	NP	-	18.65	NA
	9/22/2008	4.08	NP	-	17.83	NA
	1/5/2009	**2.45**	**NP**	**-**	**19.46**	**NA**
	3/16/2009	**2.97**	**NP**	**-**	**18.94**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
CR-32B	1/30/2006	5.34	NP	-	16.68	NA
(22.02)	3/13/2006	7.99	NP	-	14.03	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	8.69	NP	-	13.33	NA
	3/19/2007	7.41	NP	-	14.61	NA
(22.02)	6/18/2007	8.39	NP	-	13.63	NA
	9/17/2007	10.44	NP	-	11.58	NA
(22.08)	12/17/2007	8.84	NP	-	13.24	NA
	1/22/2008	8.42	NP	-	13.66	NA
	3/24/2008	8.22	NP	-	13.86	NA
	6/23/2008	5.72	NP	-	16.36	NA
	9/22/2008	10.47	NP	-	11.61	NA
	1/5/2009	**6.03**	**NP**	**-**	**16.05**	**NA**
	3/16/2009	**8.73**	**NP**	**-**	**13.35**	**NA**
CR-32C	1/30/2006	5.38	NP	-	16.42	NA
(21.80)	3/13/2006	8.75	NP	-	13.05	NA
	9/25/2006	NM	NM	NM	NM	NM
	12/11/2006	9.17	NP	-	12.63	NA
	3/19/2007	7.75	NP	-	14.05	NA
(21.76)	6/18/2007	8.94	NP	-	12.82	NA
	9/17/2007	11.38	NP	-	10.38	NA
	12/17/2007	9.20	NP	-	12.56	NA
	1/22/2008	8.97	NP	-	12.79	NA
	3/24/2008	8.77	NP	-	12.99	NA
	6/23/2008	7.86	NP	-	13.90	NA
	9/22/2008	11.38	NP	-	10.38	NA
	1/5/2009	**5.86**	**NP**	**-**	**15.90**	**NA**
	3/16/2009	**9.20**	**NP**	**-**	**12.56**	**NA**
CR-33	12/17/2007	5.96	NP	-	10.90	NA
(16.86)	1/22/2008	7.12	NP	-	9.74	NA
	3/24/2008	5.94	NP	-	10.92	NA
	6/23/2008	3.00	NP	-	13.86	NA
	9/22/2008	7.01	NP	-	9.85	NA
	1/5/2009	**4.69**	**NP**	**-**	**12.17**	**NA**
	3/16/2009	**6.23**	**NP**	**-**	**10.63**	**NA**
GPW-1	12/12/2000	12.99	NP	-	21.67	NA
(34.66)	2/20/2001	12.59	NP	-	22.07	NA
	4/3/2001	12.56	NP	-	22.10	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	12.70	NP	-	21.96	NA
	9/19/2001	13.15	NP	-	21.51	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	7.46	NP	-	27.20	NA
	6/4/2002	11.71	NP	-	22.95	NA
	9/23/2002	12.95	NP	-	21.71	NA
	12/19/2002	12.71	NP	-	21.95	NA
	3/19/2003	7.19	NP	-	27.47	NA
	6/24/2003	10.06	NP	-	24.60	NA
	9/24/2003	13.07	NP	-	21.59	NA
	12/26/2003	11.01	NP	-	23.65	NA
	3/30/2004	7.61	NP	-	27.05	NA
	6/24/2004	12.36	NP	-	22.30	NA
	9/27/2004	12.99	NP	-	21.67	NA
	12/14/2004	12.93	NP	-	21.73	NA
	3/7/2005	11.52	NP	-	23.14	NA
	6/21/2005	9.65	NP	-	25.01	NA
	9/19/2005	13.01	NP	-	21.65	NA
	12/12/2005	8.75	NP	-	25.91	NA
	3/13/2006	7.60	NP	-	27.06	NA
	6/26/2006	NM	NM	NM	NM	NA
	9/25/2006	12.89	NP	-	21.77	NA
	12/11/2006	7.21	NP	-	27.45	NA
	3/19/2007	7.04	NP	-	27.62	NA
	6/18/2007	12.19	NP	-	22.47	NA
	9/17/2007	13.31	NP	-	21.35	NA
	12/17/2007	7.88	NP	-	26.78	NA
	3/24/2008	7.92	NP	-	26.74	NA
	6/23/2008	11.74	NP	-	22.92	NA
	9/22/2008	7.90	NP	-	26.76	NA
	1/5/2009	**6.89**	**NP**	**-**	**27.77**	**NA**
	3/16/2009	**9.43**	**9.42**	**0.01**	**25.24**	**NA**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
GPW-2	12/12/2000	NM	NM	NM	NM	-
(34.98)	2/20/2001	10.93	10.68	-	24.05	NA
	4/3/2001	NM	NM	NM	NM	-
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	NM	NM	NM	NM	-
	9/19/2001	12.91	NP	-	22.07	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	7.91	NP	-	27.07	NA
	6/4/2002	NM	NM	1.2E	NM	0.01
	9/23/2002	13.10E	12.97E	0.13E	E	0.05
	12/19/2002	12.32	-	-	-	-
	3/19/2003	9.4E	-	-	-	0.02
	6/24/2003	10.20	NM	Sheen	24.78	NA
	9/24/2003	12.18	11.93	0.25E	23.00	0.01
	12/26/2003	10.80	10.55	0.25	24.38	0.25
	3/30/2004	9.31	8.92	0.39	25.98	0.25
	6/24/2004	10.75	10.73	0.02	24.25	NA
	9/27/2004	12.55	11.83	0.72	23.01	NA
	12/14/2004	12.55	11.94	0.61	22.92	NA
	3/7/2005	10.76	10.75	0.01	24.23	NA
	6/20/2005	10.18	NP	0.00	24.80	NA
	9/19/2005	12.18	11.35	0.83	23.46	0.02
	12/12/2005	9.90	9.90	Sheen	25.08	0.0
	3/13/2006	9.34	9.34	Sheen	25.64	0.0
	6/26/2006	10.77	10.77	Sheen	24.21	0.0
	9/25/2006	11.88	Trace	-	23.10	0.0
	12/11/2006	9.59	NP	-	25.39	0.0
	3/19/2007	9.02	9.00	0.02	25.98	NA
	6/18/2007	11.85	11.08	0.77	23.75	NA
	9/17/2007	12.44	12.28	0.16	22.67	NA
	12/17/2007	9.29	-	0.00	25.69	NA
	3/24/2008	10.01	9.54	0.47	25.35	NA
	6/23/2008	10.96	10.84	0.12	24.12	0.1
	9/22/2008	12.20	12.02	0.18	22.92	NA
	1/5/2009	**8.24**	**8.23**	**0.01**	**26.75**	**0.01**
	3/16/2009	**10.85**	**10.51**	**0.34**	**24.40**	**0.10**
GPW-3	12/12/2000	12.23	NP	-	22.85	NA
(35.08)	2/20/2001	12.03	NP	-	23.05	NA
	4/3/2001	11.97	NP	-	23.11	NA
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	12.16	NP	-	22.92	NA
	9/19/2001	12.66	NP	-	22.42	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	10.46	NP	-	24.62	NA
	6/4/2002	11.22	NP	-	23.86	NA
	9/23/2002	11.72	NP	-	23.36	NA
	12/19/2002	12.20	-	-	-	0.01
	3/19/2003	10.86E	-	-	-	0.01
	6/24/2003	11.35	11.24	0.11	23.82	0.01
	9/24/2003	11.90	11.78	0.12	23.28	0.01
	12/26/2003	13.49	11.24	2.25	23.39	0.25
	3/30/2004	11.73	10.90	0.83	24.01	0.03
	6/24/2004	11.83	11.59	0.24	23.44	NA
	9/27/2004	12.32	11.86	0.46	23.13	NA
	12/14/2004	12.15	11.87	0.28	23.15	0.006
	3/7/2005	11.81	11.60	0.21	23.44	0.005
	6/21/2005	11.35	11.16	0.19	23.88	0.004
	9/19/2005	11.98	11.85	0.13	23.20	0.003
	12/12/2005	11.27	11.21	0.06	23.86	0.02
	3/13/2006	10.82	10.80	0.02	24.28	0.02
	6/26/2006	11.16	11.16	Sheen	23.92	0.02
	9/25/2006	11.88	Trace	-	23.20	0.00
	12/11/2006	7.85	7.81	0.04	27.26	NA
	3/19/2007	10.57	NP	-	24.51	NA
	6/18/2007	11.47	NP	-	23.61	NA
	9/17/2007	12.05	NP	-	23.03	NA
	12/17/2007	10.97	NP	-	24.11	NA
	3/24/2008	10.92	10.91	0.01	24.17	NA
	6/23/2008	11.33	-	-	23.75	NA
	9/22/2008	11.89	11.88	0.01	23.20	NA
	1/5/2009	**10.94**	**10.85**	**0.09**	**24.21**	**0.00**
	3/16/2009	**11.20**	**NP**	**-**	**23.88**	**0.00**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
GPW-4	12/12/2000	NM	NM	NM	NM	-
(35.07)	2/20/2001	12.29	NP	-	22.78	NA
	4/3/2001	NM	NM	NM	NM	-
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	NM	NM	NM	NM	-
	9/19/2001	13.02	NP	-	22.05	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	11.08	NP	-	23.99	NA
	6/4/2002	11.98	NP	-	23.09	
	9/23/2002	12.71	NP	-	22.36	NA
	12/19/2002	12.23	NP	-	22.84	NA
	3/19/2003	11.30	NP	-	23.77	NA
	6/24/2003	12.12	NP	-	22.95	NA
	9/24/2003	13.11	13.07	0.04	21.99	Trace
	12/26/2003	12.10	NP	-	22.97	NA
	3/30/2004	12.34	11.78	0.56	23.18	NA
	6/24/2004	12.57	NP	-	22.50	NA
	9/27/2004	12.58	NP	-	22.49	NA
	12/14/2004	12.38	NP	-	22.69	NA
	3/7/2005	12.32	NP	-	22.75	NA
	6/20/2005	12.02	NP	-	23.05	NA
	9/19/2005	12.95	12.93	0.02	22.14	0.003
	12/12/2005	11.89	NP	-	23.18	NA
	3/13/2006	11.27	NP	-	23.80	NA
	6/26/2006	11.96	NP	-	23.11	NA
	9/25/2006	13.05	Trace	-	22.02	NA
	12/11/2006	11.70	NP	-	23.37	NA
	3/19/2007	11.16	NP	-	23.91	NA
	6/18/2007	12.21	NP	-	22.86	NA
	9/17/2007	13.22	NP	-	21.85	NA
	12/17/2007	11.68	NP	-	23.39	NA
	3/24/2008	11.26	11.24	0.02	23.83	NA
	6/23/2008	12.01	Trace	-	23.06	NA
	9/22/2008	12.87	12.78	0.09	22.27	NA
	1/5/2009	**NM**	**NM**	**NM**	**NM**	**-**
	3/16/2009	**11.90**	**11.81**	**0.09**	**23.24**	**NA**
GPW-5	12/12/2000	NM	NM	NM	NM	-
(34.85)	2/20/2001	12.02	NP	-	22.83	NA
	4/3/2001	NM	NM	NM	NM	-
	6/8/2001	NM	NM	NM	NM	-
	7/16/2001	NM	NM	NM	NM	-
	9/19/2001	12.79	NP	-	22.06	NA
	12/22/2001	NM	NM	-	NM	-
	3/15/2002	10.72	NP	-	24.13	NA
	6/4/2002	11.66	NP	-	23.19	NA
	9/23/2002	12.46	NP	-	22.39	NA
	12/19/2002	11.96	NP	-	22.89	NA
	3/19/2003	10.97	NP	-	23.88	NA
	6/24/2003	11.80	NP	-	23.05	NA
	9/24/2003	12.92	NP	-	21.93	NA
	12/26/2003	11.64	NP	-	23.21	NA
	3/30/2004	11.57	NP	-	23.28	NA
	6/24/2004	12.21	NP	-	22.64	NA
	9/27/2004	12.21	NP	-	22.64	NA
	12/14/2004	12.05	NP	-	22.80	NA
	3/7/2005	12.04	NP	-	22.81	NA
	6/20/2005	11.72	NP	-	23.13	NA
	9/19/2005	12.70	NP	-	22.15	NA
	12/12/2005	11.56	NP	-	23.29	NA
	3/13/2006	10.84	NP	-	24.01	NA
	6/26/2006	11.68	NP	-	23.17	NA
	9/25/2006	12.81	NP	-	22.04	NA
	12/11/2006	11.42	Trace	-	23.43	NA
	3/19/2007	-	-	-	-	-
	6/18/2007	11.86	NP	-	22.99	-
	9/17/2007	12.82	NP	-	22.03	-
	12/17/2007	11.29	NP	-	23.56	-
	3/24/2008	10.78	NP	-	24.07	-
	6/23/2008	11.58	NP	-	23.27	-
	9/22/2008	12.55	NP	-	22.30	-
	1/5/2009	**NM**	**NM**	**NM**	**NM**	**-**
	3/16/2009	**11.42**	**NP**	**-**	**23.43**	**-**

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TABLE 1A
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Chevron Products Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
EW-1	1/22/2008	12.30	NP	-	6.01	-
(18.31)	6/23/2008	5.24	NP	-	13.07	-
	9/22/2008	8.49	NP	-	9.82	-
	1/5/2009	**12.00**	**NP**	**-**	**6.31**	**-**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**-**
EW-2	1/22/2008	10.70	NP	-	7.08	-
(17.78)	6/23/2008	9.82	NP	-	7.96	-
	9/22/2008	5.75	NP	-	12.03	-
	1/5/2009	**11.00**	**NP**	**-**	**6.78**	**-**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**-**
EX-1	2/14/2000	15.55	NP	-	18.60	NA
(34.15)	5/22/2000	18.29	NP	-	15.86	NA
	8/22/2000	16.56	NP	-	17.59	NA
	11/27/2000	16.86	NP	-	17.29	NA
	2/20/2001	16.66	NP	-	17.49	NA
	5/15/2001	16.62	NP	-	17.53	NA
	9/19/2001	Covered by Facility Equipment				
	12/22/2001	Covered by Facility Equipment				
	3/15/2002	15.34	NP	-	18.81	NA
	9/23/2002	16.88	NP	-	17.27	NA
	12/19/2002	16.99	NP	-	17.16	NA
	3/19/2003	15.65	NP	-	18.50	NA
	6/24/2003	15.98	NP	-	18.17	NA
	9/24/2003	Could Not Access				
	12/26/2003	Could Not Access				
	3/30/2004	Could Not Access				
	6/24/2004	16.35	NP	-	17.80	NA
	9/27/2004	Could Not Access				
	12/14/2004	16.66	NP	-	17.49	NA
	3/7/2005	16.52	NP	-	17.63	NA
	6/20/2005	16.20	NP	-	17.95	NA
	9/19/2005	16.86	NP	-	17.29	NA
	12/12/2005	16.19	NP	-	17.96	NA
	3/13/2006	15.03	NP	-	19.12	NA
	6/26/2006	15.86	NP	-	18.29	NA
	9/25/2006	16.23	NP	-	17.92	NA
	12/11/2006	15.43	NP	-	18.72	NA
	3/19/2007	14.98	NP	-	19.17	NA
(34.35)	6/18/2007	15.82	NP	-	18.53	NA
	9/17/2007	16.45	Trace	-	17.90	NA
	12/17/2007	15.62	NP	-	18.73	NA
	1/22/2008	14.94	NP	-	19.41	NA
	3/24/2008	15.02	NP	-	19.33	NA
	6/23/2008	15.50	NP	-	18.85	NA
	9/22/2008	16.19	NP	-	18.16	NA
	1/5/2009	**15.21**	**NP**	**-**	**19.14**	**NA**
	3/16/2009	**15.50**	**NP**	**-**	**18.85**	**NA**

NOTES:
Wells B-8 and B-31 were abandoned after first quarter 2000
NP = No measurable product
NA = Not Applicable
NM = Not Measured
NR = None Recovered
* = SPH Recovered for latest quarter monitored
** = Well Contains a Sock for Product Recovery
*** = Product Recovery Part of Chevron Ethanol Study
E = 3/4 inch-diameter well/ SPH thickness estimated with bailer
- = No measurable product thickness
Groundwater elevations for wells with product thicknesses have been corrected using 0.8
GWE = TOC -(DTW - (0.8 x DTP - DTW)) Where 0.8 = The density of the SPH

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-1	2/14/2000	3.76	NP	-	31.67	NA
(35.43)	5/22/2000	4.72	NP	-	30.71	NA
	8/23/2000	7.52	NP	-	27.91	NA
	11/28/2000	7.43	NP	-	28.00	NA
	2/21/2001	6.32	NP	-	29.11	NA
	5/15/2001	6.33	NP	-	29.10	NA
	9/19/2001	8.40	NP	-	27.03	NA
	12/19/2001	3.92	NP	-	31.51	NA
	3/13/2002	3.80	NP	-	31.63	NA
	6/24/2002	6.56	NP	-	28.87	NA
	9/26/2002	8.15	NP	-	27.28	NA
	12/20/2002	5.32	NP	-	30.11	NA
	3/17/2003	3.81	NP	-	31.62	NA
	6/26/2003	6.19	NP	-	29.24	NA
	9/24/2003	8.04	NP	-	27.39	NA
	12/30/2003	4.02	NP	-	31.41	NA
	3/29/2004	4.45	NP	-	30.98	NA
	6/29/2004	6.84	NP	-	28.59	NA
	9/27/2004	7.32	NP	-	28.11	NA
	12/14/2004	5.31	NP	-	30.12	NA
	3/7/2005	6.81	NP	-	28.62	NA
	6/20/2005	5.60	NP	-	29.83	NA
	9/19/2005	7.62	NP	-	27.81	NA
	12/12/2005	4.99	NP	-	30.44	NA
	3/13/2006	3.60	NP	-	31.83	NA
	6/27/2006	5.49	NP	-	29.94	NA
	9/25/2006	7.53	NP	-	27.90	NA
	12/11/2006	4.48	NP	-	30.95	NA
	3/19/2007	4.05	NP	-	31.38	NA
	4/20/2007	4.29	NP	-	31.14	NA
	6/18/2007	5.85	NP	-	29.58	NA
	9/17/2007	7.60	NP	-	27.83	NA
	12/172007	4.74	NP	-	30.69	NA
	3/24/2008	3.78	NP	-	31.65	NA
	6/23/2008	5.53	NP	-	29.90	NA
	9/22/2008	7.41	NP	-	28.02	NA
	1/5/2009	**3.64**	**NP**	**-**	**31.79**	**NA**
	3/16/2009	**4.77**	**NP**	**-**	**30.66**	**NA**
MW-2	2/14/2000	5.59	NP	-	30.18	NA
(35.77)	5/22/2000	6.74	NP	-	29.03	NA
	8/23/2000	8.44	NP	-	27.33	NA
	11/28/2000	9.15	NP	-	26.62	NA
	2/21/2001	8.29	NP	-	27.48	NA
	5/15/2001	8.11	NP	-	27.66	NA
	9/19/2001	9.93	NP	-	25.84	NA
	12/19/2001	6.02	NP	-	29.75	NA
	3/13/2002	5.51	NP	-	30.26	NA
	6/24/2002	7.67	NP	-	28.10	NA
	9/26/2002	9.41	NP	-	26.36	NA
	12/20/2002	9.32	NP	-	26.45	NA
	3/17/2003	5.85	NP	-	29.92	NA
	6/26/2003	7.34	NP	-	28.43	NA
	9/24/2003	9.33	NP	-	26.44	NA
	12/30/2003	6.79	NP	-	28.98	NA
	3/29/2004	6.35	NP	-	29.42	NA
	6/29/2004	8.11	NP	-	27.66	NA
	9/27/2004	9.13	NP	-	26.64	NA
	12/14/2004	8.47	NP	-	27.30	NA
	3/7/2005	8.40	NP	-	27.37	NA
	6/20/2005	7.27	NP	-	28.50	NA
	9/19/2005	9.09	NP	-	26.68	NA
	12/12/2005	7.42	NP	-	28.35	NA
	3/13/2006	5.75	NP	-	30.02	NA
	6/27/2006	7.15	NP	-	28.62	NA
	9/25/2006	9.09	NP	-	26.68	NA
	12/11/2006	6.57	NP	-	29.20	NA
	3/19/2007	5.89	NP	-	29.88	NA
	4/20/2007	6.37	NP	-	29.40	NA
	6/18/2007	7.52	NP	-	28.25	NA
	9/17/2007	9.22	NP	-	26.55	NA
	12/17/2007	7.00	NP	-	28.77	NA
	3/24/2008	5.65	NP	-	30.12	NA
	6/23/2008	7.24	NP	-	28.53	NA
	9/22/2008	9.01	NP	-	26.76	NA
	1/5/2009	**5.98**	**NP**	**-**	**29.79**	**NA**
	3/16/2009	**7.19**	**NP**	**-**	**28.58**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-3	2/14/2000	7.02	NP	-	29.00	NA
(36.02)	5/22/2000	8.04	NP	-	27.98	NA
	8/23/2000	9.58	NP	-	26.44	NA
	11/28/2000	10.22	NP	-	25.80	NA
	2/21/2001	9.49	NP	-	26.53	NA
	5/15/2001	9.33	NP	-	26.69	NA
	9/19/2001	10.96	NP	-	25.06	NA
	12/19/2001	7.55	NP	-	28.47	NA
	3/13/2002	7.10	NP	-	28.92	NA
	6/24/2002	8.93	NP	-	27.09	NA
	9/26/2002	10.47	NP	-	25.55	NA
	12/20/2002	10.63	NP	-	25.39	NA
	3/17/2003	7.29	NP	-	28.73	NA
	6/26/2003	8.65	NP	-	27.37	NA
	9/24/2003	10.38	NP	-	25.64	NA
	12/30/2003	8.21	NP	-	27.81	NA
	3/29/2004	7.69	NP	-	28.33	NA
	6/29/2004	9.34	NP	-	26.68	NA
	9/27/2004	10.28	NP	-	25.74	NA
	12/14/2004	9.73	NP	-	26.29	NA
	3/7/2005	9.56	NP	-	26.46	NA
	6/20/2005	8.55	NP	-	27.47	NA
	9/19/2005	10.18	NP	-	25.84	NA
	12/12/2005	8.67	NP	-	27.35	NA
	3/13/2006	7.15	NP	-	28.87	NA
	6/27/2006	8.43	NP	-	27.59	NA
	9/25/2006	10.19	NP	-	25.83	NA
	12/11/2006	7.95	NP	-	28.07	NA
	3/19/2007	7.20	NP	-	28.82	NA
	4/20/2007	7.68	NP	-	28.34	NA
	6/18/2007	8.76	NP	-	27.26	NA
	9/17/2007	10.31	NP	-	25.71	NA
	12/17/2007	8.29	NP	-	27.73	NA
	3/24/2008	7.03	NP	-	28.99	NA
	6/23/2008	8.46	NP	-	27.56	NA
	9/22/2008	10.10	NP	-	25.92	NA
	1/5/2009	**7.31**	**NP**	**-**	**28.71**	**NA**
	3/16/2009	**8.33**	**NP**	**-**	**27.69**	**NA**
MW-4	2/14/2000	6.36	NP	-	30.03	NA
(36.39)	5/22/2000	7.54	NP	-	28.85	NA
	8/23/2000	9.18	NP	-	27.21	NA
	11/28/2000	9.83	NP	-	26.56	NA
	2/21/2001	9.07	NP	-	27.32	NA
	5/15/2001	8.93	NP	-	27.46	NA
	9/19/2001	10.59	NP	-	25.80	NA
	12/19/2001	6.98	NP	-	29.41	NA
	3/13/2002	6.42	NP	-	29.97	NA
	6/24/2002	8.49	NP	-	27.90	NA
	9/26/2002	10.10	NP	-	26.29	NA
	12/20/2002	10.21	NP	-	26.18	NA
	3/17/2003	6.57	NP	-	29.82	NA
	6/26/2003	8.15	NP	-	28.24	NA
	9/24/2003	10.00	NP	-	26.39	NA
	12/30/2003	7.65	NP	-	28.74	NA
	3/29/2004	7.07	NP	-	29.32	NA
	6/29/2004	8.88	NP	-	27.51	NA
	9/27/2004	9.89	NP	-	26.50	NA
	12/14/2004	9.29	NP	-	27.10	NA
	3/7/2005	9.10	NP	-	27.29	NA
	6/20/2005	8.03	NP	-	28.36	NA
	9/19/2005	9.78	NP	-	26.61	NA
	12/12/2005	8.15	NP	-	28.24	NA
	3/13/2006	6.40	NP	-	29.99	NA
	6/27/2006	7.91	NP	-	28.48	NA
	9/25/2006	9.76	NP	-	26.63	NA
	12/11/2006	7.30	NP	-	29.09	NA
	3/19/2007	6.48	NP	-	29.91	NA
	4/20/2007	7.02	NP	-	29.37	NA
	6/18/2007	8.27	NP	-	28.12	NA
	9/17/2007	9.89	NP	-	26.50	NA
	12/17/2007	7.75	NP	-	28.64	NA
	3/24/2008	6.35	NP	-	30.04	NA
	6/23/2008	7.93	NP	-	28.46	NA
	9/22/2008	9.68	NP	-	26.71	NA

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
	1/5/2009	**6.88**	**NP**	**-**	**29.51**	**NA**
	3/16/2009	**7.86**	**NP**	**-**	**28.53**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-5	2/14/2000	6.02	NP	-	27.50	NA
(33.52)	5/22/2000	6.64	NP	-	26.88	NA
	8/23/2000	8.28	NP	-	25.24	NA
	11/28/2000	5.79	NP	-	27.73	NA
	2/21/2001	8.27	NP	-	25.25	NA
	5/15/2001	6.02	sheen	-	27.50	NA
	9/18/2001	9.77	NP	-	23.75	NA
	12/19/2001	6.39	NP	-	27.13	NA
	3/13/2002	6.09	NP	-	27.43	NA
	6/24/2002	7.24	NP	-	26.28	NA
	9/26/2002	9.30	NP	-	24.22	NA
	12/20/2002	8.21	NP	-	25.31	NA
	3/17/2003	5.85	NP	-	27.67	NA
	6/26/2003	7.22	NP	-	26.30	NA
	9/24/2003	9.19	NP	-	24.33	NA
	12/30/2003	7.00	NP	-	26.52	NA
	3/29/2004	6.30	NP	-	27.22	NA
	6/29/2004	8.11	NP	-	25.41	NA
	9/27/2004	9.11	NP	-	24.41	NA
	12/14/2004	8.45	NP	-	25.07	NA
	3/7/2005	8.33	NP	-	25.19	NA
	6/20/2005	7.12	NP	-	26.40	NA
	9/19/2005	9.18	NP	-	24.34	NA
	12/12/2005	7.90	NP	-	25.62	NA
	3/13/2006	5.90	NP	-	27.62	NA
	6/27/2006	6.90	NP	-	26.62	NA
	9/25/2006	9.14	NP	-	24.38	NA
	12/11/2006	6.71	NP	-	26.81	NA
	3/19/2007	5.74	NP	-	27.78	NA
	4/20/2007	6.25	NP	-	27.27	NA
	6/18/2007	7.41	NP	-	26.11	NA
	9/17/2007	9.28	NP	-	24.24	NA
	12/17/2007	7.16	NP	-	26.36	NA
	3/24/2008	5.64	NP	-	27.88	NA
	6/23/2008	6.82	NP	-	26.70	NA
	9/22/2008	9.02	NP	-	24.50	NA
	1/5/2009	**6.06**	**NP**	**-**	**27.46**	**NA**
	3/16/2009	**6.65**	**NP**	**-**	**26.87**	**NA**
MW-6	2/14/2000	3.72	3.69	0.03	29.64	2.0
(33.34)	5/22/2000	4.70	NP	-	28.64	NA
	8/23/2000	6.24	NP	-	27.10	NA
	11/28/2000	6.98	NP	-	26.36	0.1
	2/21/2001	6.21	sheen	-	27.13	NA
	5/15/2001	8.10	NP	-	25.24	NA
	9/18/2001	7.71	7.66	0.05	25.67	NA
	12/19/2001	4.05	NP	-	29.29	0.06
	3/13/2002	3.70	sheen	-	29.64	NA
	6/24/2002	5.56	NP	-	27.78	NA
	9/26/2002	7.19	NP	-	26.15	NA
	12/20/2002	7.32	sheen	-	26.02	NA
	3/17/2003	3.87	NP	-	29.47	NA
	6/26/2003	5.20	NP	-	28.14	NA
	9/24/2003	7.09	NP	-	26.25	NA
	12/30/2003	4.80	NP	-	28.54	NA
	3/29/2004	4.29	NP	-	29.05	NA
	6/29/2004	5.23	NP	-	28.11	NA
	9/27/2004	6.98	NP	-	26.36	NA
	12/14/2004	6.37	NP	-	26.97	NA
	3/7/2005	6.03	sheen	-	27.31	0.1
	6/20/2005	5.15	NP	-	28.19	NA
	9/19/2005	6.92	NP	-	26.42	NA
	12/12/2005	5.45	sheen	-	27.89	NA
	3/13/2006	4.10	3.88	0.22	29.42	0
	6/27/2006	5.06	NP	-	28.28	NA
	9/25/2006	7.00	NP	-	26.34	NA
	12/11/2006	4.56	NP	-	28.78	0.2
	3/19/2007	4.01	3.98	0.03	29.35	0.35
	4/20/2007	4.35	4.32	0.03	29.01	NA
	6/18/2007	5.40	sheen	-	27.94	0.3
	9/17/2007	6.95	NP	-	26.39	NA
	12/17/2007	4.93	NP	-	28.41	0.02
	3/24/2008	3.68	3.67	0.01	29.67	0.03
	6/23/2008	5.20	sheen	-	28.14	0.02
	9/22/2008	6.81	sheen	-	26.53	0.03
	1/5/2009	**3.99**	**NP**	**-**	**29.35**	**0.03**
	3/16/2009	**5.10**	**NP**	**-**	**28.24**	**0.03**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-7	2/14/2000	8.74	8.54	0.20	25.54	3.7
(34.12)	5/22/2000	9.95	8.92	1.03	24.99	11
	8/23/2000	NM	NM	-	NA	2
	11/28/2000	10.94	10.35	0.59	23.65	2.2
	2/21/2001	10.37	10.01	0.36	24.04	1.9
	5/15/2001	10.27	10.00	0.27	24.07	1.75
	9/19/2001	11.04	11.00	0.04	23.11	0.8
	12/19/2001	9.05	8.78	0.27	25.29	1.1
	3/13/2002	9.11	8.30	0.81	25.66	4.5
	6/24/2002	10.38	9.48	0.90	24.46	3.3
	9/26/2002	11.32	10.53	0.79	23.43	2.65
	12/23/2002	11.05	10.82	0.23	23.25	1.10
	3/17/2003	9.18	8.45	0.73	25.52	1.55
	6/26/2003	10.03	9.28	0.75	24.69	1.25
	9/24/2003	11.17	10.46	0.71	23.52	1.00
	12/30/2003	9.83	9.47	0.36	24.58	1.00
	3/29/2004	9.35	8.62	0.73	25.35	1.00
	6/29/2004	10.36	9.80	0.56	24.21	1.00
	9/27/2004	10.97	10.61	0.36	23.44	0.20
	12/14/2004	10.75	10.30	0.45	23.73	1.95
	3/7/2005	10.25	9.98	0.27	24.09	2.5
	6/20/2005	9.89	9.19	0.70	24.79	0.9
	9/19/2005	10.90	10.45	0.45	23.58	1.75
	12/12/2005	9.82	9.50	0.32	24.56	1.05
	3/13/2006	8.35	8.00	0.35	26.05	1.00
	6/27/2006	9.45	9.04	0.41	25.00	NA
	9/25/2006	11.07	9.45	1.62	24.35	2.30
	12/11/2006	9.10	8.92	0.18	25.16	0.60
	3/19/2007	8.40	8.24	0.16	25.85	0.60
	4/20/2007	8.68	8.52	0.16	25.57	NA
	6/18/2007	9.53	9.31	0.22	24.77	0.75
	9/17/2007	10.71	10.45	0.26	23.62	0.75
	12/17/2007	9.36	9.22	0.14	24.87	0.75
	3/24/2008	8.17	8.12	0.05	25.99	0.21
	6/23/2008	9.30	9.11	0.19	24.97	0.25
	9/22/2008	10.51	10.26	0.25	23.81	0.10
	1/5/2009	**8.93**	**8.93**	**0.00**	**25.19**	**1.00**
	3/16/2009	**9.12**	**9.10**	**0.02**	**25.02**	**0.04**
MW-8	2/14/2000	7.18	NP	-	26.77	NA
(33.95)	5/22/2000	8.00	NP	-	25.95	NA
	8/23/2000	9.26	NP	-	24.69	NA
	11/28/2000	9.91	NP	-	24.04	NA
	2/21/2001	9.40	NP	-	24.55	NA
	5/15/2001	9.30	NP	-	24.65	NA
	9/19/2001	10.49	NP	-	23.46	NA
	12/19/2001	8.42	NP	-	25.53	NA
	3/13/2002	7.38	NP	-	26.57	NA
	6/24/2002	8.81	NP	-	25.14	NA
	9/26/2002	10.15	NP	-	23.80	NA
	12/20/2002	10.50	NP	-	23.45	NA
	3/17/2003	7.48	NP	-	26.47	NA
	6/26/2003	8.61	NP	-	25.34	NA
	9/24/2003	10.10	NP	-	23.85	NA
	12/30/2003	8.74	NP	-	25.21	NA
	3/29/2004	8.74	NP	-	25.21	NA
	6/29/2004	9.19	NP	-	24.76	NA
	9/27/2004	10.12	NP	-	23.83	NA
	12/14/2004	9.74	NP	-	24.21	NA
	3/7/2005	9.34	NP	-	24.61	NA
	6/20/2005	8.48	NP	-	25.47	NA
	9/19/2005	9.86	NP	-	24.09	NA
	12/12/2005	8.73	NP	-	25.22	NA
	3/13/2006	6.96	NP	-	26.99	NA
	6/27/2006	8.43	NP	-	25.52	NA
	9/25/2006	9.92	NP	-	24.03	NA
	12/11/2006	7.95	NP	-	26.00	NA
	3/19/2007	7.00	NP	-	26.95	NA
	6/18/2007	8.53	NP	-	25.42	NA
	9/17/2007	9.92	NP	-	24.03	NA
	12/17/2007	8.44	NP	-	25.51	NA
	3/24/2008	7.02	NP	-	26.93	NA
	6/23/2008	8.22	NP	-	25.73	NA
	9/22/2008	9.69	NP	-	24.26	NA
	1/5/2009	**7.98**	**NP**	**-**	**25.97**	**NA**
	3/16/2009	**8.30**	**NP**	**-**	**25.65**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-9	2/14/2000	9.66	NP	-	26.87	NA
(36.53)	5/22/2000	10.24	NP	-	26.29	NA
	8/23/2000	11.42	NP	-	25.11	NA
	11/28/2000	12.18	NP	-	24.35	NA
	2/21/2001	11.85	NP	-	24.68	NA
	5/15/2001	11.83	NP	-	24.70	NA
	9/19/2001	12.86	NP	-	23.67	NA
	12/19/2001	11.87	NP	-	24.66	NA
	3/13/2002	10.30	NP	-	26.23	NA
	6/24/2002	11.21	NP	-	25.32	NA
	9/26/2002	11.43	NP	-	25.10	NA
	12/23/2002	12.97	NP	-	23.56	NA
	3/17/2003	10.62	NP	-	25.91	NA
	6/26/2003	10.86	NP	-	25.67	NA
	9/24/2003	12.27	NP	-	24.26	NA
	12/30/2003	11.77	NP	-	24.76	NA
	3/29/2004	10.39	NP	-	26.14	NA
	6/29/2004	11.58	NP	-	24.95	NA
	9/27/2004	12.56	NP	-	23.97	NA
	12/14/2004	12.42	NP	-	24.11	NA
	3/7/2005	11.71	NP	-	24.82	NA
	6/20/2005	10.95	NP	-	25.58	NA
	9/19/2005	12.22	NP	-	24.31	NA
	12/12/2005	11.34	NP	-	25.19	NA
	3/13/2006	9.45	NP	-	27.08	NA
	6/27/2006	10.64	NP	-	25.89	NA
	9/25/2006	12.10	NP	-	24.43	NA
	12/11/2006	10.47	NP	-	26.06	NA
	3/19/2007	9.33	NP	-	27.20	NA
	6/18/2007	10.68	NP	-	25.85	NA
	9/17/2007	11.98	NP	-	24.55	NA
	12/17/2007	10.88	NP	-	25.65	NA
	3/24/2008	9.40	NP	-	27.13	NA
	6/23/2008	10.32	NP	-	26.21	NA
	9/22/2008	11.73	NP	-	24.80	NA
	1/5/2009	**10.77**	**NP**	**-**	**25.76**	**NA**
	3/16/2009	**10.38**	**NP**	**-**	**26.15**	**NA**
MW-10	2/14/2000	8.46	NP	-	27.36	NA
(35.82)	5/22/2000	5.59	NP	-	30.23	NA
	8/23/2000	11.21	NP	-	24.61	NA
	11/28/2000	11.86	NP	-	23.96	NA
	2/21/2001	11.16	NP	-	24.66	NA
	5/15/2001	11.04	NP	-	24.78	NA
	9/19/2001	12.59	NP	-	23.23	NA
	12/19/2001	9.42	NP	-	26.40	NA
	3/13/2002	8.58	NP	-	27.24	NA
	6/24/2002	10.54	NP	-	25.28	NA
	9/26/2002	12.12	NP	-	23.70	NA
	12/23/2002	12.14	NP	-	23.68	NA
	3/17/2003	8.78	NP	-	27.04	NA
	6/26/2003	10.24	NP	-	25.58	NA
	9/24/2003	12.02	NP	-	23.80	NA
	12/30/2003	9.98	NP	-	25.84	NA
	3/29/2004	9.26	NP	-	26.56	NA
	6/29/2004	10.98	NP	-	24.84	NA
	9/27/2004	12.00	NP	-	23.82	NA
	12/14/2004	11.38	NP	-	24.44	NA
	3/7/2005	11.19	NP	-	24.63	NA
	6/20/2005	10.13	NP	-	25.69	NA
	9/19/2005	11.84	NP	-	23.98	NA
	12/12/2005	10.29	NP	-	25.53	NA
	3/13/2006	8.35	NP	-	27.47	NA
	6/27/2006	9.98	NP	-	25.84	NA
	9/25/2006	11.80	NP	-	24.02	NA
	12/11/2006	9.49	NP	-	26.33	NA
	3/19/2007	8.57	NP	-	27.25	NA
	6/18/2007	10.30	NP	-	25.52	NA
	9/17/2007	11.91	NP	-	23.91	NA
	12/17/2007	9.94	NP	-	25.88	NA
	3/24/2008	8.42	NP	-	27.40	NA
	6/23/2008	9.97	NP	-	25.85	NA
	9/22/2008	11.65	NP	-	24.17	NA
	1/5/2009	**9.27**	**NP**	**-**	**26.55**	**NA**
	3/16/2009	**9.91**	**NP**	**-**	**25.91**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-11	2/14/2000	5.04	NP	-	31.43	NA
(36.47)	5/22/2000	3.11	NP	-	33.36	NA
	8/23/2000	7.97	NP	-	28.50	NA
	11/28/2000	7.66	NP	-	28.81	NA
	2/21/2001	7.48	NP	-	28.99	NA
	5/15/2001	7.30	NP	-	29.17	NA
	9/19/2001	9.29	NP	-	27.18	NA
	12/19/2001	5.44	NP	-	31.03	NA
	3/13/2002	5.23	NP	-	31.24	NA
	6/24/2002	7.71	NP	-	28.76	NA
	9/26/2002	9.01	NP	-	27.46	NA
	12/23/2002	7.07	NP	-	29.40	NA
	3/17/2003	5.72	NP	-	30.75	NA
	6/26/2003	7.55	NP	-	28.92	NA
	9/24/2003	8.89	NP	-	27.58	NA
	12/30/2003	5.77	NP	-	30.70	NA
	3/29/2004	6.17	NP	-	30.30	NA
	6/29/2004	8.10	NP	-	28.37	NA
	9/27/2004	8.54	NP	-	27.93	NA
	12/14/2004	6.56	NP	-	29.91	NA
	3/7/2005	7.90	NP	-	28.57	NA
	6/20/2005	6.69	NP	-	29.78	NA
	9/19/2005	8.69	NP	-	27.78	NA
	12/12/2005	6.49	NP	-	29.98	NA
	3/13/2006	5.35	NP	-	31.12	NA
	6/26/2006	6.68	NP	-	29.79	NA
	9/25/2006	8.68	NP	-	27.79	NA
	12/11/2006	9.11	NP	-	27.36	NA
	3/19/2007	5.71	NP	-	30.76	NA
	6/18/2007	7.53	NP	-	28.94	NA
	9/17/2007	8.66	NP	-	27.81	NA
	12/17/2007	6.10	NP	-	30.37	NA
	3/24/2008	5.39	NP	-	31.08	NA
	6/23/2008	6.64	NP	-	29.83	NA
	9/22/2008	8.27	NP	-	28.20	NA
	1/5/2009	**5.31**	**NP**	**-**	**31.16**	**NA**
	3/16/2009	**6.13**	**NP**	**-**	**30.34**	**NA**
MW-12	2/14/2000	4.99	NP	-	30.96	NA
(35.95)	5/22/2000	6.57	NP	-	29.38	NA
	8/23/2000	8.65	NP	-	27.30	NA
	11/28/2000	9.16	NP	-	26.79	NA
	2/21/2001	8.32	NP	-	27.63	NA
	5/15/2001	8.16	NP	-	27.79	NA
	9/19/2001	10.17	NP	-	25.78	NA
	12/19/2001	5.54	NP	-	30.41	NA
	3/13/2002	4.85	NP	-	31.10	NA
	6/24/2002	7.75	NP	-	28.20	NA
	9/26/2002	9.68	NP	-	26.27	NA
	12/23/2002	8.75	NP	-	27.20	NA
	3/17/2003	5.25	NP	-	30.70	NA
	6/26/2003	7.35	NP	-	28.60	NA
	9/24/2003	9.57	NP	-	26.38	NA
	12/30/2003	6.28	NP	-	29.67	NA
	3/29/2004	5.99	NP	-	29.96	NA
	6/29/2004	8.28	NP	-	27.67	NA
	9/27/2004	9.32	NP	-	26.63	NA
	12/14/2004	8.22	NP	-	27.73	NA
	3/7/2005	8.41	NP	-	27.54	NA
	6/20/2005	7.19	NP	-	28.76	NA
	9/19/2005	9.29	NP	-	26.66	NA
	12/12/2005	7.22	NP	-	28.73	NA
	3/13/2006	5.13	NP	-	30.82	NA
	6/27/2006	7.06	NP	-	28.89	NA
	9/25/2006	9.34	NP	-	26.61	NA
	12/11/2006	6.12	NP	-	29.83	NA
	3/19/2007	5.40	NP	-	30.55	NA
	6/18/2007	7.56	NP	-	28.39	NA
	9/17/2007	9.47	NP	-	26.48	NA
	12/17/2007	6.80	NP	-	29.15	NA
	3/24/2008	5.20	NP	-	30.75	NA
	6/23/2008	7.14	NP	-	28.81	NA
	9/22/2008	9.20	NP	-	26.75	NA
	1/5/2009	**5.80**	**NP**	**-**	**30.15**	**NA**
	3/16/2009	**6.84**	**NP**	**-**	**29.11**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-13	2/14/2000	3.85	NP	-	34.04	NA
(37.89)	5/22/2000	5.03	NP	-	32.86	NA
	8/23/2000	7.00	NP	-	30.89	NA
	11/28/2000	6.59	NP	-	31.30	NA
	2/21/2001	6.26	NP	-	31.63	NA
	5/15/2001	6.03	NP	-	31.86	NA
	9/19/2001	8.55	NP	-	29.34	NA
	12/19/2001	3.77	NP	-	34.12	NA
	3/13/2002	3.72	NP	-	34.17	NA
	6/24/2002	6.56	NP	-	31.33	NA
	9/26/2002	8.16	NP	-	29.73	NA
	12/23/2002	5.71	NP	-	32.18	NA
	3/17/2003	4.13	NP	-	33.76	NA
	6/26/2003	6.39	NP	-	31.50	NA
	9/24/2003	8.27	NP	-	29.62	NA
	12/30/2003	4.00	NP	-	33.89	NA
	3/29/2004	4.80	NP	-	33.09	NA
	6/29/2004	7.00	NP	-	30.89	NA
	9/27/2004	7.45	NP	-	30.44	NA
	12/14/2004	5.39	NP	-	32.50	NA
	3/7/2005	6.62	NP	-	31.27	NA
	6/20/2005	5.63	NP	-	32.26	NA
	9/19/2005	7.77	NP	-	30.12	NA
	12/12/2005	5.23	NP	-	32.66	NA
	3/13/2006	4.08	NP	-	33.81	NA
	6/27/2006	5.87	NP	-	32.02	NA
	9/25/2006	7.61	NP	-	30.28	NA
	12/11/2006	5.55	NP	-	32.34	NA
	3/19/2007	4.43	NP	-	33.46	NA
	6/18/2007	6.34	NP	-	31.55	NA
	9/17/2007	7.55	NP	-	30.34	NA
	12/17/2007	4.93	NP	-	32.96	NA
	3/24/2008	4.14	NP	-	33.75	NA
	6/23/2008	5.69	NP	-	32.20	NA
	9/22/2008	7.20	NP	-	30.69	NA
	1/5/2009	**3.78**	**NP**	**-**	**34.11**	**NA**
	3/16/2009	**4.76**	**NP**	**-**	**33.13**	**NA**
MW-14	2/14/2000	2.73	NP	-	33.55	NA
(36.28)	5/22/2000	4.50	NP	-	31.78	NA
	8/23/2000	6.55	NP	-	29.73	NA
	11/28/2000	6.36	NP	-	29.92	NA
	2/21/2001	5.65	NP	-	30.63	NA
	5/15/2001	4.67	NP	-	31.61	NA
	9/19/2001	7.71	NP	-	28.57	NA
	12/19/2001	3.10	NP	-	33.18	NA
	3/13/2002	2.84	NP	-	33.44	NA
	6/24/2002	5.90	NP	-	30.38	NA
	9/26/2002	7.45	NP	-	28.83	NA
	12/23/2002	5.39	NP	-	30.89	NA
	3/17/2003	3.17	NP	-	33.11	NA
	6/26/2003	5.54	NP	-	30.74	NA
	9/24/2003	7.47	NP	-	28.81	NA
	12/30/2003	3.52	NP	-	32.76	NA
	3/29/2004	3.92	NP	-	32.36	NA
	6/29/2004	6.38	NP	-	29.90	NA
	9/27/2004	6.82	NP	-	29.46	NA
	12/14/2004	5.21	NP	-	31.07	NA
	3/7/2005	5.97	NP	-	30.31	NA
	6/20/2005	5.05	NP	-	31.23	NA
	9/19/2005	7.12	NP	-	29.16	NA
	12/12/2005	4.77	NP	-	31.51	NA
	3/13/2006	3.18	NP	-	33.10	NA
	6/27/2006	5.17	NP	-	31.11	NA
	9/25/2006	7.10	NP	-	29.18	NA
	12/11/2006	3.81	NP	-	32.47	NA
	3/19/2007	3.44	NP	-	32.84	NA
	6/18/2007	5.62	NP	-	30.66	NA
	9/17/2007	7.15	NP	-	29.13	NA
	12/17/2007	4.38	NP	-	31.90	NA
	3/24/2008	3.21	NP	-	33.07	NA
	6/23/2008	5.28	NP	-	31.00	NA
	9/22/2008	6.93	NP	-	29.35	NA
	1/5/2009	**3.11**	**NP**	**-**	**33.17**	**NA**
	3/16/2009	**4.42**	**NP**	**-**	**31.86**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-15	2/14/2000	4.09	NP	-	33.41	NA
(37.50)	5/22/2000	5.80	NP	-	31.70	NA
	8/23/2000	9.21	NP	-	28.29	NA
	11/28/2000	8.90	NP	-	28.60	NA
	2/21/2001	7.46	NP	-	30.04	NA
	5/15/2001	7.80	NP	-	29.70	NA
	9/18/2001	10.46	NP	-	27.04	NA
	12/19/2001	4.03	NP	-	33.47	NA
	3/13/2002	4.14	NP	-	33.36	NA
	6/24/2002	7.93	NP	-	29.57	NA
	9/26/2002	10.13	NP	-	27.37	NA
	12/23/2002	5.72	sheen	-	31.78	NA
	3/17/2003	3.62	NP	-	33.88	NA
	6/26/2003	7.25	NP	-	30.25	NA
	9/24/2003	10.02	NP	-	27.48	NA
	12/30/2003	4.07	NP	-	33.43	NA
	3/29/2004	5.09	NP	-	32.41	NA
	6/29/2004	8.50	NP	-	29.00	NA
	9/27/2004	9.01	NP	-	28.49	NA
	12/14/2004	6.25	NP	-	31.25	NA
	3/7/2005	7.99	NP	-	29.51	NA
	6/20/2005	6.71	NP	-	30.79	NA
	9/19/2005	9.54	NP	-	27.96	NA
	12/12/2005	5.66	NP	-	31.84	NA
	3/13/2006	3.99	NP	-	33.51	NA
	6/27/2006	6.68	NP	-	30.82	NA
	9/25/2006	9.51	NP	-	27.99	NA
	12/11/2006	5.21	NP	-	32.29	NA
	3/19/2007	4.49	NP	-	33.01	NA
	6/18/2007	7.30	NP	-	30.20	NA
	9/17/2007	8.83	NP	-	28.67	NA
	12/17/2007	5.33	NP	-	32.17	NA
	3/24/2008	4.11	NP	-	33.39	NA
	6/23/2008	6.71	NP	-	30.79	NA
	9/22/2008	9.16	NP	-	28.34	NA
	1/5/2009	**3.56**	**NP**	**-**	**33.94**	**NA**
	3/16/2009	**5.81**	**NP**	**-**	**31.69**	**NA**
MW-16	2/14/2000	3.44	NP	-	31.49	NA
(34.93)	5/22/2000	4.98	NP	-	29.95	NA
	8/23/2000	6.99	NP	-	27.94	NA
	11/28/2000	7.51	NP	-	27.42	NA
	2/21/2001	6.60	NP	-	28.33	NA
	5/15/2001	6.51	NP	-	28.42	NA
	9/19/2001	8.48	NP	-	26.45	NA
	12/19/2001	3.99	NP	-	30.94	NA
	3/13/2002	3.35	NP	-	31.58	NA
	6/24/2002	5.11	NP	-	29.82	NA
	9/26/2002	6.02	NP	-	28.91	NA
	12/23/2002	7.09	NP	-	27.84	NA
	3/17/2003	3.63	NP	-	31.30	NA
	6/26/2003	5.60	NP	-	29.33	NA
	9/24/2003	8.95	NP	-	25.98	NA
	12/30/2003	4.71	NP	-	30.22	NA
	3/29/2004	4.37	NP	-	30.56	NA
	6/29/2004	6.54	NP	-	28.39	NA
	9/27/2004	7.63	NP	-	27.30	NA
	12/14/2004	6.60	NP	-	28.33	NA
	3/7/2005	6.67	NP	-	28.26	NA
	6/20/2005	5.53	NP	-	29.40	NA
	9/19/2005	7.59	NP	-	27.34	NA
	12/12/2005	5.56	NP	-	29.37	NA
	3/13/2006	3.60	NP	-	31.33	NA
	6/27/2006	5.44	NP	-	29.49	NA
	9/25/2006	7.60	NP	-	27.33	NA
	12/11/2006	4.52	NP	-	30.41	NA
	3/19/2007	3.83	NP	-	31.10	NA
	4/20/2007	4.41	NP	-	30.52	NA
	6/18/2007	5.87	NP	-	29.06	NA
	9/17/2007	7.79	NP	-	27.14	NA
	12/17/2007	5.10	NP	-	29.83	NA
	3/24/2008	3.63	NP	-	31.30	NA
	6/23/2008	5.45	NP	-	29.48	NA
	9/22/2008	7.52	NP	-	27.41	NA
	1/5/2009	**4.23**	**NP**	**-**	**30.70**	**NA**
	3/16/2009	**5.19**	**NP**	**-**	**29.74**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-17	2/14/2000	4.22	NP	-	31.83	NA
(36.05)	5/22/2000	4.70	NP	-	31.35	NA
	8/23/2000	5.91	NP	-	30.14	NA
	11/28/2000	5.82	NP	-	30.23	NA
	2/21/2001	5.46	NP	-	30.59	NA
	5/15/2001	5.26	NP	-	30.79	NA
	9/18/2001	6.84	NP	-	29.21	NA
	12/19/2001	4.67	NP	-	31.38	NA
	3/13/2002	4.17	NP	-	31.88	NA
	6/24/2002	5.31	NP	-	30.74	NA
	9/26/2002	6.62	NP	-	29.43	NA
	3/17/2003	4.40	NP	-	31.65	NA
	6/26/2003	5.22	NP	-	30.83	NA
	9/24/2003	6.57	NP	-	29.48	NA
	12/30/2003	4.61	NP	-	31.44	NA
	3/29/2004	4.45	NP	-	31.60	NA
	6/29/2004	5.25	NP	-	30.80	NA
	9/27/2004	5.96	NP	-	30.09	NA
	12/14/2004	Unable to Access, Due to Fuel Transfer Activities				
	3/7/2005	5.43	NP	-	30.62	NA
	6/20/2005	4.90	NP	-	31.15	NA
	9/19/2005	6.18	NP	-	29.87	NA
	12/12/2005	5.03	NP	-	31.02	NA
	3/13/2006	4.31	NP	-	31.74	NA
	6/27/2006	4.91	Sheen	-	31.14	NA
	9/25/2006	6.22	NP	-	29.83	NA
	12/11/2006	4.42	NP	-	31.63	NA
	3/19/2007	4.35	NP	-	31.70	NA
	4/20/2007	4.48	NP	-	31.57	NA
	6/18/2007	5.10	NP	-	30.95	NA
	9/17/2007	6.28	NP	-	29.77	NA
	12/17/2007	4.69	NP	-	31.36	NA
	3/24/2008	4.19	NP	-	31.86	NA
	6/23/2008	4.88	NP	-	31.17	NA
	9/22/2008	6.11	NP	-	29.94	NA
	1/5/2009	**3.84**	**NP**	**-**	**32.21**	**NA**
	3/16/2009	**4.14**	**NP**	**-**	**31.91**	**NA**
MW-18	2/14/2000	0.87	NP	-	32.89	NA
(33.76)	5/22/2000	2.15	NP	-	31.61	NA
	8/23/2000	3.62	sheen	-	30.14	NA
	11/28/2000	3.55	NP	-	30.21	0.1
	2/21/2001	3.10	NP	-	30.66	0.1
	5/15/2001	2.83	NP	-	30.93	0.1
	9/18/2001	4.68	4.66	0.02	29.10	NA
	12/19/2001	0.25	NP	-	33.51	NA
	3/13/2002	0.97	sheen	-	32.79	NA
	6/24/2002	3.03	NP	-	30.73	NA
	9/26/2002	4.32	NP	-	29.44	NA
	12/20/2002	2.83	NP	-	30.93	NA
	3/17/2003	1.48	NP	-	32.28	NA
	6/26/2003	2.76	NP	-	31.00	NA
	9/24/2003	4.31	NP	-	29.45	NA
	12/30/2003	1.20	NP	-	32.56	NA
	3/29/2004	1.71	NP	-	32.05	NA
	6/29/2004	2.98	NP	-	30.78	NA
	9/27/2004	3.74	NP	-	30.02	NA
	12/14/2004	Unable to Access, Due to Fuel Transfer Activities				
	3/7/2005	3.04	NP	-	30.72	NA
	6/20/2005	2.48	NP	-	31.28	NA
	9/19/2005	3.94	NP	-	29.82	NA
	12/12/2005	2.39	NP	-	31.37	NA
	3/13/2005	1.41	NP	-	32.35	NA
	6/27/2006	2.45	NP	-	31.31	NA
	9/25/2006	----------Cannot locate well----------				
	12/11/2006	----------Cannot locate well----------				
	3/19/2007	----------Cannot locate well----------				
	4/20/2007	----------Cannot locate well----------				
	6/18/2007	----------Cannot locate well----------				
	9/17/2002	----------Cannot locate well----------				
	12/17/2007	----------Cannot locate well----------				
	3/24/2008	----------Cannot locate well----------				
	6/23/2008	----------Cannot locate well----------				
	9/22/2008	3.88	NP	-	29.88	NA
	1/5/2009	**0.79**	**NP**	**-**	**32.97**	**NA**
	3/16/2009	**1.58**	**NP**	**-**	**32.18**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-19	2/14/2000	2.82	NP	-	30.57	NA
(33.39)	5/22/2000	4.62	4.59	0.03	28.79	NA
	8/23/2000	5.89	5.88	0.01	27.51	NA
	11/28/2000	5.91	NP	-	27.48	0.3
	2/21/2001	5.03	sheen	-	28.36	0.1
	5/15/2001	4.09	sheen	-	29.30	NA
	9/18/2001	7.27	7.23	0.04	26.15	NA
	12/19/2001	2.72	NP	-	30.67	NA
	3/13/2002	2.84	sheen	-	30.55	NA
	6/24/2002	4.61	NP	-	28.78	NA
	9/26/2002	6.42	NP	-	26.97	NA
	12/20/2002	5.06	NP	-	28.33	NA
	3/17/2003	2.59	NP	-	30.80	NA
	6/26/2003	3.42	NP	-	29.97	NA
	9/24/2003	6.51	6.48	0.03	26.90	0.2
	12/30/2003	2.84	NP	-	30.55	NA
	3/29/2004	3.32	NP	-	30.07	NA
	6/29/2004	5.34	sheen	-	28.05	NA
	9/27/2004	6.04	sheen	-	27.35	NA
	12/14/2004	4.18	NP	-	29.21	0.1
	3/7/2005	4.78	4.77	0.01	28.62	0.1
	6/20/2005	3.21	sheen	-	30.18	NA
	9/19/2005	6.27	sheen	-	27.12	NA
	12/12/2005	3.94	NP	-	29.45	NA
	3/13/2006	2.70	sheen	-	30.69	0
	6/27/2006	3.39	sheen	-	30.00	0
	9/25/2006	6.15	sheen	-	27.24	0
	12/11/2006	3.08	NP	-	30.31	0
	3/19/2007	2.85	sheen	-	30.54	0
	4/20/2007	3.08	sheen	-	30.31	0
	6/18/2007	4.06	sheen	-	29.33	0.11
	9/17/2007	6.26	sheen	-	27.13	0.12
	12/17/2007	3.68	NP	-	29.71	0.02
	3/24/2008	2.84	NP	-	30.55	0.01
	6/23/2008	4.37	4.35	0.02	29.02	0.01
	9/22/2008	5.91	sheen	-	27.48	0.01
	1/5/2009	**2.38**	**NP**	**-**	**31.01**	**0.04**
	3/16/2009	**3.71**	**NP**	**-**	**29.68**	**0.03**
MW-20	2/14/2000	9.80	NP	-	24.96	NA
(34.76)	5/22/2000	10.23	NP	-	24.53	NA
	8/23/2000	11.47	NP	-	23.29	NA
	11/28/2000	11.45	NP	-	23.31	NA
	2/21/2001	11.21	NP	-	23.55	NA
	5/15/2001	11.20	NP	-	23.56	NA
	9/18/2001	12.48	NP	-	22.28	NA
	12/19/2001	10.21	NP	-	24.55	NA
	3/13/2002	9.80	NP	-	24.96	NA
	6/24/2002	10.71	NP	-	24.05	NA
	9/26/2002	12.11	NP	-	22.65	NA
	12/20/2002	11.91	NP	-	22.85	NA
	3/17/2003	9.80	NP	-	24.96	NA
	6/26/2003	10.83	NP	-	23.93	NA
	9/24/2003	12.12	NP	-	22.64	NA
	12/30/2003	10.61	NP	-	24.15	NA
	3/29/2004	10.27	NP	-	24.49	NA
	6/29/2004	11.31	NP	-	23.45	NA
	9/27/2004	11.94	NP	-	22.82	NA
	12/14/2004	11.48	NP	-	23.28	NA
	3/7/2005	11.34	NP	-	23.42	NA
	6/20/2005	10.58	NP	-	24.18	NA
	9/19/2005	12.05	NP	-	22.71	NA
	12/12/2005	11.28	NP	-	23.48	NA
	3/13/2006	9.54	NP	-	25.22	NA
	6/27/2006	10.45	NP	-	24.31	NA
	9/25/2006	12.01	NP	-	22.75	NA
	12/11/2006	10.27	NP	-	24.49	NA
	3/19/2007	9.47	NP	-	25.29	NA
	4/20/2007	10.00	NP	-	24.76	NA
	4/20/2007	10.00	NP	-	24.76	NA
	6/18/2007	10.75	NP	-	24.01	NA
	9/17/2007	12.04	NP	-	22.72	NA
	12/17/2007	10.37	NP	-	24.39	NA
	3/24/2008	9.50	NP	-	25.26	NA
	6/23/2008	10.39	NP	-	24.37	NA
	9/22/2008	11.51	NP	-	23.25	NA
	1/5/2009	**9.29**	**NP**	**-**	**25.47**	**NA**
	3/16/2009	**10.32**	**NP**	**-**	**24.44**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-21	2/14/2000	1.26	NP	-	33.07	NA
(34.33)	5/22/2000	1.62	NP	-	32.71	NA
	8/23/2000	2.38	NP	-	31.95	NA
	11/28/2000	1.80	NP	-	32.53	NA
	2/21/2001	1.64	NP	-	32.69	NA
	5/15/2001	1.59	NP	-	32.74	NA
	9/18/2001	3.01	NP	-	31.32	NA
	12/19/2001	0.27	NP	-	34.06	NA
	3/13/2002	0.99	NP	-	33.34	NA
	6/24/2002	1.95	NP	-	32.38	NA
	9/26/2002	3.65	NP	-	30.68	NA
	12/20/2002	2.05	NP	-	32.28	NA
	3/17/2003	Unable to Locate				
	6/26/2003	Unable to Access, Covered by Steel Plate				
	9/24/2003	Unable to Access, Covered by Steel Plate				
	12/30/2003	Unable to Access, Covered by Steel Plate				
	3/29/2004	Unable to Access, Covered by Gravel Pile				
	6/29/2004	Unable to Access, Covered by Gravel Pile				
	9/27/2004	Unable to Access, Covered by Gravel Pile				
	12/14/2004	Unable to Access, Covered by Gravel Pile				
	3/7/2005	Unable to Access, Covered by Gravel Pile				
	6/20/2005	Unable to Access, Covered by Gravel Pile				
	9/19/2005	Unable to Access, Covered by Gravel Pile				
	12/12/2005	Unable to Access, Covered by Gravel Pile				
	3/13/2006	Unable to Access, Covered by Gravel Pile				
	6/27/2006	Unable to Access, Covered by Gravel Pile				
	9/25/2006	Unable to Access, Covered by Gravel Pile				
	12/11/2006	Unable to Access, Covered by Gravel Pile				
	3/19/2007	Unable to Access, Covered by Gravel Pile				
	6/18/2007	Unable to Access, Covered by Gravel Pile				
	9/17/2007	Unable to Access, Covered by Gravel Pile				
	12/17/2007	Unable to Access, Covered by Gravel Pile				
	3/24/2008	Unable to Access, Covered by Gravel Pile				
	6/23/2008	Unable to Access, Covered by Gravel Pile				
	9/22/2008	Unable to Access, Covered by Gravel Pile				
	1/5/2009	**Unable to Access, Covered by Gravel Pile**				
	3/16/2009	**Unable to Access, Covered by Gravel Pile**				
MW-22	2/14/2000	2.85	NP	-	32.80	NA
(35.65)	5/22/2000	4.28	NP	-	31.37	NA
	8/23/2000	5.52	NP	-	30.13	NA
	11/28/2000	6.50	NP	-	29.15	NA
	2/21/2001	5.57	sheen	-	30.08	NA
	5/15/2001	5.29	5.28	0.01	30.37	NA
	9/19/2001	6.53	NP	-	29.12	NA
	12/19/2001	3.56	NP	-	32.09	NA
	3/13/2002	3.10	sheen	-	32.55	NA
	6/24/2002	4.89	4.88	0.01	30.77	NA
	9/26/2002	6.14	6.13	0.01	29.52	NA
	12/20/2002	6.29	NP	-	29.36	NA
	3/17/2003	3.81	sheen	-	31.84	0.01
	6/26/2003	4.56	NP	-	31.09	NA
	9/24/2003	6.00	NP	-	29.65	NA
	12/30/2003	4.60	NP	-	31.05	NA
	3/29/2004	4.09	4.08	0.01	31.56	NA
	6/29/2004	5.48	NP	-	30.17	NA
	9/27/2004	5.79	Sheen	-	29.86	NA
	12/14/2004	5.60	NP	-	30.05	NA
	3/7/2005	5.40	Sheen	-	30.25	0.1
	6/20/2005	4.81	NP	-	30.84	NA
	9/19/2005	6.03	Sheen	-	29.62	0.1
	12/12/2005	4.37	Sheen	-	31.28	NA
	3/13/2006	3.44	NP	-	32.21	NA
	6/27/2006	4.68	NP	-	30.97	NA
	9/25/2006	5.99	NP	-	29.66	NA
	12/11/2006	3.40	NP	-	32.25	NA
	3/19/2007	3.31	NP	-	32.34	NA
	6/18/2007	4.89	NP	-	30.76	NA
	9/17/2007	6.35	sheen	-	29.30	0.1
	12/17/2007	4.17	NP	-	31.48	0
	3/24/2008	3.52	NP	-	32.13	0
	6/23/2008	4.83	NP	-	30.82	0
	9/22/2008	6.20	NP	-	29.45	0
	1/5/2009	**3.70**	**NP**	**-**	**31.95**	**0**
	3/16/2009	**4.58**	**NP**	**-**	**31.07**	**0.01**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-23	2/14/2000	3.56	NP	-	32.50	NA
(36.06)	5/22/2000	5.63	NP	-	30.43	NA
	8/23/2000	5.82	5.82	0.00	30.24	NA
	11/28/2000	5.51	5.51	0.00	30.55	0.1
	2/21/2001	5.33	NP	-	30.73	0.1
	5/15/2001	5.01	sheen	-	31.05	NA
	9/19/2001	6.50	6.49	0.01	29.57	NA
	12/19/2001	4.19	NP	-	31.87	NA
	3/13/2002	3.99	NP	-	32.07	NA
	6/24/2002	5.44	NP	-	30.62	NA
	9/26/2002	8.21	sheen	-	27.85	NA
	12/20/2002	5.20	NP	-	30.86	NA
	3/17/2003	4.47	NP	-	31.59	NA
	6/26/2003	5.54	NP	-	30.52	NA
	9/24/2003	6.35	sheen	-	29.71	0.1
	12/30/2003	4.41	NP	-	31.65	NA
	3/29/2004	4.48	NP	-	31.58	NA
	6/29/2004	6.58	sheen	-	29.48	NA
	9/27/2004	5.91	sheen	-	30.15	NA
	12/14/2004	5.05	NP	-	31.01	NA
	3/7/2005	5.12	NP	-	30.94	NA
	6/20/2005	5.19	NP	-	30.87	NA
	9/19/2005	6.22	NP	-	29.84	NA
	12/12/2005	5.09	NP	-	30.97	NA
	3/13/2006	4.10	NP	-	31.96	NA
	6/27/2006	5.14	sheen	-	30.92	NA
	9/25/2006	6.31	sheen	-	29.75	0.1
	12/11/2006	4.41	NP	-	31.65	0.2
	3/19/2007	4.31	NP	-	31.75	0.15
	6/18/2007	5.20	sheen	-	30.86	0.2
	9/17/2007	6.27	sheen	-	29.79	0.21
	12/17/2007	4.72	sheen	-	31.34	0.01
	3/24/2008	4.04	NP	-	32.02	0.02
	6/23/2008	5.11	5.10	0.01	30.95	0.01
	9/22/2008	6.18	NP	-	29.88	0.01
	1/5/2009	**4.14**	**sheen**	**-**	**31.92**	**0.01**
	3/16/2009	**4.58**	**NP**	**-**	**31.48**	**0.02**
MW-24	2/14/2000	5.00	4.50	0.50	30.55	1.0
(35.15)	5/22/2000	5.34	5.21	0.13	29.91	2.0
	8/23/2000	8.56	NP	-	26.59	NA
	11/28/2000	7.79	NP	-	27.36	0.3
	2/21/2001	7.20	7.15	0.05	27.99	0.4
	5/15/2001	5.45	sheen	-	29.70	0.1
	9/19/2001	9.55	9.54	0.01	25.61	NA
	12/19/2001	5.30	4.84	0.46	30.22	0.1
	3/13/2002	6.78	sheen	-	28.37	0.16
	6/24/2002	6.80	6.79	0.01	28.36	0.2
	9/26/2002	8.86	sheen	-	26.29	0.01
	12/20/2002	6.34	6.35	0.01	28.82	NA
	3/17/2003	4.78	4.70	0.08	30.43	0.1
	6/26/2003	6.51	sheen	-	28.64	0.02
	9/24/2003	8.35	NP	-	26.80	NA
	12/30/2003	4.80	4.60	0.2*	30.35	0.10
	3/29/2004	5.35	5.33	0.02*	29.80	NA
	6/29/2004	6.82	6.81	0.01	28.34	NA
	9/27/2004	8.58	8.56	0.02	26.59	NA
	12/14/2004	5.32	sheen	-	29.83	0.30
	3/7/2005	7.71	NP	-	27.44	0.20
	6/20/2005	5.39	5.36	0.03	29.78	0.10
	9/19/2005	-**	8.01	0.02	-**	0.20
	12/12/2005	5.94	5.89	0.05	29.25	0.30
	3/13/2006	4.60	sheen	-	30.55	0.20
	6/27/2006	-**	5.71	-	-**	NA
	9/25/2006	-**	8.80	-	-**	0.40
	12/11/2006	NM	NM	NM	NM	0.30
	3/19/2007	4.71	sheen	-	30.44	0.20
	4/20/2007	NM	4.86	-	-**	NA
	6/18/2007	NM	5.75	-	-**	0.30
	9/17/2007	NM	8.70	-	-**	0.20
	12/17/2007	NM	5.13	-	-**	0.13
	3/24/2008	NM	4.53	-	-**	0.02
	6/23/2008	NM	5.50	-	-**	0.05
	9/22/2008	5.40	sheen	-	29.75	0.04
	1/5/2009	**4.47**	**4.42**	**0.05**	**30.72**	**0.02**
	3/16/2009	**NM**	**4.95**	**-**	**-****	**0.03**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-25	2/14/2000	10.03	NP	-	24.70	NA
(34.73)	5/22/2000	11.66	NP	-	23.07	NA
	8/23/2000	12.20	NP	-	22.53	NA
	11/28/2000	12.34	NP	-	22.39	NA
	2/21/2001	11.97	NP	-	22.76	NA
	5/15/2001	11.91	NP	-	22.82	NA
	9/19/2001	13.12	NP	-	21.61	NA
	12/19/2001	10.45	NP	-	24.28	NA
	3/13/2002	10.35	NP	-	24.38	NA
	6/24/2002	11.38	NP	-	23.35	NA
	9/26/2002	12.77	NP	-	21.96	NA
	12/20/2002	12.14	NP	-	22.59	NA
	3/17/2003	10.38	NP	-	24.35	NA
	6/26/2003	11.60	NP	-	23.13	NA
	9/24/2003	12.77	NP	-	21.96	NA
	12/30/2003	11.00	NP	-	23.73	NA
	3/29/2004	10.46	NP	-	24.27	NA
	6/29/2004	11.93	NP	-	22.80	NA
	9/27/2004	12.67	NP	-	22.06	NA
	12/14/2004	12.52	NP	-	22.21	NA
	3/7/2005	12.10	NP	-	22.63	NA
	6/20/2005	11.40	NP	-	23.33	NA
	9/19/2005	12.71	NP	-	22.02	NA
	12/12/2005	11.52	NP	-	23.21	NA
	3/13/2006	10.16	NP	-	24.57	NA
	6/27/2006	11.21	NP	-	23.52	NA
	9/25/2006	12.70	NP	-	22.03	NA
	12/11/2006	10.97	NP	-	23.76	NA
	3/19/2007	10.13	NP	-	24.60	NA
	4/20/2007	10.51	NP	-	24.22	NA
	6/18/2007	11.47	NP	-	23.26	NA
	9/17/2007	12.72	NP	-	22.01	NA
	12/17/2007	11.10	NP	-	23.63	NA
	3/24/2008	10.22	NP	-	24.51	NA
	6/23/2008	10.94	NP	-	23.79	NA
	9/22/2008	12.49	NP	-	22.24	NA
	1/5/2009	**10.21**	**NP**	**-**	**24.52**	**NA**
	3/16/2009	**11.04**	**NP**	**-**	**23.69**	**NA**
MW-26	2/14/2000	10.44	NP	-	24.34	NA
(34.78)	5/22/2000	11.10	NP	-	23.68	NA
	8/23/2000	12.55	NP	-	22.23	NA
	11/28/2000	12.63	NP	-	22.15	NA
	2/21/2001	12.33	sheen	-	22.45	NA
	5/15/2001	12.24	NP	-	22.54	NA
	9/19/2001	13.47	sheen	-	21.31	NA
	12/19/2001	11.04	NP	-	23.74	NA
	3/13/2002	10.91	sheen	-	23.87	NA
	6/24/2002	11.88	NP	-	22.90	NA
	9/26/2002	13.07	NP	-	21.71	NA
	12/20/2002	12.55	NP	-	22.23	NA
	3/17/2003	10.93	NP	-	23.85	NA
	6/26/2003	12.00	NP	-	22.78	NA
	9/24/2003	13.13	NP	-	21.65	NA
	12/30/2003	11.53	NP	-	23.25	NA
	3/29/2004	10.46	NP	-	24.32	NA
	6/29/2004	12.43	NP	-	22.35	NA
	9/27/2004	13.03	NP	-	21.75	NA
	12/14/2004	12.30	NP	-	22.48	NA
	3/7/2005	12.51	NP	-	22.27	NA
	6/20/2005	11.78	NP	-	23.00	NA
	9/19/2005	13.09	NP	-	21.69	NA
	12/12/2005	11.95	NP	-	22.83	NA
	3/13/2006	10.61	NP	-	24.17	NA
	6/27/2006	11.65	NP	-	23.13	NA
	9/25/2006	13.06	NP	-	21.72	NA
	12/11/2006	11.46	NP	-	23.32	NA
	3/19/2007	10.65	NP	-	24.13	NA
	6/18/2007	11.86	NP	-	22.92	NA
	9/17/2007	13.11	NP	-	21.67	NA
	12/17/2007	11.58	NP	-	23.20	NA
	1/22/2008	10.63	NP	-	24.15	NA
	3/24/2008	10.72	NP	-	24.06	NA
	6/23/2008	11.43	NP	-	23.35	NA
	9/22/2008	12.89	NP	-	21.89	NA
	1/5/2009	**10.88**	**NP**	**-**	**23.90**	**NA**
	3/16/2009	**11.52**	**NP**	**-**	**23.26**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-27	2/14/2000	3.67	NP	-	32.02	NA
(35.69)	5/22/2000	4.91	NP	-	30.78	NA
	8/23/2000	6.15	NP	-	29.54	NA
	11/28/2000	5.49	NP	-	30.20	NA
	2/21/2001	5.64	NP	-	30.05	NA
	5/15/2001	5.31	NP	-	30.38	NA
	9/19/2001	6.68	NP	-	29.01	NA
	12/19/2001	4.40	NP	-	31.29	NA
	3/13/2002	3.97	NP	-	31.72	NA
	6/24/2002	5.75	NP	-	29.94	NA
	9/26/2002	6.50	NP	-	29.19	NA
	12/20/2002	5.19	NP	-	30.50	NA
	3/17/2003	4.46	NP	-	31.23	NA
	6/26/2003	5.83	NP	-	29.86	NA
	9/24/2003	6.60	NP	-	29.09	NA
	12/30/2003	4.60	NP	-	31.09	NA
	3/29/2004	4.83	NP	-	30.86	NA
	6/29/2004	5.94	NP	-	29.75	NA
	9/27/2004	6.07	NP	-	29.62	NA
	12/14/2004	5.20	NP	-	30.49	NA
	3/7/2005	5.78	NP	-	29.91	NA
	6/20/2005	5.35	NP	-	30.34	NA
	9/19/2005	6.32	NP	-	29.37	NA
	12/12/2005	5.36	NP	-	30.33	NA
	3/13/2006	4.32	NP	-	31.37	NA
	6/27/2006	5.21	NP	-	30.48	NA
	9/25/2006	6.45	NP	-	29.24	NA
	12/11/2006	4.67	NP	-	31.02	NA
	3/19/2007	4.70	NP	-	30.99	NA
	6/18/2007	5.39	NP	-	30.30	NA
	9/17/2007	6.41	NP	-	29.28	NA
	12/17/2007	5.15	NP	-	30.54	NA
	3/24/2008	4.27	NP	-	31.42	NA
	6/23/2008	5.12	NP	-	30.57	NA
	9/22/2008	6.15	NP	-	29.54	NA
	1/5/2009	**4.21**	**NP**	**-**	**31.48**	**NA**
	3/16/2009	**4.73**	**NP**	**-**	**30.96**	**NA**
MW-28	2/14/2000	4.03	NP	-	30.36	NA
(34.39)	5/22/2000	5.44	NP	-	28.95	1.0
	8/23/2000	9.55	NP	-	24.84	NA
	11/28/2000	11.34	sheen	-	23.05	0.4
	2/21/2001	8.52	8.51	0.01	25.88	0.1
	5/15/2001	8.54	sheen	-	25.85	NA
	9/19/2001	13.75	13.48	0.27	20.86	0.6
	12/19/2001	4.47	NP	-	29.92	0.4
	3/13/2002	4.49	sheen	-	29.90	NA
	6/24/2002	7.34	NP	-	27.05	NA
	9/26/2002	9.39	NP	-	25.00	NA
	12/23/2002	7.12	7.11	0.01	27.28	NA
	3/17/2003	4.68	4.66	0.02	29.73	0.05
	6/26/2003	7.15	sheen	-	27.24	0.03
	9/24/2003	13.25	13.21	0.04	21.17	0.2
	12/30/2003	5.87	NP	-	29.90	NA
	3/29/2004	5.97	sheen	-	29.80	NA
	6/29/2004	9.68	sheen	-	26.09	NA
	9/27/2004	13.35	13.33	0.02	21.06	NA
	12/14/2004	7.51	sheen	-	26.88	0.4
	3/7/2005	10.65	sheen	-	23.74	0.2
	6/20/2005	7.85	sheen	-	26.54	0.2
	9/19/2005	12.65	sheen	-	21.74	0.3
	12/12/2005	6.87	6.86	0.01	27.53	0.2
	3/13/2006	4.91	NP	-	29.48	0
	6/27/2006	6.95	NP	-	27.44	0
	9/25/2006	13.05	sheen	-	21.34	0.1
	12/11/2006	5.53	NP	-	28.86	0.3
	3/19/2007	5.40	NP	-	28.99	0
	6/18/2007	7.15	sheen	-	27.24	0.1
	9/17/2007	13.14	NP	-	21.25	0.02
	12/17/2007	5.76	5.75	0.01	28.64	0
	1/22/2008	5.00	4.98	0.02	29.41	0.01
	3/24/2008	4.80	NP	-	29.59	0.01
	6/23/2008	6.96	sheen	-	27.43	0.01
	9/22/2008	12.40	12.36	0.04	22.02	0.02
	1/5/2009	**4.56**	**4.55**	**0.01**	**29.84**	**0.03**
	3/16/2009	**6.38**	**sheen**	**-**	**28.01**	**0.03**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-29	2/14/2000	12.98	NP	-	22.79	NA
(35.77)	5/22/2000	13.49	NP	-	22.28	NA
	8/23/2000	14.53	NP	-	21.24	NA
	11/28/2000	14.84	NP	-	20.93	NA
	2/21/2001	14.54	NP	-	21.23	NA
	5/15/2001	14.52	NP	-	21.25	NA
	9/19/2001	15.57	NP	-	20.20	NA
	12/19/2001	13.59	NP	-	22.18	NA
	3/13/2002	13.21	NP	-	22.56	NA
	6/24/2002	13.94	NP	-	21.83	NA
	9/26/2002	15.11	NP	-	20.66	NA
	12/20/2002	14.79	NP	-	20.98	NA
	3/17/2003	13.26	NP	-	22.51	NA
	6/26/2003	13.93	NP	-	21.84	NA
	9/24/2003	15.29	NP	-	20.48	NA
	12/30/2003	13.99	NP	-	21.78	NA
	3/29/2004	13.47	NP	-	22.30	NA
	6/29/2004	14.48	NP	-	21.29	NA
	9/27/2004	15.18	NP	-	20.59	NA
	12/14/2004	14.56	NP	-	21.21	NA
	3/7/2005	14.57	NP	-	21.20	NA
	6/20/2005	13.96	NP	-	21.81	NA
	9/19/2005	15.15	NP	-	20.62	NA
	12/12/2005	14.10	NP	-	21.67	NA
	3/13/2006	12.97	NP	-	22.80	NA
	6/27/2006	13.70	NP	-	22.07	NA
	9/25/2006	15.10	NP	-	20.67	NA
	12/11/2006	13.65	NP	-	22.12	NA
	3/19/2007	13.07	NP	-	22.70	NA
	6/18/2007	13.93	NP	-	21.84	NA
	9/17/2007	15.22	NP	-	20.55	NA
	12/17/2007	13.86	NP	-	21.91	NA
	1/22/2008	12.93	NP	-	22.84	NA
	3/24/2008	13.08	NP	-	22.69	NA
	6/23/2008	13.60	NP	-	22.17	NA
	9/22/2008	15.02	NP	-	20.75	NA
	1/5/2009	**13.44**	**NP**	**-**	**22.33**	**NA**
	3/16/2009	**13.71**	**NP**	**-**	**22.06**	**NA**
MW-30	2/14/2000	3.97	NP	-	32.42	NA
(36.39)	5/22/2000	5.37	NP	-	31.02	NA
	8/23/2000	7.06	NP	-	29.33	NA
	11/28/2000	7.34	NP	-	29.05	NA
	2/21/2001	6.74	NP	-	29.65	NA
	5/15/2001	6.50	NP	-	29.89	NA
	9/19/2001	8.28	NP	-	28.11	NA
	12/19/2001	4.35	NP	-	32.04	NA
	3/13/2002	4.31	NP	-	32.08	NA
	6/24/2002	6.28	NP	-	30.11	NA
	9/26/2002	7.64	NP	-	28.75	NA
	12/20/2002	7.11	NP	-	29.28	NA
	3/17/2003	4.72	NP	-	31.67	NA
	6/26/2003	6.14	NP	-	30.25	NA
	9/24/2003	7.85	NP	-	28.54	NA
	12/30/2003	4.87	NP	-	31.52	NA
	3/29/2004	5.21	NP	-	31.18	NA
	6/29/2004	6.71	NP	-	29.68	NA
	9/27/2004	7.71	NP	-	28.68	NA
	12/14/2004	6.60	NP	-	29.79	NA
	3/7/2005	6.81	NP	-	29.58	NA
	6/20/2005	5.85	NP	-	30.54	NA
	9/19/2005	7.39	NP	-	29.00	NA
	12/12/2005	5.66	NP	-	30.73	NA
	3/13/2006	4.55	NP	-	31.84	NA
	6/27/2006	5.81	NP	-	30.58	NA
	9/25/2006	7.51	NP	-	28.88	NA
	12/11/2006	4.92	NP	-	31.47	NA
	3/19/2007	4.80	NP	-	31.59	NA
	6/18/2007	6.05	NP	-	30.34	NA
	9/17/2007	7.65	NP	-	28.74	NA
	12/17/2007	5.23	NP	-	31.16	NA
	3/24/2008	4.44	NP	-	31.95	NA
	6/23/2008	5.79	NP	-	30.60	NA
	9/22/2008	7.33	NP	-	29.06	NA
	1/5/2009	**4.05**	**NP**	**-**	**32.34**	**NA**
	3/16/2009	**5.00**	**NP**	**-**	**31.39**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-31	2/14/2000	5.19	NP	-	30.47	NA
(35.66)	5/22/2000	6.66	NP	-	29.00	NA
	8/23/2000	8.41	NP	-	27.25	NA
	11/28/2000	8.86	NP	-	26.80	NA
	2/21/2001	8.07	NP	-	27.59	NA
	5/15/2001	7.90	NP	-	27.76	NA
	9/19/2001	9.69	NP	-	25.97	NA
	12/19/2001	5.43	NP	-	30.23	NA
	3/13/2002	5.31	NP	-	30.35	NA
	6/24/2002	7.67	NP	-	27.99	NA
	9/26/2002	9.09	9.06	0.03	26.59	NA
	12/20/2002	8.89	NP	-	26.77	NA
	3/17/2003	6.12	sheen	-	29.54	0.01
	6/26/2003	7.58	NP	-	28.08	NA
	9/24/2003	9.54	9.45	0.09	26.19	0.2
	12/30/2003	6.20	NP	-	29.46	NA
	3/29/2004	6.49	NP	-	29.17	NA
	6/29/2004	8.31	sheen	-	27.35	NA
	9/27/2004	9.38	sheen	-	26.28	NA
	12/14/2004	8.55	NP	-	27.11	NA
	3/7/2005	8.43	NP	-	27.23	NA
	6/20/2005	7.43	sheen	-	28.23	0.1
	9/19/2005	9.02	NP	-	26.64	0.1
	12/12/2005	6.99	NP	-	28.67	NA
	3/13/2006	5.61	NP	-	30.05	NA
	6/27/2006	7.19	sheen	-	28.47	NA
	9/25/2006	9.34	9.26	0.08	26.38	0.21
	12/11/2006	5.85	sheen	-	29.81	0.1
	3/19/2007	5.00	sheen	-	30.66	0.3
	6/18/2007	7.58	sheen	-	28.08	0.3
	9/17/2007	9.53	9.35	0.18	26.27	0.3
	12/17/2007	6.50	NP	-	29.16	0.05
	1/22/2008	5.77	sheen	0.00	29.89	0.01
	3/24/2008	5.71	NP	-	29.95	0.03
	6/23/2008	7.31	NP	-	28.35	0
	9/22/2008	9.06	9.05	0.01	26.61	0
	1/5/2009	**5.34**	**sheen**	**0.00**	**30.32**	**0.04**
	3/16/2009	**6.01**	**NP**	**-**	**29.65**	**0**
MW-32	2/14/2000	3.57	NP	-	33.44	NA
(37.01)	5/22/2000	4.83	NP	-	32.18	NA
	8/23/2000	6.41	NP	-	30.60	NA
	11/28/2000	6.69	NP	-	30.32	NA
	2/21/2001	6.11	NP	-	30.90	NA
	5/15/2001	5.99	NP	-	31.02	NA
	9/19/2001	7.64	NP	-	29.37	NA
	12/19/2001	4.30	NP	-	32.71	NA
	3/13/2002	3.71	NP	-	33.30	NA
	6/24/2002	5.72	NP	-	31.29	NA
	9/26/2002	7.18	NP	-	29.83	NA
	12/20/2002	6.72	NP	-	30.29	NA
	3/17/2003	4.15	sheen	-	32.86	0.01
	6/26/2003	5.53	NP	-	31.48	NA
	9/24/2003	7.28	NP	-	29.73	NA
	12/30/2003	4.58	NP	-	32.43	NA
	3/29/2004	4.65	NP	-	32.36	NA
	6/29/2004	6.25	NP	-	30.76	NA
	9/27/2004	7.16	NP	-	29.85	NA
	12/14/2004	6.28	NP	-	30.73	NA
	3/7/2005	6.32	NP	-	30.69	NA
	6/20/2005	5.42	NP	-	31.59	NA
	9/19/2005	6.91	NP	-	30.10	NA
	12/12/2005	5.21	NP	-	31.80	NA
	3/13/2006	3.99	NP	-	33.02	NA
	6/27/2006	5.32	NP	-	31.69	NA
	9/25/2006	7.05	NP	-	29.96	NA
	12/11/2006	4.41	NP	-	32.60	NA
	3/19/2007	4.00	NP	-	33.01	NA
	6/18/2007	5.68	NP	-	31.33	NA
	9/17/2007	7.26	NP	-	29.75	NA
	12/17/2007	5.00	NP	-	32.01	NA
	3/24/2008	4.08	NP	-	32.93	NA
	6/23/2008	5.51	NP	-	31.50	NA
	9/22/2008	7.05	NP	-	29.96	NA
	1/5/2009	**4.14**	**NP**	**-**	**32.87**	**NA**
	3/16/2009	**4.90**	**NP**	**-**	**32.11**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-33	2/14/2000	19.59	NP	-	19.75	NA
(39.34)	5/22/2000	20.15	NP	-	19.19	NA
	8/23/2000	20.88	NP	-	18.46	NA
	11/28/2000	20.98	NP	-	18.36	NA
	2/21/2001	20.78	NP	-	18.56	NA
	5/15/2001	20.83	NP	-	18.51	NA
	9/19/2001	21.43	NP	-	17.91	NA
	12/19/2001	12.62	NP	-	26.72	NA
	3/13/2002	19.61	NP	-	19.73	NA
	6/24/2002	20.42	NP	-	18.92	NA
	9/26/2002	21.13	NP	-	18.21	NA
	12/20/2002	20.66	NP	-	18.68	NA
	3/17/2003	19.73	NP	-	19.61	NA
	6/26/2003	20.31	NP	-	19.03	NA
	9/24/2003	21.04	NP	-	18.30	NA
	12/30/2003	19.82	NP	-	19.52	NA
	3/29/2004	19.89	NP	-	19.45	NA
	6/29/2004	20.65	NP	-	18.69	NA
	9/27/2004	21.16	NP	-	18.18	NA
	12/14/2004	20.60	NP	-	18.74	NA
	3/7/2005	20.57	NP	-	18.77	NA
	6/20/2005	20.32	NP	-	19.02	NA
	9/19/2005	21.05	NP	-	18.29	NA
	12/12/2005	20.20	NP	-	19.14	NA
	3/13/2006	19.54	NP	-	19.80	NA
	6/27/2006	20.11	NP	-	19.23	NA
	9/25/2006	20.96	NP	-	18.38	NA
	12/11/2006	19.84	NP	-	19.50	NA
	3/19/2007	19.58	NP	-	19.76	NA
(39.33)	6/18/2007	20.27	NP	-	19.06	NA
	9/17/2007	20.98	NP	-	18.35	NA
	12/17/2007	19.92	NP	-	19.41	NA
	1/22/2008	19.35	0.00	-	19.98	NA
	3/24/2008	19.66	NP	-	19.67	NA
	6/23/2008	20.02	NP	-	19.31	NA
	9/22/2008	20.83	NP	-	18.50	NA
	1/5/2009	**19.19**	**NP**	**-**	**20.14**	**NA**
	3/16/2009	**20.00**	**NP**	**-**	**19.33**	**NA**
MW-34	2/14/2000	19.31	NP	-	20.36	NA
(39.67)	5/22/2000	19.75	NP	-	19.92	NA
	8/23/2000	20.88	NP	-	18.79	NA
	11/28/2000	20.39	NP	-	19.28	NA
	2/21/2001	20.19	NP	-	19.48	NA
	5/15/2001	20.18	NP	-	19.49	NA
	9/19/2001	20.60	NP	-	19.07	NA
	12/19/2001	19.20	NP	-	20.47	NA
	3/13/2002	19.37	NP	-	20.30	NA
	6/24/2002	19.95	NP	-	19.72	NA
	9/26/2002	20.41	NP	-	19.26	NA
	3/17/2003	19.39	NP	-	20.28	NA
	6/26/2003	19.85	NP	-	19.82	NA
	9/24/2003	20.39	NP	-	19.28	NA
	12/30/2003	19.57	NP	-	20.10	NA
	3/29/2004	19.54	NP	-	20.13	NA
	6/29/2004	20.11	NP	-	19.56	NA
	9/27/2004	20.46	NP	-	19.21	NA
	12/14/2004	20.15	NP	-	19.52	NA
	3/7/2005	20.00	NP	-	19.67	NA
	6/20/2005	19.84	NP	-	19.83	NA
	9/19/2005	20.37	NP	-	19.30	NA
	12/12/2005	19.71	NP	-	19.96	NA
	3/13/2006	19.30	NP	-	20.37	NA
	6/27/2006	19.80	NP	-	19.87	NA
	9/25/2006	20.33	NP	-	19.34	NA
	12/11/2006	19.50	NP	-	20.17	NA
	3/19/2007	19.27	NP	-	20.40	NA
(39.64)	6/18/2007	19.87	NP	-	19.77	NA
	9/17/2007	20.32	NP	-	19.32	NA
	12/17/2007	19.51	NP	-	20.13	NA
	1/22/2008	19.02	0.00	-	20.62	NA
	3/24/2008	19.35	NP	-	20.29	NA
	6/23/2008	19.68	NP	-	19.96	NA
	9/22/2008	20.20	NP	-	19.44	NA
	1/5/2009	**18.73**	**NP**	**-**	**20.91**	**NA**
	3/16/2009	**19.68**	**NP**	**-**	**19.96**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-35	2/14/2000	2.34	NP	-	31.05	NA
(33.39)	5/22/2000	3.21	NP	-	30.18	NA
	8/23/2000	4.98	NP	-	28.41	NA
	11/28/2000	5.54	NP	-	27.85	NA
	2/21/2001	4.67	NP	-	28.72	NA
	5/15/2001	4.35	NP	-	29.04	NA
	9/18/2001	6.33	NP	-	27.06	NA
	12/19/2001	5.84	NP	-	27.55	NA
	3/13/2002	2.61	NP	-	30.78	NA
	6/24/2002	--Unable to Locate--				
	9/26/2002	5.85	NP	-	27.54	NA
	12/20/2002	5.91	sheen	-	27.48	NA
	3/17/2003	3.44	NP	-	29.95	NA
	6/26/2003	3.83	NP	-	29.56	NA
	9/24/2003	5.85	NP	-	27.54	NA
	12/30/2003	3.58	NP	-	29.81	NA
	3/29/2004	2.97	NP	-	30.42	NA
	6/29/2004	2.50	NP	-	30.89	NA
	9/27/2004	5.55	NP	-	27.84	NA
	12/14/2004	4.91	NP	-	28.48	NA
	3/7/2005	4.85	NP	-	28.54	NA
	6/20/2005	4.13	NP	-	29.26	NA
	9/19/2005	5.51	NP	-	27.88	NA
	12/12/2005	4.02	NP	-	29.37	NA
	3/13/2006	2.69	NP	-	30.70	NA
	6/27/2006	3.64	NP	-	29.75	NA
	9/25/2006	5.50	NP	-	27.89	NA
	12/11/2006	3.35	NP	-	30.04	NA
	3/19/2007	2.81	NP	-	30.58	NA
	4/20/2007	3.06	NP	-	30.33	NA
	6/18/2007	3.98	NP	-	29.41	NA
	9/17/2007	6.60	sheen	-	26.79	0
	12/17/2007	3.51	NP	-	29.88	0
	1/22/2008	3.73	0.00	-	29.66	0
	3/24/2008	2.68	NP	-	30.71	0
	6/23/2008	3.91	NP	-	29.48	0
	9/22/2008	5.53	NP	-	27.86	0
	1/5/2009	**2.02**	**NP**	**-**	**31.37**	**0**
	3/16/2009	**4.85**	**NP**	**-**	**28.54**	**0**
MW-36	2/14/2000	14.04	NP	-	20.84	NA
(34.88)	5/22/2000	14.62	NP	-	20.26	NA
	8/23/2000	15.39	NP	-	19.49	NA
	11/28/2000	15.72	NP	-	19.16	NA
	2/21/2001	15.49	NP	-	19.39	NA
	5/15/2001	15.51	NP	-	19.37	NA
	9/19/2001	16.08	NP	-	18.80	NA
	12/20/2001	14.98	NP	-	19.90	NA
	3/13/2002	14.18	NP	-	20.70	NA
	6/24/2002	--Unable to Access--				
	9/26/2002	17.92	NP	-	16.96	NA
	12/20/2002	15.59	NP	-	19.29	NA
	3/17/2003	14.25	NP	-	20.63	NA
	6/26/2003	--Unable to Access--				
	9/24/2003	15.74	NP	-	19.14	NA
	12/30/2003	14.97	NP	-	19.91	NA
	3/29/2004	14.37	NP	-	20.51	NA
	6/29/2004	15.33	NP	-	19.55	NA
	9/27/2004	15.87	NP	-	19.01	NA
	12/14/2004	15.54	NP	-	19.34	NA
	3/7/2005	--Unable to Access--				
	6/20/2005	14.98	NP	-	19.90	NA
	9/19/2005	15.75	NP	-	19.13	NA
	12/12/2005	15.01	NP	-	19.87	NA
	3/13/2006	13.82	NP	-	21.06	NA
	6/27/2006	14.78	NP	-	20.10	NA
	9/25/2006	15.61	NP	-	19.27	NA
	12/11/2006	14.45	NP	-	20.43	NA
	3/19/2007	13.98	NP	-	20.90	NA
(35.00)	6/18/2007	14.88	NP	-	20.12	NA
	9/17/2007	15.70	NP	-	19.30	NA
	12/17/2007	14.70	NP	-	20.30	NA
	1/22/2008	13.77	0.00	-	21.23	NA
	3/24/2008	14.07	NP	-	20.93	NA
	6/23/2008	14.67	NP	-	20.33	NA
	9/22/2008	15.50	NP	-	19.50	NA
	1/5/2009	**14.13**	**NP**	**-**	**20.87**	**NA**
	3/16/2009	**14.68**	**NP**	**-**	**20.32**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-37	2/14/2000	14.71	NP	-	20.15	NA
(34.86)	5/22/2000	15.27	NP	-	19.59	NA
	8/23/2000	16.06	NP	-	18.80	NA
	11/28/2000	16.32	NP	-	18.54	NA
	2/21/2001	16.10	NP	-	18.76	NA
	5/15/2001	16.11	NP	-	18.75	NA
	9/19/2001	16.69	NP	-	18.17	NA
	12/19/2001	15.10	NP	-	19.76	NA
	3/13/2002	14.64	14.62	0.02	20.24	0.1
	6/24/2002	15.66	NP	-	19.20	NA
	9/26/2002	16.39	NP	-	18.47	NA
	12/20/2002	16.11	sheen	-	18.75	NA
	3/17/2003	14.92	NP	-	19.94	NA
	6/26/2003	--Unable to Acess--				
	9/24/2003	16.40	16.37	0.03	18.48	0.1
	12/30/2003	15.35	NP	NP	19.51	NA
	3/29/2004	14.93	14.94	0.01	19.94	0.1
	6/29/2004	15.96	sheen	-	18.90	NA
	9/27/2004	16.52	16.51	0.01	18.35	0.1
	12/14/2004	16.10	NP	-	18.76	NA
	3/7/2005	16.07	NP	-	18.79	0.1
	6/20/2005	15.60	NP	-	19.26	NA
	9/19/2005	16.34	NP	-	18.52	NA
	12/12/2005	15.59	NP	-	19.27	NA
	3/13/2006	14.21	NP	-	20.65	NA
	6/27/2006	15.29	NP	-	19.57	NA
	9/25/2006	16.19	NP	-	18.67	NA
	12/11/2006	15.04	NP	-	19.82	NA
	3/19/2007	14.44	NP	-	20.42	NA
(34.97)	6/18/2007	15.54	NP	-	19.43	NA
	9/17/2007	16.34	NP	-	18.63	NA
	12/17/2007	15.22	NP	-	19.75	NA
	1/22/2008	14.26	0.00	-	20.71	NA
	3/24/2008	14.51	NP	-	20.46	NA
	6/23/2008	15.25	NP	-	19.72	NA
	9/22/2008	16.09	NP	-	18.88	NA
	1/5/2009	**14.69**	**NP**	**-**	**20.28**	**NA**
	3/16/2009	**15.21**	**NP**	**-**	**19.76**	**NA**
MW-38	2/14/2000	4.72	NP	-	32.78	NA
(37.50)	5/22/2000	6.17	NP	-	31.33	NA
	8/23/2000	8.02	NP	-	29.48	NA
	11/28/2000	8.41	NP	-	29.09	NA
	2/21/2001	7.62	NP	-	29.88	NA
	5/15/2001	7.65	sheen	-	29.85	NA
	9/18/2001	9.52	NP	-	27.98	NA
	12/19/2001	6.05	NP	-	31.45	NA
	3/13/2002	4.97	NP	-	32.53	NA
	6/24/2002	7.10	NP	-	30.40	NA
	9/26/2002	9.09	NP	-	28.41	NA
	12/23/2002	7.82	NP	-	29.68	NA
	3/17/2003	4.89	NP	-	32.61	NA
	6/26/2003	6.55	NP	-	30.95	NA
	9/24/2003	9.04	NP	-	28.46	NA
	12/30/2003	6.57	NP	-	30.93	NA
	3/29/2004	5.42	NP	-	32.08	NA
	6/29/2004	7.34	NP	-	30.16	NA
	9/27/2004	8.57	NP	-	28.93	NA
	12/14/2004	7.84	NP	-	29.66	NA
	3/7/2005	7.85	NP	-	29.65	NA
	6/20/2005	6.69	NP	-	30.81	NA
	9/19/2005	8.73	NP	-	28.77	NA
	12/12/2005	6.95	NP	-	30.55	NA
	3/13/2006	4.92	NP	-	32.58	NA
	6/27/2006	6.49	NP	-	31.01	NA
	9/25/2006	8.64	NP	-	28.86	NA
	12/11/2006	5.70	NP	-	31.80	NA
	3/19/2007	4.66	NP	-	32.84	NA
	6/18/2007	6.87	NP	-	30.63	NA
	9/17/2007	9.52	NP	-	27.98	NA
	12/17/2007	6.70	NP	-	30.80	NA
	3/24/2008	5.09	NP	-	32.41	NA
	6/23/2008	6.63	NP	-	30.87	NA
	9/22/2008	8.68	NP	-	28.82	NA
	1/5/2009	**6.30**	**NP**	**-**	**31.20**	**NA**
	3/16/2009	**6.49**	**NP**	**-**	**31.01**	**NA**

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-39	2/14/2000	NM	NP	-	NA	NA
(35.02)	5/22/2000	13.56	NP	-	21.46	NA
	8/23/2000	14.15	NP	-	20.87	NA
	11/28/2000	14.52	NP	-	20.50	NA
	2/21/2001	14.30	NP	-	20.72	NA
	5/15/2001	14.24	NP	-	20.78	NA
	9/19/2001	14.82	NP	-	20.20	NA
	12/19/2001	13.52	NP	-	21.50	NA
	3/13/2002	13.26	NP	-	21.76	NA
	6/24/2002	--Unable to Locate--				
	9/26/2002	17.01	NP	-	18.01	NA
	12/20/2002	14.71	NP	-	20.31	NA
	3/17/2003	13.37	NP	-	21.65	NA
	6/26/2003	--Unable to Access--				
	9/24/2003	14.59	NP	-	20.43	NA
	12/30/2003	13.97	NP	-	21.05	NA
	3/29/2004	13.42	NP	-	21.60	NA
	6/29/2004	14.17	NP	-	20.85	NA
	9/27/2004	14.71	NP	-	20.31	NA
	12/14/2004	--Unable to Access--				
	3/7/2005	--Unable to Access--				
	6/20/2005	--Unable to Access--				
	9/19/2005	14.54	NP	-	20.48	NA
	12/12/2005	13.98	NP	-	21.04	NA
	3/13/2006	12.96	NP	-	22.06	NA
	6/27/2006	13.61	NP	-	21.41	NA
	9/25/2006	14.44	NP	-	20.58	NA
	12/11/2006	5.67	NP	-	29.35	NA
	3/19/2007	12.96	NP	-	22.06	NA
(35.18)	6/18/2007	13.73	NP	-	21.45	NA
	9/17/2007	14.41	NP	-	20.77	NA
	12/17/2007	13.61	NP	-	21.57	NA
	1/22/2008	12.81	0.00	-	22.37	NA
	3/24/2008	13.00	NP	-	22.18	NA
	6/23/2008	13.44	NP	-	21.74	NA
	9/22/2008	14.22	NP	-	20.96	NA
	1/5/2009	**13.45**	**NP**	**-**	**21.73**	**NA**
	3/16/2009	**--Unable to Access--**				

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TABLE 1B
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal
Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
MW-40	2/14/2000	13.64	NP	-	20.01	NA
(33.65)	5/22/2000	14.28	NP	-	19.37	NA
	8/23/2000	15.01	NP	-	18.64	NA
	11/28/2000	15.15	NP	-	18.50	NA
	2/21/2001	14.97	NP	-	18.68	NA
	5/15/2001	15.00	NP	-	18.65	NA
	9/19/2001	15.58	NP	-	18.07	NA
	12/19/2001	13.72	NP	-	19.93	NA
	3/13/2002	13.58	NP	-	20.07	NA
	6/24/2002	14.62	NP	-	19.03	NA
	9/26/2002	17.30	NP	-	16.35	NA
	12/20/2002	15.78	NP	-	17.87	NA
	3/17/2003	13.84	NP	-	19.81	NA
	6/26/2003	14.45	NP	-	19.20	NA
	9/24/2003	15.25	NP	-	18.40	NA
	12/30/2003	14.03	NP	-	19.62	NA
	3/29/2004	14.04	NP	-	19.61	NA
	6/29/2004	14.85	NP	-	18.80	NA
	9/27/2004	15.35	NP	-	18.30	NA
	12/14/2004	14.80	NP	-	18.85	NA
	3/7/2005	14.84	NP	-	18.81	NA
	6/20/2005	14.50	NP	-	19.15	NA
	9/19/2005	15.25	NP	-	18.40	NA
	12/12/2005	14.40	NP	-	19.25	NA
	3/13/2006	13.57	NP	-	20.08	NA
	6/27/2006	14.39	NP	-	19.26	NA
	9/25/2006	15.15	NP	-	18.50	NA
	12/11/2006	14.04	NP	-	19.61	NA
	3/19/2007	13.67	NP	-	19.98	NA
(33.75)	6/18/2007	14.52	NP	-	19.23	NA
	9/17/2007	15.19	NP	-	18.56	NA
	12/17/2007	14.11	NP	-	19.64	NA
	1/22/2008	13.45	NP	-	20.30	NA
	3/24/2008	13.73	NP	-	20.02	NA
	6/23/2008	14.21	NP	-	19.54	NA
	9/22/2008	15.06	NP	-	18.69	NA
	1/5/2009	**13.25**	**NP**	**-**	**20.50**	**NA**
	3/16/2009	**14.16**	**NP**	**-**	**19.59**	**NA**
MW-41B	1/22/2008	15.78	NP	-	19.06	NA
(34.84)	3/24/2008	15.84	NP	-	19.00	NA
	6/23/2008	14.97	NP	-	19.87	NA
	9/22/2008	17.90	NP	-	16.94	NA
	1/5/2009	**15.00**	**NP**	**-**	**19.84**	**NA**
	3/16/2009	**16.48**	**NP**	**-**	**18.36**	**NA**
MW-41C	1/22/2008	15.34	NP	-	19.34	NA
(34.68)	3/24/2008	15.40	NP	-	19.28	NA
	6/23/2008	14.24	NP	-	20.44	NA
	9/22/2008	17.50	NP	-	17.18	NA
	1/5/2009	**14.20**	**NP**	**-**	**20.48**	**NA**
	3/16/2009	**15.93**	**NP**	**-**	**18.75**	**NA**
MW-42B	1/22/2008	23.52	NP	-	15.73	NA
(39.25)	3/24/2008	23.60	NP	-	15.65	NA
	6/23/2008	19.68	NP	-	19.57	NA
	9/22/2008	25.70	NP	-	13.55	NA
	1/5/2009	**21.68**	**NP**	**-**	**17.57**	**NA**
	3/16/2009	**24.22**	**NP**	**-**	**15.03**	**NA**
MW-42C	1/22/2008	24.83	NP	-	14.40	NA
(39.23)	3/24/2008	24.71	NP	-	14.52	NA
	6/23/2008	22.13	NP	-	17.10	NA
	9/22/2008	27.16	NP	-	12.07	NA
	1/5/2009	**22.28**	**NP**	**-**	**16.95**	**NA**
	3/16/2009	**25.05**	**NP**	**-**	**14.18**	**NA**

NOTES:
If SPH Thickness equals 0.0 feet, then non-measurable sheen was observed
NP - No measurable product
NA - Not Applicable
NM - Not Measured
* - SPH recovered for latest quarter monitored
** - Unable to determine due to SPH viscosity
GWE = TOC -(DTW - (0.8 x DTP - DTW)) Where 0.8 = The density of the SPH

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-1	2/14/2000	16.82	NP	-	17.86	NA
(34.68)	5/22/2000	17.05	NP	-	17.63	NA
	8/22/2000	17.48	NP	-	17.20	NA
	11/27/2000	17.82	NP	-	16.86	NA
	2/20/2001	17.71	NP	-	16.97	NA
	5/15/2001	17.68	NP	-	17.00	NA
	9/18/2001	18.01	NP	-	16.67	NA
	12/20/2001	17.10	NP	-	17.58	NA
	3/13/2002	16.77	NP	-	17.91	NA
	6/24/2002	17.32	NP	-	17.36	NA
	9/26/2002	17.74	NP	-	16.94	NA
	12/20/2002	17.57	NP	-	17.11	NA
	3/17/2003	16.97	NP	-	17.71	NA
	6/26/2003	17.24	NP	-	17.44	NA
	9/24/2003	17.77	NP	-	16.91	NA
	12/30/2003	17.09	NP	-	17.59	NA
	3/29/2004	16.98	NP	-	17.70	NA
	6/29/2004	17.45	NP	-	17.23	NA
	9/27/2004	17.71	NP	-	16.97	NA
	12/14/2004	17.58	NP	-	17.10	NA
	3/7/2005	17.62	NP	-	17.06	NA
	6/20/2005	17.30	NP	-	17.38	NA
	9/19/2005	17.74	NP	-	16.94	NA
	12/12/2005	17.22	NP	-	17.46	NA
	3/13/2006	16.50	NP	-	18.18	NA
	6/26/2006	17.03	NP	-	17.65	NA
	9/25/2006	17.39	NP	-	17.29	NA
	12/11/2006	16.96	NP	-	17.72	NA
	3/19/2007	16.63	NP	-	18.05	NA
(34.65)	6/18/2007	17.15	NP	-	17.50	NA
	9/17/2007	17.63	NP	-	17.02	NA
	12/17/2007	17.11	NP	-	17.54	NA
	1/22/2008	16.61	NP	-	18.04	NA
	3/24/2008	-	-	-	-	-
	4/16/2008	16.80	NP	-	17.85	NA
	6/23/2008	17.03	NP	-	17.62	NA
	9/22/2008	17.53	NP	-	17.12	NA
	1/5/2009	**16.61**	**NP**	**-**	**18.04**	**NA**
	3/16/2009	**17.05**	**NP**	**-**	**17.60**	**NA**
B-2	2/14/2000	16.68	NP	-	18.67	NA
(35.35)	5/22/2000	17.06	NP	-	18.29	NA
	8/22/2000	17.61	NP	-	17.74	NA
	11/27/2000	17.97	NP	-	17.38	NA
	2/20/2001	17.82	NP	-	17.53	NA
	5/15/2001	17.74	NP	-	17.61	NA
	9/18/2001	18.23	NP	-	17.12	NA
	12/20/2001	17.06	NP	-	18.29	NA
	3/13/2002	16.80	NP	-	18.55	NA
	6/24/2002	17.44	NP	-	17.91	NA
	9/26/2002	17.99	NP	-	17.36	NA
	12/20/2002	18.06	NP	-	17.29	NA
	3/17/2003	17.03	NP	-	18.32	NA
	6/26/2003	17.29	NP	-	18.06	NA
	9/24/2003	18.03	NP	-	17.32	NA
	12/30/2003	17.38	NP	-	17.97	NA
	3/29/2004	16.89	NP	-	18.46	NA
	6/29/2004	17.62	NP	-	17.73	NA
	9/27/2004	18.09	NP	-	17.26	NA
	12/14/2004	17.94	NP	-	17.41	NA
	3/7/2005	17.78	NP	-	17.57	NA
	6/20/2005	17.41	NP	-	17.94	NA
	9/19/2005	17.98	NP	-	17.37	NA
	12/12/2005	17.37	NP	-	17.98	NA
	3/13/2006	16.50	NP	-	18.85	NA
	6/26/2006	17.14	NP	-	18.21	NA
	9/25/2006	17.63	NP	-	17.72	NA
	12/11/2006	16.90	NP	-	18.45	NA
	3/19/2007	16.47	NP	-	18.88	NA
(35.54)	6/18/2007	17.18	NP	-	18.36	NA
	9/17/2007	17.77	NP	-	17.77	NA
	12/17/2007	17.01	NP	-	18.53	NA
	1/22/2008	16.40	NP	-	19.14	NA
	3/24/2008	-	-	-	-	-
	4/16/2008	16.69	NP	-	18.85	NA
	6/23/2008	17.04	NP	-	18.50	NA
	9/22/2008	17.60	NP	-	17.94	NA
	1/5/2009	**16.58**	**NP**	**-**	**18.96**	**NA**
	3/16/2009	**17.09**	**NP**	**-**	**18.45**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-3	2/14/2000	18.14	NP	-	16.67	NA
(34.81)	5/22/2000	18.36	NP	-	16.45	NA
	8/22/2000	19.05	NP	-	15.76	NA
	11/27/2000	19.31	NP	-	15.50	NA
	2/20/2001	19.22	NP	-	15.59	NA
	5/15/2001	19.26	NP	-	15.55	NA
	9/18/2001	19.63	NP	-	15.18	NA
	12/20/2001	18.03	NP	-	16.78	NA
	3/13/2002	18.12	NP	-	16.69	NA
	6/24/2002	18.84	NP	-	15.97	NA
	9/26/2002	19.21	NP	-	15.60	NA
	12/20/2002	18.79	NP	-	16.02	NA
	3/17/2003	18.14	NP	-	16.67	NA
	6/26/2003	18.87	NP	-	15.94	NA
	9/24/2003	19.20	NP	-	15.61	NA
	12/30/2003	18.22	NP	-	16.59	NA
	3/29/2004	18.30	NP		16.51	NA
	6/29/2004	18.93	NP	-	15.88	NA
	9/27/2004	19.19	NP	-	15.62	NA
	12/14/2004	18.89	NP	-	15.92	NA
	3/7/2005	19.14	NP	-	15.67	NA
	6/20/2005	18.88	NP	-	15.93	NA
	9/19/2005	19.24	NP	-	15.57	NA
	12/12/2005	18.50	NP	-	16.31	NA
	3/13/2006	17.75	NP	-	17.06	NA
	6/26/2006	18.43	NP	-	16.38	NA
	9/25/2006	18.87	NP	-	15.94	NA
	12/11/2006	18.04	NP	-	16.77	NA
	3/19/2007	18.02	NP	-	16.79	NA
(34.80)	6/18/2007	18.76	NP	-	16.04	NA
	9/17/2007	19.18	NP	-	15.62	NA
	12/17/2007	18.36	NP	-	16.44	NA
	1/22/2008	17.97	NP	-	16.83	NA
	3/24/2008	-	-	-	-	-
	4/16/2008	18.34	NP	-	16.46	NA
	6/23/2008	18.45	NP	-	16.35	NA
	9/22/2008	19.70	NP	-	15.10	NA
	1/5/2009	**17.33**	**NP**	**-**	**17.47**	**NA**
	3/16/2009	**18.51**	**NP**	**-**	**16.29**	**NA**
B-4	2/14/2000	18.25	17.59	0.66	16.98	3
(34.70)	5/22/2000	17.80	NP	-	16.90	0.5
	8/22/2000	18.22	18.21	0.01	16.49	NA
	11/27/2000	18.55	NP	-	16.15	NA
	2/20/2001	18.49	18.48	0.01	16.22	NA
	5/15/2001	18.47	18.46	0.01	16.24	0.1
	9/18/2001	18.75	18.74	0.01	15.96	0.1
	12/20/2001	18.05	NP	-	16.65	NA
	3/13/2002	17.69	NP	-	17.01	0.1
	6/24/2002	18.10	NP	-	16.60	NA
	9/26/2002	18.43	NP	-	16.27	NA
	12/20/2002	18.43	NP	-	16.27	NA
	3/17/2003	18.14	17.81	0.33	16.82	0.01
	6/26/2003	18.08	18.05	0.03	16.64	0.04
	9/24/2003	18.45	18.44	0.01	16.26	NA
	12/30/2003	18.05	NP	-	16.65	NA
	3/29/2004	17.90	17.70	0.20	16.96	0.1
	6/29/2004	18.61	sheen	-	16.09	NA
	9/27/2004	18.46	NP	-	16.24	NA
	12/14/2004	18.42	NP	-	16.28	NA
	3/7/2005	18.35	NP	-	16.35	NA
	6/20/2005	18.19	18.11	0.08	16.57	0.1
	9/19/2005	18.45	sheen	-	16.25	0.11
	12/12/2005	18.17	NP	-	16.53	0.2
	3/13/2006	17.43	17.24	0.19	17.42	0.1
	6/26/2006	17.79	NP	-	16.91	NA
	9/25/2006	18.28	NP	-	16.42	NA
	12/11/2006	**	17.87	-	-	0
	3/19/2007	17.51	NP	-	17.19	0.3
(34.69)	6/18/2007	18.00	NP	-	16.69	0.12
	9/17/2007	18.38	sheen	-	16.31	0.03
	12/17/2007	17.98	NP	-	16.71	0.01
	1/22/2008	17.53	NP	-	17.16	0
	3/24/2008	17.61	NP	-	17.08	0
	6/23/2008	17.84	NP	-	16.85	NA
	9/22/2008	19.30	NP	-	15.39	NA
	1/5/2009	**17.58**	**NP**	**-**	**17.11**	**NA**
	3/16/2009	**17.99**	**17.97**	**0.02**	**16.72**	**0**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-5	2/14/2000	16.24	NP	-	18.59	NA
(34.83)	5/22/2000	16.63	NP	-	18.20	NA
	8/22/2000	16.98	sheen	-	17.85	NA
	11/27/2000	17.36	NP	-	17.47	NA
	2/20/2001	17.23	NP	-	17.60	NA
	5/15/2001	17.18	NP	-	17.65	NA
	9/18/2001	17.49	NP	-	17.34	NA
	12/20/2001	16.68	NP	-	18.15	NA
	3/13/2002	16.28	NP	-	18.55	NA
	6/24/2002	16.88	NP	-	17.95	NA
	9/26/2002	17.28	NP	-	17.55	NA
	12/20/2002	17.43	NP	-	17.40	NA
	3/17/2003	16.51	NP	-	18.32	NA
	6/26/2003	16.71	NP	-	18.12	NA
	9/24/2003	17.33	NP	-	17.50	NA
	12/30/2003	16.86	NP	-	17.97	NA
	3/29/2004	16.33	NP	-	18.50	NA
	6/29/2004	16.99	NP	-	17.84	NA
	9/27/2004	17.35	NP	-	17.48	NA
	12/14/2004	17.25	NP	-	17.58	NA
	3/7/2005	17.15	NP	-	17.68	NA
	6/20/2005	16.77	NP	-	18.06	NA
	9/19/2005	17.25	NP	-	17.58	NA
	12/12/2005	16.75	NP	-	18.08	NA
	3/13/2006	15.90	NP	-	18.93	NA
	6/26/2006	16.58	NP	-	18.25	NA
	9/25/2006	17.10	NP	-	17.73	NA
	12/11/2006	16.50	NP	-	18.33	NA
	3/19/2007	15.90	NP	-	18.93	NA
(34.83)	6/18/2007	16.66	NP	-	18.17	NA
	9/17/2007	17.23	NP	-	17.60	NA
	12/17/2007	16.71	16.68	0.03	18.14	0.02
	1/22/2008	15.97	NP	-	18.86	NA
	3/24/2008	-	-	-	-	-
	4/16/2008	16.20	NP	-	18.63	NA
	6/23/2008	16.58	NP	-	18.25	NA
	9/22/2008	17.10	NP	-	17.73	NA
	1/5/2009	**16.85**	**NP**	**-**	**17.98**	**NA**
	3/16/2009	**16.63**	**NP**	**-**	**18.20**	**NA**
B-6	2/14/2000	16.53	NP	-	18.96	NA
(35.49)	5/22/2000	16.95	NP	-	18.54	NA
	8/22/2000	17.40	NP	-	18.09	NA
	11/27/2000	17.80	NP	-	17.69	NA
	2/20/2001	17.64	NP	-	17.85	NA
	5/15/2001	17.56	NP	-	17.93	NA
	9/18/2001	17.95	NP	-	17.54	NA
	12/20/2001	17.02	NP	-	18.47	NA
	3/13/2002	16.57	NP	-	18.92	NA
	6/24/2002	17.22	NP	-	18.27	NA
	9/26/2002	17.71	NP	-	17.78	NA
	12/20/2002	17.80	NP	-	17.69	NA
	3/17/2003	16.81	NP	-	18.68	NA
	6/26/2003	17.04	NP	-	18.45	NA
	9/24/2003	17.73	NP	-	17.76	NA
	12/30/2003	17.21	NP	-	18.28	NA
	3/29/2004	16.61	NP	-	18.88	NA
	6/29/2004	17.35	NP	-	18.14	NA
	9/27/2004	17.80	NP	-	17.69	NA
	12/14/2004	17.66	NP	-	17.83	NA
	3/7/2005	17.50	NP	-	17.99	NA
	6/20/2005	17.12	NP	-	18.37	NA
	9/19/2005	17.66	NP	-	17.83	NA
	12/12/2005	17.12	NP	-	18.37	NA
	3/13/2006	16.14	NP	-	19.35	NA
	6/26/2006	16.90	NP	-	18.59	NA
	9/25/2006	17.50	NP	-	17.99	NA
	12/11/2006	16.82	NP	-	18.67	NA
	3/19/2007	16.23	NP	-	19.26	NA
(35.46)	6/18/2007	17.01	NP	-	18.45	NA
	9/17/2007	17.63	NP	-	17.83	NA
	12/17/2007	16.68	NP	-	18.78	NA
	1/22/2008	16.22	NP	-	19.24	NA
	3/24/2008	-	-	-	-	-
	4/16/2008	16.49	NP	-	18.97	NA
	6/23/2008	16.80	NP	-	18.66	NA
	9/22/2008	17.51	NP	-	17.95	NA
	1/5/2009	**16.72**	**NP**	**-**	**18.74**	**NA**
	3/16/2009	**16.95**	**NP**	**-**	**18.51**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-16	2/14/2000	16.84	NP	-	18.98	NA
(35.82)	5/22/2000	17.27	NP	-	18.55	NA
	8/22/2000	17.76	NP	-	18.06	NA
	11/27/2000	18.16	NP	-	17.66	NA
	2/20/2001	17.98	NP	-	17.84	NA
	5/15/2001	18.04	NP	-	17.78	NA
	9/18/2001	18.44	NP	-	17.38	NA
	12/20/2001	17.43	NP	-	18.39	NA
	3/13/2002	17.02	NP	-	18.80	NA
	6/24/2002	17.67	NP	-	18.15	NA
	9/26/2002	18.18	NP	-	17.64	NA
	12/20/2002	18.31	NP	-	17.51	NA
	3/17/2003	17.24	NP	-	18.58	NA
	6/26/2003	17.46	NP	-	18.36	NA
	9/24/2003	18.21	NP	-	17.61	NA
	12/30/2003	17.67	NP	-	18.15	NA
	3/29/2004	17.06	NP	-	18.76	NA
	6/29/2004	17.80	NP	-	18.02	NA
	9/27/2004	18.28	NP	-	17.54	NA
	12/14/2004	18.14	NP	-	17.68	NA
	3/7/2005	17.95	NP	-	17.87	NA
	6/20/2005	17.58	NP	-	18.24	NA
	9/19/2005	18.16	NP	-	17.66	NA
	12/12/2005	17.58	NP	-	18.24	NA
	3/13/2006	16.59	NP	-	19.23	NA
	6/26/2006	17.33	NP	-	18.49	NA
	9/25/2006	17.94	NP	-	17.88	NA
	12/11/2006	17.18	NP	-	18.64	NA
	3/19/2007	16.65	NP	-	19.17	NA
(35.93)	6/18/2007	17.38	NP	-	18.55	NA
	9/17/2007	18.08	NP	-	17.85	NA
	12/17/2007	17.20	NP	-	18.73	NA
	1/22/2008	16.65	NP	-	19.28	NA
	3/24/2008	-	-	-	-	-
	4/16/2008	16.90	NP	-	19.03	NA
	6/23/2008	17.33	NP	-	18.60	NA
	9/22/2008	17.92	NP	-	18.01	NA
	1/5/2009	**17.14**	**NP**	**-**	**18.79**	**NA**
	3/16/2009	**17.35**	**NP**	**-**	**18.58**	**NA**
B-17	2/14/2000	16.83	NP	-	18.78	NA
(35.61)	5/22/2000	17.20	NP	-	18.41	NA
	8/22/2000	17.76	NP	-	17.85	NA
	11/27/2000	18.05	NP	-	17.56	NA
	2/20/2001	17.88	NP	-	17.73	NA
	5/15/2001	17.84	NP	-	17.77	NA
	9/18/2001	18.21	NP	-	17.40	NA
	12/20/2001	17.31	NP	-	18.30	NA
	3/13/2002	16.91	NP	-	18.70	NA
	6/24/2002	17.50	NP	-	18.11	NA
	9/26/2002	17.97	NP	-	17.64	NA
	12/20/2002	18.07	NP	-	17.54	NA
	3/17/2003	17.13	NP	-	18.48	NA
	6/26/2003	17.33	NP	-	18.28	NA
	9/24/2003	18.00	NP	-	17.61	NA
	12/30/2003	17.48	NP	-	18.13	NA
	3/29/2004	16.39	NP	-	19.22	NA
	6/29/2004	17.62	NP	-	17.99	NA
	9/27/2004	18.03	NP	-	17.58	NA
	12/14/2004	17.95	NP	-	17.66	NA
	3/7/2005	17.81	NP	-	17.80	NA
	6/20/2005	17.40	NP	-	18.21	NA
	9/19/2005	17.93	NP	-	17.68	NA
	12/12/2005	17.42	NP	-	18.19	NA
	3/13/2006	16.50	NP	-	19.11	NA
	6/26/2006	17.17	NP	-	18.44	NA
	9/25/2006	17.74	NP	-	17.87	NA
	12/11/2006	17.08	NP	-	18.53	NA
	3/19/2007	16.56	NP	-	19.05	NA
(35.61)	6/18/2007	17.30	NP	-	18.31	NA
	9/17/2007	17.86	NP	-	17.75	NA
	12/17/2007	17.24	NP	-	18.37	NA
	1/22/2008	16.57	NP	-	19.04	NA
	3/24/2008	-	-	-	-	-
	4/16/2008	16.80	NP	-	18.81	NA
	6/23/2008	17.14	NP	-	18.47	NA
	9/22/2008	17.73	NP	-	17.88	NA
	1/5/2009	**17.00**	**NP**	**-**	**18.61**	**NA**
	3/16/2009	**17.20**	**NP**	**-**	**18.41**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-18	2/14/2000	18.55	NP	-	16.94	NA
(35.49)	5/22/2000	18.66	NP	-	16.83	NA
	8/22/2000	19.11	NP	-	16.38	NA
	11/27/2000	19.43	NP	-	16.06	NA
	2/20/2001	19.44	NP	-	16.05	NA
	5/15/2001	19.43	NP	-	16.06	NA
	9/18/2001	19.68	NP	-	15.81	NA
	12/20/2001	----Unable to Locate----				
	3/13/2002	----Inaccessible - Covered with Sand----				
	6/24/2002	----Inaccessible - Covered with Sand----				
	9/26/2002	---TOC broken, bentonite blocking well---				
(36.00)	12/20/2002	3.88	NP	-	32.12	NA
	3/17/2003	Unable to access				
	6/26/2003	Well blocked ~5 feet bgs				
	9/24/2003	Well blocked ~5 feet bgs				
	12/30/2003	Well blocked ~5 feet bgs				
	3/29/2004	Well blocked ~5 feet bgs				
	6/29/2004	Abandoned				
B-22	2/14/2000	17.91	NP	-	17.92	1
(35.83)	5/22/2000	18.00	NP	-	17.83	NA
	8/22/2000	18.66	18.65	0.01	17.18	NA
	11/27/2000	19.02	sheen	-	16.81	0.1
	2/20/2001	19.02	18.99	0.03	16.83	NA
	5/15/2001	19.01	19.00	0.01	16.83	0.1
	9/18/2001	-------- Well Has Been Buried --------				
	12/20/2001	----Well Damaged During Construction Activities----				
	3/13/2002	----Well Damaged During Construction Activities----				
	6/24/2002	----Well Damaged During Construction Activities----				
	9/26/2002	----Well Damaged During Construction Activities----				
		----- Well Abandoned December 10, 2002 -----				

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-22A	12/20/2002	19.10	NP	-	15.77	NA
(34.87)	3/17/2003	18.33	18.30	0.03	16.54	0.01
	6/26/2003	18.72	18.69	0.03	16.15	0.05
	9/24/2003	19.08	19.05	0.03	15.79	0.10
	12/30/2003	18.52	NP	-	16.35	NA
	3/29/2004	18.25	18.25	sheen	16.62	NA
	6/29/2004	18.78	NP	-	16.09	NA
	9/27/2004	19.07	NP	-	15.80	NA
	12/14/2004	18.95	NP	-	15.92	NA
	3/7/2005	19.08	NP	-	15.79	NA
	6/20/2005	18.75	NP	-	16.12	NA
	9/19/2005	19.07	NP	-	15.80	NA
	12/12/2005	18.55	NP	-	16.32	NA
	3/13/2006	17.66	NP	-	17.21	NA
	6/26/2006	18.12	NP	-	16.75	NA
	9/25/2006	18.43	NP	-	16.44	NA
	12/11/2006	18.49	NP	-	16.38	NA
	3/19/2007	17.97	NP	-	16.90	NA
(34.85)	6/18/2007	18.59	NP	-	16.26	NA
	9/17/2007	19.02	NP	-	15.83	NA
	12/17/2007	18.58	NP	-	16.27	NA
	3/24/2008	18.16	NP	-	16.69	NA
	6/23/2008	18.33	NP	-	16.52	NA
	9/22/2008	18.80	NP	-	16.05	NA
	1/5/2009	**15.76**	**NP**	**-**	**19.09**	**NA**
	3/16/2009	**18.36**	**NP**	**-**	**16.49**	**NA**
B-25	2/14/2000	18.39	NP	-	17.39	NA
(35.78)	5/22/2000	17.67	NP	-	18.11	NA
	8/22/2000	19.09	NP	-	16.69	NA
	11/27/2000	19.51	NP	-	16.27	NA
	2/20/2001	18.79	NP	-	16.99	NA
	5/15/2001	19.54	NP	-	16.24	NA
	9/18/2001	19.86	NP	-	15.92	NA
	12/20/2001	----Could Not Access----				
	3/13/2002	18.52	NP	-	17.26	NA
	6/24/2002	18.89	NP	-	16.89	NA
	9/26/2002	19.33	NP	-	16.45	NA
	12/20/2002	19.43	NP	-	16.35	NA
	3/17/2003	18.65	NP	-	17.13	NA
	6/26/2003	18.82	NP	-	16.96	NA
	9/24/2003	19.24	NP	-	16.54	NA
	12/30/2003	18.95	NP	-	16.83	NA
	3/29/2004	18.42	NP	-	17.36	NA
	6/29/2004	----Could Not Access----				
	9/27/2004	19.25	NP	-	16.53	NA
	12/14/2004	19.21	NP	-	16.57	NA
	3/7/2005	21.57	NP	-	14.21	NA
	6/20/2005	18.89	NP	-	16.89	NA
	9/19/2005	19.26	NP	-	16.52	NA
	12/12/2005	18.89	NP	-	16.89	NA
	3/13/2006	-	-	-	-	-
	6/26/2006	18.27	NP	-	17.51	NA
	9/25/2006	18.75	NP	-	17.03	NA
	12/11/2006	18.68	NP	-	17.10	NA
	3/19/2007	18.00	NP	-	17.78	NA
(35.76)	6/18/2007	18.55	NP	-	17.21	NA
	9/17/2007	19.10	NP	-	16.66	NA
	12/17/2007	18.79	NP	-	16.97	NA
	3/24/2008	----Could Not Access----				
	6/23/2008	18.38	NP	-	17.38	NA
	9/22/2008	18.95	NP	-	16.81	NA
	1/5/2009	**18.17**	**NP**	**-**	**17.59**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-27	2/14/2000	17.61	NP	-	18.13	NA
(35.74)	5/22/2000	17.76	NP	-	17.98	NA
	8/22/2000	18.27	NP	-	17.47	NA
	11/27/2000	18.71	NP	-	17.03	0.1
	2/20/2001	18.66	18.65	0.01	17.09	0.2
	5/15/2001	18.74	18.66	0.08	17.06	0.2
	9/18/2001	18.99	NP	-	16.75	0.3
	12/20/2001	18.66	NP	-	17.08	0.2
	3/13/2002	17.76	NP	-	17.98	0.02
	6/24/2002	18.09	NP	-	17.65	NA
	9/26/2002	18.50	NP	-	17.24	NA
	12/20/2002	18.65	18.68	0.03	17.11	0.1
	3/17/2003	17.91	17.90	0.01	17.84	0.01
	6/26/2003	17.96	NP	-	17.78	NA
	9/24/2003	18.51	NP	-	17.23	NA
	12/30/2003	18.21	NP	-	17.53	NA
	3/29/2004	17.72	17.31	0.41	18.35	0.1
	6/29/2004	18.03	NP	-	17.71	NA
	9/27/2004	18.53	NP	-	17.21	NA
	12/14/2004	18.50	NP	-	17.24	NA
	3/7/2005	18.34	NP	-	17.40	NA
	6/20/2005	18.03	NP	-	17.71	NA
	9/19/2005	18.48	NP	-	17.26	NA
	12/12/2005	18.13	NP	-	17.61	NA
	3/13/2006	17.20	16.70	0.50	18.94	0.2
	6/26/2006	17.44	NP	-	18.30	NA
	9/25/2006	18.22	NP	-	17.52	NA
	12/11/2006	17.84	17.81	0.03	17.92	0
	3/19/2007	17.14	NP	-	18.60	0
	6/18/2007	17.70	NP	-	18.04	0.01
	9/17/2007	18.30	NP	-	17.44	0.02
	12/17/2007	17.96	NP	-	17.78	0.01
	1/22/2008	17.00	NP	-	18.74	0
	3/24/2008	17.15	NP	-	18.59	0
	6/23/2008	17.39	NP	-	18.35	0
	9/22/2008	18.10	NP	-	17.64	0
	1/5/2009	**17.80**	**NP**	**-**	**17.94**	**0**
	3/16/2009	**17.69**	**17.63**	**0.06**	**18.10**	**0**
B-35	2/14/2000	15.71	NP	-	17.85	NA
(33.56)	5/22/2000	16.00	NP	-	17.56	NA
	8/22/2000	16.36	NP	-	17.20	NA
	11/27/2000	16.71	NP	-	16.85	NA
	2/20/2001	16.65	NP	-	16.91	NA
	5/15/2001	15.56	NP	-	18.00	NA
	9/18/2001	16.90	NP	-	16.66	NA
	12/20/2001	15.95	NP	-	17.61	NA
	3/13/2002	15.70	NP	-	17.86	NA
	6/24/2002	16.22	NP	-	17.34	NA
	9/26/2002	16.64	NP	-	16.92	NA
	12/20/2002	16.48	NP	-	17.08	NA
	3/17/2003	15.91	NP	-	17.65	NA
	6/26/2003	16.13	NP	-	17.43	NA
	9/24/2003	16.67	NP	-	16.89	NA
	12/30/2003	16.04	NP	-	17.52	NA
	3/29/2004	15.81	NP	-	17.75	NA
	6/29/2004	16.33	NP	-	17.23	NA
	9/27/2004	16.61	NP	-	16.95	NA
	12/14/2004	16.52	NP	-	17.04	NA
	3/7/2005	16.52	NP	-	17.04	NA
	6/20/2005	16.17	NP	-	17.39	NA
	9/19/2005	16.63	NP	-	16.93	NA
	12/12/2005	16.08	NP	-	17.48	NA
	3/13/2005	15.42	NP	-	18.14	NA
	6/26/2006	15.95	NP	-	17.61	NA
	9/25/2006	16.30	NP	-	17.26	NA
	12/11/2006	15.90	sheen	-	17.66	NA
	3/19/2007	15.52	NP	-	18.04	NA
(33.54)	6/18/2007	16.04	NP	-	17.50	NA
	9/17/2007	16.53	NP	-	17.01	NA
	12/17/2007	15.59	NP	-	17.95	NA
	1/22/2008	15.51	NP	-	18.03	NA
	3/24/2008	15.68	NP	-	17.86	NA
	6/23/2008	15.95	NP	-	17.59	NA
	9/22/2008	16.40	NP	-	17.14	NA
	1/5/2009	**15.40**	**NP**	**-**	**18.14**	**NA**
	3/16/2009	**15.95**	**NP**	**-**	**17.59**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-36	2/14/2000	14.33	NP	-	16.69	NA
(31.02)	5/22/2000	14.64	NP	-	16.38	NA
	8/22/2000	15.28	NP	-	15.74	NA
	11/27/2000	15.55	NP	-	15.47	NA
	2/20/2001	15.48	NP	-	15.54	NA
	5/15/2001	15.47	NP	-	15.55	NA
	9/18/2001	15.83	NP	-	15.19	NA
	12/20/2001	14.17	NP	-	16.85	NA
	3/13/2002	14.31	NP	-	16.71	NA
	6/24/2002	15.06	NP	-	15.96	NA
	9/26/2002	15.43	NP	-	15.59	NA
	12/20/2002	14.98	NP	-	16.04	NA
	3/17/2003	14.35	NP	-	16.67	NA
	6/26/2003	15.09	NP	-	15.93	NA
	9/24/2003	15.44	NP	-	15.58	NA
	12/30/2003	14.41	NP	-	16.61	NA
	3/29/2004	14.53	NP	-	16.49	NA
	6/29/2004	15.19	NP	-	15.83	NA
	9/27/2004	15.41	NP	-	15.61	NA
	12/14/2004	15.10	NP	-	15.92	NA
	3/7/2005	15.39	NP	-	15.63	NA
	6/20/2005	15.08	NP	-	15.94	NA
	9/19/2005	15.45	NP	-	15.57	NA
	12/12/2005	14.68	NP	-	16.34	NA
	3/13/2006	13.97	NP	-	17.05	NA
	6/26/2006	14.64	NP	-	16.38	NA
	9/25/2006	15.12	NP	-	15.90	NA
	12/11/2007	14.46	NP	-	16.56	NA
	3/19/2007	13.98	NP	-	17.04	NA
(31.00)	6/18/2007	15.04	NP	-	15.96	NA
	9/17/2007	15.39	NP	-	15.61	NA
	12/17/2007	15.56	NP	-	15.44	NA
	3/24/2008	14.57	NP	-	16.43	NA
	6/23/2008	14.69	NP	-	16.31	NA
	9/22/2008	15.30	NP	-	15.70	NA
	1/5/2009	**13.48**	**NP**	**-**	**17.52**	**NA**
	3/16/2009	**14.72**	**NP**	**-**	**16.28**	**NA**
B-37	2/14/2000	18.96	NP	-	16.87	NA
(35.83)	5/22/2000	19.05	NP	-	16.78	NA
	8/22/2000	19.77	NP	-	16.06	NA
	11/27/2000	20.18	NP	-	15.65	NA
	2/20/2001	22.05	NP	-	13.78	NA
	5/15/2001	20.16	NP	-	15.67	NA
	9/18/2001	-------- Well Has Been Buried --------				
	12/20/2001	----Could Not Locate----				
	3/13/2002	19.09	NP	-	16.74	NA
	6/24/2002	19.58	NP	-	16.25	NA
	9/26/2002	20.00	NP	-	15.83	NA
	12/20/2002	20.08	NP	-	15.75	NA
	3/17/2003	19.17	NP	-	16.66	NA
	6/26/2003	19.52	NP	-	16.31	NA
	9/24/2003	19.88	NP	-	15.95	NA
	12/31/2003	----Well Covered with Ice----				
	3/29/2004	19.07	NP	-	16.76	NA
	6/29/2004	19.96	NP	-	15.87	NA
	9/27/2004	19.88	NP	-	15.95	NA
	12/14/2004	19.76	NP	-	16.07	NA
	3/7/2005	20.92	NP	-	14.91	NA
	6/20/2005	19.57	NP	-	16.26	NA
	9/19/2005	19.89	NP	-	15.94	NA
	12/12/2005	19.40	NP	-	16.43	NA
	3/13/2006	18.42	NP	-	17.41	NA
	6/26/2006	---Unable to locate well; under sand---				
	9/25/2006	19.08	NP	-	16.75	NA
	12/11/2006	NM	NM	NM	NM	NA
	3/19/2007	18.69	NP	-	17.14	NA
(35.79)	6/18/2007	19.28	NP	-	16.51	NA
	9/17/2007	19.77	NP	-	16.02	NA
	12/17/2007	19.40	NP	-	16.39	NA
	1/22/2008	18.64	NP	-	17.15	NA
	3/24/2008	18.81	NP	-	16.98	NA
	6/23/2008	19.00	NP	-	16.79	NA
	9/22/2008	19.52	NP	-	16.27	NA
	1/5/2009	**18.50**	**NP**	**-**	**17.29**	**NA**
	3/16/2009	**19.02**	**NP**	**-**	**16.77**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-38	9/26/2002	20.91	20.69	0.22	15.74	NA
(36.65)	12/20/2002	20.53	20.75	0.22	16.12	NA
	3/17/2003	19.71	NP	-	16.94	NA
	6/26/2003	20.10	NP	-	16.55	NA
	9/24/2003	Dry at 20.41 feet bgs				
	12/30/2003	19.93	NP	-	16.72	NA
	3/29/2004	dry	NP	-	-	NA
	6/29/2004	Dry at 20.23 feet bgs				
	9/27/2004	dry	NP	-	-	NA
	6/20/2005	20.10	NP	-	16.55	NA
	9/19/2005	20.22	NP	-	16.43	NA
	12/12/2005	19.91	NP	-	16.74	NA
	3/13/2006	18.90	NP	-	17.75	NA
	6/26/2006	dry	NP	-	-	NA
	9/25/2006	19.60	NP	-	17.05	NA
	12/11/2006	19.71	NP	-	16.94	NA
	3/19/2007	19.26	NP	-	17.39	NA
(36.07)	6/18/2007	Dry	NP	-	-	NA
	9/17/2007	Dry	NP	-	-	NA
	12/17/2007	19.85	NP	-	16.22	NA
	3/24/2008	19.49	NP	-	16.58	NA
	6/23/2008	Dry	NP	-	-	NA
	9/22/2008	Dry	NP	-	-	NA
	1/5/2009	**18.93**	**NP**	**-**	**17.14**	**NA**
	3/16/2009	**19.55**	**NP**	**-**	**16.52**	**NA**
B-40	2/14/2000	17.34	NP	-	17.36	1
(34.70)	5/22/2000	18.28	17.48	0.80	17.06	5.5
	8/22/2000	19.65	18.21	1.44	16.20	0.6
	11/27/2000	20.03	18.55	1.48	15.85	1.25
	2/20/2001	19.85	18.54	1.31	15.90	1.3
	5/15/2001	19.88	18.58	1.30	15.86	0.85
	9/18/2001	20.90	19.07	1.83	15.26	1
	12/20/2001	18.35	17.36	0.99	17.14	0.65
	3/13/2002	17.51	17.32	0.19	17.34	0.85
	6/24/2002	18.36	18.24	0.12	16.44	0.30
	9/26/2002	19.22	18.53	0.69	16.03	0.46
	12/20/2002	18.27	18.81	0.54	16.86	0.57
	3/17/2003	18.12	17.45	0.67	17.12	0.30
	6/26/2003	18.47	18.30	0.17	16.37	0.10
	9/24/2003	18.61	18.51	0.10	16.17	0.10
	12/30/2003	17.64	17.58	0.06	17.11	0.10
	3/29/2004	17.70	17.69	0.01	17.01	0.10
	6/29/2004	18.58	sheen	-	16.05	NA
	9/27/2004	18.76	sheen	-	15.87	0.10
	12/14/2004	18.18	18.17	0.01	16.53	0.20
	3/7/2005	18.35	sheen	-	16.35	0.70
	6/20/2005	18.37	18.36	0.01	16.34	0.20
	9/19/2005	18.55	sheen	-	16.15	0.12
	12/12/2005	17.71	16.81	0.90	17.71	0.30
	3/13/2006	17.14	NP	-	17.56	0.00
	6/26/2006	17.76	NP	-	16.94	0.00
	9/25/2006	18.01	NP	-	16.69	0.11
	12/11/2006	18.22	17.95	0.27	16.70	0.20
	3/19/2007	15.57	NP	-	19.13	0.30
(33.68)	6/18/2007	18.40	NP	-	15.28	0.21
	9/17/2007	18.75	sheen	-	14.93	0.11
	12/17/2007	17.98	17.94	0.04	15.73	0.00
	1/22/2008	17.54	NP	-	16.14	0.10
	3/24/2008	17.85	NP	-	15.83	0.10
	6/23/2008	17.93	17.92	0.01	15.76	0.01
	9/22/2008	18.50	sheen	-	15.18	0.02
	1/5/2009	**17.19**	**16.75**	**0.44**	**16.84**	**0.00**
	3/16/2009	**18.36**	**17.79**	**0.57**	**15.78**	**0.20**
B-41	2/14/2000	17.73	NP	-	16.90	NA
(34.63)	5/22/2000	18.89	NP	-	15.74	NA
	8/22/2000	18.44	NP	-	16.19	NA
	11/27/2000	18.81	NP	-	15.82	NA
	2/20/2001	18.78	sheen	-	15.85	NA
	5/15/2001	18.78	NP	-	15.85	NA
	9/18/2001	-------- Well Has Been Buried --------				
	12/20/2001	16.86	NP	-	17.77	NA
	3/13/2002	20.07	20.03	0.04	14.59	NA
	6/24/2002	20.54	20.52	0.02	14.11	NA
	9/26/2002	18.75	18.72	0.03	15.90	NA
	----- Well Abandoned December 9, 2002 -----					

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
B-41A	12/20/2002	19.13	NP	-	16.00	NA
(35.13)	3/17/2003	18.40	NP	-	16.73	NA
	6/26/2003	18.73	NP	-	16.40	NA
	9/24/2003	19.10	NP	-	16.03	NA
	12/30/2003	18.61	NP	-	16.52	NA
	3/29/2004	18.32	NP	-	16.81	NA
	6/29/2004	18.82	NP	-	16.31	NA
	9/27/2004	19.11	NP	-	16.02	NA
	12/14/2004	19.00	NP	-	16.13	NA
	3/7/2005	19.07	NP	-	16.06	NA
	6/20/2005	18.80	NP	-	16.33	NA
	9/19/2005	19.13	NP	-	16.00	NA
	12/12/2005	18.65	NP	-	16.48	NA
	3/13/2006	17.71	NP	-	17.42	NA
	6/26/2006	18.25	NP	-	16.88	NA
	9/25/2006	18.60	NP	-	16.53	NA
	12/11/2006	18.54	NP	-	16.59	NA
	3/19/2007	18.04	NP	-	17.09	NA
(35.08)	6/18/2007	18.62	NP	-	16.46	NA
	9/17/2007	19.06	NP	-	16.02	NA
	12/17/2007	18.65	NP	-	16.43	NA
	1/22/2008	18.14	NP	-	16.94	NA
	3/24/2008	18.20	NP	-	16.88	NA
	6/23/2008	18.39	NP	-	16.69	NA
	9/22/2008	18.80	NP	-	16.28	NA
	1/5/2009	**17.91**	**NP**	**-**	**17.17**	**NA**
	3/16/2009	**18.44**	**NP**	**-**	**16.64**	**NA**
DW-1	2/14/2000	18.87	NP	-	17.06	NA
(35.93)	5/22/2000	18.94	NP	-	16.99	NA
	8/22/2000	19.51	NP	-	16.42	NA
	11/27/2000	19.88	NP	-	16.05	NA
	2/20/2001	19.83	NP	-	16.10	NA
	5/15/2001	19.87	NP	-	16.06	NA
	9/18/2001	20.19	NP	-	15.74	NA
	12/20/2001	19.56	NP	-	16.37	NA
	3/13/2002	18.96	NP	-	16.97	NA
	6/24/2002	19.38	NP	-	16.55	NA
	9/26/2002	19.77	NP	-	16.16	NA
	12/20/2002	19.77	NP	-	16.16	NA
	3/17/2003	18.85	NP	-	17.08	NA
	6/26/2003	19.33	NP	-	16.60	NA
	9/24/2003	19.66	NP	-	16.27	NA
	12/30/2003	19.27	NP	-	16.66	NA
	3/29/2004	18.87	NP	-	17.06	NA
	6/29/2004	19.39	NP	-	16.54	NA
	9/27/2004	19.69	NP	-	16.24	NA
	12/14/2004	19.65	NP	-	16.28	NA
	3/7/2005	19.66	NP	-	16.27	NA
	6/20/2005	19.41	NP	-	16.52	NA
	9/19/2005	19.71	NP	-	16.22	NA
	12/12/2005	19.30	NP	-	16.63	NA
	3/13/2006	18.30	NP	-	17.63	NA
	6/26/2006	18.85	NP	-	17.08	NA
	9/25/2006	19.15	NP	-	16.78	NA
	12/11/2006	19.12	NP	-	16.81	NA
	3/19/2007	18.62	NP	-	17.31	NA
(35.90)	6/18/2007	19.05	NP	-	16.85	NA
	9/17/2007	19.60	NP	-	16.30	NA
	12/17/2007	19.22	NP	-	16.68	NA
	3/24/2008	18.76	NP	-	17.14	NA
	6/23/2008	NM	NM	NM	NM	NM
	9/22/2008	19.46	NP	-	16.44	NA
	1/5/2009	**18.63**	**NP**	**-**	**17.27**	**NA**
	3/16/2009	**19.02**	**NP**	**-**	**16.88**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
DW-2	2/14/2000	18.91	NP	-	17.14	NA
(36.05)	5/22/2000	19.03	NP	-	17.02	NA
	8/22/2000	19.62	NP	-	16.43	NA
	11/27/2000	10.01	NP	-	26.04	NA
	2/20/2001	20.02	NP	-	16.03	NA
	5/15/2001	20.00	NP	-	16.05	NA
	9/18/2001	20.35	NP	-	15.70	NA
	12/20/2001	19.62	NP	-	16.43	NA
	3/13/2002	19.06	NP	-	16.99	NA
	6/24/2002	19.44	NP	-	16.61	NA
	9/26/2002	19.85	NP	-	16.20	NA
	12/20/2002	19.88	NP	-	16.17	NA
	3/17/2003	18.97	NP	-	17.08	NA
	6/26/2003	19.40	NP	-	16.65	NA
	9/24/2003	19.78	NP	-	16.27	NA
	12/30/2003	19.37	NP	-	16.68	NA
	3/29/2004	18.97	NP	-	17.08	NA
	6/29/2004	19.46	NP	-	16.59	NA
	9/27/2004	19.85	NP	-	16.20	NA
	12/14/2004	19.75	NP	-	16.30	NA
	3/7/2005	19.74	NP	-	16.31	NA
	6/20/2005	19.49	NP	-	16.56	NA
	9/19/2005	19.81	NP	-	16.24	NA
	12/12/2005	19.41	NP	-	16.64	NA
	3/13/2006	18.40	NP	-	17.65	NA
	6/26/2006	18.89	NP	-	17.16	NA
	9/25/2006	19.25	NP	-	16.80	NA
	12/11/2006	19.23	19.22	0.01	16.83	NA
	3/19/2007	18.69	NP	-	17.36	NA
(36.04)	6/18/2007	19.15	NP	-	16.89	NA
	9/17/2007	19.69	NP	-	16.35	NA
	12/17/2007	19.33	NP	-	16.71	NA
	3/24/2008	18.84	NP	-	17.20	NA
	6/23/2008	18.99	NP	-	17.05	NA
	9/22/2008	19.56	NP	-	16.48	NA
	1/5/2009	**18.65**	**NP**	**-**	**17.39**	**NA**
	3/16/2009	**19.12**	**NP**	**-**	**16.92**	**NA**
EW-1	6/23/2008	5.21	NP	-	-	NA
	9/22/2008	8.49	NP	-	-	NA
	1/5/2009	**12.00**	**NP**	**-**	**-**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
EW-2	6/23/2008	9.82	NP	-	-	NA
	9/22/2008	5.75	NP	-	-	NA
	1/5/2009	**11.00**	**NP**	**-**	**-**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
EW-3	1/22/2008	10.13	NP	-	4.89	NA
(15.02)	6/23/2008	10.68	NP	-	4.34	NA
	9/22/2008	11.30	NP	-	3.72	NA
	1/5/2009	**10.00**	**NP**	**-**	**5.02**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
EW-4	1/22/2008	12.15	NP	-	5.48	NA
(17.63)	6/23/2008	12.04	NP	-	5.59	NA
	9/22/2008	13.15	NP	-	4.48	NA
	1/5/2009	**12.20**	**NP**	**-**	**5.43**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
EX-39	2/14/2000	17.42	17.09	0.33	15.93	10
(33.09)	5/22/2000	17.35	17.29	0.06	15.79	5
	8/22/2000	17.98	17.95	0.03	15.13	0.1
	11/27/2000	18.38	sheen	-	14.71	0.1
	2/20/2001	18.49	18.36	0.13	14.70	2.55
	5/15/2001	19.29	18.19	1.10	14.68	5.0
	9/18/2001	-------- Well Has Been Buried --------				
	12/20/2001	----Well Damaged During Construction Activities----				
	3/13/2002	----Well Damaged During Construction Activities----				
	6/24/2002	----Well Damaged During Construction Activities----				
	9/26/2002	----Well Damaged During Construction Activities----				
	----- Well Abandoned December 9, 2002 -----					

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
EX-39B	12/20/2002	18.85	18.87	0.02	15.80	0.10
(34.63)	3/17/2003	18.15	18.13	0.02	16.50	0.10
	6/26/2003	18.71	18.71	sheen	15.92	0.05
	9/24/2003	18.98	NP	-	15.65	NA
	12/30/2003	18.30	sheen	sheen	16.33	NA
	3/29/2004	18.12	NP	-	16.51	NA
	6/29/2004	18.37	NP	-	16.26	NA
	9/27/2004	18.83	NP	-	15.80	NA
	12/14/2004	21.18	NP	-	13.45	NA
	3/7/2005	18.97	sheen	-	15.66	0.20
	6/20/2005	16.85	NP	-	17.78	0.10
	9/19/2005	16.65	NP	-	17.98	NA
	12/12/2005	16.67	NP	-	17.96	NA
	3/13/2006	17.20	sheen	-	17.43	0.00
	6/26/2006	18.00	sheen	-	16.63	NA
	9/25/2006	18.68	sheen	-	15.95	NA
	12/11/2006	**	18.33	-	-	NA
	3/19/2007	NM	NM	NM	NM	NA
(34.46)	6/18/2007	NM	NM	NM	NM	NA
	9/17/2007	NM	NM	NM	NM	NA
	12/17/2007	NM	NM	NM	NM	NA
	1/22/2008	19.86	NP	-	14.60	NA
	3/24/2008	NM	NM	NM	NM	NA
	6/23/2008	19.14	NP	-	15.49	NA
	9/22/2008	19.46	NP	-	15.17	NA
	1/5/2009	**19.88**	**NP**	**-**	**14.58**	**NA**
	3/16/2009	**19.70**	**NP**	**-**	**14.76**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
IT-E	2/14/2000	19.01	NP	-	17.06	NA
(36.07)	5/22/2000	19.03	NP	-	17.04	NA
	8/22/2000	19.93	NP	-	16.14	NA
	11/27/2000	20.12	NP	-	15.95	NA
	2/20/2001	20.11	NP	-	15.96	NA
	5/15/2001	20.29	NP	-	15.78	NA
	9/18/2001	20.65	NP	-	15.42	NA
	12/20/2001	----Could Not Access Well----				
	3/13/2002	19.31	NP	-	16.76	NA
	6/24/2002	19.80	NP	-	16.27	NA
	9/26/2002	20.18	NP	-	15.89	NA
	12/20/2002	19.95	NP	-	16.12	NA
	3/17/2003	19.25	NP	-	16.82	NA
	6/26/2003	19.68	NP	-	16.39	NA
	9/24/2003	20.01	NP	-	16.06	NA
	12/30/2003	19.45	NP	-	16.62	NA
	3/29/2004	19.28	NP	-	16.79	NA
	6/29/2004	19.79	NP	-	16.28	NA
	9/27/2004	20.05	NP	-	16.02	NA
	12/14/2004	20.00	NP	-	16.07	NA
	3/7/2005	20.11	NP	-	15.96	NA
	6/20/2005	19.74	NP	-	16.33	NA
	9/19/2005	20.18	NP	-	15.89	NA
	12/12/2005	19.65	NP	-	16.42	NA
	3/13/2006	18.62	NP	-	17.45	NA
	6/26/2006	19.30	NP	-	16.77	NA
	9/25/2006	19.65	NP	-	16.42	NA
	12/11/2006	19.47	NP	-	16.60	NA
	3/19/2007	18.97	NP	-	17.10	NA
(36.07)	6/18/2007	19.64	NP	-	16.43	NA
	9/17/2007	20.06	NP	-	16.01	NA
	12/17/2007	19.56	NP	-	16.51	NA
	3/24/2008	19.23	NP	-	16.84	NA
	6/23/2008	19.39	NP	-	16.68	NA
	9/22/2008	19.85	NP	-	16.22	NA
	1/5/2009	**18.86**	**NP**	**-**	**17.21**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
IT-W	2/14/2000	17.46	NP	-	18.53	NA
(35.99)	5/22/2000	17.75	NP	-	18.24	NA
	8/22/2000	18.17	NP	-	17.82	NA
	11/27/2000	18.51	NP	-	17.48	NA
	2/20/2001	18.43	NP	-	17.56	NA
	5/15/2001	18.33	NP	-	17.66	NA
	9/18/2001	18.68	NP	-	17.31	NA
	12/20/2001	17.76	NP	-	18.23	NA
	3/13/2002	17.50	NP	-	18.49	NA
	6/24/2002	17.98	NP	-	18.01	NA
	9/26/2002	18.40	NP	-	17.59	NA
	12/20/2002	18.28	NP	-	17.71	NA
	3/17/2003	17.70	NP	-	18.29	NA
	6/26/2003	17.94	NP	-	18.05	NA
	9/24/2003	18.42	NP	-	17.57	NA
	12/30/2003	17.81	NP	-	18.18	NA
	3/29/2004	17.61	NP	-	18.38	NA
	6/29/2004	18.10	NP	-	17.89	NA
	9/27/2004	18.45	NP	-	17.54	NA
	12/14/2004	18.37	NP	-	17.62	NA
	3/7/2005	18.31	NP	-	17.68	NA
	6/20/2005	18.02	NP	-	17.97	NA
	9/19/2005	18.46	NP	-	17.53	NA
	12/12/2005	17.94	NP	-	18.05	NA
	3/13/2006	17.22	NP	-	18.77	NA
	6/26/2006	17.78	NP	-	18.21	NA
	9/25/2006	18.18	NP	-	17.81	NA
	12/11/2006	17.68	NP	-	18.31	NA
	3/19/2007	17.35	NP	-	18.64	NA
(35.91)	6/18/2007	17.84	NP	-	18.07	NA
	9/17/2007	18.34	NP	-	17.57	NA
	12/17/2007	17.79	NP	-	18.12	NA
	3/24/2008	17.40	NP	-	18.51	NA
	6/23/2008	17.75	NP	-	18.16	NA
	9/22/2008	18.21	NP	-	17.70	NA
	1/5/2009	**17.38**	**NP**	**-**	**18.53**	**NA**
	3/16/2009	**17.75**	**NP**	**-**	**18.16**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
P-1	2/14/2000	6.26	NP	-	11.98	NA
(18.24)	5/22/2000	6.89	NP	-	11.35	NA
	8/22/2000	10.51	NP	-	7.73	NA
	11/27/2000	8.62	NP	-	9.62	NA
	2/20/2001	9.14	NP	-	9.10	NA
	5/15/2001	9.17	NP	-	9.07	NA
	9/18/2001	9.97	NP	-	8.27	NA
	12/20/2001	6.01	NP	-	12.23	NA
	3/13/2002	7.07	NP	-	11.17	NA
	6/24/2002	5.89	NP	-	12.35	NA
	9/26/2002	9.13	NP	-	9.11	NA
	12/20/2002	7.87	NP	-	10.37	NA
	3/17/2003	8.38	NP	-	9.86	NA
	6/26/2003	Dry at 10 feet bgs				
	9/24/2003	9.62	NP	-	8.62	NA
	12/30/2003	7.21	NP	-	11.03	NA
	3/29/2004	8.17	NP	-	10.07	NA
	6/29/2004	7.89	NP	-	10.35	NA
	9/27/2004	9.19	NP	-	9.05	NA
	12/14/2004	6.79	NP	-	11.45	NA
	3/7/2005	9.16	NP	-	9.08	NA
	6/20/2005	8.80	NP	-	9.44	NA
	9/19/2005	Dry	NP	-	Dry	NA
	12/12/2005	8.38	NP	-	9.86	NA
	3/13/2006	8.56	NP	-	9.68	NA
	6/26/2006	7.60	NP	-	10.64	NA
	9/25/2006	9.03	NP	-	9.21	NA
	12/11/2006	7.40	NP	-	10.84	NA
	3/19/2007	7.54	NP	-	10.70	NA
(18.19)	6/18/2007	8.58	NP	-	9.61	NA
	9/17/2007	9.88	NP	-	8.31	NA
	Well Abandoned					
P-1A	12/17/2007	8.53	NP	-	9.95	NA
(18.48)	1/22/2008	8.12	NP	-	10.36	NA
	3/24/2008	7.81	NP	-	10.67	NA
	6/23/2008	5.74	NP	-	12.74	NA
	9/22/2008	9.60	NP	-	8.88	NA
	1/5/2009	**6.61**	**NP**	**-**	**11.87**	**NA**
	3/16/2009	**6.64**	**NP**	**-**	**11.84**	**NA**
P-2	2/14/2000	4.18	NP	-	13.67	NA
(17.85)	5/22/2000	4.66	NP	-	13.19	NA
	8/22/2000	5.27	NP	-	12.58	NA
	11/27/2000	5.28	NP	-	12.57	NA
	2/20/2001	5.32	NP	-	12.53	NA
	5/15/2001	5.18	NP	-	12.67	NA
	9/18/2001	5.50	NP	-	12.35	NA
	12/20/2001	4.21	NP	-	13.64	NA
	3/13/2002	4.40	NP	-	13.45	NA
	6/24/2002	3.26	NP	-	14.59	NA
	9/26/2002	5.74	NP	-	12.11	NA
	12/20/2002	5.93	NP	-	11.92	NA
	3/17/2003	4.84	NP	-	13.01	NA
	6/26/2003	5.31	NP	-	12.54	NA
	9/24/2003	5.70	NP	-	12.15	NA
	12/30/2003	4.66	NP	-	13.19	NA
	3/29/2004	4.97	NP	-	12.88	NA
	6/29/2004	5.35	NP	-	12.50	NA
	9/27/2004	5.95	NP	-	11.90	NA
	12/14/2004	4.98	NP	-	12.87	NA
	3/7/2005	5.52	NP	-	12.33	NA
	6/20/2005	5.55	NP	-	12.30	NA
	9/19/2005	5.89	NP	-	11.96	NA
	12/12/2005	5.04	NP	-	12.81	NA
	3/13/2006	4.39	NP	-	13.46	NA
	6/26/2006	4.90	NP	-	12.95	NA
	Well Abandoned					

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
RES-N	2/14/2000	20.90	NP	-	17.68	NA
(38.58)	5/22/2000	21.01	NP	-	17.57	NA
	8/22/2000	21.58	NP	-	17.00	NA
	11/27/2000	21.95	NP	-	16.63	NA
	2/20/2001	21.98	NP	-	16.60	NA
	5/15/2001	21.94	NP	-	16.64	NA
	9/18/2001	22.27	NP	-	16.31	NA
	12/20/2001	21.55	NP	-	17.03	NA
	3/13/2002	21.02	NP	-	17.56	NA
	6/24/2002	21.41	NP	-	17.17	NA
	9/26/2002	21.79	NP	-	16.79	NA
	12/20/2002	21.83	NP	-	16.75	NA
	6/26/2003	21.35	NP	-	17.23	NA
	9/24/2003	21.72	NP	-	16.86	NA
	12/30/2003	21.34	NP	-	17.24	NA
	3/29/2004	20.93	NP	-	17.65	NA
	9/27/2004	21.15	NP	-	17.43	NA
	12/14/2004	21.66	NP	-	16.92	NA
	3/7/2005	21.70	NP	-	16.88	NA
	6/20/2005	21.44	NP	-	17.14	NA
	9/19/2005	21.74	NP	-	16.84	NA
	12/12/2005	21.37	NP	-	17.21	NA
	3/13/2006	20.40	NP	-	18.18	NA
	6/26/2006	22.00	NP	-	16.58	NA
	9/25/2006	21.24	NP	-	17.34	NA
	12/11/2006	21.19	sheen	-	17.39	NA
	3/19/2007	19.66	NP	-	18.92	NA
(38.00)	6/18/2007	21.19	NP	-	16.81	NA
	9/17/2007	20.61	NP	-	17.39	NA
	12/17/2007	21.29	NP	-	16.71	NA
	3/24/2008	20.81	NP	-	17.19	NA
	6/23/2008	21.00	NP	-	17.00	NA
	9/22/2008	25.54	NP	-	12.46	NA
	1/5/2009	**20.82**	**NP**	**-**	**17.18**	**NA**
	3/16/2009	**21.29**	**NP**	**-**	**16.71**	**NA**
RES-O	2/14/2000	16.89	NP	-	19.14	NA
(36.03)	5/22/2000	17.29	NP	-	18.74	NA
	8/22/2000	17.86	NP	-	18.17	NA
	11/27/2000	18.38	NP	-	17.65	NA
	2/20/2001	NM	NP	-	-	NA
	5/15/2001	18.04	NP	-	17.99	NA
	9/18/2001	18.43	NP	-	17.60	NA
	12/20/2001	17.63	NP	-	18.40	NA
	3/13/2002	16.87	NP	-	19.16	NA
	6/24/2002	18.52	NP	-	17.51	NA
	9/26/2002	19.23	NP	-	16.80	NA
	12/20/2002	18.35	NP	-	17.68	NA
	3/17/2003	17.18	NP	-	18.85	NA
	6/26/2003	17.40	NP	-	18.63	NA
	9/24/2003	18.25	NP	-	17.78	NA
	12/30/2003	17.56	NP	-	18.47	NA
	3/29/2004	16.74	NP	-	19.29	NA
	6/29/2004	No Access To Well				
	9/27/2004	No Access To Well				
	12/14/2004	15.74	NP	-	20.29	NA
	3/7/2005	16.29	NP	-	19.74	NA
	6/20/2005	15.29	sheen	-	20.74	NA
	9/19/2005	15.92	NP	-	20.11	NA
	12/12/2005	15.28	NP	-	20.75	NA
	3/13/2006	14.05	NP	-	21.98	NA
	6/26/2006	14.99	NP	-	21.04	NA
	9/25/2006	15.97	NP	-	20.06	NA
	12/11/2006	15.02	NP	-	21.01	NA
	3/19/2007	14.26	NP	-	21.77	NA
(34.65)	6/18/2007	15.20	NP	-	19.45	NA
	9/17/2007	16.03	NP	-	18.62	NA
	12/17/2007	15.21	NP	-	19.44	NA
	3/24/2008	14.34	NP	-	20.31	NA
	6/23/2008	14.99	14.98	0.01	19.67	NA
	9/22/2008	15.84	NP	-	18.81	NA
	1/5/2009	**14.55**	**NP**	**-**	**20.10**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
RW-1	1/22/2008	14.30	NP	-	7.44	NA
(21.74)	3/24/2008	NM	NM	NM	NM	NA
	6/23/2008	16.86	NM	NM	4.88	NA
	9/22/2008	18.06	NM	NM	3.68	NA
	1/5/2009	**16.08**	**NM**	**NM**	**5.66**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
RW-2	1/22/2008	18.00	NP	-	9.45	NA
(27.45)	3/24/2008	NM	NM	NM	NM	NA
	6/23/2008	16.57	NM	NM	10.88	NA
	9/22/2008	19.71	NM	NM	7.74	NA
	1/5/2009	**16.00**	**NM**	**NM**	**11.45**	**NA**
	3/16/2009	**11.30**	**NM**	**NM**	**16.15**	**NA**
RW-3	1/22/2008	23.20	NP	-	10.82	NA
(34.02)	3/24/2008	NM	NM	NM	NM	NA
	6/23/2008	23.60	NM	NM	10.42	NA
	9/22/2008	12.01	NM	NM	22.01	NA
	1/5/2009	**17.62**	**NM**	**NM**	**16.40**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
RW-4	1/22/2008	18.94	NP	-	14.87	NA
(33.81)	3/24/2008	NM	NM	NM	NM	NA
	6/23/2008	19.88	NM	NM	13.93	NA
	9/22/2008	19.49	NM	NM	14.32	NA
	1/5/2009	**19.90**	**NM**	**NM**	**13.91**	**NA**
	3/16/2009	**20.70**	**NM**	**NM**	**13.11**	**NA**
RW-5	1/22/2008	10.95	NP	-	7.38	NA
(18.33)	3/24/2008	12.45	12.35	0.10	5.96	NA
	6/23/2008	13.60	NM	NM	4.73	NA
	9/22/2008	8.12	NM	NM	10.21	NA
	1/5/2009	**12.67**	**NM**	**NM**	**5.66**	**NA**
	3/16/2009	**8.35**	**NM**	**NM**	**9.98**	**NA**
RW-6	1/22/2008	10.70	NP	-	7.99	NA
(18.69)	3/24/2008	NM	NM	NM	NM	NA
	6/23/2008	13.52	NM	NM	5.17	NA
	9/22/2008	9.45	NM	NM	9.24	NA
	1/5/2009	**12.55**	**NM**	**NM**	**6.14**	**NA**
	3/16/2009	**8.20**	**NM**	**NM**	**10.49**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
U-2	2/14/2000	15.31	NP	-	19.71	NA
(35.02)	5/22/2000	15.41	NP	-	19.61	NA
	8/22/2000	16.13	NP	-	18.89	NA
	11/27/2000	16.81	NP	-	18.21	NA
	2/20/2001	16.81	NP	-	18.21	NA
	5/15/2001	16.82	NP	-	18.20	NA
	9/18/2001	17.20	NP	-	17.82	NA
	12/20/2001	16.99	NP	-	18.03	NA
	3/13/2002	15.59	NP	-	19.43	NA
	6/24/2002	15.80	NP	-	19.22	NA
	9/26/2002	16.50	NP	-	18.52	NA
	12/20/2002	16.95	NP	-	18.07	NA
	3/17/2003	15.77	NP	-	19.25	NA
	6/26/2003	15.89	NP	-	19.13	NA
	9/24/2003	16.42	NP	-	18.60	NA
	12/30/2003	16.28	NP	-	18.74	NA
	3/29/2004	15.06	NP	-	19.96	NA
	6/29/2004	15.79	NP	-	19.23	NA
	9/27/2004	16.30	NP	-	18.72	NA
	12/14/2004	16.59	NP	-	18.43	NA
	3/7/2005	17.52	NP	-	17.50	NA
	6/20/2005	15.82	NP	-	19.20	NA
	9/19/2005	16.42	NP	-	18.60	NA
	12/12/2005	15.96	NP	-	19.06	NA
	3/13/2006	14.22	NP	-	20.80	NA
	6/26/2006	15.02	NP	-	20.00	NA
	9/25/2006	16.07	NP	-	18.95	NA
	12/11/2006	15.67	NP	-	19.35	NA
	3/19/2007	14.63	NP	-	20.39	NA
	6/18/2007	15.33	NP	-	19.69	NA
	9/17/2007	16.18	NP	-	18.84	NA
	12/17/2007	15.88	NP	-	19.14	NA
	1/22/2008	14.94	NP	-	20.08	NA
	3/24/2008	14.75	NP	-	20.27	NA
	6/23/2008	15.10	NP	-	19.92	NA
	9/22/2008	16.30	16.29	0.01	18.72	NA
	1/5/2009	**15.68**	**NP**	**-**	**19.34**	**NA**
	3/17/2009	**15.46**	**NP**	**-**	**19.56**	**NA**
U-3	2/14/2000	12.95	NP	-	22.30	NA
(35.25)	5/22/2000	13.55	NP	-	21.70	NA
	8/22/2000	14.19	NP	-	21.06	NA
	11/27/2000	15.68	NP	-	19.57	NA
	2/20/2001	14.38	NP	-	20.87	NA
	5/15/2001	14.26	NP	-	20.99	NA
	9/18/2001	14.89	NP	-	20.36	NA
	12/20/2001	13.22	NP	-	22.03	NA
	3/13/2002	13.01	NP	-	22.24	NA
	6/24/2002	13.57	NP	-	21.68	NA
	9/26/2002	14.39	NP	-	20.86	NA
	12/20/2002	14.23	NP	-	21.02	NA
	3/17/2003	13.97	NP	-	21.28	NA
	6/26/2003	13.56	NP	-	21.69	NA
	9/24/2003	14.54	NP	-	20.71	NA
	12/30/2003	13.41	NP	-	21.84	NA
	3/29/2004	12.83	NP	-	22.42	NA
	6/29/2004	14.75	NP	-	20.50	NA
	9/27/2004	14.21	NP	-	21.04	NA
	12/14/2004	13.98	NP	-	21.27	NA
	3/7/2005	14.02	NP	-	21.23	NA
	6/20/2005	13.68	NP	-	21.57	NA
	9/19/2005	14.49	NP	-	20.76	NA
	12/12/2005	13.43	NP	-	21.82	NA
	3/13/2006	12.58	NP	-	22.67	NA
	6/26/2006	14.27	NP	-	20.98	NA
	9/25/2006	15.24	NP	-	20.01	NA
	12/11/2006	15.08	NP	-	20.17	NA
	3/19/2007	13.54	NP	-	21.71	NA
	6/18/2007	13.60	NP	-	21.65	NA
	9/17/2007	-	-	-	-	NA
	12/17/2007	13.07	NP	-	22.18	NA
	3/24/2008	12.54	NP	-	22.71	NA
	6/23/2008	13.22	NP	-	22.03	NA
	9/22/2008	13.97	NP	-	21.28	NA
	1/5/2009	**12.63**	**NP**	**-**	**22.62**	**NA**
	3/17/2009	**12.97**	**NP**	**-**	**22.28**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
U-4	2/14/2000	15.86	15.77	0.09	18.67	2.5
(34.46)	5/22/2000	16.03	NP	-	18.43	NA
	8/22/2000	16.38	NP	-	18.08	NA
	11/27/2000	16.83	NP	-	17.63	NA
	2/20/2001	16.85	sheen	-	17.61	NA
	5/15/2001	16.61	16.57	0.04	17.88	0.1
	9/18/2001	19.96	sheen	-	14.50	0.1
	12/20/2001	16.37	16.30	0.07	18.15	0.11
	3/13/2002	15.60	NP	-	18.86	0.11
	6/24/2002	15.50	NP	-	18.96	0.06
	9/26/2002	17.64	NP	-	16.82	NA
	12/20/2002	16.77	NP	-	17.69	NA
	3/17/2003	16.05	15.80	0.25	18.61	0.35
	6/26/2003	16.10	15.98	0.12	18.46	0.18
	9/24/2003	16.68	16.61	0.07	17.84	0.1
	12/30/2003	16.28	NP	-	18.18	NA
	3/29/2004	15.45	15.43	0.02	19.03	0.2
	6/29/2004	16.14	NP	-	18.32	NA
	9/27/2004	16.55	NP	-	17.91	NA
	12/14/2004	16.50	NP	-	17.96	NA
	3/7/2005	16.35	NP	-	18.11	NA
	6/20/2005	15.90	NP	-	18.56	NA
	9/19/2005	16.48	16.45	0.03	18.00	0.1
	12/12/2005	16.15	NP	-	18.31	NA
	3/13/2006	14.25	sheen	-	20.21	0
	6/26/2006	15.50	sheen	-	18.96	NA
	9/25/2006	16.21	sheen		18.25	0.1
	12/11/2006	15.76	15.75	0.01	18.71	0.1
	3/19/2007	14.56	NP	-	19.90	0.3
(34.06)	6/18/2007	15.87	NP	-	18.19	0.3
	9/17/2007	16.42	sheen	-	17.64	0.03
	12/17/2007	15.22	NP	-	18.84	0
	1/22/2008	14.27	NP	-	19.79	0
	3/24/2008	14.60	14.55	0.05	19.50	0
	6/23/2008	15.82	15.74	0.08	18.30	0.01
	9/22/2008	16.40	NP	-	17.66	0.07
	1/5/2009	**15.56**	**NP**	**-**	**18.50**	**0**
	3/17/2009	**15.75**	**NP**	**-**	**18.31**	**0**
U-5	2/14/2000	17.85	NP	-	16.28	NA
(34.13)	5/22/2000	18.03	NP	-	16.10	NA
	8/22/2000	19.02	NP	-	15.11	NA
	11/27/2000	19.03	NP	-	15.10	NA
	2/20/2001	19.44	NP	-	14.69	NA
	5/15/2001	19.57	19.22	0.35	14.84	0.65
	9/18/2001	20.04	20.02	0.02	14.11	0.6
	12/20/2001	----Unable to Locate----				
	3/13/2002	----Inaccessible - Covered by Sand----				
	6/24/2002	----Inaccessible - Covered by Sand----				
	9/26/2002	19.63	19.41	0.22	14.68	0.20
	12/20/2002	19.49	NP	-	14.64	0.42
	3/17/2003	17.99	NP	-	16.14	NA
	6/26/2003	19.17	NP	-	14.96	NA
	9/24/2003	19.42	NP	-	14.71	NA
	12/30/2003	18.80	NP	-	15.33	NA
	3/29/2004	18.39	NP	-	15.74	NA
	6/29/2004	19.00	NP	-	15.13	NA
	9/27/2004	19.14	Sheen	-	14.99	NA
	12/14/2004	18.55	NP	-	15.58	NA
	3/7/2005	19.23	NP	-	14.90	0.1
	6/20/2005	18.95	NP	-	15.18	NA
	9/19/2005	18.93	NP	-	15.20	0.1
	12/12/2005	18.09	NP	-	16.04	NA
	3/13/2006	17.06	NP	-	17.07	NA
	6/26/2006	---Unable to locate well; under sand---				
	9/25/2006	18.86	18.80	0.06	15.27	NA
	12/11/2006	NM	NM	NM	NM	0.1
	3/19/2007	18.00	NP	-	16.13	NA
(34.10)	6/18/2007	18.52	NP	-	15.58	NA
	9/17/2007	19.60	NP	-	14.50	NA
	12/17/2007	---Unable to locate well; under sand---				
	1/22/2008	18.15	NP	-	15.95	NA
	3/24/2008	17.39	sheen	-	16.71	NA
	6/23/2008	18.73	NP	-	15.37	NA
	9/22/2008	18.99	NP	-	15.11	NA
	1/5/2009	**17.88**	**NP**	**-**	**16.22**	**NA**
	3/16/2009	**18.25**	**NP**	**-**	**15.85**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
U-5A	2/14/2000	6.46	NP	-	27.31	NA
(33.77)	5/22/2000	7.00	6.99	0.01	26.78	1
	8/22/2000	8.58	8.57	0.01	25.20	0.1
	11/27/2000	9.71	NP	-	24.06	0.1
	2/20/2001	9.04	NP	-	24.73	0.1
	5/15/2001	8.99	sheen	-	24.78	NA
	9/18/2001	10.29	sheen	-	23.48	0.1
	12/20/2001	7.81	NP	-	25.96	NA
	3/13/2002	6.51	NP	-	27.26	NA
	6/24/2002	7.60	NP	-	26.17	NA
	9/26/2002	9.31	NP	-	24.46	NA
	12/20/2002	9.43	NP	-	24.34	NA
	3/17/2003	7.03	NP	-	26.74	NA
	6/26/2003	7.41	NP	-	26.36	NA
	9/24/2003	9.16	NP	-	24.61	NA
	12/30/2003	7.79	NP	-	25.98	NA
	3/29/2004	6.49	NP	-	27.28	NA
	6/29/2004	7.76	7.75	0.01	26.02	NA
	9/27/2004	9.03	8.98	0.05	24.78	NA
	12/14/2004	8.60	NP	-	25.17	0.1
	3/7/2005	8.22	sheen	-	25.55	0.2
	6/20/2005	7.41	sheen	-	26.36	0.1
	9/19/2005	19.14	NP	-	14.63	0.1
	12/12/2005	7.91	sheen	-	25.86	0.3
	3/13/2006	5.32	NP	-	28.45	0.2
	6/26/2006	6.83	NP	-	26.94	NA
	9/25/2006	**	8.68	**	NM	NA
	12/11/2006	7.31	7.30	0.01	26.47	0.2
	3/19/2007	5.98	5.96	0.02	27.81	0.1
	6/18/2007	NM	7.30	**	-	0.3
	9/17/2007	9.03	NP	-	24.74	0.3
	12/17/2007	7.85	NP	-	25.92	0.02
	3/24/2008	6.04	5.94	0.10	27.81	0
	6/23/2008	7.12	sheen	-	26.65	0.01
	9/22/2008	8.85	8.70	0.15	25.04	0.1
	1/5/2009	**7.03**	**NP**	**-**	**26.74**	**0**
	3/17/2009	**6.89**	**NP**	**-**	**26.88**	**0**
U-10	6/26/2003	4.76	NP	-	NM	NA
	9/24/2003	5.00	NP	-	NM	NA
	12/30/2003	3.65	NP	-	NM	NA
	3/29/2004	4.45	NP	-	NM	NA
	9/27/2004	5.03	NP	-	NM	NA
	12/14/2004	4.10	NP	-	NM	NA
	3/7/2005	5.12	NP	-	NM	NA
	6/20/2005	4.94	NP	-	NM	NA
	9/19/2005	5.26	NP	-	NM	NA
	12/12/2005	4.11	sheen	-	NM	NA
	3/13/2006	3.45	NP	-	NM	NA
	6/26/2006	3.96	NP	-	NM	NA
	Well Abandoned					
U-11	6/26/2003	3.30	NP	-	NM	NA
	9/24/2003	3.29	NP	-	NM	NA
	12/30/2003	2.51	NP	-	NM	NA
	3/29/2004	2.94	NP	-	NM	NA
	9/27/2004	3.91	NP	-	NM	NA
	12/14/2004	2.35	NP	-	NM	NA
	3/7/2005	3.43	NP	-	NM	NA
	6/20/2005	3.95	NP	-	NM	NA
	9/19/2005	4.11	NP	-	NM	NA
	12/12/2005	3.09	NP	-	NM	NA
	3/13/2006	2.40	NP	-	NM	NA
	6/26/2006	2.38	NP	-	NM	NA
	Well Abandoned					

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
U-12	6/26/2003	3.08	NP	-	NM	NA
	9/24/2003	3.17	NP	-	NM	NA
	12/30/2003	2.98	NP	-	NM	NA
	3/29/2004	2.97	NP	-	NM	NA
	9/27/2004	4.14	NP	-	NM	NA
	12/14/2004	3.18	NP	-	NM	NA
	3/7/2005	3.72	NP	-	NM	NA
	6/20/2005	3.66	NP	-	NM	NA
	9/19/2005	4.14	NP	-	NM	NA
	12/12/2005	3.44	NP	-	NM	NA
	3/13/2006	2.51	NP	-	NM	NA
	6/26/2006	2.82	NP	-	NM	NA
	Well Abandoned					
U-13	12/14/2004	15.93	NP	-		
(35.77)	3/7/2005	14.51	14.45	0.01	NM	NA
	6/20/2005	14.71	14.47	0.24	NM	0.1
	9/19/2005	16.30	15.72	0.58	NM	0.2
	12/12/2005	15.28	14.93	0.35	NM	0.3
	3/13/2006	12.79	12.45	0.34	NM	1.15
	6/26/2006	13.92	13.64	0.28	NM	NA
	9/25/2006	15.52	15.35	0.17	20.39	0.65
	12/11/2006	13.98	NP	-	21.79	0.65
	3/19/2007	13.27	13.10	0.17	22.64	0.6
	6/18/2007	14.48	14.17	0.31	21.54	0.5
	9/17/2007	15.67	15.64	0.03	22.51	0.3
	12/17/2007	14.73	14.62	0.11	20.95	0.02
	3/24/2008	13.30	13.25	0.05	22.43	0.02
	6/23/2008	14.11	13.94	0.17	21.52	0.02
	9/22/2008	15.47	15.35	0.12	20.20	0.04
	1/5/2009	**14.79**	**14.51**	**0.28**	**20.76**	**0**
	3/17/2009	**14.40**	**14.16**	**0.24**	**21.18**	**2**
U-14	8/18/2006	14.65	NP	-	NM	NA
(37.21)	9/25/2006	15.22	NP	-	21.99	NA
	12/11/2006	13.21	NP	-	24.00	NA
	3/19/2007	12.66	NP	-	24.55	NA
	6/18/2007	14.33	NP	-	22.88	NA
	9/17/2007	15.24	NP	-	21.97	NA
	12/17/2007	13.01	NP	-	24.20	NA
	3/24/2008	12.77	NP	-	24.44	NA
	6/23/2008	14.04	NP	-	23.17	NA
	9/22/2008	15.02	NP	-	22.19	NA
	1/5/2009	**12.14**	**NP**	**-**	**25.07**	**NA**
	3/17/2009	**14.10**	**NP**	**-**	**23.11**	**NA**
U-15	8/18/2006	14.18	NP	-	NM	NA
(35.57)	9/25/2006	14.95	NP	-	20.62	NA
	12/11/2006	NM	NM	NM	NM	NA
	3/19/2007	12.90	NP	-	22.67	NA
	6/18/2007	13.87	NP	-	21.70	NA
	9/17/2007	14.81	NP	-	20.76	NA
	12/17/2007	13.80	NP	-	21.77	NA
	3/24/2008	12.88	NP	-	22.69	NA
	6/23/2008	13.42	13.41	0.01	22.14	NA
	9/22/2008	14.50	NP	-	21.07	NA
	1/5/2009	**13.35**	**NP**	**-**	**22.22**	**NA**
	3/17/2009	**13.65**	**sheen**	**-**	**21.92**	**NA**
U-16	8/18/2006	13.46	NP	-	NM	NA
(36.08)	9/25/2006	14.35	NP	-	21.73	NA
	12/11/2006	13.32	NP	-	22.76	NA
	3/19/2007	12.19	NP	-	23.89	NA
	6/18/2007	13.26	NP	-	22.82	NA
	9/17/2007	14.55	NP	-	21.53	NA
	12/17/2007	13.19	NP	-	22.89	NA
	3/24/2008	12.22	NP	-	23.86	NA
	6/23/2008	13.94	NP	-	22.14	NA
	9/22/2008	13.83	NP	-	22.25	NA
	1/5/2009	**12.82**	**NP**	**-**	**23.26**	**NA**
	3/17/2009	**13.10**	**NP**	**-**	**22.98**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
U-17	8/18/2006	14.21	NP	-	NM	NA
(35.77)	9/25/2006	14.86	NP	-	20.91	NA
	12/11/2006	14.19	NP	-	21.58	NA
	3/19/2007	12.72	NP	-	23.05	NA
	6/18/2007	13.76	NP	-	22.01	NA
	9/17/2007	15.07	NP	-	20.70	NA
	12/17/2007	14.65	NP	-	21.12	NA
	3/24/2008	12.91	NP	-	22.86	NA
	6/23/2008	13.54	NP	-	22.23	NA
	9/22/2008	14.83	NP	-	20.94	NA
	1/5/2009	**14.50**	**NP**	**-**	**21.27**	**NA**
	3/17/2009	**13.77**	**NP**	**-**	**22.00**	**NA**
U-18	3/19/2007	8.08	NP	-	26.75	NA
(34.83)	6/18/2007	9.16	NP	-	25.67	NA
	9/17/2007	10.89	NP	-	23.94	NA
	12/17/2007	9.50	NP	-	25.33	NA
	3/24/2008	7.99	NP	-	26.84	NA
	6/23/2008	8.96	NP	-	25.87	NA
	9/22/2008	10.54	NP	-	24.29	NA
	1/5/2009	**8.54**	**NP**	**-**	**26.29**	**NA**
	3/17/2009	**8.70**	**NP**	**-**	**26.13**	**NA**
U-19	3/19/2007	14.89	NP	-	19.33	NA
(34.22)	6/18/2007	15.14	NP	-	19.08	NA
	9/17/2007	15.29	NP	-	18.93	NA
	12/17/2007	14.57	NP	-	19.65	NA
	3/24/2008	13.64	NP	-	20.58	NA
	6/23/2008	14.69	NP	-	19.53	NA
	9/22/2008	15.20	NP	-	19.02	NA
	1/5/2009	**13.31**	**NP**	**-**	**20.91**	**NA**
	3/16/2009	**NM**	**NM**	**NM**	**NM**	**NA**
U-20	3/19/2007	13.50	NP	-	21.89	NA
(35.39)	6/18/2007	14.50	NP	-	20.89	NA
	9/17/2007	15.29	NP	-	20.10	NA
	12/17/2007	14.22	NP	-	21.17	NA
	3/24/2008	13.50	NP	-	21.89	NA
	6/23/2008	14.39	NP	-	21.00	NA
	9/22/2008	15.22	NP	-	20.17	NA
	1/5/2009	**13.66**	**NP**	**-**	**21.73**	**NA**
	3/17/2009	**14.34**	**NP**	**-**	**21.05**	**NA**
U-21	3/19/2007	13.71	NP	-	22.03	NA
(35.74)	6/18/2007	14.71	NP	-	21.03	NA
	9/17/2007	15.50	NP	-	20.24	NA
	12/17/2007	14.38	NP	-	21.36	NA
	3/24/2008	13.66	NP	-	22.08	NA
	6/23/2008	14.56	NP	-	21.18	NA
	9/22/2008	15.41	NP	-	20.33	NA
	1/5/2009	**13.84**	**NP**	**-**	**21.90**	**NA**
	3/17/2009	**14.50**	**NP**	**-**	**21.24**	**NA**
U-22A	12/17/2007	9.43	NP	-	7.87	NA
(17.30)	1/22/2008	8.74	NP	-	8.56	NA
	3/24/2008	8.85	NP	-	8.45	NA
	6/23/2008	4.85	NP	-	12.45	NA
	9/22/2008	10.15	NP	-	7.15	NA
	1/5/2009	**5.48**	**NP**	**-**	**11.82**	**NA**
	3/16/2009	**9.02**	**NP**	**-**	**8.28**	**NA**
U-22B	12/17/2007	6.22	NP	-	10.69	NA
(16.91)	1/22/2008	5.61	NP	-	11.30	NA
	3/24/2008	6.02	NP	-	10.89	NA
	6/23/2008	19.22	NP	-	-2.31	NA
	9/22/2008	11.98	NP	-	4.93	NA
	1/5/2009	**11.90**	**NP**	**-**	**5.01**	**NA**
	3/16/2009	**8.84**	**NP**	**-**	**8.07**	**NA**
U-23	12/17/2007	5.70	NP	-	13.60	NA
(19.30)	1/22/2008	4.96	NP	-	14.34	NA
	3/24/2008	4.98	NP	-	14.32	NA
	6/23/2008	5.61	NP	-	13.69	NA
	9/22/2008	6.55	NP	-	12.75	NA
	1/5/2009	**4.37**	**NP**	**-**	**14.93**	**NA**
	3/16/2009	**4.99**	**NP**	**-**	**14.31**	**NA**
U-24A	12/17/2007	9.19	NP	-	10.75	NA
(19.94)	1/22/2008	9.09	NP	-	10.85	NA
	3/24/2008	8.83	NP	-	11.11	NA
	6/23/2008	7.14	NP	-	12.80	NA
	9/22/2008	9.93	NP	-	10.01	NA
	1/5/2009	**7.80**	**NP**	**-**	**12.14**	**NA**
	3/16/2009	**8.75**	**NP**	**-**	**11.19**	**NA**

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TABLE 1C
GROUNDWATER ELEVATION AND SPH RECOVERY DATA
ConocoPhillips Company - Willbridge Terminal
Portland, Oregon

Well Designation (TOC)	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation	SPH Recovered* (gallons)
U-24B	12/17/2007	8.71	NP	-	11.38	NA
(20.09)	1/22/2008	7.99	NP	-	12.10	NA
	3/24/2008	8.15	NP	-	11.94	NA
	6/23/2008	5.83	NP	-	14.26	NA
	9/22/2008	9.71	NP	-	10.38	NA
	1/5/2009	**6.77**	**NP**	**-**	**13.32**	**NA**
	3/16/2009	**8.63**	**NP**	**-**	**11.46**	**NA**
U-25	12/17/2007	6.19	NP	-	14.80	NA
(20.99)	1/22/2008	5.83	NP	-	15.16	NA
	3/24/2008	6.18	NP	-	14.81	NA
	6/23/2008	6.16	NP	-	14.83	NA
	9/22/2008	7.22	NP	-	13.77	NA
	1/5/2009	**5.01**	**NP**	**-**	**15.98**	**NA**
	3/16/2009	**6.37**	**NP**	**-**	**14.62**	**NA**
U-26	12/17/2007	7.70	NP	-	11.81	NA
(19.51)	1/22/2008	7.45	NP	-	12.06	NA
	3/24/2008	7.65	NP	-	11.86	NA
	6/23/2008	6.50	NP	-	13.01	NA
	9/22/2008	9.48	NP	-	10.03	NA
	1/5/2009	**6.80**	**NP**	**-**	**12.71**	**NA**
	3/16/2009	**7.33**	**NP**	**-**	**12.18**	**NA**
U-27	12/17/2007	11.87	NP	-	14.57	NA
(26.44)	1/22/2008	11.64	NP	-	14.80	NA
	3/24/2008	11.76	NP	-	14.68	NA
	6/23/2008	11.35	NP	-	15.09	NA
	9/22/2008	13.85	NP	-	12.59	NA
	1/5/2009	**9.08**	**NP**	**-**	**17.36**	**NA**
	3/16/2009	**11.89**	**NP**	**-**	**14.55**	**NA**
U-28	12/17/2007	10.28	NP	-	9.78	NA
(20.06)	1/22/2008	9.75	NP	-	10.31	NA
	3/24/2008	9.96	NP	-	10.10	NA
	6/23/2008	7.86	NP	-	12.20	NA
	9/22/2008	17.78	NP	-	2.28	NA
	1/5/2009	**7.79**	**NP**	**-**	**12.27**	**NA**
	3/16/2009	**9.45**	**NP**	**-**	**10.61**	**NA**
U-29A	12/17/2007	NM	NM	NM	NM	NA
(33.40)	1/22/2008	17.65	NP	-	15.75	NA
	3/24/2008	18.00	17.85	0.15	15.28	NA
	6/23/2008	18.02	18.00	0.02	15.36	0.01
	9/22/2008	18.36	NP	-	15.04	0.003
	1/5/2009	**16.59**	**NP**	**-**	**16.81**	**NA**
	3/16/2009	**17.63**	**NP**	**-**	**15.77**	**NA**
U-29B	12/17/2007	NM	NM	NM	NM	NA
(32.85)	1/22/2008	32.30	NP	-	0.55	NA
	3/24/2008	19.73	NP	-	13.12	NA
	6/23/2008	36.12	NP	-	-3.27	NA
	9/22/2008	20.60	NP	-	12.25	NA
	1/5/2009	**18.95**	**NP**	**-**	**13.90**	**NA**
	3/16/2009	**23.71**	**NP**	**-**	**9.14**	**NA**
U-29C	12/17/2007	NM	NM	NM	NM	NA
(32.73)	1/22/2008	28.25	NP	-	4.48	NA
	3/24/2008	22.03	NP	-	10.70	NA
	6/23/2008	18.00	NP	-	14.73	NA
	9/22/2008	24.79	NP	-	7.94	NA
	1/5/2009	**18.99**	**NP**	**-**	**13.74**	**NA**
	3/16/2009	**22.56**	**NP**	**-**	**10.17**	**NA**

NOTES:
NP = No measurable product
NA = Not Applicable
NM = Not Measured
* = SPH Recovered for latest quarter monitored
** - Unable to determine due to SPH viscosity
- = No Measurable Product Thickness
GWE = TOC -(DTW - (0.8 x DTP - DTW)) Where 0.8 = The density of the SPH

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TABLE 1D
GROUNDWATER SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY
Willbridge Terminals
Portland, Oregon

Well ID	Gauging Date	SPH Thickness, feet	SPH Recovery (gallons)
CHEVRON			
B-7	12/17/2007	trace	-
	1/21/2008	trace	-
B-10	12/17/2007	trace	-
	1/21/2008	0.01	-
	9/22/2008	0.01	-
B-14	12/17/2007	0.02	-
	1/21/2008	trace	-
B-20	5/22/2008	0.01	trace
	6/23/2008	0.01	-
	7/21/2008	0.01	trace
	8/22/2008	0.01	trace
	10/21/2008	0.01	0
	1/5/2009	0.02	0
B-24	12/17/2007	0.03	-
	1/21/2008	0.03	-
	3/24/2008	0.03	-
	6/23/2008	0.03	-
	7/21/2008	0.01	trace
	9/22/2008	0.24	-
B-30	12/17/2007	0.04	-
	1/21/2008	0.02	-
	3/24/2008	0.01	-
	6/23/2008	0.01	-
	7/21/2008	0.03	trace
	8/29/2008	0.01	-
	9/22/2008	0.01	-
	10/21/2008	0.01	0
	1/5/2009	0.01	0
	3/16/2009	0.02	0
CR-6	6/23/2008	0.01	-
	9/22/2008	0.04	-
	1/5/2009	0.07	0
	3/16/2009	0.05	0
CR-8 Sump	8/29/2008	trace	-
CR-10	10/2/2007	0.37	0.66
	11/30/2007	0.18	0.30
	12/7/2007	0.06	-
	1/28/2008	0.02	0.03
	2/8/2008	Not Measured	0
	3/24/2008	0.04	0.05
	5/22/2008	0.04	0.01
	6/23/2008	0.04	-
	7/21/2008	0.01	trace
	8/29/2008	0.15	0.16
	9/22/2008	0.23	0.13
	10/21/2008	0.01	0
	1/5/2009	0.09	0.4
	3/16/2009	0.04	0.03
CR-12	3/24/2008	0.01	-

TABLE 1D
GROUNDWATER SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY
Willbridge Terminals
Portland, Oregon

Well ID	Gauging Date	SPH Thickness, feet	SPH Recovery (gallons)
CR-15	10/2/2007	0.06	0.03
	11/30/2007	0.00	0
	12/7/2007	0.10	-
	1/28/2008	0.21	0.16
	2/8/2008	Not Measured	0
	3/24/2008	0.23	0.13
	4/25/2008	0.20	0.17
	5/22/2008	0.17	0.09
	6/23/2008	0.11	0.11
	7/21/2008	0.01	trace
	8/29/2008	0.05	0.13
	1/5/2009	0.01	0.04
	3/16/2009	0.13	0.00
CR-19	10/7/2007	trace	0
	11/30/2007	0.00	0
	12/7/2007	1.03	-
	1/28/2008	1.80	0.60
	2/8/2008	Not Measured	0
	3/24/2008	0.06	0.11
	4/25/2008	0.77	0.34
	5/22/2008	0.28	0.12
	6/23/2008	0.21	0.11
	8/29/2008	0.01	-
	9/22/2008	0.48	0.07
	10/21/2008	0.42	0
	1/5/2009	0.09	0.3
	3/16/2009	0.55	0.42
CR-21A	10/7/2007	trace	0.03
	11/30/2007	trace	0
	12/7/2007	Not Accessible	-
	1/28/2008	0.20	0.02
	2/8/2008	Not Measured	0
	3/24/2008	0.05	0.07
CR24B	3/16/2009	trace	0.00
CR-25	10/7/2007	trace	0
	11/30/2007	0.18	0.07
	12/7/2007	0.07	-
	1/28/2008	0.11	0.07
	2/8/2008	Not Measured	0
	3/24/2008	0.09	0.03
	4/25/2008	0.10	0.03
	5/22/2008	0.01	trace
	6/23/2008	0.05	0.03
	7/21/2008	0.06	0.04
	8/29/2008	0.04	0.08
	9/22/2008	0.08	0.03
	10/21/2008	0.09	0
	1/5/2009	0.05	0.05
	3/16/2009	0.09	0.03
GPW-1	3/16/2009	0.01	0
GPW-2	3/24/2008	0.47	-
	6/23/2008	0.12	0.05
	9/22/2008	0.18	0.01
	1/5/2009	0.01	0.01
	3/16/2009	0.34	0.1
GPW-3	3/24/2008	0.01	-
	1/5/2009	0.09	0
GPW-4	3/24/2008	0.02	-

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TABLE 1D
GROUNDWATER SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY
Willbridge Terminals
Portland, Oregon

Well ID	Gauging Date	SPH Thickness, feet	SPH Recovery (gallons)
CONOCOPHILLIPS			
B-4	10/30/2007	0.00	Trace
	11/28/2007	0.00	0.01
	12/17/2007	0.00	0
	1/22/2008	0.00	0
	2/28/2008	0.00	0
	3/24/2008	0.00	0
	3/16/2009	0.02	0
B-27	10/30/2007	0.00	0
	11/28/2007	0.00	0
	12/17/2007	0.00	0
	1/22/2008	0.00	0
	2/28/2008	0.00	0
	3/24/2008	0.00	0
	3/16/2009	0.06	0
B-40	10/30/2007	0.00	0
	11/28/2007	0.00	0
	12/17/2007	0.04	0
	1/22/2008	0.01	trace
	2/28/2008	0.00	0
	3/24/2008	0.00	0
	9/22/2008	0.10	0.02
	1/5/2009	0.44	-
	3/16/2009	0.57	0.2
GP-3	8/22/2008	0.27	0.01
	9/22/2008	0.23	0.01
	1/5/2009	0.01	0
GP-4	8/22/2008	0.18	0.01
U-4	10/30/2007	0.00	0
	11/28/2007	0.00	0
	12/17/2007	0.00	0
	1/22/2008	0.00	0
	2/28/2008	0.00	0
	3/24/2008	0.05	trace
	8/22/2008	0.11	0.07
U-5A	10/30/2007	0.00	0.01
	11/28/2007	0.00	0.01
	12/17/2007	0.00	0.01
	1/22/2008	0.04	0.01
	2/28/2008	0.05	0.01
	3/24/2008	0.10	0.03
	9/22/2008	0.15	0.10

TABLE 1D
GROUNDWATER SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY
Willbridge Terminals
Portland, Oregon

Well ID	Gauging Date	SPH Thickness, feet	SPH Recovery (gallons)
U-13	10/30/2007	0.11	0.02
	11/28/2007	0.00	0
	12/17/2007	0.11	0.05
	1/22/2008	0.11	0.1
	2/28/2008	0.08	0.02
	3/24/2008	0.05	0.01
	6/16/2008	0.00	0.01
	8/22/2008	0.10	0.02
	9/22/2008	0.12	0.02
	1/5/2009	0.28	0
	3/17/2009	0.24	2
U-15	3/17/2009	sheen	0
U-29A	6/16/2008	0.00	0.01
	8/22/2008	0.02	trace

TABLE 1D
GROUNDWATER SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY
Willbridge Terminals
Portland, Oregon

Well ID	Gauging Date	SPH Thickness, feet	SPH Recovery (gallons)
KINDER MORGAN			
MW-6	10/30/2007	0.00	0.01
	11/29/2007	0.00	0.01
	12/28/2007	0.00	Trace
	1/22/2008	0.00	Trace
	2/26/2008	0.00	0.01
	3/31/2008	0.01	0.02
	4/17/2008	0.00	0.02
	5/29/2008	0.00	Trace
	6/23/2008	sheen	Trace
	8/26/2008	0.03	0.02
	9/29/2008	sheen	0.01
	10/20/2008	0.00	Trace
	11/25/2008	sheen	trace
	12/30/2008	0.00	0.01
	1/30/2009	0.00	0.01
	2/26/2009	0.00	0.01
	3/26/2009	0.00	0.01
MW-7	10/30/2007	0.33	0.25
	11/29/2007	0.09	0.2
	12/28/2007	0.14	0.3
	1/22/2008	0.03	0.01
	2/26/2008	0.05	0.1
	3/31/2008	0.05	0.1
	4/17/2008	0.11	0.1
	5/29/2008	0.16	0.05
	6/23/2008	0.19	0.1
	8/26/2008	0.16	0.05
	9/29/2008	0.25	0.05
	10/20/2008	0.07	0.15
	11/25/2008	0.13	0.1
	12/30/2008	0.02	0.75
	1/30/2009	0.04	0.02
	2/26/2009	0.00	0
	3/26/2009	0.02	0.02
MW-19	10/30/2007	0.00	0.01
	11/29/2007	0.00	0.01
	12/28/2007	0.00	Trace
	1/22/2008	0.00	Trace
	2/26/2008	0.00	Trace
	3/31/2008	0.00	Trace
	4/17/2008	0.00	0
	5/29/2008	0.02	Trace
	6/23/2008	0.02	Trace
	8/26/2008	sheen	0
	9/29/2008	sheen	0.01
	10/20/2008	0.01	0.02
	11/25/2008	sheen	trace
	12/30/2008	0.00	0.01
	1/30/2009	0.02	0.01
	2/26/2009	0.00	0.01
	3/26/2009	0.00	0.01

TABLE 1D
GROUNDWATER SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY
Willbridge Terminals
Portland, Oregon

Well ID	Gauging Date	SPH Thickness, feet	SPH Recovery (gallons)
MW-22	10/30/2007	0.00	Trace
	11/29/2007	0.00	0
	12/28/2007	0.00	Trace
	1/22/2008	0.00	Trace
	2/26/2008	0.00	0
	3/31/2008	0.00	0
	4/17/2008	0.00	0
	5/29/2008	0.00	0
	6/23/2008	0.00	0
	8/26/2008	0.00	0
	9/29/2008	0.00	0
	3/26/2009	0.00	trace
MW-23	10/30/2007	0.00	Trace
	11/29/2007	0.00	Trace
	12/28/2007	0.00	Trace
	1/22/2008	0.00	Trace
	2/26/2008	0.00	Trace
	3/31/2008	0.00	0.02
	4/17/2008	0.00	0
	5/29/2008	0.00	0
	6/23/2008	0.01	Trace
	8/26/2008	0.10	0
	9/29/2008	0.00	0.01
	10/20/2008	0.01	Trace
	11/25/2008	sheen	Trace
	12/30/2008	sheen	Trace
	1/30/2009	0.00	Trace
	2/26/2009	0.00	0.01
	3/26/2009	0.00	0.01
MW-24	11/25/2008	-**	0.01
	12/30/2008	-**	0.02
	1/30/2009	-**	0.1
	2/26/2009	-**	0.01
	3/26/2009	-**	0.01
	3/31/2008	-**	0
	4/17/2008	0.00	0.03
	5/29/2008	0.14	0.01
	6/23/2008	-**	0.01
	8/26/2008	-**	0.02
	9/29/2008	0.00	0.02
	10/20/2008	-**	0.01
	11/25/2008	-**	0.01
	12/30/2008	-**	Trace
	1/30/2009	0.02	0.01
	2/26/2009	sheen	0.01
	3/26/2009	-**	0.01

TABLE 1D
GROUNDWATER SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY
Willbridge Terminals
Portland, Oregon

Well ID	Gauging Date	SPH Thickness, feet	SPH Recovery (gallons)
MW-28	10/30/2007	0.00	0
	11/29/2007	0.00	0
	12/28/2007	0.00	0
	1/22/2008	0.02	Trace
	2/26/2008	0.00	0
	3/31/2008	0.00	0.01
	4/17/2008	0.00	0
	5/29/2008	0.00	0
	6/23/2008	0.00	Trace
	8/26/2008	0.01	Trace
	9/29/2008	0.04	0.01
	10/20/2008	0.01	0.01
	11/25/2008	0.03	Trace
	12/30/2008	sheen	0.01
	1/30/2009	0.00	0.01
	2/26/2009	sheen	0.01
	3/26/2009	sheen	0.01
MW-31	10/30/2007	0.00	0.02
	11/29/2007	0.00	0.02
	12/28/2007	0.00	0.01
	1/22/2008	0.00	Trace
	2/26/2008	0.00	0.01
	3/31/2008	0.00	0.02
	4/17/2008	0.00	0
	5/29/2008	0.00	0
	6/23/2008	0.00	0
	8/26/2008	0.00	0
	9/29/2008	0.01	0
	10/20/2008	0.01	0.02
	11/25/2008	sheen	0.01
	12/30/2008	sheen	0.01
	1/30/2009	0.00	0
	2/26/2009	sheen	0
	3/26/2009	0.00	0
MW-35	10/30/2007	0.00	0
	11/29/2007	0.00	0
	12/28/2007	0.00	Trace
	1/22/2008	0.00	0
	2/26/2008	0.00	Trace
	3/31/2008	0.00	0
	4/17/2008	0.00	0
	5/29/2008	-	-
	6/23/2008	0.00	0
	8/26/2008	0.00	0
	9/29/2008	0.00	0

Notes:
** - Unable to determine due to SPH viscosity
- = Not measured

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
CHEVRON										
B-7	02/18/00	-	-	-	ND	20.1	ND	44.8	-	-
	05/23/00	-	-	-	ND	0.678	1.41	1.22	-	-
dup	05/23/00	-	-	-	ND	0.691	1.06	ND	-	-
	08/25/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	11/30/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	02/22/01	-	-	-	0.690	0.736	ND	ND	-	-
	05/17/01	-	-	-	ND	0.700	ND	ND	-	-
	03/20/03	-	-	-	ND	0.740	ND	ND	-	-
	09/29/03	-	-	-	<0.500	0.870	<0.500	1.93	-	-
	03/30/04	-	-	-	<0.500	0.750	<0.500	<1.00	-	-
	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	1.54	-
dup	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	1.51	-
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	1.08	-
	03/25/08	<400	42,000[5]	736[12]	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/24/08	383	8,980	<481	0.250	0.330	<1.00	0.910	0.230	-
	09/23/08	331	18,000	608	0.210	0.340	<1.00	0.520	0.210	-
dup	09/23/08	460	4,690	<485	0.240	0.350	0.0800	0.690	0.270	-
	01/06/09	<4,000	26,900	593	<0.200	<1.00	<1.00	0.0900	<1.00	-
	03/18/09	<80.0	12,600	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
B-9	05/23/00	-	-	-	ND	0.535	0.737	ND	-	-
	08/25/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	09/19/01	-	-	-	ND	ND	0.913	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	03/30/04	-	-	-	<0.500	0.560	<0.500	<1.00	-	-
	10/06/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	-
B-9A	09/19/07	-	-	-	0.900	2.08	<1.00[10]	3.28	<4.00[10]	-
	03/25/08	478	105,000[5]	2,620[12]	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/24/08	1,770	26,200	961	0.160	0.360	<1.00	0.190	0.200	-
	09/23/08	404	37,900	1,720	0.100	0.190	<1.00	0.170	0.0900	-
dup	09/23/08	469	19,500	972	<0.200	0.210	<1.00	0.220	<1.00	-
	01/06/09	589	16,700	566	0.100	0.270	<1.00	0.160	0.100	-
dup	01/06/09	549	1,280	<490	0.110	0.310	0.100	0.200	0.120	-
	03/24/09	439	18,700	867	<0.200	<1.00	<1.00	<3.00	<1.00	-

COP0017017

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
B-10	02/18/00	-	-	-	3.85	4.42	8.78	14.7	-	-
dup	02/18/00	-	-	-	3.72	4.1	7.8	13.8	-	-
	05/23/00	-	-	-	3.72	4.1	7.8	13.8	-	-
dup	05/23/00	-	-	-	1.2	2.93	4.14	6.53	-	-
	08/25/00	-	-	-	1.40	2.80	1.45	4.80	-	-
	11/30/00	-	-	-	1.20	2.69	ND	4.60	-	-
	02/23/01	-	-	-	3.74	0.983	3.94	6.78	-	-
	05/17/01	-	-	-	4.87	1.25	4.36	8.56	-	-
	09/19/01	-	-	-	0.711	ND	1.80	2.50	-	-
	03/21/02	-	-	-	3.15	2.60	1.19	2.43	-	-
	09/24/02	-	-	-	1.41	1.43	0.753	2.46	-	-
	03/20/03	-	-	-	0.680	1.76	ND	2.34	-	-
	09/29/03	-	-	-	2.26	1.60	0.781	4.29	-	-
	03/30/04	-	-	-	<0.500	1.42	<0.500	2.66	-	-
	10/06/04	-	-	-	0.810	2.62	<0.500	6.55	-	-
	03/08/05	-	-	-	<1.00	2.00	<1.00	2.89	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/14/06	-	-	-	<1.00	1.08	<1.00	<3.00	<1.00	-
	09/26/06	-	-	-	0.970	3.17	0.770	4.09	<2.00	-
	03/21/07	-	-	-	0.770	1.79	<1.00	6.20	<1.00	-
dup	03/21/07	-	-	-	0.720	1.74	<1.00	5.52	<1.00	-
	09/18/07	-	-	-	<0.400[10]	<1.00[10]	<1.00[10]	<2.00[10]	<4.00[10]	-
	03/25/08	618	695[3]	<500	0.730	1.35	<0.500	4.30	-	-
	09/23/08	792	2,080	<485	1.02	1.14	0.450	2.90	<1.00	-
	03/24/09	743	13,700	<500	1.06	1.46	<1.00	2.15	<1.00	-
dup	03/24/09	746	25,100	722	0.980	1.31	<1.00	2.02	<1.00	-
B-11	02/18/00	-	-	-	29.2	6.14	4.36	14.1	-	-
	05/23/00	-	-	-	7.45	4.95	1.42	8.52	-	-
	08/25/00	-	-	-	11.2	6.53	2.39	11.2	-	-
	11/30/00	-	-	-	8.72	5.36	ND	ND	-	-
	02/22/01	-	-	-	24.2	2.13	5.11	8.98	-	-
	05/17/01	-	-	-	17.9	2.77	6.46	11.4	-	-
	03/30/04	-	-	-	9.20	4.74	0.790	5.90	-	-
	03/09/05	-	-	-	4.25	3.72	<1.00	4.18	<1.00	-
	06/22/05	-	-	-	3.03	3.77	<1.00	4.66	<1.00	-
	09/21/05	-	-	-	1.80	4.57	<1.00	5.63	<1.00	-
	06/25/08	-	-	-	0.850	1.61	0.130	2.55	<1.00	-
B-14	02/18/00	-	-	-	119	18.1	80	38	-	-
	05/23/00	-	-	-	125	15.9	69.2	30.7	-	-
	08/25/00	-	-	-	382	44.6	194	70.3	-	-
	11/30/00	-	-	-	292	37.3	148	52.4	-	-
	02/22/01	-	-	-	402	229	42.6	78.2	-	-
	05/17/01	-	-	-	332	190	37.4	56.2	-	-
B-19	03/20/03	-	-	-	7.76	2.09	0.620	2.51	-	-
	09/29/03	-	-	-	5.93	1.98	1.56	7.44	-	-
	03/29/04	-	-	-	2.26	1.32	<0.500	2.88	-	-
	03/09/05	-	-	-	5.53	2.57	<1.00	2.76	<1.00	-
	06/22/05	-	-	-	<1.00	2.02	<1.00	2.61	<1.00	-
	09/22/05	-	-	-	1.54	1.99	<1.00	3.60	<1.00	-
	03/14/06	-	-	-	<1.00	1.11	<1.00	2.21	<1.00	-
	06/26/08	-	-	-	0.270	0.630	0.230	1.74	<1.00	-
	03/18/09	928	63,100	1,730	<1.00	<5.00	<5.00	<15.00	<5.00	-
dup	03/18/09	920	33,900	816	0.340	<1.00	<1.00	<3.00	<1.00	-

COP0017018

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
B-20	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	1.38	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/09/05	-	-	-	<1.00	1.47	<1.00	1.15	<1.00	-
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/25/08	344	2,410	<490	0.350	0.970	<0.500	2.19	<2.00	-
B-21	09/19/01	-	-	-	ND	ND	1.47	ND	-	-
	03/21/02	-	-	-	ND	0.679	ND	ND	-	-
	09/24/02	-	-	-	ND	1.20	0.517	1.20	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	0.659	1.3	<0.500	2.20	-	-
	03/29/04	-	-	-	<0.500	0.720	<0.500	<1.00	-	-
	10/06/04	-	-	-	<0.500	<0.880	<0.500	<1.00	-	-
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<2.00	17.4	-
	09/22/05	-	-	-	<1.00	1.15	<1.00	<3.00	11.2	-
	03/15/06	-	-	-	<1.00	<1.00	<1.00	<3.00	1.30	-
	09/26/06	-	-	-	0.460	0.980	<0.500	1.01	<2.00	-
	03/21/07	-	-	-	0.400	1.64	<1.00	<2.00	1.20	-
	09/19/07	-	-	-	0.330	1.78	<0.500	1.03	<2.00	-
	03/26/08[13]	431	7,960[5]	<490	0.570	1.93	<0.500	1.18	<2.00	-
	09/23/08	627	2,100	<485	0.450	1.99	0.100	1.79	0.370	-
	03/24/09	674	36,300	847	0.350	1.59	<1.00	<1.50	<1.00	-
B-26	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/09/05	-	-	-	2.94	<1.00	12.5	2.36	<1.00	-
	06/22/05	-	-	-	11.9	<1.00	46.1	4.26	<1.00	-
	09/22/05	-	-	-	12.4	1.19	56.8	6.21	<1.00	-
	06/26/08	-	-	-	7.66	0.850	64.8	6.56	<1.00	-
B-28	02/18/00	-	-	-	0.754	0.368	0.545	0.986	-	-
	05/23/00	-	-	-	ND	ND	ND	ND	-	-
	08/25/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	09/20/01	-	-	-	2.12	2.93	ND	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	0.699	<0.500	1.04	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	0.930	<1.00	-	-
	03/09/05	-	-	-	1.59		4.68	<1.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/14/06	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/28/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	0.350	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	1.11	-
	03/24/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	1.27	-

COP0017019

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
B-29	09/20/01	-	-	-	1.30	ND	0.710	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/14/06	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/28/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	-
	09/18/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	0.100	-
	03/24/09	<80.0	248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
B-30	02/18/00	-	-	-	38.9	5.29	2.44	10.3	-	-
	05/23/00	-	-	-	18.8	2.53	0.682	4.57	-	-
	08/25/00	-	-	-	81.2	12.5	2.35	21.9	-	-
	11/30/00	-	-	-	59.6	10.0	1.92	18.8	-	-
	02/23/01	-	-	-	61.6	5.31	9.52	19.4	-	-
dup**	02/23/01	-	-	-	61.8	3.24	9.23	16.0	-	-
	05/17/01	-	-	-	95.1	4.12	18.0	14.6	-	-
	09/20/01	-	-	-	38.7	ND	5.66	ND	-	-
dup	09/20/01	-	-	-	38.6	ND	6.18	ND	-	-
	03/21/02	-	-	-	113	17.0	6.09	24.2	-	-
	09/24/02	-	-	-	30.1	6.60	1.56	12.0	-	-
dup***	09/24/02	-	-	-	28.0	6.42	1.44	11.3	-	-
	03/20/03	-	-	-	17.3	4.49	0.500	5.96	-	-
dup*	03/20/03	-	-	-	17.4	4.43	0.510	6.68	-	-
	09/29/03	-	-	-	32.6	7.34	1.62	12.2	-	-
	03/29/04	-	-	-	15.6	3.13	1.16	7.07	-	-
dup	03/29/04	-	-	-	17.5	3.38	1.24	7.32	-	-
	03/09/05	-	-	-	12.6	3.04	<1.00	6.26	<1.00	-
	06/22/05	-	-	-	19.6	4.53	1.06	7.80	<1.00	-
	09/21/05	-	-	-	15.1	2.75	<1.00	3.72	<1.00	-
dup****	09/21/05	-	-	-	18.9	3.17	<1.00	4.40	<1.00	-
	03/14/06	-	-	-	15.9	2.53	<1.00	4.15	<1.00	-
dup	03/14/06	-	-	-	15.8	2.51	1.02	4.42	<1.00	-
	09/28/06	-	-	-	48.9	8.50	1.51	12.1	<2.00	-
	03/22/07	-	-	-	28.5	1.09	<1.00	<2.00	<1.00	-
	09/18/07	-	-	-	2.78	1.78	<0.500	4.31	<2.00	-
dup	09/18/07	-	-	-	2.55	1.23	<1.00	2.99	<1.00	-

COP0017020

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
B-32	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	0.636	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	2.17	-
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	1.66	-
	03/15/06	-	-	-	<1.00	<1.00	<1.00	<3.00	1.84	-
B-33	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	0.558	0.735	<0.500	1.35	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/15/06	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	06/26/08	-	-	-	0.280	0.900	<1.00	0.930	<1.00	-
	03/18/09	408	35,500	1,570	0.210	<1.00	<1.00	<3.00	<1.00	-
CR-1	09/20/01	-	-	-	ND	ND	ND	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/30/04	-	-	-	25.8	1.13	120	9.06	-	-
	10/06/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	154	376	<485	<0.400	<2.00	<2.00	<6.00	<2.00	-
	03/25/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
CR-3	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	06/26/08	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/26/08	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-

COP0017021

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
CR-8	02/18/00	-	-	-	0.314	0.673	3.82	6.55	-	-
	05/23/00	-	-	-	ND	ND	ND	ND	-	-
	08/25/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	0.841	0.519	1.77	-	-
CR-9	02/18/00	-	-	-	ND	ND	ND	ND	-	-
	05/23/00	-	-	-	ND	ND	ND	ND	-	-
	08/25/00	-	-	-	ND	ND	ND	ND	-	-
dup	08/25/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
dup	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-
dup	05/16/01	-	-	-	ND	ND	ND	ND	-	-
CR-11	02/18/00	-	-	-	81	4.95	4.41	6.17	-	-
	05/23/00	-	-	-	40.2	1.95	2.54	ND	-	-
	08/25/00	-	-	-	107	5.30	22.1	8.41	-	-
	11/30/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	02/22/01	-	-	-	84.2	3.24	2.47	6.25	-	-
	05/16/01	-	-	-	119	5.85	4.43	14.3	-	-
CR-26	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/24/08	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	8,200
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	4,820
	01/06/09	<80.0	287	<490	<0.200	<1.00	<1.00	<3.00	<1.00	3,950
CR-27C	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/24/08	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	4,200
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	6,900
	01/06/09	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	3,080
CR-28A	06/25/08	9,760	2,330	<485	10.8	6.40	1,300	115	<10.0	13,000
	09/25/08	10,200	2,630	344	7.80	6.80	1,410	121	<10.0	9,620
CR-28B	06/25/08	39.7	<243	<485	<0.200	<1.00	0.0800	<3.00	<1.00	3,800
	09/25/08	<80.0	<245	<490	<0.200	<1.00	0.150	<3.00	<1.00	3,660
CR-28C	06/25/08	<80.0	<243	<485	<0.200	0.120	0.320	<3.00	<1.00	3,600
	09/25/08	97.7	<245	<490	<0.200	<1.00	7.23	0.610	<1.00	2,960
CR-29A	06/26/08	2,070	837	<485	<0.200	0.350	5.05	1.18	<1.00	-
	09/25/08	2,540	726	<490	<1.00	0.700	13.8	1.90	<5.00	-
CR-29B	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/25/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-
CR-30A	06/26/08	566	986	<485	<0.200	<1.00	0.160	0.320	<1.00	-
	09/24/08	707	502	<480	0.0900	0.140	0.370	0.360	<1.00	-
CR-30B	06/26/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/24/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-

COP0017022

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
CR-31A	06/26/08	697	5,080	380	0.110	0.130	<1.00	0.470	<1.00	-
	09/24/08	328	4,230	292	<0.400	<2.00	<2.00	<6.00	<2.00	-
CR-31B	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/24/08	<80.0	<245	<490	<0.200	<1.00	0.160	<3.00	<1.00	-
CR-32A	06/26/08	251	3,630	483	<0.200	<1.00	<1.00	<3.00	<1.00	22,000
	09/24/08	132	3,050	305	<0.400	<2.00	<2.00	<6.00	<2.00	19,800
CR-32B	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	7,200
	09/24/08	<80.0	<245	<490	<0.400	<2.00	<2.00	<6.00	<2.00	4,010
CR-32C	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	4,800
	09/24/08	<80.0	<245	<490	<0.200	<1.00	0.0800	<3.00	<1.00	4,290
CR-33	03/26/08[10]	<400	1,960[5]	<481	<0.400	<1.00	<1.00	<2.00	<4.00	-
	06/24/08	211	209	<481	0.140	0.280	0.250	0.860	0.300	-
	09/24/08	145	547	<485	<0.400	<2.00	<2.00	0.180	0.400	-
	01/06/09	205	1,410	<490	<0.200	<1.00	0.350	0.810	0.350	-
	03/18/09	196	458	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
TB-LB	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-
	09/19/01	-	-	-	ND	ND	ND	ND	-	-
	03/21/02	-	-	-	1.16	3.9	ND	1.95	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	-
	03/25/08	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/22/08	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/26/08	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/26/08	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/25/08				<0.200	<1.00	<1.00	<3.00	<1.00	-

COP0017023

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
Kinder Morgan										
MW-8	02/16/00	-	-	-	9.79	2.51	7.97	12.1	-	-
	05/31/00	-	-	-	16.6	3.85	3.05	10.2	-	-
	08/24/00	-	-	-	26.0	5.78	28.2	24.0	-	-
	12/01/00	-	-	-	17.8	4.59	3.19	11.1	-	-
	02/22/01	-	-	-	11.4	ND	2.79	8.88	-	-
	05/16/01	-	-	-	15.1	1.18	2.79	6.4	-	-
	09/21/01	-	-	-	13.0	1.08	9.54	7.66	-	-
	03/14/02	-	-	-	1.95	1.09	0.618	2.22	-	-
dup	03/14/02	-	-	-	1.96	0.955	ND	1.93	-	-
	09/27/02	-	-	-	4.85	2.30	0.819	4.25	-	-
	03/18/03	-	-	-	3.12	ND	ND	2.24	-	-
dup	03/18/03	-	-	-	2.36	ND	ND	2.62	-	-
	09/24/03	-	-	-	5.00	1.20	0.759	7.05	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	3.03	0.576	<0.500	1.80	-	-
dup	09/27/04	-	-	-	3.25	<0.500	<0.500	1.75	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	0.290	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/24/08	-	-	-	<0.14	<0.11	<0.13	<0.33	<0.20	-
	09/22/08	-	-	-	<0.50	0.17	<0.50	0.91	<0.50	-
dup	09/22/08	-	-	-	<0.50	0.20	0.050	1.05	<0.50	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
MW-9	03/29/05	-	-	-	-	-	-	-	<2.00	-
	09/21/05	-	-	-	-	-	-	-	<2.00	-
MW-10	02/16/00	-	-	-	6.6	2.33	0.996	3.33	-	-
	05/31/00	-	-	-	6.78	0.794	ND	1.02	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	12/01/00	-	-	-	5.40	1.32	ND	1.78	-	-
	02/22/01	-	-	-	1.15	ND	1.15	1.98	-	-
	05/16/01	-	-	-	11.6	0.894	1.42	2.92	-	-
	03/29/05	-	-	-	-	-	-	-	<2.00	-
	09/21/05	-	-	-	-	-	-	-	<2.00	-
MW-11	02/16/00	-	-	-	5,260	2,360	2,580	11,200	-	-
	05/31/00	-	-	-	4,120	1,460	2,720	9,290	-	-
	08/24/00	-	-	-	2,490	787	2,020	5,960	-	-
	12/01/00	-	-	-	2,330	755	1,610	5,420	-	-
	02/22/01	-	-	-	3,520	2,230	1,230	8,130	-	-
	05/16/01	-	-	-	3,800	2,510	1,290	8,980	-	-
	03/29/05	-	-	-	-	-	-	-	<100	-
1,2,4=1590	09/21/05	-	-	-	-	-	-	-	<40.0	-
MW-13	02/16/00	-	-	-	ND	0.392	ND	0.903	-	-
	05/31/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	12/01/00	-	-	-	ND	ND	ND	ND	-	-
dup	12/01/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-

COP0017024

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
MW-15	02/17/00	-	-	-	2.89	0.493	0.442	1.15	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	12/01/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-
MW-20	03/29/05	-	-	-	-	-	-	-	<2.00	-
	09/21/05	-	-	-	-	-	-	-	<2.00	-
MW-21	02/17/00	-	-	-	ND	1.21	0.997	3.36	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/23/00	-	-	-	ND	ND	ND	ND	-	-
	12/01/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-
MW-22	02/17/00	-	-	-	2060	2060	4720	13200	-	-
	05/30/00	-	-	-	2140	1560	4240	9150	-	-
	08/23/00	-	-	-	1670	1500	3670	7720	-	-
	12/01/00	-	-	-	1450	1330	3960	8280	-	-
	02/21/01	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	05/16/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
MW-23	02/17/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	05/30/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	08/23/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	12/01/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	02/22/01	-	-	-	76.8	102	12.6	90.4	-	-
	05/16/01	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
MW-25	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/24/08	-	-	-	<0.14	0.17[14]	<0.13	<0.33	<0.20	-
	09/22/08	-	-	-	<0.50	<0.50	<0.50	<1.00	<0.50	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-

COP0017025

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
MW-26	02/17/00	-	-	-	1.31	4.01	18.6	26.2	-	-
dup	02/17/00	-	-	-	1.04	3.11	11.9	17.1	-	-
	05/30/00	-	-	-	ND	7.11	7.4	9.62	-	-
	08/23/00	-	-	-	ND	3.67	10.8	3.54	-	-
dup	08/23/00	-	-	-	ND	4.81	15.9	6.20	-	-
	12/01/00	-	-	-	3.43	29.8	7.28	15.6	-	-
	02/21/01	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	05/17/01	-	-	-	15.1	8.76	10.1	10.6	-	-
	09/27/02	-	-	-	7.66	7.24	5.90	6.44	-	-
	03/18/03	-	-	-	9.11	ND	1.57	4.80	-	-
	09/24/03	-	-	-	2.18	<0.500	2.90	12.7	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	1.67	-	-
	09/27/04	-	-	-	2.41	1.42	4.64	7.57	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	0.540	1.85	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	0.600	2.35	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/24/08	-	-	-	<0.14	0.47[14]	0.49[14]	2.4	<0.20	-
dup	03/24/08	-	-	-	<0.14	0.51	0.49[14]	2.6	<0.20	-
	09/22/08	-	-	-	<2.5	0.35	0.25	1.5	<2.5	-
	03/16/09	-	-	-	<1.00	<5.00	<5.00	<15.0	<5.00	-
MW-28	02/16/00	-	-	-	1.29	3.13	8.26	14.7	-	-
	05/30/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	08/23/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	12/01/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	02/21/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	05/16/01	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
MW-29	03/28/05	-	-	-	-	-	-	-	<2.00	-
	09/21/05	-	-	-	-	-	-	-	<2.00	-
MW-31	02/16/00	-	-	-	0.579	0.629	0.481	1.51	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/23/00	-	-	-	ND	ND	ND	ND	-	-
	12/01/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
MW-32	02/16/00	-	-	-	ND	0.608	0.379	1.31	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/23/00	-	-	-	ND	ND	ND	ND	-	-
	12/01/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
MW-33	02/16/00	-	-	-	ND	0.718	0.589	1.21	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
dup	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-
	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	<13	<13	42[14]	<0.14	<0.11	<0.13	<0.33	<0.20	-
	09/23/08	<250	14	34	<0.50	<0.50	<0.50	<1.00	<0.50	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
MW-34	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	20[14]	12[14]	44[14]	<0.14	0.17[14]	<0.13	<0.33	<0.20	-
	06/24/08	<250	19[14]	36[14]	<0.045	<0.048	<0.042	<0.115	<0.070	-
	09/23/08	150	53	140	<0.50	<0.50	<0.50	0.080	0.18	5,200
	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
MW-36	02/16/00	-	-	-	0.322	2.36	1.32	6.29	-	-
	05/31/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	0.548	ND	-	-
	02/21/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	0.882	ND	ND	ND	-	-
	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/13/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	0.727	<0.500	<0.500	1.38	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
dup	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	<13	<12	40[14]	<0.14	<0.11	<0.13	<0.33	<0.20	-
	09/23/08	120	20	<500	<0.50	<0.50	<0.50	0.18	0.080	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
MW-37	02/16/00	-	-	-	1.06	0.456	0.492	1.78	-	-
	05/30/00	-	-	-	33	0.957	ND	2.1	-	-
dup	05/30/00	-	-	-	31.4	0.775	0.786	1.72	-	-
	08/24/00	-	-	-	40.9	0.731	ND	1.44	-	-
	11/30/00	-	-	-	10.7	0.594	ND	ND	-	-
	02/21/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	0.691	ND	0.740	1.25	-	-
	09/21/01	-	-	-	ND	ND	1.04	1.31	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
dup	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	480[15]	12,000	480[14]	<0.14	0.27[14]	<0.13	<0.33	<0.20	-
dup	03/25/08	670[15]	3,500	130[14]	<0.14	0.26[14]	<0.13	0.11[14]	<0.20	-
dup	03/25/08	670[15]	3,500	130[14]	<0.14	0.26[14]	<0.13	0.11[14]	<0.20	-
	06/23/08	400	370	33[14]	0.12[14]	0.22[14]	<0.042	0.47[14]	<0.12	-
	09/23/08	670	3,500	69	<0.50	0.050	<0.50	0.24	<0.50	5,600
dup	09/23/08	550	3,700	63	<0.50	0.060	<0.50	0.36	<0.50	5,500
	01/05/09	128[11]	3,780	<490	<0.200	<1.00	<1.00	<1.00	<1.00	3,740
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
MW-38	03/29/05	-	-	-	-	-	-	-	10.2	-
	09/21/05	-	-	-	-	-	-	-	22.0	-
MW-39	09/27/04	-	-	-	<0.500	<0.500	<0.500	7.45	-	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
MW-40	02/16/00	-	-	-	ND	0.424	0.492	0.759	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/21/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	0.505	ND	-	-
	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/13/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00		-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	48[14]	14[14]	46[14]	<0.14	<0.11	<0.13	<0.33	<0.20	-
	09/23/08	53	21	64	<0.50	<0.50	<0.50	0.13	0.17	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
MW-41B	03/25/08	<13	12[14]	52[14]	<0.14	0.13[14]	<0.13	<0.33	<0.20	-
	06/24/08	<250	14[14]	59[14]	0.060[14]	0.11[14]	<0.042	<0.0115	<0.070	-
dup	06/24/08	<250	<11	29[14]	<0.045	0.090[14]	<0.042	<0.0115	<0.070	-
	09/23/08	<250	15	77	<0.50	<0.50	<0.50	<1.00	<0.50	3,100
	01/05/09	<80	<236	<472	<0.200	<1.00	<1.00	<1.00	<1.00	2,050
MW-41C	03/25/08	42[14]	19[14]	68[14]	<0.14	0.11[14]	<0.13	<0.33	<0.20	-
	06/24/08	<250	20[14]	86[14]	0.050[14]	0.070[14]	<0.042	<0.0115	<0.070	-
	09/23/08	24	16	39	<0.50	<0.50	<0.50	<1.00	<0.50	6,800
	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	5,090
MW-42B	03/25/08	<13	<12	58[14]	<0.14	0.12[14]	<0.13	<0.33	<0.20	-
	06/24/08	<250	<11	55[14]	<0.045	0.060[14]	<0.042	<0.0115	<0.070	-
	09/23/08	<250	16	42	<0.50	0.050	<0.50	<1.00	<0.50	4,200
	01/05/09	<80	<243	<485	<0.200	<1.00	<1.00	<1.00	<1.00	3,320
MW-42C	03/25/08	17[14]	15[14]	110[14]	0.14[14]	0.20[14]	<0.13	<0.33	<0.20	-
	06/24/08	<250	14[14]	78[14]	0.050[14]	0.060[14]	<0.042	<0.0115	<0.070	-
	09/23/08	<250	25	120	<0.50	<0.50	<0.50	<1.00	<0.50	4,600
	01/05/09	<80	<245	<490	<0.200	<1.00	<1.00	<1.00	<1.00	2,690
dup	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	2,770

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
CONOCOPHILLIPS										
B-2	03/28/05	-	-	-	-	-	-	-	3.47	-
dup	03/28/05	-	-	-	-	-	-	-	3.52	-
	09/20/05	-	-	-	-	-	-	-	4.30	-
B-3	03/28/05	-	-	-	-	-	-	-	10.7	-
	09/20/05	-	-	-	-	-	-	-	8.26	-
B-4	05/26/00	-	-	-	82.3	12.7	4	14.8	-	-
dup	05/26/00	-	-	-	74.8	10.7	2.77	10.3	-	-
	08/23/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	11/29/00	-	-	-	7.04	5.81	2.10	8.09	-	-
	02/20/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	09/26/02	-	-	-	16.5	8.36	5.14	27.6	-	-
	09/25/03	-	-	-	48.1	7.55	6.02	17.9	-	-
	03/28/05	-	-	-	-	-	-	-	<2.00	-
	09/26/06	-	-	-	25.6	5.03	<0.500	6.46	<2.00	-
	03/21/07	-	-	-	43.2	5.10	1.33	7.02	<2.00	-
	09/20/07	-	-	-	2.65	2.59	<0.500	4.46	<2.00	-
	03/26/08	2,830[11]	31,700[5]	<490	2.66	3.54	<1.00	4.90	<4.00	-
	09/24/08	943	30,800	566	0.900	2.98	<1.00	3.04	<1.00	-
dup	09/24/08	1,350	5,730	<481	1.72	4.62	<1.00	7.13	<1.00	-
B-6	03/28/05	-	-	-	-	-	-	-	<2.00	-
	09/20/05	-	-	-	-	-	-	-	<2.00	-
B-16	03/28/05	-	-	-	-	-	-	-	2.11	-
	09/20/05	-	-	-	-	-	-	-	<2.00	-
B-17	02/17/00	-	-	-	274	24	15.4	37.7	-	-
	05/26/00	-	-	-	434	44.4	49.9	158	-	-
	08/28/00	-	-	-	372	21.1	10.8	15.4	-	-
	11/29/00	-	-	-	293	18.2	9.89	13.6	-	-
	02/23/01	-	-	-	258	11.8	21.3	21.6	-	-
dup	02/23/01	-	-	-	238	10.2	19.6	17.3	-	-
	05/17/01	-	-	-	165	6.82	17.0	15.7	-	-
dup	05/17/01	-	-	-	173	7.14	17.2	15.6	-	-
B-18	02/17/00	-	-	-	ND	1.04	3.46	6.13	-	-
	05/26/00	-	-	-	ND	ND	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	ND	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	0.502	ND	ND	-	-
B-22	02/17/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	05/26/00	-	-	-	0.508	0.522	0.543	2.17	-	-
	08/28/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	11/29/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	02/20/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
B-27	03/28/05	-	-	-	-	-	-	-	2.16	-

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
B-35	02/17/00	-	-	-	31.6	13.5	11	27.4	-	-
	05/26/00	-	-	-	194	16.3	12.5	39.8	-	-
	08/28/00	-	-	-	287	15.3	8.42	ND	-	-
	11/29/00	-	-	-	384	17.0	12.0	30.2	-	-
	02/23/01	-	-	-	45.6	4.87	12.4	20.5	-	-
	05/17/01	-	-	-	15.2	4.32	5.62	7.99	-	-
	09/20/01	-	-	-	58.0	3.31	9.78	15.9	-	-
	03/14/02	-	-	-	34.1	15.8	2.41	11.4	-	-
	09/26/02	-	-	-	95.8	11.3	14.0	26.3	-	-
	03/18/03	-	-	-	8.11	6.39	1.42	3.20	-	-
	09/25/03	-	-	-	66.7	7.41	3.74	19.2	-	-
	03/30/04	-	-	-	15.1	1.39	6.49	13.0	-	-
	09/28/04	-	-	-	93.4	11.7	<5.00	19.7	-	-
	03/28/05	-	-	-	3.71	6.72	0.660	10.5	7.20	-
	09/20/05	-	-	-	82.0	10.4	1.79	12.2	6.48	-
	03/14/06	-	-	-	18.8	7.31	1.32	10.9	-	-
	09/26/06	-	-	-	20.9	7.63	2.45	10.2	<2.00	-
	03/20/07	-	-	-	11.4	5.16	1.02	11.2	<2.00	-
	09/20/07	-	-	-	3.44	6.55	<0.500	10.1	<2.00	-
	03/27/08	1,120	88,300[5]	2,910[12]	1.65	3.00	<2.50	5.15	<10.0	-
	09/24/08	1,720	21,300	868	3.48	6.72	<2.00	10.68	<2.00	-
	03/23/09	1,240	21,700	1,110	2.44	6.88	<1.00	9.83	<1.00	-
B-36	02/17/00	-	-	-	0.925	1.16	0.762	3.16	-	-
	05/26/00	-	-	-	ND	0.82	0.502	ND	-	-
	08/28/00	-	-	-	2.08	2.54	0.693	2.53	-	-
	11/29/00	-	-	-	1.14	2.53	1.02	2.78	-	-
	02/23/01	-	-	-	ND	0.512	1.15	1.44	-	-
	05/17/01	-	-	-	ND	0.545	0.819	1.8	-	-
	09/20/01	-	-	-	ND	0.609	0.761	1.50	-	-
dup	09/20/01	-	-	-	ND	0.547	0.820	1.51	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/26/02	-	-	-	1.18	1.33	0.635	2.48	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/25/03	-	-	-	0.940	1.10	0.954	2.90	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	1.23	-	-
	09/28/04	-	-	-	0.614	0.679	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/05	-	-	-	0.390	0.930	<0.500	<1.00	2.63	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	0.760	1.18	<0.500	1.57	3.50	-
	03/20/07	-	-	-	0.610	0.500	<0.500	1.37	<2.00	-
	09/20/07	-	-	-	1.32	1.67	<0.500	1.72	3.47	-
	03/27/08	227	469[3]	<476	<0.400	<1.00	<1.00	<2.00	<4.00	-
	09/24/08	947	632	<485	0.480	<2.00	<2.00	<6.00	<2.00	-
	03/23/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/23/09	102	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-

COP0017031

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
B-37	02/17/00	-	-	-	ND	0.517	0.63	1.18	-	-
dup	02/17/00	-	-	-	0.342	1.06	0.795	1.97	-	-
	05/26/00	-	-	-	ND	ND	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	ND	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/26/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
dup	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/25/03	-	-	-	<0.500	<0.500	0.639	1.30	-	-
dup	09/25/03	-	-	-	<0.500	<0.500	0.628	1.24	-	-
	03/31/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	3.98	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	6.14	-
	09/20/05	-	-	-	-	-	-	-	5.82	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/27/08	147[11]	<240	<481	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	188	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	156	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/20/09	145	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
B-40	02/17/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	05/26/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	08/28/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	11/29/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	02/20/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	09/26/06	-	-	-	21.5	2.94	89.4	225	<4.00	-
	03/20/07	-	-	-	15.2	2.74	86	213	<4.00	-
	09/20/07	-	-	-	15.9	2.12	63.6	153	<2.00	-
	03/26/08	2,860	37,600[3]	5,700	3.40	1.85	61.6	132	<2.00	-
	09/22/08	-	-	-	-	-	-	-	-	-
OF-1	03/26/08	953[11]	6,920[5]	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
P-1	03/17/03	-	-	-	ND	ND	ND	ND	-	-
	03/31/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	-	-	-	-	<2.00	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	Well Abandoned									
P-1A	03/26/08	<80.0	<245	<490	0.240	<0.500	<0.500	<1.00	<2.00	-
	06/25/08	<80.0	<236	<472	1.99	1.32	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<243	<485	1.87	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
P-2	03/17/03	-	-	-	ND	0.534	ND	ND	-	-
	09/25/03	-	-	-	<0.500	<0.500	0.823	<1.00	-	-
	03/30/04	-	-	-	0.540	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	2.84	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	4.48	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-

COP0017032

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
U-2	02/17/00	-	-	-	3.13	1.93	3.59	3.43	-	-
	05/26/00	-	-	-	0.885	1.45	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	0.604	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	09/20/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	0.986	1.60	0.905	ND		-
	09/26/02	-	-	-	ND	ND	ND	ND		-
	03/18/03	-	-	-	ND	ND	ND	ND		-
	09/25/03	-	-	-	<0.500	<0.500	<0.500	<1.00		-
	03/31/04	-	-	-	2.60	<0.500	0.820	<1.00	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/14/06	-	-	-	4.71	<0.500	3.19	1.05	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	4.05	<0.500	1.10	<1.00	<2.00	-
	09/19/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	1,010	673[3]	<476	8.15	0.630	1.88	<1.00	<2.00	-
	09/25/08	<80.0[16]	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/17/09	970	399	<485	5.08	<1.00	<1.00	<3.00	<1.00	-
U-3	02/17/00	-	-	-	0.355	0.993	0.952	3.17	-	-
	05/26/00	-	-	-	1.5	0.954	1.01	2.39	-	-
	08/28/00	-	-	-	ND	ND	0.793	ND	-	-
	11/29/00	-	-	-	ND	ND	0.744	ND	-	-
dup	11/29/00	-	-	-	0.500	0.567	0.727	ND	-	-
	02/23/01	-	-	-	14.8	1.84	2.58	ND	-	-
	05/17/01	-	-	-	7.83	ND	0.620	1.16	-	-
	03/28/05	-	-	-	-	-	-	-	<2.00	-
	09/20/05	-	-	-	-	-	-	-	5.09	-
U-4	05/26/00	-	-	-	62.3	ND	ND	ND	-	-
	08/28/00	-	-	-	15.0	ND	1.76	ND	-	-
dup	08/28/00	-	-	-	14.3	0.509	2.99	1.04	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	0.844	6.84	1.07	11.2	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	09/26/02	-	-	-	0.760	0.552	1.07	2.99	-	-
dup	09/26/02	-	-	-	0.771	0.623	2.21	4.14	-	-
	03/28/05	-	-	-	-	-	-	-	5.62	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	6.69	-
	03/21/07	-	-	-	<0.200	<0.500	<0.500	<1.00	5.24	-
	09/19/07	-	-	-	<0.200	<0.500	<0.500	<1.00	6.36	-
	03/27/08	2,390[11]	51,500[5]	664[12]	<0.200	<0.500	<0.500	<1.00	4.47	-
	09/24/08	666	4,290	<481	<0.200	<1.00	<1.00	<3.00	5.52	-
dup	09/24/08	701	18,400	<490	<0.200	<1.00	<1.00	<3.00	5.35	-

COP0017033

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
U-5	02/17/00	-	-	-	3.86	0.654	0.501	2.54	-	-
	05/26/00	-	-	-	3.49	ND	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	ND	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	1.56	1.16	ND	ND	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	03/18/03	-	-	-	2.49	2.21	5.77	33.7	-	-
	09/25/03	-	-	-	2.39	1.71	7.89	7.66	-	-
	03/31/04	-	-	-	1.53	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	<0.500	0.806	<0.500	1.80	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/14/06	-	-	-	0.560	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	652	26,700	3,870	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-5A	03/27/08	2,100	14,100[5]	4,650	0.400	1.18	<0.500	1.66	<2.00	-
U-10	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/25/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/30/04	-	-	-	0.680	2.08	<0.500	4.01	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
U-11	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/25/03	-	-	-	1.74	1.37	1.04	1.74	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	03/30/04	-	-	-	0.650	1.93	<0.500	3.26	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	0.360	0.830	<0.500	1.09	<2.00	-
	09/20/05	-	-	-	0.480	1.10	<0.500	1.17	<2.00	-
	03/14/06	-	-	-	0.780	1.74	<0.500	2.86	-	-

COP0017034

TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
U-12	03/18/03	-	-	-	5.30	2.12	0.642	3.72	-	-
	09/25/03	-	-	-	<0.500	0.563	<0.500	2.00	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	1.03	0.978	0.719	2.58	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	4.21	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	4.54	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
U-14	09/27/06	-	3,980[1]	<526[1]	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/21/07	<80.0	428[3]	<500	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/19/07	2,760	1,920[9]	<500	<1.00[10]	<2.50[10]	<2.50[10]	<5.00[10]	<10.0[10]	-
	03/25/08	<80.0	<238	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/25/08	<80.0[16]	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/18/09	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-15	09/27/06	-	466	<485	7.01	<0.500	1.38	<1.00	<2.00	-
	03/21/07	<80.0	465[4]	<490	0.560	<0.500	<0.500	<1.00	<2.00	-
	09/19/07	88.7	377[4]	<500	1.72	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	132	<238	<476	1.47	<0.500	0.600	<1.00	<2.00	-
	09/25/08	<80.0[16]	<243	<485	0.860	<1.00	1.28	<3.00	<1.00	-
	03/17/09	711	314	5,310	2.26	<1.00	15.9	20.0	<1.00	-
U-16	09/27/06	-	2,530	<500	0.440	<0.500	5.43	<1.00	<2.00	-
	03/21/07	277	3,630[5]	860[6]	0.220	<0.500	0.930	<1.00	<2.00	-
	09/19/07	456	2,800[5]	590	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	308	1,410[3]	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/25/08	642[16]	2,230	<485	0.620	<2.00	<2.00	<6.00	<2.00	-
	03/17/09	657	2,280	497	0.640	<2.00	<2.00	<6.00	<2.00	-
U-17	09/27/06	-	4,540	<500	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/21/07	305	5,560[4]	<500	<0.450	<0.500	<0.500	<1.00	<2.00	-
	09/19/07	277	2,810[5]	<500	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	780	941[3]	<476	0.640	1.26	<1.00	<2.00	<4.00	-
	09/25/08	808[16]	688	<485	<0.400	<2.00	<2.00	<6.00	<2.00	-
	03/17/09	898	981	<478	<0.400	<2.00	<2.00	<6.00	<2.00	-
U-18	03/21/07	207	16,300	6,000	0.210	0.540	<0.500	<1.00	<2.00	-
	09/19/07	517	9,980[5]	1,860	3.06	0.890	<0.500	1.05	<2.00	-
	03/25/08	239	607[3]	<476	2.36	0.850	<0.500	<1.00	<2.00	-
	09/25/08	941[16]	1,540	<485	1.32	2.24	<2.00	<6.00	<2.00	-
	03/17/09	<80.0	<236	<472	<0.400	<2.00	<2.00	<6.00	<2.00	-
U-19	03/21/07	2,540	2,020	<490	<0.200	<0.500	0.670	<1.00	9.31	-
	09/19/07	3,160	1,470[3]	<485	<0.200	<0.500	1.02	<1.00	22.0	-
	03/25/08	1,950	522[3]	<476	<0.400	<1.00	<1.00	<2.00	<4.00	-
	09/25/08	-	-	-	-	-	-	-	-	-
U-20	03/20/07	561	4,530	561[8]	<0.200	<0.500	<0.500	<1.00	4.28	-
	09/19/07	512	1,460[3]	<526	<0.200	<0.500	<0.500	<1.00	6.90	-
	03/25/08	240	631[3]	<490	<0.200	<0.500	<0.500	<1.00	5.51	-
dup	03/25/08	244	600[3]	<490	<0.200	<0.500	<0.500	<1.00	5.82	-
	09/25/08	3,600[16]	1,450	<485	<1.00[18]	<5.00[18]	<5.00[18]	<15.00[18]	7.80[18]	-
	03/17/09	295	563	<485	9.88	4.35	3.74	8.26	2.88	-

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
U-21	03/20/07	2,060	3,600[7]	<490	0.270	<0.500	2.50	<1.00	<2.00	-
	09/19/07	2,070	3,050[3]	<500	<1.00[10]	<2.50[10]	3.60	<5.00[10]	<10.0[10]	-
	03/26/08	1,230	945[3]	<490	<1.00[10]	<2.50[10]	<2.50[10]	<5.00[10]	<10.0[10]	-
	09/25/08	706[16]	807	<485	<0.200	<1.00	<1.00	<3.00	5.27	-
	03/17/09	1,810	1,190	<485	<0.200	<1.00	<1.00	<3.00	5.61	-
U-22A	03/27/08	322[11]	10,000[5]	490	<0.400	<1.00	<1.00	<2.00	<4.00	-
	06/24/08	322	3,550	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	237	2,410	<476	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/06/09	279	1,790	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/19/09	303	1,680	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-22B	03/27/08	<80.0	473[4]	<481	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/24/08	<80.0	<238	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	455	<476	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/19/09	<80.0	384	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/19/09	<80.0	1,160	<556	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-22C	06/25/08	304	1,170	<472	<0.200	<0.500	<0.500	<1.00	<2.00	-
U-23	03/27/08	1,010	1,740[3]	<476	<1.00	<2.50	<2.50	<5.00	<10.0	-
	06/24/08	3,550	2,690	<476	6.96	1.32	1.56	3.16	<2.00	-
	09/23/08	532	1,450	<476	17.0	1.58	<1.00	2.16	<1.00	-
	01/06/09	303	6,700	<481	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/19/09	<80.0	3,430	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-24A	03/27/08	<400	<243	<485	<1.00	<2.50	<2.50	<5.00	<10.0	-
	06/24/08	<80.0	386	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	1.52	-
	01/06/09	<80.0	<236	<472	<0.200	<1.00	<1.00	<3.00	1.17	-
	03/19/09	<80.0	281	<495	<0.200	<1.00	<1.00	<3.00	1.22	-
U-24B	03/27/08	<400	<238	<476	<1.00	<2.50	<2.50	<5.00	<10.0	-
	06/25/08	<80.0	<236	<472	<0.200	<0.500	0.510	<1.00	<2.00	-
	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/19/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/19/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-25	03/27/08	722	<240	<481	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/24/08	869	301	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	211	388	<485	<0.400	<2.00	<2.00	<6.00	<2.00	-
	01/06/09	555	309	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/19/09	<80.0	<278	<556	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-26	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-27	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-28	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	-

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TABLE 2
GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	TOC (µg/l)
U-29A	06/26/08	1,150[3]	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	492	--	--	0.210	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	2,700	386,000	29,100	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-29B	03/26/08	<80.0	430[3]	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-29C	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
TB-LB	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	08/25/00	-	-	-	ND	ND	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	ND	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	12/01/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-

Notes:
2/00 and 5/00 data from IT Corporation
8/00, 11/00, 2/01 and 5/01 data from KHM Environmental Management, Inc.
NS/F = Not sampled floating product present
NS/S = Not sampled sheen present
µg/l = Micrograms per liter
ND = Not detected at or below detection limit
<0.200 = Not detected above the laboratory method reporting limit (MRL) of 0.200 µg/L.
TPH-G = Total petroleum hydrocarbons in the gasoline range
TPH-D = Total petroleum hydrocarbons in the diesel range
TPH-O = Total petroleum hydrocarbons in the heavy oil range
TOC = Total organic carbon
BTEX and MTBE analysis by USEPA Method 8021B or 8260B
TPH-G analysis using Northwest Method NWTPH-Gx
TPH-D and TPH-O analysis using Northwest Method NWTPH-Dx with silica gel cleanup.
TOC analysis using EPA Method 415
dup* = duplicate for B-30 submitted as blind duplicate labeled as B-50
dup**= duplicate for B-30 submitted as blind duplicate labled as B-31
dup*** = duplicate for B-30 submitted as blind duplicate labeled as B-99
TB-LB = trip blank
[1] = The reporting limit for this analyte was raised to compensate for the limited sample quantity available for analysis.
[2] = The reporting limit for this analyte was raised to compensate for the limited sample quantity available for analysis.
[3] = Detected hydrocarbons appear to be due to heavy gas/light diesel range components as well as weathered diesel.
[4] = Detected hydrocarbons in the diesel range do not have a distinct diesel pattern and may be due to heavily weathered diesel or possibly biogenic interference.
[5] = Hydrocarbon pattern most closely resembles weathered diesel.
[6] = The hydrocarbons present are a complex mixture of diesel range and heavy oil range organics.
[7] = Detected hydrocarbons appear to be due to heavy gas/light diesel range components as well as biogenic interference.
[8] = Detected hydrocarbons do not have a pattern and range consistent with typical petroleum products and may be due to biogenic interference.
[9] = Hydrocarbon pattern most closely resembles weathered jet fuel or similar light diesel range product.
[10] = The reporting limit was raised due to sample matrix effects.
[11] = Detected hydrocarbons in the gasoline range appear to be due to overlap of diesel range hydrocarbons.
[12] = Heavy oil range organics present are due to hydrocarbons eluting primarily in the diesel range.
[13] = Isopropylbenzene and n-propylbenzene were detected at concentrations of 8.51 µg/L and 10.9 µg/L, respectively.
[14] = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
[15] = Chromatographic fingerprint resembles a petroleum product, but the elution pattern indicates presence of a greater amount of heavier molecular weight constituents than the calibration standard.
[16] = The sample was analyzed one day past holding time.
[17] = Detected hydrocarbons in the diesel range are primarily due to overlap from a gasoline range product.
[18] = The reporting limit was raised due to high concentrations non-target analytes.

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
CHEVRON																		
B-7	02/18/00	-	5.22	ND	ND	ND	ND	ND	ND	ND	0.528	ND	7.26	16.3	ND	ND	17.6	0.962
	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17.2	ND	ND	13.6	ND
dup	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.9	ND	ND	15.8	ND
	08/25/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	11/30/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	02/22/01	-	1.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.64	ND	ND	2.82	ND
	05/17/01	-	0.934	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.59	ND	ND	0.564	ND
	03/20/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/29/03	-	2.12	ND	0.287	ND	ND	ND	ND	ND	ND	ND	ND	7.74	ND	ND	6.11	ND
	03/30/04	-	1.95	<0.200	0.436	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	7.73	<0.200	<1.60	5.95	<0.200
	03/09/05	-	2.42	<0.800	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.800	<0.400	9.07	<0.400	<1.40	8.82	<0.400
dup	03/09/05	-	2.66	<1.00	<0.250	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	9.74	<0.100	<2.00	7.30	0.154
	09/22/05	-	2.65	<0.990	<0.990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.990	10.4	<0.0990	<1.98	8.16	0.177
	03/25/08	<0.396	0.742	<0.396	<0.396	<0.0990	<0.0495	<0.0495	<0.990	<0.0495	<0.0990	<0.0495	<0.396	2.77	<0.0495	<0.792	1.44	<0.396
	06/24/08	<2.44	3.02	<2.44	<4.88	0.0403	0.0256	<0.0244	<0.488	<0.0244	0.150	<0.0244	<0.488	9.17	0.0250	<2.44	6.70	0.468
	09/23/08	<0.476	1.35	<0.476	<0.476	<0.0238	<0.0238	<0.0238	<0.476	<0.0238	0.0249	<0.0238	<0.476	5.14	<0.0238	<0.952[6]	2.57	<0.476
dup	09/23/08	<0.476	1.42	<0.476	<1.43[6]	<0.0238	<0.0238	<0.0238	<0.476	<0.0238	0.0479	<0.0238	<0.476	5.66	<0.0238	<0.952	3.96	<0.476
	01/06/09	<0.490	1.26	<1.96	<0.980	0.0544	0.0382	0.0337	<0.490	0.0327	0.121	<0.0245	<0.490	4.63	0.0364	<1.47	4.64	0.712
	03/18/09	<0.290	1.46	<0.966	<0.966	0.0288	0.0202	0.0191	<0.290	0.0164	0.0839	<0.0145	<0.966	5.85	0.0167	<0.580	2.30	<0.725
B-9	02/18/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.43	ND	ND	1.3	ND
	08/25/00	-	2.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.40	ND	ND	1.33	ND
	11/30/00	-	0.700	ND	0.600	0.460	0.240	0.400	ND	ND	ND	ND	ND	6.70	ND	0.780	0.200	0.160
	02/22/01	-	1.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.20	ND	ND	0.528	ND
	05/17/01	-	1.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.60	ND	ND	0.386	ND
	09/19/01	-	1.08	0.240	ND	ND	ND	ND	0.120	ND	ND	0.100	ND	4.00	0.100	0.260	0.780	0.100
	03/21/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/02	-	1.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.09	ND	ND	0.358	ND
	03/20/03	-	0.242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.508	ND	ND	ND	ND
	09/30/03	-	1.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.38	ND	ND	0.265	ND
	03/30/04	-	0.964	<0.300	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	3.10	<0.200	<1.50	0.951	0.234
	03/08/05	-	0.910	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	2.78	<0.100	<0.700	0.679	<0.100
	06/22/05	-	0.887	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	3.05	<0.100	<0.500	0.873	<0.100
	09/21/05	-	0.832	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	2.93	<0.0990	<0.891	0.702	<0.0990
	09/26/06	-	0.780	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.105	<0.100	0.221	1.99	<0.100	<0.550	0.805	0.226
	03/22/07	-	0.489	<0.146	<0.0976	0.171	0.225	0.328	0.357	0.343	0.389	0.0970	0.519	1.95	0.288	<0.829	0.531	0.610
B-9A	09/19/07	<9.76[6]	<9.76[6]	<9.76[6]	<9.76[6]	0.341	0.189	0.156	<1.95	0.117	0.498	<0.0976	<9.76[6]	68.2	0.120	<19.5[6]	34.1	5.96
	03/25/08	5.39	4.56	<4.95	2.02	0.381	0.290	0.219	<2.48	0.231	0.622	<0.124	1.25	21.2	0.212	<4.95	13.5	<2.48
	06/24/08	3.08	6.25	<2.44	<7.32	0.250	0.219	0.159	<0.488	0.129	0.471	0.0394	<0.976	22.2	0.160	<4.88	21.5	0.967
	09/23/08	1.33	2.72	<0.952[8]	<1.43[8]	0.106	0.0750	0.0597	<0.952[8]	0.0497	0.211	<0.0476[8]	0.487	12.5	0.0548	<2.86[8]	7.27	0.496
dup	09/23/08	1.42	2.89	<0.952[8]	<1.43[8]	0.130	0.0930	0.0786	<0.952[8]	0.0620	0.255	<0.0476[8]	0.570	12.8	0.0644	<2.38[8]	7.15	0.638
	01/06/09	1.01	2.32	<1.96	<1.96	0.174	0.223	0.272	0.350	0.268	0.368	0.0948	<1.96	10.2	0.296	<3.92	3.44	<1.96
dup	01/06/09	0.682	1.20	<0.485	<0.485	0.0744	0.0876	0.0922	0.128	0.0968	0.147	0.0340	0.290	7.19	0.109	<1.46	2.19	0.435
	03/24/09	0.475	1.70	<0.891	<1.19	0.137	0.138	0.149	<0.297	0.150	0.265	0.0427	0.503	14.4	0.140	<1.34	6.88	0.914

COP0017038

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
B-10	02/18/00	-	3.58	ND	ND	0.0670	ND	ND	ND	ND	0.14	ND	0.632	11.8	ND	ND	12.9	0.513
dup	02/18/00	-	4.83	ND	2.9	5.47	ND	0.66	ND	ND	0.689	ND	1.95	15.9	ND	ND	23.4	1.85
	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	0.101	ND	ND	11.9	ND	ND	12.7	0.818
	08/25/00	-	1.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.18	ND	ND	2.91	ND
	11/30/00	-	1.42	ND	0.320	ND	ND	ND	ND	ND	ND	ND	ND	2.24	ND	0.980	0.160	0.120
	02/23/01	-	1.01	ND	0.252	ND	ND	ND	ND	ND	ND	ND	0.234	1.25	ND	ND	1.33	0.225
	05/17/01	-	0.635	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.976	ND	ND	0.521	ND
	09/19/01	-	0.420	ND	ND	ND	ND	ND	0.100	ND	ND	ND	0.200	0.300	0.100	0.360	ND	0.240
	03/21/02	-	ND	ND	0.188	ND	ND	ND	ND	ND	ND	ND	0.190	1.23	ND	ND	1.23	0.220
	09/24/02	-	1.04	0.132	1.49	ND	ND	0.170	ND	0.189	ND	ND	ND	1.32	ND	0.717	1.34	0.245
	03/20/03	-	1.05	ND	0.190	ND	ND	ND	ND	ND	ND	ND	0.194	1.30	ND	ND	1.27	0.236
	09/29/03	-	1.09	ND	0.234	ND	ND	ND	ND	ND	ND	ND	0.463	1.91	ND	ND	2.11	0.436
	03/30/04	-	1.65	<0.200	0.671	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.588	5.22	<0.200	<2.40	5.67	0.891
	03/08/05	-	1.41	<0.300	0.638	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	0.814	4.46	<0.200	<1.40	2.76	0.829
	09/21/05	-	1.27	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<1.98	<0.990	2.22	<0.990	<1.98	1.89	<0.990
	03/14/06	-	1.05	<0.200	0.170	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.154	2.15	<0.0200	<1.50	1.68	0.211
	09/26/06	-	1.64	<0.388	0.527	0.0463	0.0590	0.0717	0.110	0.0542	0.0928	0.0265	0.469	4.89	0.0768	<1.17	3.66	0.635
	03/21/07	-	1.18	<0.383[6]	<0.153[6]	0.0376	0.0329	0.0403	0.0420	0.0329	0.0510	0.0121	0.236	6.81	0.0335	<3.44[6]	2.83	0.416
dup	03/21/07	-	1.06	<0.291[6]	<0.194[6]	0.058	0.0606	0.0578	0.0643	0.0677	0.0846	0.0216	0.275	5.26	0.0545	<2.43[6]	1.80	0.440
	09/18/07	<0.962[6]	0.889	<0.192	<0.962[6]	0.0293	0.0288	0.0270	<0.192	0.0292	0.0413	0.0102	<0.962[6]	2.20	0.0218	<3.85[6]	<0.962[6]	1.35
	03/25/08	<0.0990	0.728	<0.198	0.114	<0.0198	<0.00495	0.00544	<0.0990	0.00519	<0.0198	<0.00495	0.214	0.968	<0.00495	<0.594	1.02	0.162
	09/23/08	<0.476[8]	<1.19[8]	<0.476[8]	<0.476[8]	0.182	0.148	0.146	<0.476[8]	0.131	0.267	0.0500	0.671	1.87	0.136	<0.952[8]	1.11	0.584
	03/24/09	<2.43	2.69	<2.43	<2.43	0.0367	0.0247	0.0251	<0.194	0.0196	0.0853	<0.00971	<2.43	8.59	0.0215	<2.43	4.96	0.819
dup	03/24/09	<0.971	1.85	<0.971	<0.971	0.0355	0.0236	0.0249	<0.194	0.0179	0.0782	<0.00971	<0.971	7.45	0.0217	<0.971	4.66	0.782
B-11	02/18/00	-	1.75	ND	ND	ND	ND	0.547	ND	ND	ND	ND	ND	2.15	ND	ND	1.53	0.764
	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.891	0.169
	08/25/00	-	1.35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.47	ND	ND	1.76	ND
	11/30/00	-	2.10	0.400	1.02	0.400	0.180	0.180	ND	ND	ND	ND	ND	2.88	ND	1.20	0.260	ND
	02/22/01	-	ND	ND	0.106	ND	ND	ND	ND	ND	ND	ND	ND	1.12	ND	ND	0.815	ND
	05/17/01	-	0.478	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.729	ND	ND	0.358	ND
	03/30/04	-	0.931	<0.300	<0.300	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	1.06	<0.200	<3.50	0.604	0.418
	03/09/05	-	0.664	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	1.15	<0.100	<1.40	0.623	0.172
	06/22/05	-	0.685	<0.150	117	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	0.111	1.04	<0.100	<1.00	0.471	0.181
	09/21/05	-	0.854	<0.149	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	1.36	<0.0990	<1.58	0.743	0.124
	06/25/08	0.319	0.268	<0.0952	<0.0952	0.0198	0.0260	0.0376	<0.0952	0.0219	0.0341	0.0121	<0.0952	0.314	0.0348	<0.667	0.0891	0.0764

COP0017039

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
B-14	02/18/00	-	1.08	ND	0.222	0.01	ND	ND	ND	ND	0.104	ND	0.561	1.84	ND	7	1.9	0.582
	05/23/00	-	ND	ND	1.85	ND	ND	ND	ND	ND	ND	ND	0.467	ND	ND	ND	1.36	0.621
	08/25/00	-	1.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.75	ND	24.5	2.06	ND
	11/30/00	-	0.920	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.60	ND	0.980	ND	ND
	02/22/01	-	ND	ND	0.187	ND	ND	ND	ND	ND	ND	ND	0.390	1.10	ND	ND	1.16	0.489
	05/17/01	-	0.738	ND	0.106	ND	ND	ND	ND	ND	ND	ND	0.341	0.966	ND	1.72	0.892	0.338
B-19	03/20/03	-	1.69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.440	ND	ND	6.62	ND
	09/29/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.68	ND	ND	13.2	ND
	03/29/04	-	2.12	<1.00	<1.00	<1.00	0.0213	<0.0200	<0.0200	<0.0200	<1.00	<0.0200	<1.00	7.01	<0.0200	<3.50	11.9	<1.00
	03/09/05	-	2.40	<1.00	0.973	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	8.85	<0.500	<3.00	16.0	0.537
	06/22/05	-	2.96	<2.00	0.849	<0.100	<0.100	<0.100	<0.100	<0.100	0.141	<0.200	<0.300	9.59	<0.100	<2.50	15.8	0.277
	09/22/05	-	<1.34	<0.396	<0.297	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.149	4.14	<0.0990	<1.98	6.40	0.209
	03/14/06	-	1.97	<0.472	0.291	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	0.0427	<0.0189	<0.0943	4.60	<0.0189	<2.17	8.98	0.113
	06/26/08	<0.952	2.83	<0.952	<3.81	0.0473	0.0235	0.0193	<0.0952	0.0117	0.118	0.00480	<0.952	8.35	0.0154	<2.86	18.7	0.322
	03/18/09	<0.985	1.59	<0.985	<0.985	0.0132	0.00630	<0.00493	<0.0985	<0.00493	0.0397	<0.00493	<0.985	5.41	<0.00493	<0.985	7.71	0.234
dup	03/18/09	<0.485	1.69	<0.971	<1.46	0.0403	0.0187	0.0130	<0.0971	0.0115	0.103	<0.00485	<0.485	9.63	0.0114	<1.21	11.4	0.591
B-20	03/20/03	-	0.322	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.577	ND	ND	ND	ND
	09/29/03	-	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.86	ND	ND	4.27	ND
	03/30/04	-	1.07	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	3.81	<0.200	<1.50	0.988	<0.200
	03/09/05	-	1.29	<0.400	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	<0.200	4.58	<0.200	<0.800	3.03	<0.200
	09/22/05	-	<0.891	<0.248	<0.347	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	3.13	<0.0990	<0.693	0.812	<0.0990
	03/25/08	<0.390	1.24	<0.390	<0.780	<0.0976	<0.0195	<0.0390	<0.390	<0.0390	<0.0976	<0.0195	<0.390	4.35	<0.0195	<0.780	1.89	<0.390
B-21	09/19/01	-	3.40	0.200	1.78	0.360	0.360	0.320	0.400	0.300	0.540	0.160	1.52	16.1	0.320	1.18	16.8	1.54
	03/21/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.38	ND	ND	3.84	ND
	09/24/02	-	2.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.66	ND	ND	4.15	ND
	03/20/03	-	2.71	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.0	ND	ND	7.00	ND
	09/29/03	-	3.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.94	ND	ND	8.86	0.394
	03/29/04	-	2.52	<0.500	<0.500	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0396	<0.0200	<0.500	8.76	<0.0200	<3.00	7.58	0.259
	03/08/05	-	2.79	<0.800	<0.600	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.800	<0.400	10.5	<0.400	<2.20	10.8	0.430
	09/22/05	-	2.26	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<1.98	<0.990	8.41	<0.990	<1.98	5.22	<0.990
	03/15/06	-	2.66	<0.755	<0.189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.189	9.04	<0.0189	<1.79	7.34	0.0789
	09/26/06	-	2.39	<0.693	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.149	9.45	<0.0990	<1.39	6.85	<0.149
	03/21/07	-	1.87	<0.585[6]	<0.146[6]	0.00839	0.00665	0.00618	<0.00976	<0.00488	0.0172	<0.00488	<0.0976[6]	11.2	<0.00488	<2.63[6]	4.77	0.142
	09/19/07	<0.498	1.92	<1.49[6]	<1.49[6]	<0.0249	<0.0249	<0.0249	<0.498	<0.0249	0.0368	<0.0249	<0.498	11.9	<0.0249	<4.98[6]	6.68	<0.498
	03/26/08	<0.319	2.02	<0.638	<0.319	<0.0160	<0.0160	<0.0160	<0.319	<0.0160	0.0204	<0.0160	<0.319	8.20	<0.0160	<0.957	5.05	<0.319
	09/23/08	<0.476[8]	2.08	<0.476[8]	<1.43[8]	0.0361	0.0258	0.0295	<0.476[8]	<0.0238[8]	0.0612	<0.0238[8]	0.284	8.25	<0.0238[8]	<1.43[8]	6.48	<0.476[8]
	03/24/09	<1.99	3.37	<1.99	<1.99	0.0561	0.0382	0.0288	<0.398	0.0271	0.120	<0.0199	<1.99	15.0	0.0215	<1.99	14.1	0.646

COP0017040

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
B-26	03/30/04	-	0.778	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.299	0.649	<0.200	27.5	1.08	0.447
	03/09/05	-	0.778	<0.100	<0.100	<0.100	<0.100	0.140	<0.100	<0.100	<0.100	<0.200	0.236	0.421	<0.100	5.37	0.912	0.371
	06/22/05	-	0.651	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	0.264	0.588	<0.200	10.9	0.639	0.293
	09/22/05	-	0.841	<0.149	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	0.161	0.440	<0.0990	7.80	0.701	0.224
	06/26/08	1.87	0.412	<0.190	<0.190	0.0407	0.0301	0.0603	<0.190	0.0415	0.0763	0.0130	0.163	0.324	0.0399	1.24	0.357	0.218
B-28	02/18/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.09	ND	ND
	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/25/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/23/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/17/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/01	-	ND	ND	ND	ND	ND	ND	0.100	ND	ND	ND	ND	ND	0.100	ND	ND	ND
	03/21/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/20/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/30/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.767	ND	ND
	03/29/04	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0400	<0.0200	<0.100	<0.0400	<0.0200
	03/09/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	1.18	<0.100	<0.100
	09/21/05	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	<0.0990	<0.0990	0.395	<0.0990	<0.0990
	03/14/06	-	<0.0404	<0.0404	<0.0404	0.0735	0.0823	0.0839	0.105	0.0695	0.111	<0.0404	0.180	<0.0404	0.0734	<0.0404	0.112	0.179
	09/28/06	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0294	<0.0196	<0.0196	<0.0196	<0.0196
	09/18/07	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	0.00584	<0.0971	<0.00485	0.00541	<0.00485	<0.0971	<0.0971	<0.00485	0.130	<0.0971	<0.0971
	03/25/08	<0.0971	<0.0971	<0.0971	<0.0971	0.0132	0.0152	0.0156	<0.194	0.0155	0.0178	<0.00971	<0.0971	<0.0971	0.0154	<0.0971	<0.0971	<0.0971
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	0.00908	0.0101	0.00913	<0.0952	0.00866	0.0124	<0.00476	<0.0952	<0.0952	0.00885	<0.0952	<0.0952	<0.0952
	03/24/09	<0.0971	<0.0971	<0.0971	<0.0971	0.0238	0.0287	0.0360	<0.0971	0.0311	0.0412	0.00832	<0.0971	<0.0971	0.0260	<0.0971	<0.0971	<0.0971
B-29	09/20/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/21/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/20/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/30/03	-	ND	ND	ND	ND	0.121	0.136	0.157	0.114	0.111	ND	0.132	ND	0.123	ND	ND	0.138
	03/29/04	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0300	<0.0200	<0.0600	<0.0200	<0.0200
	03/09/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/21/05	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990
	03/14/06	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0490	<0.0294	0.0238
	09/28/06	-	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194
	03/22/07	-	<0.00990	<0.00990	<0.00990	<0.00495	<0.00495	0.00524	<0.00990	<0.00495	0.00663	<0.00495	<0.0198	<0.0792	<0.00495	<0.0198	0.126	0.0201
	09/18/07	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	0.00624	<0.0971	0.00561	<0.00485	<0.00485	<0.0971	<0.0971	0.00573	<0.0971	<0.0971	<0.0971
	03/25/08	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<0.0980	<0.0980	<0.0980
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	0.00789	0.00553	0.00665	<0.0952	<0.00476	0.0112	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	03/24/09	<0.0995	<0.0995	<0.0995	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.0995	0.00533	<0.0995	<0.0995	<0.0995

COP0017041

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
B-30	02/18/00	-	0.121	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.113	0.177	ND	ND	0.175	0.202
	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.105	ND
	08/25/00	-	0.385	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.530	ND	ND	0.423	ND
	11/30/00	-	0.280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.440	ND	0.280	0.300	0.100
	02/23/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup**	02/23/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/17/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.116	ND	ND	0.108	ND
	09/20/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.100	ND	0.100	ND	ND
dup	09/20/01	-	ND	ND	ND	ND	ND	ND	0.100	ND	ND	0.100	ND	ND	0.120	0.100	ND	ND
	03/21/02	-	0.162	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.312	ND	ND	0.157	0.114
dup	03/21/02	-	0.162	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.314	ND	ND	0.164	0.123
	09/24/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/20/03	-	0.142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.133	ND	ND	0.132	ND
dup*	03/20/03	-	0.108	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.126	ND	ND	0.105	ND
	09/30/03	-	ND	ND	ND	0.582	0.585	0.421	0.323	0.443	0.531	ND	0.827	0.349	0.272	ND	0.451	1.51
dup***	09/30/03	-	ND	ND	ND	0.473	0.416	0.410	0.291	0.357	0.450	ND	0.728	ND	0.248	ND	0.432	1.26
	03/29/04	-	0.119	<0.0200	0.0449	0.0576	0.0507	0.0420	0.0344	0.0393	0.0633	<0.0200	0.123	0.173	0.0295	<0.320	0.170	0.240
dup***	03/29/04	-	<0.280	<0.800	0.0485	0.0605	0.0596	0.0452	0.0417	0.0438	0.0637	<0.0200	0.112	0.216	0.0361	<0.640	0.170	0.244
	03/09/05	-	0.242	<0.200	<0.200	0.223	0.209	<0.200	<0.200	<0.200	0.217	<0.400	0.400	<0.300	<0.200	<0.400	0.284	0.637
	09/21/05	-	0.103	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	0.198	<0.0990	<0.0990	<0.0990	<0.297	<0.0990	<0.0990
dup****	09/21/05	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	0.198	<0.0990	<0.0990	<0.0990	<0.248	<0.0990	<0.0990
	03/14/06	-	0.310	<0.142	0.0684	0.0761	0.0628	0.0455	0.0480	0.0368	0.0783	<0.0189	0.152	0.369	0.0353	<0.292	0.260	0.323
dup	03/14/06	-	0.375	<0.182	0.0933	0.106	0.0871	0.0607	0.0674	0.0564	0.109	<0.0404	0.202	0.375	0.0491	<0.404	0.275	0.424
	09/28/06	-	0.157	<0.0891	0.0317	0.0371	0.0391	0.0320	0.0316	0.0216	0.0344	<0.0198	0.0477	0.108	0.0246	<0.297	0.0869	0.133
	03/22/07	-	0.0691	<0.0392	<0.00980	0.0230	0.0222	0.0173	0.0167	0.0193	0.0291	0.00518	0.0242	0.200	0.0134	<0.245	0.201	0.114
	09/18/07	<0.0990	<0.0990	<0.0990	<0.0990	0.00633	<0.00495	0.00528	<0.0990	<0.00495	0.00735	<0.00495	<0.0990	<0.0990	<0.00495	<0.693[6]	<0.0990	0.118
dup	09/18/07	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00495	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.481[6]	<0.0962	<0.0962
B-32	03/20/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.161	ND	ND	ND	0.108
	09/29/03	-	ND	ND	ND	0.114	0.112	0.114	ND	0.114	0.188	ND	0.557	1.06	ND	ND	ND	0.498
	03/09/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/22/05	-	<1.00	<1.00	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	0.171	<1.00	<1.00	<0.300	<0.150	0.256
	03/15/06	-	<0.0190	<0.0190	<0.0952	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	0.0280	<0.0190	0.193	<0.0762	<0.0190	<0.152	<0.0381	0.206

COP0017042

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
B-33	03/20/03	-	0.589	ND	ND	ND	ND	0.385	0.370	ND	0.306	ND	0.449	2.01	0.300	ND	0.914	0.458
	09/30/03	-	11.0	ND	3.30	8.28	19.2	44.0	37.5	26.4	34.1	7.35	20.2	33.3	30.6	ND	39.7	29.5
	03/30/04	-	3.03	<2.00	2.42	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	12.5	<2.00	<4.50	13.6	3.28
	03/09/05	-	2.42	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	9.36	<1.00	<2.00	10.6	1.07
	06/22/05	-	3.00	<1.50	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	10.0	<1.00	<2.00	10.2	<1.00
	09/22/05	-	2.56	<0.990	<1.49	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<1.98	<0.990	8.31	<0.990	<1.98	6.82	<0.990
	03/15/06	-	1.08	<0.308	<0.154	0.153	0.233	0.270	0.286	0.292	0.400	0.0854	0.336	2.94	0.270	<0.615	2.45	0.533
	06/26/08	<0.476	1.28	<0.476	<0.476	0.0855	0.0864	0.148	<0.476	0.0980	0.208	0.0307	0.450	2.93	0.0955	<0.952	2.86	0.475
	03/18/09	<1.94	3.17	<1.94	<1.94	0.418	0.370	0.615	<1.94	0.505	1.01	0.111	2.14	12.7	0.363	<1.94	13.5	3.22
CR-1	09/20/01	-	0.520	ND	ND	ND	0.120	0.100	0.140	0.100	ND	0.120	ND	1.94	0.140	0.300	0.160	ND
	03/21/02	-	0.216	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.789	ND	ND	0.194	ND
	09/24/02	-	1.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.32	ND	0.887	0.660	ND
	03/20/03	-	0.758	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.53	ND	ND	0.748	ND
	09/30/03	-	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.02	ND	ND	1.11	ND
	03/30/04	-	0.473	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.59	<0.100	<0.650	0.322	<0.100
	03/08/05	-	0.825	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	3.18	<0.100	<0.850	0.766	<0.100
	09/21/05	-	1.22	<0.297	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	4.63	<0.0990	<1.63	1.52	<0.0990
	09/27/06	-	0.978	<0.197	0.0747	<0.00985	<0.00985	<0.0197	<0.0493	<0.0197	<0.00985	<0.00985	<0.0493	3.19	<0.00985	<0.788	1.07	0.0513
	03/22/07	-	0.118	<0.0343[6]	<0.0490[6]	<0.00490	<0.00490	<0.00490	<0.00980	<0.00490	<0.0147[6]	<0.00490	<0.0245[6]	0.838	<0.00490	<0.275[5]	0.140	<0.0784[6]
	09/20/07	<0.500[6]	1.01	<0.500[6]	<0.500[6]	<0.0250[6]	0.0112[4]	0.0146[4]	<0.100	0.0120[4]	<0.0250[6]	0.00524[4]	<0.500[6]	9.81	0.00512[4]	<2.50	1.03	<0.500[6]
	03/25/08	<0.0980	<0.0980	<0.0980	<0.0980	<0.0245	<0.00490	<0.00490	<0.0980	<0.00490	<0.0245	<0.00490	<0.0980	<0.0980	<0.00490	<0.0980	<0.0980	<0.0980
	09/24/08	<0.0952	0.500	<0.0952	<0.0952	0.00712	0.00625	0.00645	<0.0952	0.00486	0.0145	<0.00476	<0.0952	2.38	0.00599	<0.571[8]	0.375	<0.0952
	03/25/09	<0.0971	0.125	<0.0971	<0.0971	0.00665	0.00565	0.00614	<0.0971	0.00595	0.0129	0.00515	<0.0971	0.411	0.00674	<0.0971	<0.0971	<0.0971
CR-3	03/09/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	06/22/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/22/05	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-8	02/18/00	-	0.749	ND	0.264	0.981	2.47	1.6	2.92	1.3	1.28	3.42	1.34	ND	1.96	ND	0.125	1.97
	05/23/00	-	ND	ND	0.223	0.232	0.61	0.46	0.981	0.331	0.326	ND	0.27	ND	0.613	ND	ND	0.458
	08/25/00	-	ND	ND	ND	0.313	0.666	0.445	0.755	0.455	0.434	ND	0.674	ND	ND	ND	ND	0.913
	11/30/00	-	ND	ND	ND	ND	0.120	ND	0.160	ND	ND	ND	ND	ND	0.100	ND	ND	0.180
	02/22/01	-	ND	0.284	0.105	0.536	1.25	0.970	1.46	0.628	0.923	ND	0.749	0.103	0.960	ND	0.108	1.41
	05/16/01	-	ND	ND	ND	ND	0.389	0.301	0.459	ND	0.229	ND	0.371	ND	0.326	ND	ND	0.472

COP0017043

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
CR-9	02/18/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/23/00	-	ND	ND	0.115	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/25/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	08/25/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/30/00	-	ND	ND	ND	ND	ND	ND	0.160	0.120	ND	ND	ND	ND	0.120	ND	ND	0.100
dup	11/30/00	-	ND	ND	ND	0.140	0.260	0.260	0.400	0.300	0.200	ND	0.160	ND	0.320	ND	ND	0.240
	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CR-11	02/18/00	-	0.333	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.982	ND	ND	0.327	ND
	05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/25/00	-	0.402	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.20	ND	ND	0.450	ND
	11/30/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	02/22/01	-	0.208	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.457	ND	ND	ND	ND
	05/16/01	-	0.149	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.221	ND	ND	ND	ND
CR-26	03/09/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	0.215	<0.100	<0.200	0.165	<0.100
	06/22/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	0.264	<0.100	<0.100	<0.100	<0.100
	09/22/05	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	0.172	<0.0990	<0.0990	<0.0990	<0.0990
	03/25/08	<0.0962	<0.0962	<0.0962	<0.0962	0.0118	0.0126	0.0145	<0.0962	0.0135	0.0206	<0.00481	<0.0962	<0.0962	0.0122	<0.0962	<0.0962	<0.0962
	06/24/08	<0.0985	<0.0985	<0.0985	<0.0985	0.0238	0.0271	0.0326	<0.0985	0.0283	0.0394	0.0101	0.0583	0.0849	0.0267	<0.0985	0.0720	0.0583
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	0.0144	0.0150	0.0142	<0.0952	0.0158	0.0221	0.00510	<0.0952	0.0574	0.0129	<0.0952	<0.0952	<0.0952
	01/06/09	<0.0980	<0.0980	<0.0980	<0.0980	0.0146	0.0151	0.0199	<0.0980	0.0162	0.0254	0.00513	0.0518	0.0508	0.0171	<0.0980	<0.0980	<0.0980
CR-27C	03/25/08	<0.0995	<0.0995	<0.0995	<0.0995	0.0375	0.0382	0.0519	<0.0995	0.0478	0.0583	0.0136	<0.0995	<0.0995	0.0415	<0.0995	<0.0995	<0.0995
	06/24/08	<0.0971	<0.0971	<0.0971	<0.0971	0.101	0.125	0.148	0.141	0.142	0.173	0.0455	0.200	<0.0971	0.126	<0.0971	0.129	0.198
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	0.0948	0.0996	0.104	0.105	0.0911	0.140	0.0344	0.215	<0.0952	0.0928	<0.0952	0.130	0.240
	01/06/09	<0.0971	<0.0971	<0.0971	0.0693	0.238	0.334	0.377	0.327	0.334	0.404	0.101	0.506	<0.0971	0.292	<0.0971	0.442	0.329
CR-28A	06/25/08	55.3	0.448	<0.476	<0.476	<0.0238	<0.0238	<0.0238	<0.476	<0.0238	0.0262	<0.0238	<0.476	0.535	<0.0238	177	0.399	<0.476
	09/25/08	55.6	0.422	<0.481	<0.481	0.0268	<0.0240	<0.0240	<0.481	<0.0240	0.0307	<0.0240	<0.481	0.557	<0.0240	184	0.442	<0.481
CR-28B	06/25/08	<0.192	<0.192	<0.192	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.192	<0.00962	<0.192	<0.192	<0.192
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	0.00498	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-28C	06/25/08	<0.0952	<0.0952	<0.0952	<0.0952	0.0494	0.0421	0.0517	<0.0952	0.0478	0.0649	0.0131	0.102	<0.0952	0.0345	<0.0952	<0.0952	0.119
	09/25/08	0.0783	<0.0962	<0.0962	<0.0962	0.0171	0.00854	0.0129	<0.0962	0.00891	0.0203	<0.00481	<0.0962	<0.0962	0.00713	0.481	<0.0962	<0.0962
CR-29A	06/26/08	10.9	0.473	<0.0952	0.0707	0.00636	<0.00476	<0.00476	0.0952	<0.00476	0.00733	<0.00476	0.0479	0.574	<0.00476	2.51	0.873	0.0621
	09/25/08	11.2	0.723	<0.144	0.0654	0.0148	<0.00481	<0.00481	<0.0962	<0.00481	0.0167	<0.00481	0.0653	0.685	<0.00481	<4.33	0.990	0.103
CR-29B	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962

COP0017044

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
CR-30A	06/26/08	<0.0952	0.811	<0.190	0.0838	0.0117	0.00653	<0.00476	<0.0952	<0.00476	0.0154	<0.00476	<0.0952	1.15	<0.00476	<0.857	1.15	0.115
	09/24/08	<0.0962	0.602	<0.0962	<0.0962	0.0170	0.0104	0.00658	<0.0962	0.00622	0.0253	<0.00481	<0.0962	0.921	0.00599	<0.817	0.427	0.130
CR-30B	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-31A	06/26/08	<0.0952	1.50	<0.952	<0.190	0.0205	0.0148	0.00918	<0.0952	0.00794	0.0331	<0.00476	<0.0952	6.63	0.00892	<0.952	1.69	0.0977
	09/24/08	<0.481	1.23	<0.481	<0.481	<0.0240	<0.0240	<0.0240	<0.481	<0.0240	0.0257	<0.0240	<0.481	5.90	<0.0240	<1.20	1.34	<0.481
CR-31B	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-32A	06/26/08	<0.0952	0.396	<0.0952	<0.190	0.00625	<0.00476	<0.00476	<0.0952	<0.00476	0.0101	<0.00476	<0.0952	1.41	<0.00476	<0.381	0.445	<0.0952
	09/24/08	<0.192	0.746	<0.192	<0.192	<0.0192	<0.00962	<0.00962	<0.192	<0.00962	<0.0192	<0.00962	<0.192	2.56	<0.00962	<0.865	0.646	<0.192
CR-32B	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-32C	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	0.00614	0.00780	0.00869	<0.0952	0.00884	0.00964	<0.00476	<0.0952	<0.0952	0.00737	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-33	03/26/08	<0.0980	<0.980	<0.980	<0.490	<0.0245	<0.0245	<0.0245	<0.0980	<0.0245	<0.0245	<0.0245	<0.490	<0.980	<0.0245	<0.196	<0.490	<0.0980
	06/24/08	<0.398	<0.398	<0.398	<0.398	<0.00498	<0.00498	<0.00498	0.0995	<0.00498	0.00751	<0.00498	<0.398	0.413	<0.00498	<0.796	<0.398	<0.0995
	09/24/08	<0.385[6]	<0.385[6]	<0.385[6]	<0.385[6]	0.00503	<0.00481	<0.00481	<0.0962	<0.00481	0.00821	0.00712	<0.385[6]	0.559	0.00873	<0.769[6]	<0.385[6]	<0.0962
	01/06/09	<0.980	<0.980	<0.980	<0.980	0.00710	0.00683	0.00831	<0.0980	0.00624	0.0133	<0.00490	<0.980	0.547	0.00849	<0.980	<0.980	<0.980
	03/18/09	<0.0976	<0.976	<0.976	<0.390	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00976	<0.00488	<0.390	<0.976	<0.00488	<0.390	<0.390	<0.146

COP0017045

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
KINDER MORGAN		-																
MW-8	02/16/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.66	ND	ND
	05/31/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.53	ND	ND
	12/01/00	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.680	0.140	0.160
	02/22/01	-	0.221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.104	ND
	05/16/01	-	0.149	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	05/16/01	-	0.128	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/01	-	0.160	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.260	0.100	ND
	03/14/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	03/14/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/27/02	-	0.148	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/03	-	0.181	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/30/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100
	09/27/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.350	<0.100	<0.100
dup	09/27/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.300	<0.100	<0.100
	03/29/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/21/05	-	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204
	03/15/06	-	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.155	<0.0194	<0.0194
dup	03/15/06	-	0.0260	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.125	<0.0192	<0.0192
	09/26/06	-	0.147	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.600[6]	0.0601	0.0326
	03/22/07	-	0.0292	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.314[6]	<0.0196	<0.0196
	09/20/07	<0.0100	0.0625	<0.0150[6]	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<1.55[6]	0.0153	<0.0200[6]
dup	09/20/07	<0.0100	0.0662	<0.0150[6]	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<1.05[6]	0.0143	<0.0150[6]
	03/24/08	<0.0044	<0.0024	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.12	<0.0050	<0.0035
	09/22/08	0.0042	0.053	0.0050	0.0050	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	0.010	<0.0026	0.16	0.0095	0.0098
dup	09/22/08	0.0044	0.066	0.0048	0.0047	<0.0026	<0.0043	0.0038	<0.0029	<0.0025	<0.0034	<0.0025	0.0045	0.010	<0.0026	0.18	0.011	0.0097
	03/16/09	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
dup	03/16/09	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.190	<0.0952	<0.0952

COP0017046

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
MW-10	02/16/00	-	0.113	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0759	0.0845
	05/31/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	0.119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/01/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.180	ND	ND
	02/22/01	-	0.134	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	0.104	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-11	02/16/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.66	ND	410	ND	ND
	05/31/00	-	ND	ND	0.159	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	555	0.256	ND
	08/24/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	451	ND	ND
	12/01/00	-	0.200	0.120	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.300	ND	ND	0.160	ND
	02/22/01	-	0.247	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	411	0.184	ND
	05/16/01	-	0.117	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.185	ND	572	0.108	ND
MW-13	02/16/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/31/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/01/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	12/01/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15	02/17/00	-	0.118	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0743	ND	ND	ND	ND
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/01/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-21	02/17/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/01/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-22	02/17/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.23	ND	356	1.09	ND
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	345	ND	ND
	08/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	386	ND	ND
	12/01/00	-	0.300	0.160	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.500	ND	ND	0.400	ND
	02/21/01	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	05/16/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
MW-23	02/17/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	05/30/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	08/23/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	12/01/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	02/22/01	-	2.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.12	ND	35.0	3.27	ND
	05/16/01	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
MW-25	09/21/01	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.120	ND	ND
	03/14/02	-	0.172	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/27/02	-	0.194	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.101
	03/18/03	-	0.163	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/03	-	0.289	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/30/04	-	0.233	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.350	<0.100	<0.100
	09/27/04	-	0.384	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100
	03/28/05	-	0.177	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.250	<0.100	<0.100
	09/21/05	-	0.205	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	0.0344	0.0401
	03/15/06	-	0.112	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.135	<0.0192	0.0255
	09/26/06	-	0.190	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.184[6]	<0.0306[6]	0.0633
	03/22/07	-	0.175	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.382[6]	<0.0294[6]	0.0537
	09/20/07	<0.0150	0.224	<0.0150	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.400[6]	0.0338	0.0577
	03/24/08	<0.0075[6]	0.20	<0.0034	<0.0036	0.015	0.025	0.023	0.027	<0.0025	0.021	0.0050	0.013	<0.0038	0.017	<0.17[6]	0.023	0.14
	09/22/08	<0.013	0.25	<0.011	0.011	<0.0026	0.0069	0.0042	0.0078	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	0.0048	0.24	0.023	0.077
	03/16/09	<0.0952	0.136	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	0.00620	<0.00476	<0.0952	<0.0952	<0.00476	<0.286	<0.0952	<0.0952
MW-26	02/17/00	-	2.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.19	1.7	ND	2.69	2.27	1.05
dup	02/17/00	-	1.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.99	1.43	ND	2.24	1.74	0.714
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.84	ND	ND	1.84	ND
	08/23/00	-	2.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.23	1.92	ND	ND	2.39	ND
dup	08/23/00	-	2.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.12	1.98	ND	ND	2.63	ND
	12/01/00	-	0.840	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.580	0.320	ND	0.380	ND	0.360
	02/21/01	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	05/17/01	-	1.86	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.40	ND	ND	1.88	ND
	09/18/01	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	03/13/02	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	09/27/02	-	1.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.510	1.43	ND	ND	2.36	ND
	03/18/03	-	1.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.641	0.974	ND	7.16	1.51	ND
	09/24/03	-	1.86	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.596	1.61	ND	ND	2.3	ND
	03/30/04	-	1.33	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	<0.200	1.52	<0.200	<3.80	0.357	0.219
	09/27/04	-	2.33	<0.200	0.277	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	0.985	2.07	<0.200	<2.00	2.01	0.664
	03/28/05	-	2.02	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	1.26	1.63	<0.500	<1.62	2.51	0.924
	09/21/05	-	1.32	<0.200	0.165	0.0459	<0.0400	0.0560	<0.0400	<0.0400	0.0875	<0.0400	0.521	0.967	<0.0400	<0.980	1.48	0.396
	03/15/06	-	1.01	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	0.225	0.883	<0.192	<3.75	0.538	<0.192
	09/26/06	-	1.63	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	0.243	1.24	<0.202	<1.21[6]	1.48	<0.202
dup	09/26/06	-	1.61	<0.0750[6]	0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.226	1.17	<0.0500	<1.18[6,7]	1.60	0.151
	03/22/07	-	0.431	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	0.133	0.372	<0.0980	<1.96[6]	0.331	<0.0980
	09/20/07	<0.0500[6]	0.602	<0.0300[6]	0.0440	0.0125	<0.0100	<0.0100	0.0114[4]	<0.0100	0.0196	<0.0100	0.390	0.477	<0.0100	<1.25[6]	0.0903	0.334
	03/25/08	12[8]	0.84	<0.088[6]	0.11	0.098	0.057	0.064	0.054	<0.0025	0.15	0.011	1.0	0.62	0.035	<0.76[6]	0.84	0.81
dup	03/25/08	12[8]	0.78	<0.070[6]	0.064	0.073	0.050	0.042	0.037	<0.0025	0.11	0.0061	0.73	0.55	0.030	<0.68[6]	0.67	0.56
	09/22/08	0.25	1.6	<0.060	0.12	0.081	0.031	0.040	0.034	<0.0025	0.083	0.0075	1.1	1.3	0.021	0.88	0.88	0.83
	03/16/09	0.422	1.15	<0.200	<0.200	0.0540	0.0218	0.0202	<0.200	0.0116	0.0795	<0.0100	0.917	0.825	0.0130	<0.600	1.29	0.554

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Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
MW-28	02/16/00	-	2.68	ND	ND	ND	ND	ND	ND	ND	1.00	ND	0.792	6.69	ND	ND	8.54	2.71
	05/30/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	08/24/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	12/01/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	02/21/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	05/16/01	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
MW-31	02/16/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.988	ND	ND	0.457	0.0887
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/23/00	-	0.243	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.666	ND	ND	0.463	ND
	12/01/00	-	0.100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.300	ND	ND	ND	ND
	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.568	ND	ND	0.363	ND
	05/17/01	-	0.206	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.597	ND	ND	0.352	ND
MW-32	02/16/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	12/01/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.12	ND	ND
	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
MW-33	02/16/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.222	ND	ND
dup	02/22/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.161	ND	ND
	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/01	-	0.340	ND	ND	0.100	ND	0.220	0.140	0.120	0.200	ND	0.180	ND	0.120	0.160	ND	0.160
	03/14/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/27/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/29/04	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0209
	09/27/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	03/29/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/21/05	-	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0396	<0.0198	0.0321
dup	09/21/05	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0384
	03/15/06	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
	09/27/06	-	<0.00990	<0.00990	<0.00990	<0.00615	<0.00495	0.00540	<0.00990	0.00659	<0.00718	<0.00495	<0.00990	<0.00990	<0.00510	0.0468[4,5]	<0.00990	0.0189
	03/22/07	-	<0.00976	<0.00976	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00976	<0.00488	0.0146	<0.00976	0.0193
dup	03/22/07	-	<0.00971	<0.00971	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	0.0145	<0.00971	0.0157
	09/18/07	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/25/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	0.0030	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.017	<0.0050	<0.0035
	09/23/08	0.0026	<0.0044	<0.0034	<0.0036	0.0069	<0.0043	<0.0023	<0.0029	<0.0025	0.0039	<0.0025	<0.0044	<0.0038	<0.0026	0.0038	<0.0050	0.029
	03/16/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
MW-34	09/21/01	-	0.280	ND	ND	ND	ND	ND	0.100	ND	ND	ND	ND	ND	ND	0.120	ND	ND
	03/14/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/27/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/03	-	0.151	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/29/04	-	0.0524	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0600	<0.0200	<0.0200
	09/27/04	-	0.135	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.150	<0.100	<0.100
dup	03/29/05	-	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.222	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111
	03/29/05	-	0.129	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/21/05	-	0.332	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0297	<0.0198	<0.218	<0.0198	<0.0222
	03/15/06	-	0.118	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0990	<0.0198	<0.0198
	09/27/06	-	<0.00990	<0.00990	<0.00990	<0.00615	<0.00495	0.00540	<0.00990	0.00659	<0.00718	<0.00495	<0.00990	<0.00990	<0.00510	0.0468[4,5]	<0.00990	0.0189
	03/22/07	-	0.0215	<0.00985	<0.00985	<0.00493	<0.00493	<0.00493	<0.00985	<0.00493	<0.00493	<0.00493	<0.00985	<0.00985	<0.00493	<0.0591[6]	<0.00985	<0.00985
	09/18/07	<0.0971	0.375	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.971[6]	<0.0971	<0.0971
	03/25/08	0.0025	0.071	<0.0034	0.0070	<0.0026	<0.0043	<0.0025	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.075[6]	0.0065	0.012
	06/24/08	0.0073	0.063	0.0069	0.010	0.0078	0.0057	0.0062	0.013	0.0045	0.0079	0.0068	0.0090	0.0091	0.014	0.11	0.020	0.016
	09/23/08	0.0089	0.31	<0.0034	<0.0036	0.0074	<0.0043	<0.0023	0.0029	<0.0025	0.0051	<0.0025	<0.0044	<0.0038	0.0033	<0.18	<0.0050	0.018
	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909
	03/16/09	<0.100	<0.100	<0.100	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.100	<0.00500	<0.150	<0.100	<0.100

COP0017050

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
MW-36	02/16/00	-	0.143	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/31/00	-	0.228	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/30/00	-	0.420	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.180	ND	ND
	02/21/01	-	0.304	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	0.247	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/01	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.140	ND	ND
	03/13/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	0.178	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/03	-	0.307	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/29/04	-	0.246	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.200	0.0525	0.0487
	09/27/04	-	0.710	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.150	<0.100	<1.00	<0.100	<0.100
	09/21/05	-	0.382	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0300	<0.0200	<0.0200	<0.0200	0.0574	0.0616
	03/15/06	-	0.0302	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0388	<0.0194	0.0226
	09/27/06	-	0.606	<0.0200[6]	<0.0200[6]	<0.00500	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00500	<0.0100	<0.0200[6]	<0.00500	<0.400[6,7]	0.103	0.121
dup	09/27/06	-	0.528	<0.0199[6]	<0.0249[6]	0.00544	<0.00498	<0.00498	<0.00995	0.00498	0.00527	<0.00522	<0.00995	<0.0149[6]	<0.00559	<0.279[6,7]	0.104	0.109
	03/22/07	-	0.289	<0.0146[6]	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	<0.320[6]	0.0513	0.0478
	09/18/07	<0.0995	0.564	<0.0995	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.0995	<0.00498	<0.896[6]	<0.0995	0.148
dup	09/18/07	<0.0980	0.552	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<0.882[6]	0.110	0.151
	03/25/08	<0.0023	0.088	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	0.0047	<0.0038	<0.0026	<0.032[6]	0.029	0.021
	09/23/08	0.0089	0.44	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.18	0.050	0.10
	03/16/09	<0.0952	0.272	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.190	<0.0952	<0.0952
MW-37	02/16/00	-	1.56	ND	0.0862	0.0584	0.0773	0.0564	ND	ND	583	ND	0.158	3.02	ND	ND	0.605	0.214
	05/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.126	ND	ND	ND	0.451	0.153
	08/24/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.25	ND	ND	ND	ND
	11/30/00	-	0.680	0.180	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.600	ND	0.660	0.200	0.120
	02/21/01	-	0.183	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.228	ND	ND	ND	ND
	02/21/01[1]	-	0.588	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.513	ND	ND	0.207	ND
	05/16/01	-	0.401	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.327	ND	ND	0.146	ND
	09/21/01	-	0.140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.280	0.120	ND
	03/13/02	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/27/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.499	ND	ND	0.166	0.122
dup	09/27/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.147	ND
	03/18/03	-	0.435	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.731	ND	ND	ND	ND
	09/27/04	-	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	0.122	<1.00	<0.100	<1.00	0.184	0.251
	03/29/05	-	2.39	<0.250	0.344	<0.200	<0.200	<0.200	<0.200	<0.200	0.241	<0.400	1.39	1.93	<0.200	<2.00	2.86	1.05
	09/21/05	-	0.77	<0.350	<0.100	<0.100	<0.100	<0.100	0.110	<0.100	<0.100	<0.100	<0.100	0.478	<0.100	<1.90	<0.100	0.131
	03/15/06	-	0.737	<0.433	<0.0962	<0.0962	0.150	<0.0962	0.319	<0.0962	<0.0962	<0.0962	<0.0962	1.18	0.214	<1.49	0.160	0.119
	09/27/06	-	0.653	<0.250[6]	<0.0400[6]	0.0212	0.0486	0.0326	0.0717	0.0314	0.0296	0.0120	0.0562	0.342	0.0456	<1.20[6,7]	0.135	0.123
	03/22/07	-	0.579	<0.194[6]	<0.0971[6]	0.0183	0.0330	0.0190	0.0389	0.0230	0.0270	0.00858	<0.0971[6]	0.820	0.0315	<2.14[6]	<0.0971[6]	0.133
	09/18/07	<0.388[6]	<0.971[6]	<0.971[6]	<0.0971	0.0132	0.0297	<0.0194[6]	<0.388[6]	<0.0194[6]	0.0167	<0.0194[6]	<0.0971	<0.971[6]	0.0334	<3.11[6]	<0.971[6]	0.120
	03/25/08	<0.0023	1.1	<0.48[6]	0.041	0.044	0.083	0.080	0.15	0.025	0.021	0.015	0.098	1.5	0.15	<1.1[6]	0.23	0.17
dup	03/25/08	<0.0023	1.0	<0.44[6]	0.040	0.046	0.11	0.089	0.21	0.031	0.026	0.018	0.074	1.7	0.21	<1.1[6]	0.23	0.15
	06/24/08	0.012	0.56	<0.19	0.025	<0.0075	0.017	0.015	0.035	0.0053	0.0044	0.0054	0.033	0.75	0.036	0.46	0.099	0.053
	09/23/08	<0.0023	0.70	<0.29	0.031	0.055	0.071	0.065	0.085	0.026	0.051	0.013	0.10	0.68	0.081	<0.69	0.12	0.18
dup	09/23/08	0.031	0.67	<0.22	0.026	0.0079	0.0089	0.0070	0.013	<0.0025	0.0038	<0.0025	0.048	0.58	0.012	<0.52	0.10	0.058
	01/05/09	<0.0930	0.474	<0.465[6]	<0.465[6]	0.0119	0.0438	0.0215	0.222	0.0107	0.0247	0.0243	<0.465[6]	0.406	0.161	<1.40[6]	<0.465[6]	<0.0930

COP0017051

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
	03/16/09	<0.286	0.399	<0.286	<0.0952	0.00564	0.00791	0.00532	<0.0952	<0.00476	0.00894	<0.00476	<0.0952	0.366	0.0100	<0.429	<0.0952	<0.0952

COP0017052

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
MW-39	09/27/04	-	4.30	<0.100	0.159	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	0.338	1.23	<0.100	<1.60	1.16	0.348
	09/21/05	-	2.33	<0.200	0.0920	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.211	0.826	<0.0200	<0.900	0.802	0.239
MW-40	02/16/00	-	0.0972	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/30/00	-	0.124	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	0.141	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/30/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/21/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/01	-	ND	ND	ND	ND	ND	ND	0.120	ND	ND	0.100	0.380	ND	0.140	ND	0.120	0.240
	03/13/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/27/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/03	-	0.109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	09/24/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/29/04	-	0.0609	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0900	<0.0300	<0.0200
dup	03/29/04	-	0.0588	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0900	0.0266	<0.0200
	09/27/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	03/29/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/21/05	-	0.0732	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	0.105	0.0381	<0.0190
	03/15/06	-	0.0716	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0769	0.0297	<0.0192
	03/22/07	-	0.0655	<0.00971	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	<0.126[6]	0.0259	0.0114
	09/18/07	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.0990	<0.00495	<0.297[6]	<0.0990	<0.0990
	03/25/08	0.0023	0.075	<0.0034	0.010	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.027[6]	0.028	0.011
	09/23/08	<0.0023	0.10	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.090	0.022	<0.0035
	03/16/09	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
MW-41B	03/25/08	0.010	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.011	<0.0050	<0.0035
	06/24/08	0.0063	<0.0044	<0.0034	0.0076	0.0038	<0.0043	<0.0023	0.0031	<0.0025	<0.0034	<0.0025	<0.0044	0.0077	<0.0026	0.058	0.011	0.0036
dup	06/24/08	0.0074	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.036	<0.0050	<0.0035
	09/23/08	0.0072	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	0.0062	<0.0026	0.046	<0.0050	<0.0035
	01/05/09	<0.0930	<0.0930	<0.0930	<0.0930	<0.00465	<0.00465	<0.00465	<0.0930	<0.00465	<0.00465	<0.00465	<0.0930	<0.0930	<0.00465	<0.0930	<0.0930	<0.0930
MW-41C	03/25/08	0.012	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.024	<0.0050	<0.0035
	06/24/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	0.0042	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	0.0028	0.032	<0.0050	<0.0035
	09/23/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	0.017	<0.0026	<0.0030	<0.0050	<0.0035
	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909
MW-42B	03/25/08	0.0060	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.042	<0.0050	<0.0035
	06/24/08	0.0070	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.031	0.0065	<0.0035
	09/23/08	0.0090	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.013	0.0083	<0.0035
	01/05/09	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.0990	<0.00495	<0.0990	<0.0990	<0.0990
MW-42C	03/25/08	<0.0023	0.013	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.012	0.0089	<0.0035
	06/24/08	0.0094	<0.0046	0.0073	<0.0038	0.0044	<0.0045	<0.0024	0.0031	<0.0027	<0.0036	<0.0027	<0.0046	<0.0040	<0.0028	0.091	0.012	<0.0037
	09/23/08	<0.0023	0.0057	0.011	<0.0038	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.016	<0.0050	<0.0035
	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909
dup	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909

COP0017053

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
CONOCOPHILLIPS																		
B-4	02/17/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	05/26/00	-	13.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.19	17.3	ND	ND	28.4	2.24
dup	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	20.9	1.72
	08/28/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	11/29/00	-	2.50	ND	0.620	0.140	ND	ND	ND	ND	ND	ND	1.60	2.54	ND	8.80	4.72	1.24
	02/20/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/18/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	03/13/02	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	09/26/02	-	2.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.889	3.42	ND	ND	4.26	0.859
	03/17/03	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/25/03	-	2.79	ND	0.857	ND	ND	ND	ND	ND	ND	ND	1.24	5.10	ND	ND	6.24	1.23
	09/26/06	-	2.75	<0.300[6]	0.670	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	1.00	2.86	<0.200	<1.90[6]	3.68	1.00
	03/21/07	-	2.39	<0.680	<2.04	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	0.103	<0.0971	0.420	8.07	<0.0971	<5.34	11.0	1.01
	09/20/07	<0.0500[6]	1.73	<0.125[6]	0.316	0.0232	<0.0100	<0.0100	0.0122[4]	<0.0100	0.0196	<0.0100	0.512	2.55	<0.100	<2.75[6]	2.21	0.523
	03/26/08	<1.92	5.22	<4.81	4.72	0.169	0.0554	0.0543	<0.577	0.0335	0.299	<0.0288	<1.92	19.2	0.0305	<9.62	27.1	2.02
	09/24/08	<0.481	2.04	<0.481	1.19	0.111	<0.0240	<0.0240	<0.481	<0.0240	0.100	<0.0240	0.988	3.35	<0.0240	<1.68[6]	5.68	0.927
dup	09/24/08	<0.481	2.14	<0.481	<1.44	0.102	<0.0240	<0.0240	<0.481	<0.0240	0.112	<0.0240	1.00	3.73	<0.0240	<1.92[6]	8.03	0.972
B-17	02/17/00	-	2.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.42	ND	ND	4.25	ND
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.1	ND	ND	5.33	ND
	08/28/00	-	2.92	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.5	ND	ND	7.10	
	11/29/00	-	1.72	0.340	0.180	ND	ND	ND	ND	ND	ND	ND	0.320	5.50	ND	0.880	4.96	0.260
	02/23/01	-	2.36	ND	0.139	ND	ND	ND	ND	ND	ND	ND	ND	8.20	ND	ND	2.93	ND
dup	02/23/01	-	2.52	ND	0.236	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.372	ND	3.84	ND
	05/17/01	-	2.19	ND	0.294	ND	ND	ND	ND	ND	ND	ND	ND	7.83	ND	ND	4.24	ND
dup	05/17/01	-	2.19	ND	0.265	ND	ND	ND	ND	ND	ND	ND	ND	8.25	ND	ND	4.14	ND
B-18	02/17/00	-	1.41	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.39	ND	ND	1.83	ND
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/28/00	-	1.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.84	ND	ND	1.17	ND
	11/29/00	-	0.220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.440	ND	ND	0.220	ND
	02/23/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.11	ND	ND	ND	ND
	05/17/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.529	ND	ND	ND	ND
B-22	02/17/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.4	ND	ND	21.5	ND
	08/28/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	11/29/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	02/20/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	05/17/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F

COP0017054

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
B-35	02/17/00	-	11	ND	5.15	1.19	ND	ND	ND	ND	1.1	ND	8.29	30	ND	ND	35.8	4.33
	05/26/00	-	ND	ND	2.61	ND	ND	ND	ND	ND	ND	ND	2.93	22.5	ND	ND	20.7	1.73
	08/28/00	-	6.77	ND	0.807	0.123	ND	ND	ND	ND	0.127	ND	1.12	13.7	ND	ND	8.35	0.584
	11/29/00	-	2.84	0.360	0.520	0.240	ND	ND	ND	ND	0.200	ND	1.46	6.30	ND	1.22	7.16	0.760
	02/23/01	-	8.44	ND	ND	0.304	ND	0.102	ND	ND	0.330	ND	ND	16.2	ND	ND	17.3	1.15
	05/17/01	-	4.34	ND	0.493	0.103	ND	ND	ND	ND	0.106	ND	0.692	11.3	ND	ND	5.50	0.425
	09/20/01	-	2.92	0.360	0.680	0.200	ND	0.120	ND	ND	0.200	ND	1.20	6.74	ND	1.00	10.0	0.700
	03/14/02	-	3.02	ND	0.620	ND	ND	ND	ND	ND	ND	ND	0.844	7.62	ND	ND	6.78	0.468
	09/26/02	-	4.76	ND	0.740	0.109	ND	ND	ND	ND	ND	ND	1.00	11.6	ND	ND	9.41	0.570
	03/18/03	-	3.46	ND	0.493	ND	ND	ND	ND	ND	ND	ND	0.578	14.3	ND	ND	7.51	0.434
	09/25/03	-	5.36	ND	0.779	ND	ND	ND	ND	ND	ND	ND	0.884	10.2	ND	ND	8.86	0.399
	03/30/04	-	3.52	<0.200	0.456	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.419	7.21	<0.200	<2.10	5.18	0.274
	09/28/04	-	5.25	<0.200	0.579	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	0.662	9.23	<0.200	<2.70	6.80	0.455
	03/28/05	-	<7.25	<1.00	1.13	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	2.12	15.6	<1.00	<3.50	14.7	1.24
	09/20/05	-	7.51	<0.400	2.37	0.792	<0.400	<0.400	<0.400	<0.400	0.797	<0.400	5.150	16.900	<0.400	<3.60	24.9	3.23
	03/14/06	-	4.63	<0.495	0.438	0.107	0.0259	0.0402	<0.0198	0.0201	0.0972	<0.0198	0.419	8.83	<0.0198	<2.23	7.60	0.496
	09/26/06	-	5.99	<0.619[6]	0.609	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	1.03	11.2	<0.206	<2.27[6]	9.46	0.644
	03/20/07	-	9.21	<1.26	2.21	0.549	0.113	0.133	<0.0971	0.123	0.587	<0.0971	3.04	21.7	<0.0971	<7.28	20.8	2.96
	09/20/07	<0.750[6]	7.05	<1.00[6]	0.540	0.086	<0.0500	<0.0500	<0.0500	<0.0500	0.0960	<0.0500	1.03	13.5	<0.0500	<6.00	10.2[6]	0.616
	03/27/08	<0.962	7.73	<2.40	2.36	0.645	0.144	0.218	<0.962	0.156	0.669	<0.0481	3.92	22.1	<0.0481	<7.21	25.4	2.05
	09/24/08	<0.962	5.27	<1.44[6]	<3.85[6]	0.706	0.139	0.176	<0.962	0.124	0.728	<0.0481	3.65	16.0	<0.0481	<4.81[6]	35.3	2.71
	03/23/09	<0.971	5.15	<1.94	<3.40	0.959	0.220	0.272	<0.971	0.202	0.953	<0.0485	5.79	24.3	0.0623	<1.94	32.9	3.82
B-36	02/17/00	-	0.251	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.537	ND	ND	ND	ND
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/28/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/00	-	0.720	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.34	ND	0.520	0.180	ND
	02/23/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/17/01	-	0.642	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.91	ND	ND	ND	ND
	09/20/01	-	0.360	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.920	ND	0.320	0.200	ND
dup	09/20/01	-	0.320	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.880	ND	0.300	0.100	ND
	03/14/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.262	ND	ND	ND	ND
	09/26/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.26	ND	ND	ND	ND
	03/18/03	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.811	ND	ND	ND	ND
	09/25/03	-	0.584	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.22	ND	ND	ND	ND
	03/30/04	-	3.51	<0.200	0.490	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.429	6.79	<0.200	<2.10	5.07	0.268
	09/28/04	-	0.653	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	1.51	<0.100	<1.60	<0.100	<0.100
dup	09/28/04	-	0.723	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	1.24	<0.100	<1.35	<0.100	<0.150
	03/28/05	-	0.728	<0.175	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	1.60	<0.100	<1.25	<0.125	<0.100
	09/20/05	-	0.274	<0.0200	<0.0300	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.606	<0.0200	<0.610	<0.0200	0.0285
	03/14/06	-	0.0866	<0.0288	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	0.259	<0.0192	<0.462	<0.0192	<0.0288
	09/26/06	-	0.706	<0.198[6]	<0.0495[6]	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	1.59	<0.0198	<1.98[6]	<0.0495[6]	<0.0693[6]
	03/20/07	-	<0.245	<0.0686	<0.0686	<0.0392	<0.0196	<0.0196	0.0255	<0.0196	<0.0392	<0.0196	<0.0686	0.724	<0.0196	<1.18	<0.0490	<0.196
	09/20/07	<0.125[6]	0.911	<0.250[6]	<0.250[6]	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.250[6]	2.24	<0.0500	<4.25[6]	<0.250[6]	<0.250[6]
	03/27/08	<0.0962	0.187	<0.0962	<0.0962	<0.0481	0.0270	0.0368	<0.192	<0.00962	<0.0481	<0.00962	<0.0962	0.501	<0.00962	<0.385	<0.0962	<0.0962
	09/24/08	<0.385[6]	0.708	<0.385[6]	<0.385[6]	0.00563	0.00905	<0.0144[6]	<0.0962	<0.0144[6]	0.00799	<0.00481	<0.385[6]	1.63	0.00788	<1.92[6]	<0.385[6]	<0.0962
	03/23/09	<0.0995	0.444	<0.0995	<0.0995	0.0133	0.0188	0.0125	<0.0995	0.0116	0.0181	<0.00498	<0.0995	1.07	0.0138	<0.299	<0.0995	0.170
dup	03/23/09	<0.0990	0.352	<0.0990	<0.0990	0.0224	0.0313	0.0184	<0.0990	0.0204	0.0331	<0.00495	<0.0990	0.849	0.0205	<0.297	<0.0990	0.198

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
B-37	02/17/00	-	0.0698	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0547
dup	02/17/00	-	0.0683	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0731
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/28/00	-	0.124	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/23/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.128	ND
	05/17/01	-	0.110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/14/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/26/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/25/03	-	0.120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	09/25/03	-	0.113	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.118	ND
	03/31/04	-	0.0737	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.320	<0.0300	0.0431
	09/28/04	-	0.142	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.300	<0.100	<0.100
	03/28/05	-	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.225	<0.100	<0.100
	09/20/05	-	0.347	<0.0303	<0.0303	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.222	<0.0707	0.0454
	03/14/06	-	0.0725	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.277	<0.0198	<0.0396
dup	03/14/06	-	<0.0891	<0.0198	0.0217	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	0.0217	<0.0198	<0.0198	<0.0198	<0.0198	<0.277	0.0813	0.0591
	09/26/06	-	0.270	<0.0392[6]	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.225[6]	0.0214	0.0208
	03/20/07	-	0.186	<0.0288	0.0199	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.962	0.0517	0.0636
	09/20/07	<0.0150[6]	0.208	<0.0300[6]	<0.0500[6]	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0500[6]	<0.0400[6]	<0.0100	<0.550[6]	0.0826	0.0789
	03/27/08	<0.0952	0.144	<0.0952	<0.0952	0.0121	0.0146	0.0114	<0.190	<0.00952	0.0142	<0.00952	<0.0952	<0.0952	0.0128	<0.476	<0.0952	<0.0952
	09/24/08	<0.0962	0.116	<0.0962	<0.0962	0.00641	0.00660	0.00510	<0.0962	<0.00481	0.00940	<0.00481	<0.0962	<0.0962	0.00617	<0.192[6]	<0.0962	<0.0962
	03/20/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.246	<0.0985	<0.0985
dup	03/20/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	0.00520	<0.00493	<0.0985	<0.00493	0.00530	<0.00493	<0.0985	<0.0985	<0.00493	<0.246	<0.0985	<0.0985
B-40	02/17/00	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	05/26/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	08/28/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	11/29/00	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	02/20/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	05/17/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/26/06[8]	-	8.45	<1.75[6]	1.39	0.189	0.0804	<0.100[6]	<0.500	<0.100[6]	0.337	<0.0500	<0.500	9.06	<0.0500	<213[9]	13.8	1.42
	03/20/07	-	26.0	<9.95	<9.95	2.01	0.749	<0.498	<4.98	<0.498	3.86	0.298	<4.98	40.5	0.167	389	87.0	16.6
	09/20/07	260	5.71	<1.75[6]	<2.00[6]	<0.500	<0.500	<0.500	<0.500[4]	<0.500	0.507	<0.500	<0.500	6.97	<0.500	141	12.7	1.90
	03/26/08	2,080	75.6	<24.0	36.8	6.81	2.36	<1.92	<9.62	<1.92	12.0	0.621	9.75	112	0.589	612	275	33.4
	09/22/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
OF-1	03/26/08	<0.962	<0.962	<0.962	<1.44	0.0702	0.0356	0.0332	<0.192	0.0188	0.142	<0.00962	<0.962	<0.962	0.0207	<0.962	<0.962	<0.962
P-1	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/31/04	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0405
	09/26/06	-	0.0137	<0.0102	<0.0102	<0.00508	<0.00508	<0.00508	<0.0102	<0.00508	0.00513	<0.00508	<0.0102	0.0225	<0.00508	<0.0457[6,7]	0.0468	0.0195
	03/20/07	-	<0.00976	<0.00976	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00976	<0.00488	<0.0341	0.0139	0.0134
		Well Abandoned																
P-1A	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/20/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
P-2	03/17/03	-	2.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.62	ND	ND	2.05	ND
	9/25/03[2]	-	1.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.85	ND	ND	4.23	ND
	03/30/04	-	1.97	<0.200	<0.300	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	7.66	<0.200	<1.70	3.28	<0.200
	09/28/04	-	2.28	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	<0.200	8.23	<0.200	<1.40	3.56	<0.200
	03/28/05	-	2.62	<0.600	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.800	<0.400	8.77	<0.400	<1.60	3.48	<0.400
	03/14/06	-	3.45	<0.777	<0.777	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.777	12.1	<0.0388	<1.94	4.17	<0.0583
U-2	02/17/00	-	0.140	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.683	0.224	ND	ND	0.104	0.0856
	05/26/00	-	0.119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.239	ND	ND	0.122	ND
	08/28/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.73	ND	ND	ND	ND
	11/29/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/23/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/17/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/01	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/14/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/26/02	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/25/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/31/04	-	0.166	<0.0200	0.0201	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.100	0.237	<0.0200	<1.12	0.0680	0.0787
	09/28/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.150	<0.100	<0.100
	03/28/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/20/05	-	0.0232	<0.0196	0.0308	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	0.0197	0.0283	<0.0196	<0.118	0.0318	0.0292
	03/14/06	-	0.352	<0.106	0.0232	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	0.0392	0.454	<0.0192	<4.71	0.135	0.0798
	09/27/06	-	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.168[6]	<0.0198	0.0414
	03/21/07	-	0.135	<0.0291	0.0310	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	0.0447	0.451	<0.0194	<2.43	0.163	0.0874
	09/19/07	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	0.00585	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985
	03/25/08	1.73	0.377	<0.0962	<0.0962	0.0120	<0.00962	<0.00962	<0.192	<0.00962	0.0152	<0.00962	0.0993	0.736	<0.00962	<2.40	0.203	0.129
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	0.00588	<0.00481	<0.0962	<0.0962	<0.00481	<0.144[6]	<0.0962	<0.0962
	03/17/09	<0.0976	0.104	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	0.119	<0.00488	<0.976	<0.0976	<0.0976
U-3	02/17/00	-	0.142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	ND	ND	0.066	ND
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.119	ND	ND	ND	ND
	08/28/00	-	0.145	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.163	ND	ND	ND	ND
	11/29/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.120	ND	0.160	ND	ND
dup	11/29/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.120	ND	ND
	02/23/01	-	0.117	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.152	ND	ND	ND	ND
	05/17/01	-	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.134	ND	ND	ND	ND

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TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
U-4	02/16/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.92	ND	ND	7.42	ND
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.44	ND	ND	7.11	ND
	08/28/00	-	5.05	ND	1.32	ND	ND	ND	ND	ND	ND	ND	ND	11.6	ND	ND	12.4	1.17
dup	08/28/00	-	4.47	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.367	10.4	ND	ND	6.48	0.544
	11/29/00	-	1.66	ND	0.660	ND	ND	ND	ND	ND	ND	ND	0.220	3.38	ND	0.760	1.92	0.340
	02/23/01	-	13.0	ND	4.14	ND	ND	ND	ND	ND	0.727	ND	ND	31.6	ND	ND	40.6	4.08
	05/17/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/18/01	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	03/13/02	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S
	09/26/02	-	2.88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.60	ND	ND	8.14	0.571
dup	09/26/02	-	3.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.72	ND	ND	9.70	0.842
	03/17/03	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/27/06	-	2.13	<0.990[6]	0.443	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	0.113	5.81	<0.0990	<2.97[6]	4.59	0.351
	03/21/07	-	2.92	<0.980	<1.96	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	0.104	<0.0980	0.263	11.2	<0.0980	<4.51	6.69	1.06
	09/19/07	<0.493	1.75	<0.985[6]	<0.985[6]	<0.0246	<0.0246	<0.0246	<0.493	<0.0246	0.0255	<0.0246	<0.493	6.00	<0.0246	<4.43[6]	2.92	<0.493
	03/27/08	<1.92	6.07	<2.88	4.12	0.0956	0.0493	0.0328	<0.385	0.0354	0.168	<0.0192	<1.92	15.8	0.0314	<5.77	18.1	2.37
	09/24/08	<0.481	1.78	<0.481	0.666	0.0290	<0.0240	<0.0240	<0.481	<0.0240	0.0612	<0.0240	<0.481	4.78	<0.0240	<1.68[6]	3.70	0.499
dup	09/24/08	<0.481	2.15	<0.721[6]	<0.721[6]	0.0444	<0.0240	<0.0240	<0.481	<0.0240	0.0978	<0.0240	<0.481	5.55	<0.0240	<2.16[6]	4.73	0.796
U-5	02/17/00	-	1.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.63	ND	ND	1.42	0.0674
	05/26/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.04	ND
	08/28/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.52	ND	ND	2.29	ND
	11/29/00	-	0.800	0.100	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.02	ND	2.60	1.06	ND
	02/23/01	-	ND	ND	0.124	ND	ND	ND	ND	ND	ND	ND	ND	3.28	ND	ND	1.64	ND
	05/17/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/18/01	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	09/26/02	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
	03/18/03	-	ND	ND	ND	1.08	ND	ND	2.54	ND	1.89	ND	ND	36.0	ND	ND	55.0	11.3
	09/25/03	-	5.52	ND	1.13	ND	ND	ND	ND	ND	ND	ND	ND	9.61	ND	4.71	10.7	1.31
	03/31/04	-	3.15	<0.400	0.921	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	5.18	<0.400	<2.50	5.49	1.06
	09/28/04	-	4.54	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	6.51	<0.500	<3.25	5.66	<0.500
	03/28/05	-	4.25	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	6.87	<1.00	<2.50	7.64	<1.00
	09/20/05	-	3.69	<0.192	0.545	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	5.80	<0.192	<2.31	6.37	0.443
	03/14/06	-	3.50	<0.784	<0.490	<0.196	<0.196	<0.196	<0.196	<0.196	<0.196	<0.196	<0.196	5.78	<0.196	<3.04	6.09	0.374
	09/26/06[8]	-	204	<72.8[6]	108	9.40	5.79	<6.07[6]	28.3	<7.28[6]	23.3	3.69	27.6	374	2.33	<121[6,7]	996	119
	03/20/07	-	4.58	<1.17	<2.14	0.189	0.0981	<0.0971	0.420	<0.0971	0.403	0.0577	<0.388	12.5	0.0459	<5.44	11.6	2.56
	09/20/07	19.2	12.4	<5.00[6]	<15.0[6]	0.548	<0.500	<0.500	1.20[9]	<0.500	0.999	<0.500	<5.00[6]	19.9	<0.500	<12.0[6]	37.6	8.00
	09/24/08	2.68	11.4	<4.81	<12.0[6]	1.02	0.483	<0.481[6]	<4.81	<0.240	2.25	0.276	<4.81	22.5	<0.240	<7.21[6]	63.1	10.2

COP0017058

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
U-5A	03/27/08	<0.721	2.95	<1.68	<0.481	<2.40	<0.144	<0.192	<0.962	<0.240	0.388	<0.0481	<0.481	6.56	0.0793	<5.29	2.26	0.519
U-10	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.345	ND	ND
	09/25/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/30/04	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0302	<0.0200	<0.0200
	09/28/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	03/28/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/20/05	-	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0297	<0.0198	<0.0198
	03/14/06	-	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0291	<0.0194	<0.0291
U-11	03/18/03	-	0.711	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.44	ND	ND	0.951	ND
	09/25/03	-	1.45	ND	0.229	ND	ND	ND	ND	ND	ND	ND	0.391	4.69	ND	ND	3.25	0.396
	03/30/04	-	1.73	<0.200	0.395	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.610	5.29	<0.200	<2.60	4.32	0.821
	09/28/04	-	<0.171	<0.114	<0.171	<0.114	<0.114	<0.114	<0.114	<0.114	0.114	<0.229	<0.286	<0.343	<0.114	<0.343	<0.343	0.341
	03/28/05	-	1.74	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	5.56	<1.00	<2.00	4.14	<1.00
	09/20/05	-	1.39	<0.102	0.296	0.200	<0.102	<0.102	<0.102	<0.102	0.175	<0.102	0.608	3.19	<0.102	<1.68	3.30	0.830
	03/14/06	-	1.78	<0.481	0.579	0.281	<0.192	<0.192	<0.192	<0.192	0.238	<0.192	0.926	4.54	<0.192	<2.64	4.10	1.59
U-12	03/18/03	-	1.72	ND	0.308	ND	ND	ND	ND	ND	ND	ND	0.384	7.94	ND	ND	3.91	0.541
	09/25/03	-	0.277	ND	0.138	ND	ND	ND	ND	ND	ND	ND	ND	1.25	ND	0.231	1.59	ND
	03/30/04	-	0.151	<0.0400	<0.0600	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	0.621	<0.0400	<0.320	0.238	0.0434
	09/28/04	-	1.21	<0.100	0.304	0.193	<0.100	<0.100	<0.100	<0.100	0.153	<0.200	0.616	2.56	<0.100	<1.20	2.56	0.832
	03/28/05	-	<0.325	<0.275	<0.225	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	1.00	<0.100	<0.275	0.615	<0.100
	09/20/05	-	<0.0816	<0.0408	<0.0408	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	0.313	<0.0204	<0.153	<0.0714	0.0344
	04/06/06[3]	-	0.502	<0.410	0.256	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	0.0425	<0.0190	0.0749	1.15	<0.0190	<0.524	2.20	0.0762
U-14	09/27/06	-	0.329	<0.202[6]	<0.0303[6]	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	0.0242	0.750	<0.0202	<4.14[6]	0.189	0.0400
	03/21/07	-	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	0.0284	<0.0194	<0.369	0.0292	<0.0194
	09/19/07	<0.498[6]	<0.498[6]	<0.498[6]	<0.0995	0.00719	<0.00498	<0.00498	<0.0995	<0.00498	0.0114	<0.00498	<0.0995	1.58	<0.00498	<2.49[6]	<0.0995	<0.0995
	03/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	0.00967	<0.00962	<0.0962	<0.0962	<0.00962	<0.144	<0.0962	<0.0962
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<3.37[6]	<0.0962	<0.0962
	03/18/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
U-15	09/27/06	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0784[6]	<0.0196	0.0261
	03/21/07	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	0.0211	<0.0196	<0.123	<0.0196	<0.0196
	09/19/07	<0.0990	<0.0990	<0.0990	<0.0990	0.00654	0.00874	0.00875	<0.0990	0.00808	0.00725	<0.00495	<0.0990	<0.0990	0.00785	<0.0990	<0.0990	<0.0990
	03/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	03/17/09	0.122	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	1.85	<0.0962	<0.0962
U-16	09/27/06	-	0.577	<0.303	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	1.14	<0.202	<1.92[6]	0.655	<0.202
	03/21/07	-	<0.583	<0.233	<0.311	<0.0777	<0.0777	<0.0777	<0.0777	<0.0777	0.0979	<0.0777	0.107	1.50	<0.0777	<1.71	0.824	0.339
	09/19/07	<0.498[6]	0.449	<0.398[6]	<0.398[6]	0.0264	0.0106	<0.00995	<0.199	<0.00995	0.0404	<0.00995	<0.199	1.93	<0.00995	<3.48[6]	0.364	0.351
	03/25/08	<0.192	0.382	<0.192	<0.192	0.0181	<0.00962	<0.00962	<0.192	<0.00962	0.0280	<0.00962	<0.192	1.13	<0.00962	0.962	<0.192	<0.192
	09/25/08	<0.481	0.390	<0.481	<0.481	<0.0240	<0.0240	<0.0240	<0.481	<0.0240	0.0358	<0.0240	<0.481	0.880	<0.0240	<0.962[6]	<0.481	<0.481
	03/17/09	<0.192	0.406	<0.144	<0.0962	0.00798	<0.00481	<0.00481	<0.0962	<0.00481	0.0148	<0.00481	<0.0962	1.08	<0.00481	<0.673	0.104	<0.0962
U-17	09/27/06	-	<0.404[6]	<0.404[6]	<0.404[6]	0.0241	<0.0202	<0.0202	<0.0202	<0.0202	0.0221	<0.0202	<0.0202	0.698	<0.0202	<1.62[6]	0.406	0.124
	03/21/07	-	<0.713	<0.238	0.113	<0.0792	<0.0792	<0.0792	<0.0792	<0.0792	<0.0792	<0.0792	0.135	1.15	<0.0792	<3.72	1.57	0.327
	09/19/07	<0.490[6]	<0.490[6]	<0.490[6]	<0.490[6]	0.0291	0.00937	0.00833	<0.0980	0.00666	0.0272	<0.00490	<0.490[6]	0.739	<0.00490	<2.45[6]	<0.490[6]	0.553
	03/25/08	<0.385	0.920	<0.385	<0.385	0.0306	<0.00962	<0.00962	<0.192	<0.00962	0.0300	<0.00962	<0.385	1.70	<0.00962	2.40	1.46	<0.385
	09/25/08	<0.385[6]	0.434	<0.385[6]	<0.0962	0.0224	<0.00481	<0.00481	<0.0962	<0.00481	0.0224	<0.00481	<0.0962	0.751	<0.00481	<1.15[6]	0.922	0.147
	03/17/09	<0.478	<1.91	<1.91	<0.478	0.0226	0.00556	<0.00478	<0.0957	<0.00957	0.0234	<0.00478	<0.478	<1.91	<0.00478	<1.44	1.72	0.251

COP0017059

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
U-18	03/21/07	-	1.60	<0.385	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	5.40	<0.192	<3.08	1.76	0.277
	09/19/07	<4.98[6]	<4.98[6]	<4.98[6]	<4.98[6]	<0.0249	<0.0249	<0.0249	<0.498	<0.0249	0.0338	<0.0249	<4.98[6]	5.91	<0.0249	<4.98[6]	<4.98[6]	<0.498
	03/25/08	<0.192	0.732	<0.192	<0.192	<0.0385	<0.0192	<0.0192	<0.385	<0.0192	<0.0385	<0.0192	<0.192	2.31	<0.0192	<0.962	0.439	<0.192
	09/25/08	<0.481	1.07	<0.481	<0.481	<0.0240	<0.0240	<0.0240	<0.481	<0.0240	0.0250	<0.0240	<0.481	2.86	<0.0240	<1.44	0.819	<0.481
	03/17/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	0.00793	<0.00481	<0.0962	<0.00481	<0.0144	<0.00481	<0.0962	<0.0962	0.00642	<0.144	<0.0962	<0.144
U-19	03/21/07	-	<0.175	<0.0583	<0.175	0.0606	<0.0388	<0.0388	<0.0388	<0.0388	0.0878	<0.0388	0.222	0.451	<0.0388	<5.83	0.239	0.239
	09/19/07	<0.396	<0.396	<0.396	<0.396	<0.0198	<0.0198	<0.0198	<0.396	<0.0198	<0.0198	<0.0198	<0.396	<0.396	<0.0198	<4.75[6]	<0.396	<0.396
	03/25/08	<0.0962	<0.0962	<0.0962	<0.0962	0.0294	0.0167	0.0165	<0.192	0.0138	0.0406	0.0124	<0.0962	0.108	0.00984	<1.92	<0.0962	<0.0962
U-20	03/20/07	-	1.42	<0.505	<0.233	<0.0777	<0.0777	<0.0777	<0.0777	<0.0777	0.0921	<0.0777	0.0954	3.49	<0.0777	<5.44	4.56	0.195
	09/19/07	<0.493[6]	1.01	<0.591[6]	<0.394[6]	<0.00985	<0.00985	<0.00985	<0.197	<0.00985	<0.00985	<0.00985	<0.197	2.78	<0.00985	<2.96[6]	1.50	<0.197
	03/25/08	<0.0962	0.720	<0.240	<0.0962	<0.0192	<0.00962	<0.00962	<0.192	<0.00962	<0.0192	<0.00962	<0.0962	1.71	<0.00962	<1.25	1.10	<0.0962
dup	03/25/08	<0.0962	0.772	<0.288	<0.0962	<0.0192	<0.00962	<0.00962	<0.192	<0.00962	<0.0192	<0.00962	<0.0962	1.91	<0.00962	<1.30	1.10	<0.0962
	09/25/08	<0.0962	0.806	<0.385[6]	<0.0962	0.0424	0.0229	0.0164	<0.0962	0.0147	0.0474	0.00597	0.169	1.42	0.0139	<1.44[6]	0.259	0.190
	03/17/09	<0.0966	0.655	<0.193	<0.145	<0.00483	<0.00483	<0.00483	<0.0966	<0.00483	<0.00483	<0.00483	<0.0966	1.46	<0.00483	<0.386	1.11	<0.0966
U-21	03/20/07	-	1.29	<0.854	0.170	0.0845	<0.0777	<0.0777	<0.0777	<0.0777	0.0987	<0.0777	0.298	1.24	<0.0777	<8.16	0.694	0.330
	09/19/07	<4.93[6]	1.07	<0.985[6]	<0.493[6]	0.0158	<0.00493	<0.00493	<0.0985	<0.00493	0.0186	<0.00493	<0.493[6]	1.39	<0.00493	<9.85[6]	<0.493[6]	0.352
	03/26/08	<0.192	1.12	<0.481	<0.192	0.0300	<0.00962	<0.00962	<0.192	<0.00962	0.0373	<0.00962	0.208	2.11	<0.00962	<2.88	0.220	<0.192
	09/25/08	<0.0962	0.896	<0.385[6]	<0.385[6]	0.00645	0.00614	<0.00481	<0.0962	<0.00481	0.0106	<0.00481	<0.0962	1.95	0.00500	<0.962[6]	1.86	<0.0962
	03/17/09	<0.0962	0.789	<0.337	<0.0962	0.0223	0.0122	0.00868	<0.0962	0.00723	0.0286	<0.00481	0.120	1.47	0.00616	<0.433	0.170	0.172
U-22A	03/27/08	<0.0962	1.82	<0.337	<0.240	<0.0385	<0.00962	<0.0192	<0.192	<0.0192	<0.0385	<0.00962	0.105	6.55	<0.00962	<1.44	<0.288	0.121
	06/24/08	<0.476[6]	1.14	<0.476[6]	<0.476[6]	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00952[6]	<0.00476	<0.476[6]	3.35	<0.00476	<0.952[6]	0.741	<0.0952
	09/23/08	<0.190[6]	0.820	<0.190[6]	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	0.00656	<0.00476	<0.0952	2.80	<0.00476	<0.857[6]	0.593	<0.0952
	01/06/09	<0.488[6]	0.964	<0.488[6]	<0.488[6]	<0.0244	<0.00488	<0.00488	<0.0976	<0.00488	<0.0244	<0.00488	<0.488[6]	3.98	<0.00488	1.22	0.962	<0.488[6]
	03/19/09	<0.0962	1.11	<0.385	<0.385	0.00720	<0.00481	<0.00481	<0.0962	<0.00481	0.0131	<0.00481	<0.385	4.13	<0.00481	<0.433	<0.385	<0.144
U-22B	03/27/08	<0.0952	0.163	<0.0952	<0.0952	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.0952	<0.0952	0.746	<0.00952	<0.238	<0.0952	<0.0952
	06/24/08	<0.0957	<0.0957	<0.0957	<0.0957	<0.00478	<0.00478	<0.00478	<0.0957	<0.00478	<0.00478	<0.00478	<0.0957	<0.0957	<0.00478	<0.0957	<0.0957	<0.0957
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	0.159	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/19/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
dup	03/19/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985
U-22C	06/25/08	<0.481[6]	0.977	<0.481[6]	<0.481[6]	<0.00962[6]	<0.00481	<0.00481	<0.0962	<0.00481	<0.00962[6]	<0.00481	<0.481[6]	2.90	<0.00481	<0.962[6]	0.387	<0.0962
U-23	03/27/08	<0.0952	0.259	<0.0952	0.155	<0.0286	<0.00952	<0.00952	<0.190	<0.00952	<0.0286	<0.00952	<0.0952	0.973	<0.00952	<0.762	1.20	<0.0952
	06/24/08	<0.476[6]	0.562	<0.476[6]	<1.43[6]	0.0129	0.00535	0.00596	<0.0952	<0.00476	0.0281	<0.00476	<0.190[6]	1.93	<0.00476	<1.43[6]	2.12	0.121
	09/23/08	<0.0952	<0.238[6]	<0.0952	<0.190[6]	0.00600	<0.00476	<0.00476	<0.0952	<0.00476	0.00973	<0.00476	<0.0952	0.926	<0.00476	<0.619[6]	0.314	<0.0952
	01/06/09	<0.483[6]	<0.483[6]	<0.483[6]	<0.483[6]	<0.0242	<0.00483	<0.00483	<0.0966	<0.00483	<0.0242	<0.00483	<0.483[6]	0.498	<0.00483	<0.483[6]	<0.725[6]	<0.483[6]
	03/19/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.246	<0.00493	<0.0985	<0.0985	<0.148
U-24A	03/27/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/24/08	<0.0962	<0.0962	<0.0962	<0.0962	0.00780	0.00770	<0.00481	<0.0962	<0.00481	0.00824	<0.00481	<0.0962	<0.0962	0.00501	<0.0962	<0.0962	<0.0962
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/06/09	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	0.00784	<0.0980	<0.0980	0.00652	<0.0980	<0.0980	<0.0980
	03/19/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985
U-24B	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.00952	<0.0952	<0.0952	<0.00952	<0.0952	<0.0952	<0.0952
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/19/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
dup	03/19/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	0.00527	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976

COP0017060

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4
U-25	03/27/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.240	<0.0962	<0.0962
	06/24/08	<0.0952	0.0999	<0.0952	<0.0952	<0.00476	<0.00476	<0.00952[6]	<0.0952	<0.00952[6]	<0.00476	<0.00476	<0.0952	0.160	<0.00476	<0.667[6]	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.577[6]	<0.0962	<0.0962
	01/06/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	0.155	<0.00485	1.36[6]	<0.0971	<0.0971
	03/19/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	0.00557	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
U-26	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/20/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
U-27	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/20/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
U-28	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	01/07/09	<0.0943	<0.0943	<0.0943	<0.0943	<0.00472	<0.00472	<0.00472	<0.0943	<0.00472	<0.00472	<0.00472	<0.0943	<0.0943	<0.00472	<0.0943	<0.0943	<0.0943
	03/20/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
U-29A	03/20/09	105	18.4	<9.95	<14.9	1.08	0.792	<0.597	4.80	<0.199	2.35	0.541	<9.95	42.8	0.436	<9.95	62.4	24.9
U-29B	03/26/08	1.23	0.163	<0.0962	<0.0962	0.0113	0.0138	0.0125	<0.192	<0.00962	0.0162	<0.00962	<0.0962	0.257	0.0104	<0.192	<0.0962	<0.0962
	06/25/08	0.224	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	09/24/08	0.230	0.103	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	0.00683	<0.00481	<0.0962	0.145	<0.00481	<0.144[6]	<0.0962	<0.0962
dup	09/24/08	0.457	0.110	<0.0962	<0.0962	0.00917	0.0111	0.00688	<0.0962	0.00647	0.0126	<0.00481	<0.0962	0.157	0.00651	<0.144[6]	0.107	<0.0962
	01/07/09	0.413	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	0.116	<0.00488	<0.146[6]	0.104	<0.0976
U-29C	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	0.00483	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	0.00531	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985

COP0017061

TABLE 3
GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Number of benzene rings		2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4

NOTES:
- = Not sampled, not analyzed, not applicable
µg/l = Micrograms per Liter
ND = Not detected at or above method detection limit
2/00 and 5/00 data from IT Corporation
8/00, 11/00, 2/01 and 5/01 data from KHM Environmental Management, Inc.
IT Corp Data recorded as reported in Second Quarter 2000 Report
Analytes reported in alphabetical order
NS/F = Not sampled floating product present
NS/S = Not sampled sheen present
[1] = Sample rerun outside of hold time due to low surrogate recovery reported in the initial sample as a result of an extraction error.
[2] = Sample ID was misidentified by the laboratory as D-2
[3] = Analytical results are from a re-sample due to container breakage at the laboratory of the sample collected on 3/14/06.
[4] = Analyte was detected in the associated Method Blank.
[5] = Naphthalene was detected in the Method Blank at 0.0165 µg/L. Sample has a detection for naphthalene at 0.0468 µg/L. The result has been qualified and should be considered an estimate. Unable to perform corrective action due to insufficient volume left.
[6] = The reporting limit for this analyte was raised due to matrix interference or sample matrix effects.
[7] = Analyte was detected in the blank at greater than one-half of the MRL, but samples are ND.
[8] = The reporting limit was raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.
[9] = Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10 times the concentration found in the method blank.
[10] = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
dup* = duplicate for B-30 submitted as blind duplicate labeled as B-50
dup**= duplicate for B-30 submitted as blind duplicate labled as B-31
dup***= duplicate for B-30 submitted as blind duplicate labeled as B-130
PAHs by EPA Method 8270M-SIM

COP0017062

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CHEVRON												
B-7	02/18/00	28.0	122	1.07	6.60	13.4	4.25	NA	ND	1.25	ND	23.4
	05/23/00	26.8	228	ND	26.4	44.1	11.5	NA	ND	1.93	ND	86.3
dup	05/23/00	27.6	259	ND	30.4	51	13.7	NA	ND	2.11	ND	104
	08/25/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	11/30/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	02/22/01	31.0	71.9	ND	ND	3.11	ND	NA	ND	ND	ND	5.13
	05/17/01	36.4	58.7	ND	ND	1.57	ND	NA	ND	ND	ND	ND
	03/20/03	27.5	64.2	ND	ND	20.9	ND	NA	ND	ND	ND	ND
	09/29/03	30.4	81.5	ND	2.78	6.08	1.21	NA	ND	1.32	ND	7.82
	03/30/04	30.3	86.9	1.38	3.20	6.47	1.75	NA	<0.200	<1.00	<1.00	13.5
	03/09/05	34.2	110	<1.00	4.34	8.22	2.39	NA	<0.200	<2.00	<1.00	19.3
dup	03/09/05	33.8	108	<1.00	4.90	9.78	2.73	NA	<0.200	<2.00	<1.00	21.8
	09/22/05	36.3	85.7	<1.00	2.41	4.83	<1.00	NA	<0.200	<2.00	<1.00	7.87
	03/25/08	7.99	-	<0.380	1.41	9.47	<0.540	4,110	<0.200	<5.00	<0.120	<33.0
	06/24/08	24.7	73.2	<0.500	2.05	4.28	0.875	2,820	<0.200	<0.500	<1.00	9.48
	09/23/08	22.0	117	<0.500	8.56	13.9	3.02	2,970	<0.200	0.460	<1.00	26.7
dup	09/23/08	19.1	103	<0.500	7.49	12.3	2.53	2,780	<0.200	0.411	<1.00	23.2
	01/06/09	20.6	90.9	0.100	5.14	7.53	1.78	3,140	<0.200	0.130	<1.00	17.3
	03/18/09	7.89	41.7	<2.50	<2.00	7.80	<1.00	1,760	0.0496	<2.50	<1.00	11.9
B-9	05/23/00	17.7	139	ND	17.6	28.6	8.48	NA	ND	1.23	ND	61.6
	08/25/00	11.6	53.4	ND	2.70	7.50	2.14	NA	ND	ND	ND	22.8
	11/30/00	10.8	153	1.49	15.9	35.4	11.4	NA	ND	1.25	ND	82.3
	02/22/01	17.3	46.0	ND	ND	2.13	ND	NA	ND	1.27	ND	ND
	05/17/01	20.8	70.6	ND	4.44	6.34	2.41	NA	ND	ND	ND	16.1
	09/19/01	16.1	75.3	ND	2.56	9.93	2.66	NA	ND	ND	ND	13.6
	03/21/02	10.5	48.8	ND	2.57	6.83	3.98	NA	ND	ND	ND	50.6
	09/24/02	18.5	46.9	ND	ND	ND	ND	NA	ND	ND	ND	ND
	03/20/03	9.92	40.1	ND	1.65	4.21	3.17	NA	ND	ND	ND	28.3
	09/30/03	9.05	137	1.36	8.12	28.5	15.5	NA	ND	ND	ND	53.2
	03/30/04	38.4	349	3.82	39.5	99.1	46.7	NA	<0.200	1.47	<1.00	331
	03/08/05	30.5	59.2	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	7.59
	06/22/05	26.8	48.1	<1.00	<1.00	2.25	<1.00	NA	<0.200	<2.00	<1.00	18.7
	09/21/05	33.8	57.9	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	6.48
	09/26/06	29.8	70.8	<1.00	<1.00	3.15	2.18	NA	<0.200	<1.00	<1.00	33.8
	03/22/07	19.8	72.4	0.352	5.75	16.5	26.8	2,430	0.00989	<1.60	<0.800	71.1

COP0017063

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-9A	09/19/07	7.60	341	<0.0752	54.5	63.8	24.0	2,280	<0.200	<1.60	0.138	177
	03/25/08	20.9	-	<0.380	14.0	21.8	11.5	3,260	<0.200	<5.00	<0.120	72.4
	06/24/08	17.4	262	<0.500	33.4	67.4	26.8	2,900	0.0754	0.722	<1.00	146
dup	06/24/08	18.3	328	<0.500	41.4	77.7	31.1	2,870	0.0884	0.645	<1.00	169
	09/23/08	4.72	104	<0.500	14.0	24.7	8.83	1,720	0.0162	0.385	<1.00	57.3
dup	09/23/08	4.70	114	<0.500	15.7	26.4	9.88	1,840	0.0108	0.311	<1.00	58.9
	01/06/09	1.90	51.6	<0.500	3.00	4.98	2.59	2,220	<0.200	<0.500	<1.00	11.6
dup	01/06/09	1.80	47.6	0.150	2.21	4.10	1.89	2,030	<0.200	0.120	<1.00	10.5
	03/24/09	5.45	45.1	<0.500	<10.0	7.70	3.64	1,270	0.00768	<0.500	<1.00	28.5
B-10	02/18/00	36.7	337	0.840	35.5	57.2	20.2	NA	ND	0.53	0.190	96.5
dup	02/18/00	39.4	375	1.41	44.8	74.5	27.0	NA	ND	5.25	0.200	123
	05/23/00	35.4	211	ND	26.5	38.4	11.5	NA	ND	2.29	ND	63.1
	08/25/00	31.4	65.7	ND	1.99	3.66	1.41	NA	ND	1.05	ND	177
	11/30/00	30.7	94.6	ND	5.90	8.00	2.57	NA	ND	1.31	ND	16.5
	02/23/01	32.3	61.1	ND	ND	ND	ND	ND	ND	1.84	ND	ND
	05/17/01	39.5	56.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/01	23.4	194	ND	24.9	46.6	16.1	NA	ND	1.04	ND	79.3
	03/21/02	30.1	64.4	ND	ND	ND	ND	NA	ND	ND	ND	ND
	09/24/02	29.0	60.7	ND	ND	ND	ND	NA	ND	ND	ND	ND
	03/20/03	32.7	62.0	ND	ND	ND	ND	NA	ND	ND	ND	ND
	09/29/03	33.7	82.0	ND	2.85	4.41	2.17	NA	ND	1.65	ND	13.2
	03/30/04	33.2	128	<1.00	10.0	16.2	7.83	NA	<0.200	<1.00	<1.00	40.2
	03/08/05	39.5	88.1	<1.00	2.31	3.59	3.05	NA	<0.200	<2.00	<1.00	11.1
	09/21/05	36.9	64.1	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	03/14/06	36.6	65.9	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	09/26/06	27.4	90.2	0.080	2.27	<1.60	1.55	NA	<5.00	<10.0	<0.0960	10.3
	03/21/07	28.6	80.8	0.080	3.39	4.35	2.15	4,290	0.00618	<1.60	<0.0960	14.2
dup	03/21/07	31.0	87.7	0.104	4.50	5.81	2.90	3,950	0.00833	<1.60	<0.0960	16.9
	09/18/07	36.0	84.3	<0.0752	3.16	5.91	1.87	4,660	<0.200	<1.60	<0.0970	15.1
	03/25/08	32.4	-	<0.380	<1.00	<2.70	<0.540	3,860	<0.200	<5.00	<0.120	<33.0
	09/23/08	32.7	76.4	<5.00	<20.0	<20.0	<10.0	4,340	0.00117	<5.00	<10.0	11.7
	03/24/09	32.2	123	<0.500	<20.0	9.58	3.90	4,570	0.0505	<0.500	<1.00	30.5
dup	03/24/09	32.2	166	<0.500	<20.0	22.1	7.22	4,670	0.0225	<0.500	<1.00	48.2

COP0017064

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-11	02/18/00	38.6	985	4.08	130	214	95.9	NA	ND	3.4	0.470	356
	05/23/00	21.9	236	ND	25.8	40.7	17.2	NA	ND	2.33	ND	73.2
	08/25/00	29.2	80.9	ND	5.43	7.65	3.98	NA	ND	ND	ND	27.3
	11/30/00	27.7	113	ND	9.86	12.7	5.75	NA	ND	1.46	ND	28.8
	02/22/01	23.4	57.3	ND	ND	ND	ND	NA	ND	ND	ND	ND
	05/17/01	29.1	55.3	ND	ND	ND	ND	NA	ND	ND	ND	ND
	03/30/04	24.1	115	1.64	9.04	15.2	8.96	NA	<0.200	<1.00	<1.00	31.5
	03/09/05	26.5	97.2	2.08	5.34	9.43	6.15	NA	<0.200	<2.00	<1.00	26.1
	06/22/05	26.9	106	<1.00	9.78	12.3	5.43	NA	<0.200	<2.00	<1.00	25.8
	09/21/05	30.8	60.3	<1.00	1.82	3.13	1.66	NA	<0.200	<2.00	<1.00	7.32
	06/25/08	16.7	119	0.521	3.60	5.27	3.65	7,450	<0.200	0.251	<1.00	17.9
B-14	02/18/00	36.7	297	0.600	29.0	53	40.3	NA	0.095	1.34	0.160	87.4
	05/23/00	32.7	155	ND	15.20	26.4	18.6	NA	ND	1.68	ND	42.1
	08/25/00	30.0	77.4	ND	1.75	3.39	5.68	NA	ND	1.13	ND	20.7
	11/30/00	29.2	72.4	ND	ND	ND	3.26	NA	ND	1.24	ND	ND
	02/22/01	29.9	60.3	ND	ND	2.02	1.02	NA	ND	1.04	ND	6.96
	05/17/01	37.3	55.3	ND	ND	ND	ND	NA	ND	ND	ND	ND
B-19	03/20/03	45.3	69.3	ND	ND	ND	ND	NA	ND	ND	ND	ND
	09/29/03	40.4	208	ND	20.3	29.7	9.09	NA	0.234	ND	ND	57.7
	03/29/04	43.5	104	<1.00	4.87	8.31	2.79	NA	<0.200	<1.00	<1.00	19.2
	03/09/05	40.7	210	<1.00	18.1	30.7	9.18	NA	<0.200	<2.00	<1.00	54.5
	06/22/05	47.8	223	<1.00	26.5	37	9.22	NA	<0.200	<2.00	<1.00	63.3
	09/22/05	48.1	101	<1.00	3.47	5.98	1.59	NA	<0.200	<2.00	<1.00	10.5
	03/14/06	52.3	113	<1.00	3.91	5.68	1.67	NA	<0.200	<2.00	<1.00	11.7
	06/26/08	36.7	135	0.388	10.0	16.2	6.05	4,110	<0.200	0.146	<1.00	32.0
	03/18/09	39.8	162	<5.00	14.0	18.2	4.84	4,590	0.0170	<5.00	<1.00	35.1
dup	03/18/09	40.7	214	<5.00	22.2	31.3	8.40	4,110	0.0590	<5.00	<1.00	56.0

COP0017065

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-20	03/20/03	10.7	45.9	ND	1.09	3.89	ND	NA	ND	ND	ND	5.01
	09/29/03	130	4,350	49.4	808	1,140	643	NA	0.934	8.40	ND	3960
	03/30/04	1.65	41.7	<1.00	1.84	5.08	1.21	NA	<2.00	<1.00	<1.00	9.10
	03/09/05	36.0	79.5	<1.00	1.13	2.12	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	09/22/05	37.4	69.1	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	03/25/08	8.01	-	<0.380	<1.00	<2.70	<0.540	3,010	<0.200	<5.00	<0.120	<33.0
B-21	09/19/01	30.6	107	ND	8.33	10.7	3.22	NA	ND	ND	ND	25.9
	03/21/02	40.5	66.2	ND	ND	ND	ND	NA	ND	ND	1.09	8.52
	09/24/02	41.2	69.5	ND	ND	ND	ND	NA	ND	ND	ND	ND
	03/20/03	74.0	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND
	09/29/03	47.4	75.9	ND	ND	ND	ND	NA	ND	ND	ND	ND
	03/29/04	46.9	132	<1.00	9.84	14.1	4.78	NA	<2.00	<1.00	<1.00	34
	03/08/05	55.9	179	<1.00	14.3	18.8	5.35	NA	<0.200	<2.00	<1.00	37.4
	09/22/05	55.4	88.4	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	03/15/06	53.1	86.6	<1.00	1.02	<2.00	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	09/26/06	43.2	85.4	<1.00	<1.00	<1.00	<1.00	NA	<0.200	<1.00	<1.00	<10.0
	03/21/07	39.0	94.7	0.088	2.13	3.62	2.62	2,760	0.0144	<1.60	<0.0960	13.6
	09/19/07	43.0	130	<0.800	8.80	10.8	3.78	2,740	<0.200	<1.60	<0.800	18.5
	03/26/08	41.2	77.0	<0.380	2.09	3.87	2.00	2,510	0.444	<5.00	<0.120	<33.0
	09/23/08	43.4	72.9	<0.500	1.63	4.16	1.39	3,100	0.0186	0.198	<1.00	8.22
	03/24/09	44.1	153	<0.500	<20.0	13.6	6.07	3,320	0.0879	<0.500	<1.00	34.3
B-26	03/30/04	3.45	232	30.5	22.0	48.5	41.5	NA	<0.200	<1.00	<1.00	140
	03/09/05	34.5	85.2	4.11	2.74	8.01	6.96	NA	<0.200	<2.00	<1.00	17.6
	06/22/05	39.7	146	13.0	15.2	31.9	20.8	NA	<0.200	<2.00	<1.00	68.9
	09/22/05	35.1	81.2	6.01	3.20	10.3	7.54	NA	<0.200	<2.00	<1.00	26.1
	06/26/08	34.6	102	4.02	6.21	14.1	13.5	4,060	<0.200	0.113	<1.00	219

COP0017066

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-28	02/18/00	12.2	422	3.68	43.7	104	49.6	NA	0.088	1.56	0.250	165
	05/23/00	9.56	245	1.44	25.8	46.8	20.5	NA	ND	2.77	ND	91.3
	08/25/00	5.30	120	ND	8.25	15.2	5.65	NA	ND	1.34	ND	50.4
	11/30/00	17.9	459	ND	42.1	64	30.3	NA	ND	2.71	ND	149
	02/23/01	7.56	131	ND	8.96	14.2	5.55	NA	ND	1.81	ND	36.3
	05/17/01	5.61	91.4	ND	4.98	7.37	2.72	NA	ND	1.99	ND	20.0
	09/20/01	43.4	82.1	ND	1.66	5.46	ND	NA	ND	1.09	ND	7.82
	03/21/02	4.07	69.2	ND	3.11	11.5	2.92	NA	ND	ND	ND	14.8
	09/24/02	2.98	51.9	ND	ND	ND	ND	NA	ND	2.44	ND	ND
	03/20/03	2.20	48.9	ND	ND	ND	ND	NA	ND	1.64	ND	ND
	09/30/03	21.9	483	1.73	57.2	109	40.4	NA	ND	ND	ND	205
	03/29/04	6.00	111	1.18	9.42	28.7	8.52	NA	<0.200	<1.00	<1.00	34.1
	09/21/05	5.08	83.8	<1.00	3.64	9.80	2.68	NA	<0.200	<2.00	<1.00	17.9
	03/14/06	6.40	192	2.87	31.6	139	172	NA	<0.200	<2.00	<1.00	451
	09/28/06	3.96	88.0	<1.00	4.17	45.1	3.7	NA	<0.200	<2.00	<1.00	20.1
	09/18/07	2.77	53.0	0.228	<0.800	2.88	0.989	1,270	<0.200	<1.60	<0.0970	7.12
	03/25/08	4.46	108	1.52	4.90	68.1	6.75	1,200	<0.200	<5.00	<0.120	<33.0
	09/23/08	4.74	152	2.05	8.20	80.6	13.6	1,370	0.0841	1.73	<10.0	51.5
	03/24/09	3.60	90.2	1.20	5.70	42.0	8.43	1,220	0.0613	<0.500	<1.00	23.0
B-29	09/20/01	11.0	292	ND	28.6	53.1	26.4	NA	ND	3.85	ND	122
	03/21/02	1.26	60.0	ND	ND	3.72	ND	NA	ND	ND	ND	7.1
	09/24/02	ND	60.1	ND	ND	ND	ND	NA	ND	1.03	1.02	ND
	03/20/03	ND	59.3	ND	ND	2.63	ND	NA	ND	1.43	ND	ND
	09/30/03	3.32	322	13.3	29.5	167	28	NA	ND	ND	ND	125
	03/29/04	5.28	367	20.6	29.3	162	45.7	NA	<0.200	<1.00	<1.00	146
	09/21/05	3.08	193	2.90	15.9	58.7	12.7	NA	<0.200	<2.00	<1.00	72
	03/14/06	1.26	98.6	<1.00	2.34	8.34	3.52	NA	<0.200	<2.00	<1.00	13.6
	09/28/06	<1.00	64.1	<1.00	<1.00	12.2	<1.00	NA	<0.200	<2.00	<1.00	13.2
	03/22/07	1.55	156	3.46	11.00	88.2	12.2	3,470	<0.00500	<1.60	<0.800[6]	36.7[7]
	09/18/07	1.62	120	3.09	7.09	95.4	6.29	3,890	<0.200	<1.60	<0.0970	42.9
	03/25/08	0.920	62.9	<0.380	<1.00	<2.70	<0.540	2,790	<0.200	<5.00	<0.120	<33.0
	09/23/08	<10.0	117	1.46	5.34	36.1	17.9	4,950	0.00930	2.46	<10.0	84.2
	03/24/09	3.72	302	10.6	24.1	246	27.1	5,000	0.0664	<0.500	<1.00	170

COP0017067

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-30	02/18/00	18.5	327	35.5	26.90	67.1	48.2	NA	ND	2.65	0.210	238
	05/23/00	14.1	117	9.78	9.04	71.3	10.8	NA	ND	2.67	ND	52.7
	08/25/00	22.1	49.7	14.6	1.53	17.6	4.49	NA	ND	ND	ND	63.2
	11/30/00	17.5	51.3	ND	ND	ND	ND	NA	ND	1.03	ND	11.6
	02/23/01	14.4	70.4	ND	ND	ND	ND	NA	ND	ND	ND	ND
dup**	02/23/01	14.0	67.0	ND	ND	ND	ND	NA	ND	ND	ND	ND
	05/17/01	17.7	47.7	ND	ND	ND	ND	NA	ND	1.75	ND	ND
	09/20/01	2.11	82.5	1.67	3.47	20.8	16.1	NA	ND	1.90	ND	30.8
dup	09/20/01	13.8	56.4	ND	ND	2.18	ND	NA	ND	1.10	ND	ND
	03/21/02	17.7	43.8	8.23	1.11	5.33	2.27	NA	ND	ND	1.00	19.1
dup	03/21/01	21.0	48.9	3.02	1.42	6.98	4.58	NA	ND	ND	ND	22.0
	09/24/02	12.6	49.5	ND	ND	ND	ND	NA	ND	1.97	1.26	ND
	03/20/03	15.8	48.3	ND	ND	ND	ND	NA	ND	ND	ND	ND
dup*	03/20/03	14.4	48.6	ND	ND	ND	ND	NA	ND	ND	ND	ND
	09/30/30	23.8	193	22.1	19.5	63.1	39.2	NA	ND	ND	ND	159
dup***	09/30/30	26.7	276	30.1	26.8	84.2	57.4	NA	ND	ND	ND	211
	03/29/04	18.3	52.9	2.29	1.06	4.05	3.30	NA	<0.200	<1.00	<1.00	7.52
	09/21/05	17.9	56.7	1.80	<1.00	5.01	3.32	NA	<0.200	<2.00	<1.00	11.3
dup****	09/21/05	17.7	54.4	<1.00	1.17	3.84	2.94	NA	<0.200	<2.00	<1.00	10.6
	03/14/06	20.6	66.8	<1.00	<1.00	2.69	2.02	NA	<0.200	<2.00	<1.00	5.57
dup	03/14/06	20.4	69.2	1.02	1.03	3.23	2.55	NA	<0.200	<2.00	<1.00	7.50
	09/28/06	16.4	58.0	<1.00	<1.00	<2.00	2.02	NA	<0.200	<2.00	<1.00	9.10
	03/22/07	13.6	72.5	0.800	2.83	7.19	3.08	2,100	0.0235	<2.00	<0.800[6]	14.6
	09/18/07	21.1	51.1	0.394	0.94	5.31	1.55	3,170	<0.200	<2.00	<0.0970	8.93
dup	09/18/07	19.2	51.7	0.280	0.97	5.33	1.84	3,390	<0.200	<2.00	<0.0970	8.92
B-32	03/20/03	3.67	42.9	ND	1.10	ND	ND	NA	ND	ND	ND	ND
	09/29/03	122	6,840	17.0	1,040	1,640	1,150	NA	0.754	19.0	ND	3,740
	03/29/04	9.17	434	2.02	61.5	108	38.7	NA	0.221	22.4	<1.00	215
	03/09/05	7.80	128	<1.00	-	18.0	6.80	NA	<0.200	2.03	<1.00	39.4
	09/22/05	10.0	227	<1.00	23.0	33.6	11.8	NA	<0.200	<2.00	<1.00	73.7
	03/15/06	6.84	82.3	<1.00	3.16	5.51	2.22	NA	<0.200	<2.00	<1.00	11.0

COP0017068

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-33	03/20/03	4.83	43.0	ND	4.37	11.4	12.4	NA	ND	ND	ND	22.3
	09/30/03	34.2	242	6.99	71.1	248	128	NA	ND	1.24	ND	385
	03/30/04	15.5	199	8.30	45.1	164	110	NA	<2.00	<1.00	<1.00	389
	03/09/05	26.4	175	1.06	34.2	66.8	51.3	NA	<0.200	2.04	<1.00	157
	06/22/05	15.6	140	<1.00	22.1	56.0	26.4	NA	<0.200	<2.00	<1.00	99.8
	09/22/05	23.7	111	<1.00	9.16	25.0	10.9	NA	<0.200	<2.00	<1.00	48.4
	03/15/06	5.79	49.4	<1.00	2.61	6.65	4.41	NA	<0.200	<2.00	<1.00	68.3
	06/26/08	33.9	92.5	0.386	6.21	16.3	10.1	3,460	<0.200	0.093	<1.00	246
	03/18/09	61.7	245	<5.00	39.2	116	70.1	4,380	0.110	<5.00	<1.00	2,520
CR-1	09/21/01	14.3	60.6	ND	2.03	4.68	2.83	NA	ND	1.18	ND	8.46
	03/21/02	1.73	18.8	ND	1.13	3.97	ND	NA	ND	ND	ND	16.3
	09/24/02	2.04	27.4	ND	ND	ND	ND	NA	ND	ND	ND	6.09
	03/20/03	11.9	30.0	ND	1.56	11.2	2.11	NA	ND	ND	ND	17.9
	09/30/03	8.32	47.9	ND	2.49	8.36	3.91	NA	ND	1.89	ND	13.9
	03/30/04	2.10	261	5.83	22.0	53.5	67.6	NA	<0.200	<1.00	<1.00	212
	03/08/05	1.67	24.5	<1.00	<1.00	2.62	<1.00	NA	<0.200	<2.00	<1.00	10.2
	09/21/05	3.25	21.5	<1.00	<1.00	2.31	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	09/27/06	1.94	20.7	0.144	<0.800	2.77	0.440	NA	<5.00	<2.00	<0.0960	10.9
	03/22/07	0.912	12.2	<0.0752	<0.800	3.92	<0.432[6]	185	<0.00500	<1.60	<0.800[6]	9.58
	09/20/07	1.41	20.1	<0.800	<0.800	<1.60	<0.800	862	<0.200	<1.60	<0.800	<4.00
	03/25/08	0.510	12.8	<0.380	<1.00	3.40	<0.540	76.1	<0.200	<5.00	<0.120	<33.0
	09/24/08	3.47	19.8	<0.500	1.17	3.97	1.19	595	0.00198	<0.500	<1.00	13.3
	03/25/09	<1.00	12.1	<0.500	<2.00	<2.00	<1.00	127	<0.00500	<0.500	<1.00	7.68

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CR-3	03/09/05	15.6	414	2.83	23.9	59.1	41.0	NA	<0.200	<2.00	<1.00	216
	06/22/05	25.9	431	2.06	41.4	70.8	50.4	NA	<0.200	<2.00	<1.00	218
	09/22/05	1.91	28.0	<1.00	<1.00	3.46	1.23	NA	<0.200	<2.00	<1.00	7.06
	06/26/08	1.13	27.4	0.109	0.876	1.37	1.40	463	<0.200	<0.500	<1.00	11.7
	09/26/08	1.82	44.1	<0.500	3.63	6.21	4.38	594	<0.200	0.267	<1.00	18.4
CR-8	02/18/00	82.7	762	3.45	57.8	127	99.7	NA	ND	3.21	0.370	404
	05/23/00	25.6	342	3.12	22.8	68.4	36.5	NA	ND	2.04	ND	155
	08/25/00	20.3	105	ND	6.97	15.1	10.1	NA	ND	ND	ND	44.2
	11/30/00	16.7	89.0	ND	5.65	14.9	7.81	NA	ND	1.58	ND	33.1
	02/22/01	21.5	116	ND	4.85	12.3	6.66	NA	ND	ND	ND	28.8
	05/16/01	13.5	37.4	ND	1.28	2.31	1.47	NA	ND	ND	ND	ND
CR-9	02/18/00	16.7	236	0.26	19.4	28.6	15.6	NA	ND	1.87	0.100	76.9
	05/23/00	2.98	41.3	ND	3.00	3.81	1.88	NA	ND	1.12	ND	8.93
	08/25/00	1.60	30.5	ND	ND	1.43	ND	NA	ND	ND	ND	ND
dup	08/25/00	1.60	30.5	ND	ND	1.7	ND	NA	ND	ND	ND	16.5
	11/30/00	1.62	22.2	ND	ND	ND	ND	NA	ND	2.83	ND	5.03
dup	11/30/00	ND	22.2	ND	ND	ND	ND	NA	ND	1.14	ND	ND
	02/22/01	ND	23.5	ND	ND	ND	ND	NA	ND	ND	ND	ND
	05/16/01	1.42	29.1	ND	ND	2.46	ND	NA	ND	ND	ND	ND
	05/16/01	1.45	33.9	ND	1.51	2.05	ND	NA	ND	ND	ND	ND
CR-11	02/18/00	65.6	440	5.59	25.2	57.1	29.6	NA	ND	4.53	0.140	123
	05/23/00	49.3	382	6.59	35.8	68.5	39.1	NA	ND	3.21	ND	168
	08/25/00	63.1	83.4	ND	1.01	3.25	1.37	NA	ND	1.83	ND	17.9
	11/30/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	02/22/01	53.6	126	ND	1.04	3.56	ND	NA	ND	3.24	ND	7.84
	05/16/01	58.7	111	ND	3.62	6.28	3.14	NA	ND	2.43	ND	19.3
CR-26	03/09/05	143	319	<1.00	18.2	22.9	10.9	NA	<0.200	2.09	<1.00	67.0
	06/22/05	157	212	<1.00	5.99	6.61	2.68	NA	<0.200	<2.00	<1.00	17.5
	09/22/05	210	164	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	03/25/08	134	-	<0.380	27.9	37.4	22.0	7,060	<0.200	<5.00	0.180	97.3
	06/24/08	158	148	<0.500	0.500	0.743	0.791	6,900	<0.200	0.389	<1.00	7.77
	09/23/08	152	137	0.153	0.531	1.32	0.351	7,010	<0.200	0.954	<1.00	2.89
	01/06/09	136	260	0.170	14.8	15.6	8.35	7,840	<0.200	0.170	<1.00	49.4

COP0017070

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CR-27C	03/25/08	7.02	-	<0.380	<1.00	<2.70	1.07	470	<0.200	<5.00	<0.120	<33.0
[8]	03/25/08	7.25	-	<0.380	<1.00	<2.70	<0.540	489	<0.200	<5.00	<0.120	<33.0
	06/24/08	7.70	97.7	<0.500	<2.00	0.795	0.606	560	<0.200	1.01	<1.00	6.55
[8]	06/24/08	7.26	86.7	0.076	<2.00	0.699	<1.00	589	<0.200	0.652	<1.00	6.55
	09/23/08	6.78	78.4	0.111	0.526	2.79	1.06	315	<0.200	1.20	<1.00	14.5
[8]	09/23/08	4.28	64.1	0.070	<2.00	1.50	<1.00	328	0.0435[5]	<0.500	<1.00	9.46
	01/06/09	7.42	91.1	0.120	1.18	1.60	2.20	446	<0.200	<0.500	<1.00	18.4
[8]	01/06/09	7.55	91.8	<0.500	<2.00	1.13	<1.00	498	<0.200	0.667	<1.00	12.9
CR-28A	06/25/08	32.0	340	0.746	37.6	64.5	67.5	4,480	0.106	0.588	0.221	132
[8]	06/25/08	25.5	60.6	<0.500	<2.00	0.457	5.57	3,520	<0.200	<0.500	<1.00	3.62
	09/25/08	26.8	291	<5.00	33.3	64.3	58.3	4,350	0.0906	<5.00	<10.0	139
[8]	09/25/08	24.9	50.2	<0.500	<2.00	0.689	5.49	3,480	<0.200	<0.500	<1.00	5.81
CR-28B	06/25/08	3.83	61.1	0.127	<2.00	<2.00	<1.00	3,630	<0.200	<0.500	<1.00	2.30
[8]	06/25/08	3.88	64.8	0.092	<2.00	2.82	<1.00	3,460	<0.200	<0.500	<1.00	4.41
	09/25/08	4.38	70.0	<5.00	<20.0	<20.0	<10.0	3,850	<0.200	<5.00	<10.0	<50.0
[8]	09/25/08	4.53	65.4	<0.500	<2.00	3.26	<1.00	3,860	<0.200	0.596	<1.00	9.64
CR-28C	06/25/08	0.491	121	0.539	0.45	1.74	1.76	246	<0.200	<0.500	<1.00	29.3
[8]	06/25/08	0.214	124	0.077	<2.00	1.33	<1.00	275	<0.200	<0.500	<1.00	11.4
	09/25/08	0.826	138	<0.500	<2.00	1.01	0.429	400	<0.200	0.939	<1.00	5.89
[8]	09/25/08	0.673	138	<0.500	<2.00	0.858	0.220	380	<0.200	0.542	<1.00	10.1
CR-29A	06/26/08	21.7	57.3	0.069	3.26	4.26	2.96	3,750	<0.200	0.0970	<1.00	13.0
[8]	06/26/08	23.4	35.9	<0.500	<2.00	0.902	<1.00	3,260	<0.200	0.151	<10.0	4.88
	09/25/08	33.2	214	<5.00	27.8	43.1	16.9	4,790	<0.200	1.49	<10.0	79.3
[8]	09/25/08	30.1	56.0	<0.500	<2.00	1.08	0.310	3,830	<0.200	<0.500	<1.00	5.06
CR-29B	06/26/08	8.23	109	0.179	3.40	5.72	3.93	4,500	<0.200	<0.500	<1.00	19.4
[8]	06/26/08	5.03	69.6	0.072	<2.00	2.28	<1.00	4,370	<0.200	0.598	<1.00	6.54
	09/25/08	15.7	213	<5.00	11.6	24.4	11.5	6,480	<0.200	0.900	<10.0	64.3
[8]	09/25/08	4.91	74.9	0.083	<2.00	1.04	0.233	5,400	<0.200	0.698	<1.00	6.75

COP0017071

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CR-30A	06/26/08	20.9	272	0.366	23.6	39.9	23.7	3,400	0.0924	0.364	<1.00	86.5
[8]	06/26/08	14.4	33.0	<0.500	<2.00	1.47	<1.00	2,220	<0.200	<0.500	<1.00	6.14
	09/24/08	19.1	104	<5.00	10.0	18.6	8.71	3,450	<0.200	1.00	<10.0	33.0
[8]	09/24/08	25.7	49.4	<0.500	<2.00	0.705	<1.00	3,280	<0.200	<0.500	<1.00	6.32
CR-30B	06/26/08	10.9	72.3	0.101	<2.00	<2.00	<1.00	6,020	<0.200	<0.500	<1.00	2.67
[8]	06/26/08	12.0	70.7	<0.500	<2.00	1.98	<1.00	6,510	<0.200	0.797	<1.00	5.09
	09/24/08	20.5	105	0.283	1.85	4.68	2.14	8,070	<0.200	1.38	<1.00	17.4
[8]	09/24/08	18.4	82.5	<0.500	<2.00	1.04	<1.00	7,650	0.101	0.663	<1.00	6.96
CR-31A	06/26/08	8.04	78.8	0.091	5.97	8.34	3.98	1,630	<0.200	0.0840	0.586	19.7
[8]	06/26/08	5.94	34.5	<0.500	<2.00	<2.00	<1.00	1,490	<0.200	0.894	<1.00	4.72
	09/24/08	20.3	66.1	<5.00	<20.0	5.97	<10.0	2,530	<0.200	<5.00	<10.0	11.4
[8]	09/24/08	19.1	51.2	<0.500	<2.00	0.341	<1.00	2,210	<0.200	<0.500	<1.00	7.89
CR-31B	06/26/08	102	84.0	0.239	0.651	0.394	0.489	8,170	<0.200	<0.500	<1.00	13.3
[8]	06/26/08	115	79.8	<0.500	0.445	0.931	<1.00	8,120	<0.200	0.762	<1.00	4.90
	09/24/08	95.9	83.2	<5.00	<20.0	4.00	<10.0	8,650	<0.200	<5.00	<10.0	15.5
[8]	09/24/08	77.2	63.5	<0.500	<2.00	1.12	<1.00	7,970	<0.200	0.382	<10.0	11.0
CR-32A	06/26/08	3.40	36.9	<0.500	0.972	2.76	1.19	885	<0.200	0.105	<1.00	8.38
[8]	06/26/08	1.01	17.3	0.068	<2.00	1.21	<1.00	831	<0.200	0.277	<1.00	8.35
	09/24/08	3.21	43.1	<0.500	1.36	3.92	0.928	1,110	<0.200	0.198	<1.00	9.55
[8]	09/24/08	2.67	32.0	<0.500	<2.00	1.20	<1.00	1,200	<0.200	<0.500	<1.00	10.5
CR-32B	06/26/08	62.4	120	0.411	0.597	1.37	0.891	9,280	<0.200	<0.500	<1.00	5.15
[8]	06/26/08	72.2	114	<0.500	0.696	1.73	<1.00	8,870	<0.200	0.411	<1.00	6.43
	09/24/08	57.6	120	<5.00	<20.0	3.05	<10.0	9,760	<0.200	<5.00	<10.0	7.83
[8]	09/24/08	67.3	112	<0.500	<2.00	3.76	0.262	8,830	<0.200	0.324	<1.00	7.56
CR-32C	06/26/08	3.40	130	1.38	0.588	1.97	2.20	771	<0.200	<0.500	<1.00	66.9
[8]	06/26/08	0.893	119	0.811	0.394	1.94	<1.00	703	<0.200	0.571	<1.00	56.1
	09/24/08	10.2	206	0.082	6.44	17.0	12.3	1,120	<0.200	0.988	<1.00	27.9
[8]	09/24/08	9.02	128	<0.500	<2.00	0.582	<1.00	877	<0.200	0.518	<1.00	4.06
CR-33	03/26/08	4.42	-	<0.380	4.39	8.12	5.25	3,860	<0.200	<5.00	<0.120	<33.0
[8]	03/26/08	0.910	-	<0.380	<1.00	<2.70	<0.540	3,920	<0.200	<5.00	<0.120	<33.0
	06/24/08	23.8	543	<0.500	48.4	81.7	40.5	5,160	0.0826	1.71	<1.00	205
[8]	06/24/08	12.2	124	<0.500	<2.00	1.30	<1.00	4,450	<0.200	0.182	<1.00	8.14
	09/24/08	19.9	131	<0.500	3.55	4.58	2.41	4,880	<0.200	0.745	<1.00	13.8
[8]	09/24/08	15.7	119	<0.500	<2.00	0.860	<1.00	4,400	<0.200	1.20	<1.00	6.09
	01/06/09	16.4	78.0	<0.500	0.350	0.350	0.290	5,130	<0.200	0.190	<1.00	2.03
[8]	01/06/09	16.2	89.6	1.64	<20.0	0.430	<10.0	4,670	<0.200	<5.00	8.01	<50.0
	03/18/09	3.58	58.1	<5.00	<2.00	<2.00	<1.00	3,470	<0.00500	<5.00	<1.00	<5.00

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TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
KINDER MORGAN												
MW-8	09/22/08	3.96	19.4	0.556	0.56	1.98	1.23	425	--	0.4	0.027	19.7
dup	09/22/08	3.79	20.7	0.584	0.35	1.96	0.936	467	--	0.4	0.016	19.8
	03/16/09	2.25	22.8	<0.500	<2.00	<2.00	<1.00	NA	<0.200	<0.500	<1.00	13.6
dup	03/16/09	2.25	22.0	<0.500	<2.00	<2.00	<1.00	NA	<0.200	<0.500	<1.00	10.5
MW-9	02/16/00	9.74	56.6	0.73	3.96	4.76	5.69	NA	ND	ND	ND	34.4
	05/31/00	3.48	22.6	ND	ND	ND	ND	NA	ND	ND	ND	7.88
	08/24/00	13.6	38.1	ND	ND	ND	ND	NA	ND	ND	ND	7.99
	12/01/00	17.7	71.0	2.36	1.95	2.72	2.50	NA	ND	2.39	ND	20.7
	02/22/01	11.1	24.9	ND	1.30	2.34	ND	NA	ND	ND	ND	7.20
	05/16/01	9.42	30.8	ND	ND	1.19	ND	NA	ND	ND	ND	ND
dup	05/16/01	9.31	31.6	ND	ND	1.35	ND	NA	ND	ND	ND	20.8
	09/21/01	16.8	63.7	1.41	2.19	3.5	ND	NA	ND	ND	ND	13.8
	03/14/02	1.98	21.3	ND	ND	3.76	ND	NA	ND	ND	ND	8.24
dup	03/14/02	2.81	22.0	ND	ND	3.37	ND	NA	ND	ND	ND	11.5
	09/27/02	11.6	59.2	1.30	2.58	5.14	2.94	NA	ND	ND	ND	23.0
	03/18/03	4.12	40.8	ND	ND	NS	ND	NA	ND	ND	ND	NS
dup	03/18/03	3.52	40.8	ND	ND	NS	ND	NA	ND	ND	ND	NS
	09/24/03	10.8	28.1	ND	ND	ND	ND	NA	ND	ND	ND	6.70
	03/30/04	1.50	23.8	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<1.00	<1.00	10.7
	09/27/04	16.0	85.8	2.68	5.98	8.98	5.62	NA	<0.200	<1.00	<1.00	61.3
dup	09/27/04	16.7	110	3.95	4.54	13.0	7.05	NA	<0.200	<1.00	<1.00	88.8
	03/29/05	3.73	14.7	1.46	0.360	1.64	1.15	NA	<0.200	<1.00	<1.00	22.9
	09/21/05	8.67	25.8	1.28	<1.00	4.25	1.81	NA	<0.200	<2.00	<1.00	21.7
	03/15/06	2.16	24.4	<1.00	<1.00	2.34	<1.00	NA	<0.200	<2.00	<1.00	23.4
dup	03/15/06	1.64	24.5	<1.00	<1.00	2.04	<1.00	NA	<0.200	<2.00	<1.00	22.2
	09/26/06	8.84	27.6	4.08	<1.00	2.98	1.49	NA	<0.200	<2.00	<1.00	43.0
	03/22/07	2.08	20.5	<1.00	<1.00	<1.00	<1.00	NA	<0.200	<1.00	<1.00	13.8
	09/20/07	7.20	22.2	<1.00	2.09	5.22	2.68	NA	<0.200	<2.00	<1.00	20.9
dup	09/20/07	6.90	13.7	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	12.2
	03/25/08	0.80	13.7	0.272	0.220	1.59	0.248	30.5	NA	<0.2	0.009[9]	10.4
MW-10	02/16/00	31.1	266	0.270	25.0	49.3	25.6	NA	ND	2.00	<1.00	113
	05/31/00	15.8	199	ND	15.5	29.2	18.2	NA	ND	1.79	ND	75.6
	08/24/00	19.6	51.8	ND	ND	ND	ND	NA	ND	1.30	ND	5.49
	12/01/00	28.4	28.4	ND	4.24	7.04	4.37	NA	ND	1.25	ND	18.1
	02/22/01	22.2	67.0	ND	1.69	3.31	1.02	NA	ND	ND	ND	8.93
	05/16/01	19.9	72.9	ND	ND	ND	ND	NA	ND	ND	ND	ND

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TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-11	02/16/00	67.7	398	0.180	34.4	67.2	78.6	NA	0.065	1.34	0.150	168
	05/31/00	59.5	454	ND	29.1	57.7	70.5	NA	0.201	2.96	ND	153
	08/24/00	50.9	111	ND	4.84	8.28	21.0	NA	ND	3.15	ND	20.3
	12/01/00	47.8	125	ND	7.19	11.4	37.2	NA	ND	4.38	ND	31.1
	02/22/01	50.9	113	ND	5.90	11.0	39.9	NA	ND	ND	ND	31.0
	05/16/01	44.5	81.6	ND	1.84	3.88	30.0	NA	ND	ND	ND	15.8
MW-13	02/16/00	17.0	305	0.110	28.5	43.8	23.5	NA	ND	0.72	0.160	130
	05/31/00	11.5	411	ND	26.4	40.9	22.8	NA	ND	2	ND	114
	08/24/00	3.31	85.4	ND	5.00	8.17	3.73	NA	ND	4.31	ND	20.7
	12/01/00	3.84	78.4	ND	4.94	7.52	1.39	NA	ND	1.46	ND	20.1
dup	12/01/00	4.65	79.5	ND	5.04	6.82	3.44	NA	ND	1.62	ND	20.7
	02/22/01	1.46	62.1	ND	4.09	5.81	2.37	NA	ND	ND	ND	17.6
	05/16/01	1.74	52.3	ND	2.18	3.08	1.69	NA	ND	ND	ND	12.3
MW-15	02/17/00	1.70	87.4	0.040	6.51	5.46	2.06	NA	ND	0.34	ND	21.9
dup	02/17/00	1.52	87.7	0.080	6.55	5.32	3.40	NA	-	0.46	ND	21.0
	05/31/00	ND	94.1	ND	6.00	5.97	3.22	NA	ND	ND	ND	29.8
	08/24/00	ND	141	ND	9.89	8.79	4.20	NA	ND	4.81	ND	38.8
	12/01/00	3.16	148	ND	13.3	12.0	6.97	NA	ND	1.15	ND	53.4
	02/22/01	1.29	108	ND	8.40	9.51	6.64	NA	ND	ND	ND	208
	05/16/01	ND	68.1	ND	1.26	1.54	1.13	NA	ND	ND	ND	24.6
MW-21	02/17/00	4.00	188	2.19	7.77	9.10	9.88	NA	ND	0.71	ND	45.9
	05/30/00	5.99	335	7.01	19.6	24.8	24.7	NA	ND	1.85	ND	126
	08/23/00	3.39	185	ND	2.02	2.95	1.26	NA	ND	1.53	ND	14.0
	12/01/00	3.44	141	1.48	ND	ND	ND	NA	ND	1.76	ND	14.0
	02/22/01	3.50	184	ND	1.17	ND	ND	NA	ND	ND	ND	10.7
	05/16/01	4.71	21.9	ND	ND	1.27	1.03	NA	ND	ND	ND	18.2
MW-22	02/17/00	92.8	251	0.170	12.10	8.34	39.1	NA	ND	1.21	ND	49.2
dup	02/17/00	-	-	-	-	-	-	NA	ND	-	-	-
	05/30/00	94.5	244	ND	9.70	9.50	21.6	NA	ND	2.42	ND	38.8
	08/23/00	104	194	ND	1.25	2.01	6.95	NA	ND	2.74	ND	ND
	12/01/00	83.1	295	ND	1.99	2.13	10.5	NA	ND	3.00	ND	26.5
	02/21/01	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	05/16/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F

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TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-23	02/17/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	05/30/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	08/23/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	11/30/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	02/22/01	9.09	58.2	ND	1.75	8.17	4.41	NA	ND	ND	ND	9.83
	05/16/01	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
MW-25	09/21/01	56.3	95.8	ND	3.39	3.65	4.11	NA	ND	ND	ND	25.8
	03/14/02	40.6	115	ND	5.73	8.32	9.69	NA	ND	ND	1.15	27.8
	09/27/02	116	186	ND	6.06	8.97	9.90	NA	ND	ND	ND	33.4
	03/18/03	38.6	44.0	ND	ND	NS	ND	NA	ND	1.15	1.10	NS
	09/24/03	66.1	181	1.25	14.4	23	20.1	NA	ND	1.79	ND	71.2
	03/30/04	52.1	58.0	<1.00	1.57	<2.00	<1.15	NA	<0.200	<1.00	<1.00	8.10
	09/27/04	71.2	140	<1.00	5.06	11.2	11.2	NA	<0.200	<1.00	<1.00	30.4
	03/28/05	61.6	94.1	<1.00	1.16	2.53	4.74	NA	<0.200	0.400	<1.00	11.8
	09/21/05	62.2	64.7	<1.00	1.40	2.99	1.89	NA	<0.200	<2.00	<1.00	8.38
	03/15/06	60.7	70.1	<1.00	<1.00	4.69	1.83	NA	<0.200	<2.00	<1.00	9.20
	09/26/06	52.9	76.3	<1.00	1.79	2.58	3.40	NA	<0.200	<2.00	<1.00	11.7
	03/22/07	46.8	77.1	<1.00	2.88	3.93	4.52	NA	<0.200	<1.00	<1.00	16.2
	09/20/07	121	201	<1.00	8.85	12.6	15.7	NA	<0.200	<2.00	<1.00	43.6
	03/24/08	40.2	119	0.372	5.28	12.0	12.2	4,790	NA	<0.2	0.035	27.1
	09/22/08	39.0	239	0.666	9.18	20.6	24.3	5,160	NA	0.4	0.072	44.0
	03/16/09	58.8	162	<0.500	9.16	15.4	15.0	NA	<0.200	<0.500	<1.00	37.2

COP0017075

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-26	02/17/00	47.4	94.3	0.050	4.68	3.68	3.42	NA	ND	0.6	ND	14.1
dup	02/17/00	48.7	90.4	0.500	4.34	4.96	3.12	NA	ND	0.33	ND	42.2
	05/30/00	44.3	102	ND	4.53	5.01	4.92	NA	ND	ND	ND	16.2
	08/23/00	53.0	59.4	ND	2.18	2.49	2.28	NA	ND	ND	ND	ND
dup	08/23/00	57.6	64.2	ND	2.27	3.84	2.28	NA	ND	ND	ND	7.91
	12/01/00	52.6	62.0	ND	1.58	ND	2.54	NA	ND	1.16	ND	7.96
	02/21/01	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	05/17/01	59.0	67.8	ND	2.21	1.70	2.25	NA	ND	ND	ND	12.0
	09/27/02	45.0	52.4	ND	1.23	ND	2.20	NA	ND	ND	ND	16.9
	03/18/03	20.5	67.0	ND	ND	NS	ND	NA	ND	ND	1.09	
	09/24/03	51.0	51.2	ND	ND	ND	2.14	NA	ND	ND	ND	5.07
	03/30/04	43.1	66.1	<1.00	<1.00	<1.00	1.02	NA	<0.200	<1.00	<1.00	<5.00
	09/27/04	65.7	66.2	<1.00	2.06	4.48	6.54	NA	<0.200	<1.00	<1.00	18.8
	03/28/05	55.4	74.9	1.04	1.29	3.13	5.86	NA	<0.200	0.53	<1.00	15.8
	09/21/05	62.3	46.2	<1.00	<1.00	<2.00	1.22	NA	<0.200	<2.00	<1.00	<5.00
	03/15/06	47.6	77.1	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	09/26/06	45.7	68.4	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	5.05
dup	09/26/06	48.0	69.2	<1.00	<1.00	2.12	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	03/22/07	43.8	71.0	<1.00	<1.00	<1.00	<1.00	NA	<0.200	<1.00	<1.00	13.5
	09/20/07	50.1	68.5	<1.00	<1.00	<2.00	1.18	NA	<0.200	<2.00	<1.00	7.64
	03/24/08	39.5	74.0	0.048	1.06	1.18	2.22	5,640	NA	<0.2	0.006[9]	5.85
dup	03/24/08	37.9	87.5	0.099	1.66	1.96	3.35	5,580	NA	<0.2	0.011[9]	9.57
	09/22/08	39.5	102	0.112	2.97	3.39	4.98	4,660	NA	0.4	0.017	13.8
	03/16/09	47.0	105	<0.500	3.99	4.56	5.49	NA	<0.200	<0.500	<1.00	17.7

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-28	02/16/00	0.320	8.03	ND	0.47	2.00	3.87	NA	ND	ND	ND	17.2
	05/30/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	08/23/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	11/30/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	02/21/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	05/16/01	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
MW-31	02/16/00	5.04	16.0	ND	0.42	2.22	1.35	NA	ND	ND	ND	2.18
	05/30/00	6.64	19.0	ND	ND	ND	ND	NA	ND	ND	ND	ND
	08/23/00	18.1	20.0	ND	ND	ND	ND	NA	ND	ND	ND	ND
	12/01/00	13.4	17.9	ND	ND	ND	2.80	NA	ND	ND	ND	ND
	02/22/01	14.8	22.8	ND	ND	ND	ND	NA	ND	ND	ND	7.23
	05/17/01	15.0	21.0	ND	ND	ND	2.44	NA	ND	ND	ND	13.2
MW-32	02/16/00	0.710	18.9	0.070	2.97	3.99	3.09	NA	ND	ND	ND	6.03
	05/30/00	1.47	26.8	ND	1.95	4.30	1.59	NA	ND	ND	ND	6.86
	08/23/00	ND	14.7	ND	ND	2.51	ND	NA	ND	ND	ND	ND
	12/01/00	1.93	14.2	ND	ND	ND	ND	NA	ND	1.20	ND	ND
	02/22/01	ND	9.21	ND	1.19	ND	ND	NA	ND	ND	ND	ND
	05/16/01	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND

COP0017077

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-33	02/16/00	8.42	76.8	0.060	1.62	4.23	3.68	NA	ND	ND	ND	7.46
	05/30/00	6.55	111	ND	1.79	3.38	1.54	NA	ND	ND	ND	7.21
	08/24/00	10.3	227	ND	1.04	2.46	ND	NA	ND	2.59	ND	ND
	11/30/00	58.0	563	ND	2.23	3.43	ND	NA	ND	1.63	ND	8.82
	02/22/01	14.2	91.0	ND	1.79	3.39	1.03	NA	ND	ND	ND	9.44
dup	02/22/01	14.2	104	ND	1.88	3.90	1.55	NA	ND	ND	ND	11
	05/16/01	17.8	184	ND	ND	1.28	ND	NA	ND	ND	ND	ND
	09/21/01	10.0	75.7	ND	ND	ND	ND	NA	ND	1.51	ND	ND
	03/14/02	9.75	72.2	ND	ND	ND	ND	NA	ND	ND	2.02	ND
	09/27/02	30.2	356	ND	2.06	3.03	1.36	NA	ND	ND	ND	20.5
	03/18/03	8.67	40.1	ND	ND	NS	ND	NA	ND	ND	1.40	NS
	09/24/03	23.2	191	ND	ND	ND	ND	NA	ND	ND	ND	ND
	03/29/04	12.4	55.2	<1.00	1.14	<2.00	<1.00	NA	<0.200	<1.00	<1.00	<5.00
	09/27/04	132	1410	<2.00	6.28	13.5	<2.00	NA	0.490	<2.00	<2.00	31.9
	03/29/05	7.57	325	<1.00	0.360	2.44	0.210	NA	<0.200	<1.00	<1.00	7.37
	09/21/05	18.1	398	<1.00	1.65	2.90	<1.00	NA	<0.200	<2.00	<1.00	5.80
dup	09/21/05	16.3	366	<1.00	1.51	2.92	<1.00	NA	<0.200	<2.00	<1.00	5.16
	03/15/06	11.2	58.8	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	6.00
	09/27/06	26.3	409	<0.0752	<0.800	<1.60	<0.432	NA	7.24	<1.60	<0.0960	24.4
	03/22/07	13.9	123	0.205	<0.800	<1.60	<0.432	NA	0.00767	<1.60	<0.0960	8.27
dup	03/22/07	37.3	380	0.952	1.10	2.42	<0.432	NA	<0.00500	<1.60	<0.0960	18.4
	09/18/07	32.9	488	<1.00	1.33	2.73	<1.00	NA	0.0166	<2.00	<1.00	24.5
	03/25/08	12.1	71.4	0.047	0.580	1.41	0.478	1,100	0.0235	<0.2	0.009[9]	3.14
	09/23/08	32.0	466	0.135	1.31	3.28	0.764	1,780	0.167	0.4	0.029	8.11
	03/16/09	12.7	96.5	<0.500	<2.00	<2.00	<1.00	NA	0.0126	<0.500	<1.00	<5.00

COP0017078

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-34	09/21/01	69.7	381	2.39	14.3	144	14.6	NA	ND	1.46	ND	104
	03/14/02	37.6	178	ND	5.82	13.2	5.49	NA	ND	ND	1.51	32.1
	09/27/02	162	670	1.64	26.4	67.6	22.6	NA	ND	1.3	ND	126
	03/18/03	14.8	93.4	ND	6.02	NS	5.41	NA	ND	ND	1.13	NS
	09/24/03	10.9	65.4	ND	1.06	2.36	1.17	NA	ND	ND	ND	9.94
	03/29/04	3.64	35.0	<1.00	1.14	<2.00	<1.00	NA	<0.200	<1.00	<1.00	<5.00
	09/27/04	87.9	355	<1.00	11.4	28.5	11.1	NA	<0.200	1.31	<1.00	54.7
dup	03/29/05	12.6	-	<1.00	0.530	4.75	1.58	NA	<0.200	0.350	<1.00	12.7
	03/29/05	12.5	75.6	<1.00	0.460	3.82	1.48	NA	<0.200	0.430	<1.00	11.9
	09/21/05	53.7	133	<1.00	1.05	3.54	1.13	NA	<0.200	<2.00	<1.00	7.54
	03/15/06	5.90	57.2	<1.00	3.08	3.29	2.46	NA	<0.200	<2.00	<1.00	13.2
	09/27/06	14.3	70.0	0.103	0.899	3.18	1.39	NA	<0.00500	<1.60	<0.0960	15.0
	03/22/07	25.2	117	0.176	4.01	9.22	5.01	NA	0.00877	<1.60	<0.0960	32.9
	09/18/07	32.5	114	<1.00	3.14	8.00	3.51	NA	0.0208	<2.00	<1.00	20.2
	03/25/08	4.33	45.4	0.203	1.27	2.25	1.61	1,200	0.0098	<0.2	0.008[9]	5.69
	06/24/08	8.70	-	0.108	1.87	4.37	2.95	1,800	0.00789	0.3[9]	0.016[9]	13.6
	09/23/08	27.3	254	0.578	7.36	26.5	13.2	5,040	0.00776	0.4	0.075	49.7
	01/05/09	4.81	36.3	<0.500	<2.00	2.36	1.10	160	0.00422	<0.500	<1.00	5.59
	03/16/09	11.0	122	<0.500	6.68	12.7	8.64	NA	0.0388	<0.500	<1.00	28.4

COP0017079

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-36	02/16/00	14.6	57.5	0.050	4.13	6.14	3.55	NA	ND	0.22	ND	13.1
	05/31/00	14.9	51.2	ND	1.80	3.08	ND	NA	ND	ND	ND	ND
	08/24/00	18.7	57.0	ND	ND	2.22	ND	NA	ND	1.11	ND	10.8
	11/30/00	22.5	70.1	ND	ND	ND	ND	NA	ND	1.47	ND	ND
	02/21/01	20.1	56.0	ND	1.51	2.80	ND	NA	ND	ND	ND	6.77
	05/16/01	29.7	82.6	ND	ND	16.9	ND	NA	ND	ND	ND	14.9
	09/21/01	16.8	54.1	ND	ND	ND	ND	NA	ND	1.08	ND	ND
	03/13/02	4.42	25.2	ND	ND	2.97	ND	NA	ND	ND	ND	12.2
	03/18/03	5.41	31.6	ND	1.22	NS	ND	NA	ND	ND	ND	NS
	09/24/03	43.6	116	ND	1.03	2.34	ND	NA	ND	ND	ND	ND
	3/29/04	10.8	33.9	<1.00	1.31	3.85	1.44	NA	<0.200	<1.00	<1.00	<5.00
	9/27/2004	32.0	67.9	<1.00	2.38	7.39	3.34	NA	<0.200	1.40	<1.00	6.75
	09/21/05	33.6	56.7	<1.00	<1.00	3.07	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	03/15/06	5.90	23.8	<1.00	<1.00	3.84	<1.00	NA	<0.200	<2.00	<1.00	<5.00
	09/27/06	17.6	54.5	<0.0752	<0.800	1.70	<0.432	NA	<0.00500	<1.60	<0.0960	4.50
dup	09/27/06	15.7	48.0	<0.0752	<0.800	1.60	<0.432	NA	<0.00500	<1.60	<0.0960	<4.00
	03/22/07	8.58	33.4	<0.0752	<0.800	2.64	0.652	NA	0.00540	<1.60	<0.0960	6.28
	09/18/07	18.9	51.0	<1.00	<1.00	<2.00	<1.00	NA	<0.00500	<2.00	<1.00	<5.00
dup	09/18/07	30.4	78.3	<1.00	<1.00	4.49	1.07	NA	<0.00500	<2.00	<1.00	9.78
	03/25/08	8.28	28.6	0.032	0.64	3.85	0.702	1,510	0.0071	<0.2	0.005[9]	5.45
	09/23/08	21.6	64.4	0.018	0.67	2.46	0.652	3,570	0.00443	0.8	0.018	2.80
	03/16/09	24.2	56.5	<0.500	<2.00	3.56	2.70	NA	0.00608	<0.500	<1.00	5.42

COP0017080

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-37	02/16/00	18.4	74.8	0.220	7.21	11.8	4.69	NA	ND	0.32	ND	18.4
	05/30/00	19.9	56.7	ND	3.56	5.72	1.80	NA	ND	1.58	ND	11.1
dup	05/30/00	18.9	58.6	ND	4.08	6.37	2.05	NA	ND	ND	ND	12.1
	08/24/00	22.7	45.3	ND	ND	ND	ND	NA	ND	1.58	ND	5.98
	11/30/00	22.1	69.3	ND	4.19	6.05	3.53	NA	ND	1.23	ND	12.3
	02/21/01	22.3	40.4	ND	1.53	2.06	ND	NA	ND	ND	ND	5.26
	05/16/01	20.9	40.3	ND	ND	ND	ND	NA	ND	ND	ND	ND
	09/21/01	22.2	43.2	ND	1.27	ND	1.47	NA	ND	ND	ND	ND
	09/27/02	19.0	42.9	ND	ND	ND	ND	NA	ND	ND	ND	ND
dup	09/27/02	19.4	42.3	ND	ND	ND	ND	NA	ND	ND	ND	9.23
	03/18/03	8.64	25.9	ND	ND	NS	ND	NA	ND	ND	1.41	NS
	09/27/04	24.2	67.9	<1.00	3.08	5.65	3.34	NA	<0.200	<1.00	<1.00	18.1
	03/29/05	15.3	30.0	<1.00	0.230	<1.00	0.580	NA	<0.200	<1.00	<1.00	4.49
	09/21/05	19.4	39.0	<1.00	<1.00	<2.00	1.44	NA	<0.200	<2.00	<1.00	<5.00
	03/15/06	12.0	49.3	<1.00	<1.00	<2.00	1.41	NA	<0.200	<2.00	<1.00	9.59
	09/27/06	19.9	39.4	<0.0752	<0.800	<1.60	<0.432	NA	<0.00500	<1.60	<0.0960	<4.00
	03/22/07	21.0	46.8	0.173	<0.800	<1.60	0.81	NA	<0.00500	<1.60	<0.0960	8.43
	09/18/07	23.6	37.8	<1.00	<1.00	<2.00	3.08	NA	<0.00500	<2.00	<1.00	8.03
	03/25/08	22.1	54.2	0.617	1.26	2.77	1.91	2,300	0.0034	<0.2	0.016[9]	11.4
dup	03/25/08	24.9	68.0	1.01	1.55	2.99	2.52	2,180	0.0078	<0.2	0.019[9]	10.9
	06/24/08	18.0	-	0.084	0.380	0.390	0.39	2,490	0.00064	<0.29	0.004[9]	2.60
	09/23/08	18.7	42.0	0.270	0.37	0.89	1.29	2,530	0.00223	0.4	0.019	4.47
dup	09/23/08	19.0	41	0.198	0.29	0.77	1.16	2,560	0.00197	0.4	0.009	4.92
	01/05/09	19.0	35.2	0.673	<2.00	<2.00	1.80	1,730	0.00267	<0.500	<1.00	14.8
	03/16/09	19.8	31.0	<0.500	<2.00	<2.00	3.52	NA	0.00114	<0.500	<1.00	<5.00
MW-39	03/29/04	17.4	110	<1.00	9.88	16.3	8.23	NA	<0.200	<1.00	<1.00	34.6
	09/27/04	30.4	281	<1.00	24.8	83.2	19.0	NA	<0.200	1.40	<1.00	113
	09/21/05	19.9	89.1	<1.00	2.18	11.0	2.38	NA	<0.200	<2.00	<1.00	13.9

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-40	02/16/00	22.1	185	0.110	20.2	28.9	25.4	NA	ND	0.47	0.12	66.9
	05/30/00	25.0	107	ND	7.83	10.7	8.37	NA	ND	ND	ND	24.5
	08/24/00	27.0	123	ND	1.62	3.16	1.41	NA	ND	3.85	ND	16.0
	11/30/00	31.9	144	ND	4.33	7.34	4.91	NA	ND	1.87	ND	17.8
	02/21/01	38.7	119	ND	3.75	6.07	3.30	NA	ND	ND	ND	18.3
	05/16/01	23.9	102	ND	2.24	3.14	1.93	NA	ND	ND	ND	8.62
	09/21/01	24.8	106	ND	3.06	3.43	2.54	NA	ND	2.32	ND	10.7
	03/13/02	12.6	53.8	ND	1.97	3.36	1.94	NA	ND	ND	ND	12.4
	09/27/02	28.1	219	ND	8.81	10.4	8.08	NA	ND	ND	ND	25.0
	03/18/03	17.4	48.5	ND	1.35	NS	1.30	NA	ND	ND	ND	NS
	09/24/03	44.8	254	ND	8.95	13.1	31.6	NA	ND	ND	ND	32.6
dup	09/24/03	67.8	397	ND	17.9	24.9	53.8	NA	ND	ND	ND	62.7
	03/29/04	19.0	89.7	<1.00	1.24	2.64	1.24	NA	<0.200	<2.00	<1.00	<5.00
dup	03/29/04	17.8	79.7	<1.00	7.19	<2.00	1.28	NA	<0.200	<2.00	<1.00	<5.00
	9/27/2004	61.1	343	<1.00	17.9	29.3	30.8	NA	<0.200	<2.00	<1.00	76.4
	3/29/2005	19.8	62.7	<1.00	0.380	3.60	2.29	NA	<0.200	0.480	<1.00	7.18
	09/21/05	29.5	80.7	<1.00	<1.00	4.34	1.26	NA	<0.200	<2.00	<1.00	5.92
	03/15/06	16.2	54.0	<1.00	1.39	3.68	1.57	NA	<0.200	<2.00	<1.00	7.58
	03/22/07	19.1	53.8	<0.0752	<0.800	2.05	0.886	NA	0.00558	<1.60	<0.0960	7.51
	09/18/07	22.0	91.4	<1.00	<1.00	<2.00	<1.00	NA	<0.00500	<2.00	<1.00	5.58
	03/25/08	15.7	46.6	0.008	0.430	0.56	0.365	1,950	0.0023	0.4[g]	<0.003	5.25
	09/23/08	104	527	0.013	1.48	3.00	2.35	3,840	0.0158	0.4	0.012	9.64
	03/16/09	23.0	83.7	<0.500	<2.00	<2.00	<1.00	NA	0.00280	<0.500	<1.00	<5.00
MW-41B	03/25/08	9.68	98.2	0.132	4.93	7.91	5.74	2,130	0.0099	<0.2	0.037	22.6
	06/24/08	8.73	-	0.085	3.62	5.29	2.64	2,050	0.00504	<0.2	0.036	13.8
dup	06/24/08	8.40	-	0.084	3.34	5.23	2.67	2,060	0.00451	0.6[g]	0.030	13.3
	09/23/08	5.7	67	0.084	1.42	3.68	2.59	1,120	0.00329	0.7	0.009	22
	01/05/09	9.2	55.0	<0.500	<2.00	2.51	<1.00	1,980	0.00158	<0.500	<1.00	6.00
MW-41C	03/25/08	4.55	144	0.126	2.99	9.16	5.74	1,440	0.01070	<0.4	0.021	27.6
	06/24/08	5.50	-	0.088	4.17	10.5	6.17	1,180	0.00988	0.5[g]	0.030	23.9
	09/23/08	2.9	135	0.076	2.89	5.22	6.17	1,120	0.00917	0.5	0.009	28.4
	01/05/09	7.47	176	<0.500	8.76	11.6	2.95	1,480	0.00449	<0.500	<1.00	36.1
MW-42B	03/25/08	26.5	159	0.168	8.10	9.27	5.82	9,090	0.01060	<0.2	0.054	18.7
	06/24/08	20.7	-	0.091	2.35	5.00	1.80	8,600	0.00477	<0.2	0.019[g]	14.0
	09/23/08	15.4	99	0.036	0.91	2.69	1.07	8,160	0.00741	1.1	0.009	14.8
	01/05/09	37.5	107	<0.500	<2.00	<2.00	<1.00	10,500	0.00457	0.827	<1.00	<5.00
MW-42C	03/25/08	1.97	151	0.086	3.89	10.7	5.88	979	0.00600	<0.2	0.032	20.9
	06/24/08	1.09	-	0.068	0.800	4.32	3.12	784	0.00243	1.0[g]	0.010[g]	10.3
	09/23/08	0.8	133	0.106	0.49	3.93	2.69	711	0.00177	0.4	0.009	10.7
	01/05/09	<1.00	134	<0.500	<2.00	3.05	<1.00	676	0.00200	<0.500	<1.00	8.64
dup	01/05/09	<1.00	126	<0.500	<2.00	2.25	<1.00	669	0.00107	<0.500	<1.00	<5.00

COP0017082

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CONOCOPHILLIPS										0		
B-4	05/26/00	35.0	245	ND	27.5	42.5	14.0	NA	ND	ND	ND	75.0
dup	05/26/00	36.7	259	ND	28.3	44.3	14.7	NA	ND	ND	ND	78.5
	08/28/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	11/29/00	31.6	106	ND	5.32	9.68	2.85	NA	ND	1.65	ND	17.6
	02/20/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	09/26/02	30.8	99.9	ND	5.41	8.85	2.72	NA	ND	1.29	ND	25.9
	09/25/03	31.6	92.8	ND	2.58	4.97	1.55	NA	ND	1.29	ND	14.7
	09/26/06	36.1	113	<1.00	3.84	6.73	2.31	NA	<0.200	<2.00	<1.00	21.6
	03/21/07	33.8	95.5	<1.00	1.82	3.62	1.59	NA	<0.200	<1.00	<1.00	18.2
	09/20/07	39.5	89.1	<0.800	1.29	4.21	0.898	NA	<0.200	<1.60	<0.800	15.8
	03/26/08	33.6	268	<1.00	27.8	47.6	17.0	3,220	<0.200	<2.00	<1.00	101
	09/24/08	33.3	189	0.617	9.07	13.5	4.22	3,850	<0.200	0.525	<1.00	71.3
dup	09/24/08	37.3	192	2.30	15.0	23.3	6.50	4,300	<0.200	0.535	<1.00	75.7
B-17	02/17/00	57.9	549	0.360	91.0	140	67.6	NA	ND	1.52	0.280	215
	05/26/00	50.9	195	ND	19.1	29	17.1	NA	ND	1.26	ND	48.5
	08/28/00	53.2	113	ND	2.79	4.17	6.60	NA	ND	ND	ND	12.0
	11/29/00	52.5	111	ND	2.17	6.95	6.36	NA	ND	2.20	ND	9.79
	02/23/01	51.9	82.1	ND	1.30	3.02	4.70	NA	ND	ND	ND	9.66
dup	02/23/01	51.1	88.5	ND	3.05	6.91	5.35	NA	ND	1.19	ND	14.3
	05/17/01	65.6	125	ND	5.18	7.46	8.12	NA	ND	ND	ND	28.7
dup	05/17/01	65.0	114	ND	4.06	5.46	7.18	NA	ND	1.26	ND	15.0
B-18	02/17/00	22.3	507	0.440	79.7	110	29.3	NA	0.098	1.58	0.220	174
	05/26/00	22.8	203	ND	21.1	31.3	9.22	NA	ND	ND	ND	55.8
	08/28/00	22.1	130	1.11	5.63	6.84	3.15	NA	ND	ND	ND	27.0
	11/29/00	17.1	128	ND	2.38	4.51	1.20	NA	ND	1.53	ND	15.7
	02/23/01	25.6	118	ND	5.38	10.7	2.94	NA	ND	ND	ND	50.6
	05/17/01	37.2	138	ND	7.74	9.59	3.10	NA	ND	1.06	1.01	30.9
B-22	02/17/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	05/26/00	25.5	126	ND	10.50	18.7	5.61	NA	ND	ND	ND	38.5
	08/28/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	11/29/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	02/20/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F

COP0017083

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-35	02/17/00	60.2	480	0.620	89.3	122	82.8	NA	ND	1.64	0.21	311
	05/26/00	10.2	116	ND	7.86	11.4	2.64	NA	ND	1.3	ND	23.3
	08/28/00	37.7	128	1.53	4.67	6.12	6.43	NA	ND	ND	ND	33.9
	11/29/00	46.8	131	ND	3.16	6.91	6.19	NA	ND	2.12	ND	20.8
	02/23/01	34.7	81.6	ND	2.00	3.8	3.05	NA	ND	1.00	ND	30.8
	05/17/01	50.4	153	ND	10.7	14.1	10.6	NA	ND	ND	ND	51.1
	09/20/01	34.4	90.1	ND	1.78	4.2	1.60	NA	ND	ND	ND	6.32
	03/14/02	33.5	308	ND	46.3	53.4	29.8	NA	ND	1.39	1.45	146
	09/26/02	29.6	225	ND	29.8	31.4	14.7	NA	ND	1.31	ND	81.6
	03/18/03	38.7	95.8	ND	1.55	4.22	2.77	NA	ND	ND	ND	7.00
	09/25/03	51.7	132	ND	3.34	6.31	5.36	NA	ND	ND	ND	17.1
	03/30/04	29.1	135	<1.00	11.9	14.9	7.79	NA	<0.200	<1.00	<1.00	15.2
	09/28/04	42.2	182	<1.00	8.29	NA	9.93	NA	1.71	<1.00	<1.00	NA
	03/28/05	38.1	160	<1.00	12.4	18.0	15.6	NA	<0.200	<1.00	<1.00	77.6
	09/20/05	42.6	282	<1.00	32.9	40.8	30.6	NA	<0.200	<2.00	<1.00	107
	03/14/06	42.3	105	<1.00	1.92	5.34	2.85	NA	<0.200	<2.00	<1.00	39.6
	09/26/06	38.7	116	<1.00	2.33	4.24	3.44	NA	<0.200	<2.00	<1.00	23.3
	03/21/07	33.6	272	<1.00	26.5	27.0	20.7	NA	<0.200	<1.00	<1.00	114
	09/20/07	39.8	135	<0.800	7.66	12.1	5.65	NA	<0.200	<1.60	<0.800	38.6
	03/27/08	61.0	498	<3.80	82.5	144	91.4	6,180	<0.200	<50.0	0.255	388
	09/24/08	55.6	347	<1.00	48.8	57.2	31.5	5,290	<0.200	<1.00	<2.00	369
	03/23/09	34.9	68.1	<0.500	<2.00	<2.00	<1.00	3,730	0.0257	<0.500	<1.00	<5.00

COP0017084

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-36	02/17/00	10.5	168	0.210	22.2	30.6	7.79	NA	ND	0.64	ND	55.1
	05/26/00	10.5	120	ND	8.19	12.0	2.51	NA	ND	ND	ND	25.0
	08/28/00	22.4	156	ND	7.84	8.76	3.22	NA	ND	ND	ND	47.4
	11/29/00	22.3	130	ND	5.25	8.34	1.71	NA	ND	2.02	ND	17.1
	02/23/01	48.8	174	ND	3.71	6.66	1.42	NA	ND	2.34	ND	24.4
	05/17/01	38.7	476	ND	57.2	69.6	16.5	NA	ND	3.01	ND	138
	09/20/01	18.5	86.1	ND	1.54	3.02	ND	NA	ND	ND	ND	7.61
dup	09/20/01	20.4	97.4	ND	2.94	4.11	ND	NA	ND	ND	ND	13.2
	03/14/02	8.40	90.1	ND	8.74	11.4	2.71	NA	ND	ND	ND	29.4
	09/26/02	17.0	109	ND	6.88	9.1	4.40	NA	ND	ND	ND	33.4
	03/18/03	4.02	40.9	ND	2.34	3.93	1.44	NA	ND	ND	ND	7.29
	09/25/03	20.0	64.4	ND	ND	ND	ND	NA	ND	1.05	ND	ND
	03/30/04	7.19	58.6	<1.00	3.13	5.80	1.49	NA	<0.200	<1.00	<1.00	15.2
	09/28/04	23.3	112	<1.00	3.49	NA	1.20	NA	0.285	<1.00	<1.00	NA
dup	09/28/04	22.1	81.4	<1.00	2.22	NA	<1.00	NA	<0.200	<1.00	<1.00	NA
	03/28/05	24.0	104	<1.00	3.67	4.82	1.53	NA	<0.200	<1.00	<1.00	19.5
	09/20/05	20.5	103	<1.00	4.50	6.37	1.45	NA	<0.200	<2.00	<1.00	13.2
	03/14/06	8.03	40.1	<1.00	<1.00	3.31	<1.00	NA	<0.200	<2.00	<1.00	5.31
	09/26/06	21.7	87.4	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	6.71
	03/21/07	15.1	259	<1.00	28.4	38.4	9.70	NA	<0.200	<1.00	<1.00	81.2
	09/20/07	24.1	169	<0.800	11.2	18.0	4.47	NA	<0.200	<1.60	<0.800	50.0
	03/27/08	18.0	397	<0.380	46.7	77.3	18.6	3,890	0.202	<5.00	0.203	168
	09/24/08	23.3	162	<0.500	13.5	17.6	4.06	5,720	<0.200	<0.500	<1.00	54.2
	03/23/09	18.2	334	<0.500	44.3	62.2	16.7	3,130	0.0750	<0.500	<1.00	125
dup	03/23/09	19.9	455	<0.500	55.8	81.1	21.5	3,740	0.0843	0.584	<1.00	160

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
B-37	02/17/00	369	152	0.330	15.9	29.7	7.05	NA	ND	1.59	ND	54.4
dup	02/17/00	327	34.4	0.400	0.660	1.45	2.36	NA	ND	0.25	ND	1.59
	05/26/00	418	92.0	ND	5.26	13.1	2.34	NA	ND	ND	ND	21.5
	08/28/00	897	227	ND	4.62	9.38	2.09	NA	ND	ND	ND	30.3
	11/29/00	391	99.0	ND	2.21	6.08	ND	NA	ND	1.32	ND	12.0
	02/23/01	198	74.7	ND	ND	3.39	ND	NA	ND	ND	ND	17.0
	05/17/01	521	168	ND	4.08	9.84	1.64	NA	ND	ND	ND	35.5
	03/14/02	86.9	252	ND	17.0	40.9	7.46	NA	ND	ND	ND	76.4
	09/26/02	117	119	ND	6.03	10.0	6.25	NA	ND	ND	ND	34.8
	03/18/03	75.8	121	ND	8.29	17.8	4.29	NA	ND	ND	2.22	53.9
dup	03/18/03	68.3	95.8	ND	5.72	11.5	2.88	NA	ND	ND	1.41	36.4
	09/25/03	260	158	ND	2.90	8.53	1.19	NA	ND	1.69	ND	21.5
dup	09/25/03	247	182	ND	5.13	14.3	2.17	NA	ND	ND	ND	33.0
	03/31/04	125	54.6	<1.00	1.37	4.54	1.31	NA	<0.200	<1.00	<1.00	8.42
	09/28/04	131	78.4	<1.00	2.18	NA	<1.00	NA	<0.200	<1.00	<1.00	NA
	03/28/05	73.4	79.8	<1.00	1.87	5.93	1.57	NA	<0.200	<1.00	<1.00	27.0
	09/20/05	80.2	82.7	<1.00	1.15	2.29	<1.00	NA	<0.200	<2.00	<1.00	13.3
	03/14/06	230	61.6	<1.00	<1.00	4.34	<1.00	NA	<0.200	<2.00	<1.00	6.15
dup	03/14/06	217	72.0	<1.00	1.10	4.81	<1.00	NA	<0.200	<2.00	<1.00	8.20
	09/26/06	165	61.3	<1.00	<1.00	2.88	<1.00	NA	<0.200	<2.00	<1.00	11.0
	03/21/07	151	45.8	<1.00	<1.00	<1.00	<1.00	NA	<0.200	<1.00	<1.00	<10.0
	09/20/07	97.8	66.6	<0.800	1.28	3.92	0.963	NA	<0.200	<1.60	<0.800	14.3
	03/27/08	140	78.7	<0.380	4.55	10.6	3.15	1,470	<0.200	<5.00	<0.120	<33.0
	09/24/08	186	98.4	<0.500	6.22	10.4	4.18	2,230	<0.200	<0.500	<1.00	27.6
	03/20/09	214	96.9	<0.500	4.21	10.5	4.64	1,450	0.0357	<0.500	<1.00	26.4
dup	03/20/09	218	69.9	<0.500	2.05	6.42	2.92	1,480	0.0107	<0.500	<1.00	18.1
B-40	02/17/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NA	NS/S	NS/S	NS/S	NS/S
	05/26/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	08/28/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	11/29/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	02/20/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	09/26/06	18.4	67.3	<0.0752	<0.800	3.67	<0.432	NA	<0.00500	<1.60	<0.0960	16.6
	03/20/07	21.4	80.8	<0.752	1.85	7.12	2.01	NA	<0.00500	<1.60	<0.800	57.0
	09/20/07	24.2	64.0	<0.800	<0.800	1.85	<0.800	<0.800	<0.00500	<1.60	<0.800	13.6
	03/26/08	20.9	145	<1.00	14.0	32.8	9.28	3,160[7]	<0.200	<2.00	<1.00	150
	09/22/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

COP0017086

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
OF-1	03/26/08	56.4	290.0	11.2	25.0	74.9	28.9	3,960[7]	<0.200	<2.00	<1.00	242
	09/22/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
P-1	03/17/03	22.5	1270	ND	216	239	94.6	NA	0.604	ND	ND	625
	03/31/04	52.7	4370	<10.0	642	848	244	NA	0.816	<10.0	<10.0	1,730
	03/14/06	3.34	141	1.68	20.5	29.1	7.79	NA	<0.200	<2.00	<1.00	64.6
	09/26/06	14.0	1210	4.58	130	185	41.8	NA	0.300[4,5]	<1.60	0.732	358
	03/20/07	<0.800	20.8	<0.752	2.26	3.11	<0.800	NA	<0.00500	<1.60	<0.800	6.98
	09/20/07	NA	NA	NA	NA	NA	NA	NA	0.0665	NA	NA	NA
	Well Abandoned											
P-1A	03/26/08	6.99	233	<1.00	28.3	36.9	28.2	797[7]	<0.200	<2.00	<1.00	151
	06/25/08	1.60	55.4	0.746	2.26	6.51	4.48	892	<0.200	<0.500	<1.00	54.2
	09/23/08	8.17	349	<5.00	36.2	51.4	30.2	2,400	<0.200	<5.00	<1.00	234
	01/07/09	1.46	26.0	0.690	3.92	7.03	4.18	72.0	<0.200	<0.500	<1.00	50.7
	03/20/09	1.40	31.6	<0.500	3.60	6.57	4.33	73.6	0.0104	<0.500	<1.00	37.6
P-2	03/17/03	11.1	78.3	ND	2.32	7.22	2.88	NA	ND	ND	1.06	9.79
	09/25/03[1]	9.66	116	ND	4.43	11.6	5.53	NA	ND	1.09	ND	13.7
	03/30/04	8.05	131	<1.00	1.87	4.47	1.26	NA	<0.200	<1.00	<1.00	12.3
	09/28/04	10.3	163	<1.00	5.70	NA	7.42	NA	0.214	1.03	<1.00	NA
	03/28/05	9.51	141	<1.00	3.35	9.00	4.54	NA	<0.200	<1.00	<1.00	11.9
	09/20/05	6.59	144	<1.00	5.67	15.2	7.28	NA	<0.200	<2.00	<1.00	13.1
	03/14/06	5.40	51.7	<1.00	<1.00	2.66	<1.00	NA	<0.200	<2.00	<1.00	<5.00

COP0017087

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-2	02/17/00	18.6	63.2	0.230	3.63	11.6	4.99	NA	ND	0.34	ND	24.1
	05/26/00	11.0	50.3	ND	1.37	5.37	1.45	NA	ND	ND	ND	10.9
	08/28/00	11.9	50.3	1.20	1.09	3.77	1.69	NA	ND	ND	ND	14.7
	11/29/00	7.29	49.9	ND	1.58	3.14	1.09	NA	ND	1.05	ND	13.1
	02/23/01	8.87	37.3	ND	ND	9.35	1.73	NA	ND	ND	ND	21.2
	05/17/01	9.53	42.7	ND	1.29	9.16	2.57	NA	ND	ND	ND	20.5
	09/20/01	6.80	39.7	ND	ND	4.21	ND	NA	ND	ND	ND	7.00
	03/14/02	10.8	53.4	ND	1.68	6.66	1.83	NA	ND	ND	ND	43.6
	09/26/02	6.78	44.3	ND	ND	2.77	ND	NA	ND	1.27	ND	11.6
	03/18/03	10.0	48.7	ND	1.00	5.83	1.11	NA	ND	ND	ND	39.8
	09/25/03	9.78	74.9	ND	6.58	8.96	2.68	NA	ND	ND	ND	63.6
	03/31/04	15.8	64.6	<1.00	2.43	10.7	3.13	NA	<0.200	1.16	<1.00	50.0
	09/28/04	11.1	76.2	<1.00	3.18	NA	2.82	NA	<0.200	<1.00	<1.00	NA
	03/28/05	13.2	99.6	<1.00	3.26	18.7	5.31	NA	<0.200	<1.00	<1.00	94.4
	09/20/05	19.8	129	<1.00	1.74	17.0	5.50	NA	<0.200	<2.00	<1.00	52.0
	03/14/06	15.6	45.1	<1.00	<1.00	7.75	2.28	NA	<0.200	<2.00	<1.00	32.7
	09/27/06	16.0	61.7	<1.00	<1.00	19.6	<1.00	NA	<0.200	<2.00	<1.00	10.6
	03/21/07	18.1	70.2	<1.00	1.17	-	1.58	NA	<0.200	<1.00	<1.00	-
	09/19/07	13.5	92.5	<0.800	1.81	7.47	2.36	NA	<0.200	<1.60	<0.800	39.2
	03/25/08	27.6	62.0	<1.00	2.13	12.2	3.76	4,100	<0.200	<2.00	<1.00	20.9
	09/25/08	13.4	74.0	<0.500	<2.14	8.33	<4.10	3,860	<0.200	<0.500	<1.00	<47.5
	03/17/09	36.0	92.8	<0.500	2.17	10.8	2.88	4,310	<0.200	<0.500	<1.00	18.7

COP0017088

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-3	02/17/00	42.1	194	0.230	24.1	17.1	22.5	NA	ND	1.02	ND	268
	05/26/00	40.0	171	ND	14.9	11.6	18.2	NA	ND	1.45	ND	139
	08/28/00	36.5	124	ND	7.04	6.73	21.2	NA	ND	2.02	ND	103
	11/29/00	42.8	170	ND	9.94	9.49	16.7	NA	ND	3.42	ND	107
dup	11/29/00	41.3	172	ND	9.96	9.32	14.9	NA	ND	2.84	ND	97.3
	02/23/01	119	631	ND	170	107	303	NA	ND	ND	ND	1,470
	05/17/01	45.0	111	ND	3.59	4.39	4.27	NA	ND	1.70	ND	25.8
U-4	05/26/00	18.8	101	ND	3.67	7.49	2.68	NA	ND	ND	ND	14.9
	08/28/00	19.8	93.0	ND	ND	2.14	1.29	NA	ND	ND	ND	15.0
dup	08/28/00	18.9	92.2	ND	ND	2.99	1.31	NA	ND	ND	ND	15.7
	11/29/00	19.8	91.1	ND	ND	ND	ND	NA	ND	1.94	ND	8.95
	02/23/01	21.6	80.2	ND	ND	ND	ND	NA	ND	ND	ND	5.87
	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	09/26/02	18.3	106	ND	4.32	10.5	4.84	NA	ND	1.80	ND	37.7
dup	09/26/02	18.3	106	ND	4.03	9.76	3.79	NA	ND	1.28	ND	31.3
	09/27/06	17.1	81.6	<1.00	<1.00	2.34	<1.00	NA	<0.200	<2.00	<1.00	9.96
	03/21/07	18.2	94.4	<1.00	0.308	8.63	2.53	NA	<0.200	<1.00	<1.00	29.4
	09/19/07	18.4	84.2	<0.800	<0.800	2.35	<0.800	NA	<0.200	<1.60	<0.800	10.5
	03/27/08	19.0	101	<0.380	4.02	11.3	4.09	2,690	<0.200	<5.00	<0.120	<33.0
	09/24/08	16.4	90.2	<0.500	<2.00	3.97	1.10	5,740	<0.200	0.573	<1.00	10.8
dup	09/24/08	17.4	93.3	<0.500	<2.00	4.64	1.33	5,480	<0.200	0.580	<1.00	21.7

COP0017089

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-5	02/17/00	12.7	164	0.940	17.5	45.6	18.9	NA	ND	0.95	ND	933
	05/26/00	10.4	74.8	ND	2.25	9.12	3.70	NA	ND	ND	ND	286
	08/28/00	10.9	219	ND	7.59	21.6	14.3	NA	ND	1.65	ND	884
	11/29/00	12.3	124	ND	5.47	21.6	8.56	NA	ND	2.16	ND	825
	02/23/01	12.6	101	ND	6.92	34.5	14.0	NA	ND	1.00	ND	1,170
	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NA	NS/F	NS/F	NS/F	NS/F
	03/18/03	11.0	170	ND	12.9	66.3	15.8	NA	ND	ND	3.23	2590
	09/25/03	12.6	102	ND	7.36	20.1	9.47	NA	ND	1.18	ND	800
	03/31/04	8.02	85.2	<1.00	7.58	23.0	11.5	NA	<0.200	<1.00	<1.00	785
	09/28/04	9.87	103	<1.00	6.23	NA	10.6	NA	0.228	<1.00	<1.00	NA
	03/28/05	12.3	131	<1.00	22.9	64.5	38.1	NA	<0.200	<1.00	<1.00	1,980
	09/20/05	7.04	107	<1.00	5.83	18.8	12.4	NA	<0.200	<2.00	<1.00	720
	03/14/06	8.16	132	<1.00	11.7	30.7	12.7	NA	<0.200	<2.00	<1.00	669
	09/26/06[2]	6.21	122	0.532	9.60	31.0	15.1	NA	0.0182	<3.20[3]	<0.0960	1,070[3]
	03/20/07	11.7	301	1.45	26.8	54.8	43.2	NA	0.0248	<1.60	<0.800	2,130
	09/20/07	26.0	334	<8.00	16.7	131	22.4	NA	0.0233	<16.0	<0.800	2,970
	09/24/08	13.2	151	<1.00	13.5	46.5	192	2,910	<0.200	<1.00	<2.00	752
U-5A	03/27/08	52.6	63.0	<0.380	3.00	19.4	53.0	6,170	<0.200	<5.0	<0.120	204
U-10	03/18/03	107	3390	ND	313	403	176	NA	0.551	ND	ND	1,220
	09/25/03	9.75	196	ND	13.2	14.9	9.04	NA	ND	ND	ND	49.3
	03/30/04	31.6	128	<1.00	4.81	5.73	22.5	NA	<0.200	<1.00	<1.00	28.8
	09/28/04	6.57	201	<1.00	9.66	NA	8.52	NA	<0.200	<1.00	<1.00	NA
	03/28/05	6.43	127	<1.00	5.29	6.00	4.62	NA	<0.200	<1.00	<1.00	29.3
	09/20/05	6.86	123	<1.00	1.20	2.58	2.05	NA	<0.200	<2.00	<1.00	10.6
	03/14/06	9.18	140	<1.00	6.07	9.33	4.86	NA	<0.200	<2.00	<1.00	40.3

COP0017090

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-11	03/18/03	9.42	372	ND	29.7	33.9	33.6	NA	0.211	1.53	ND	110
	09/25/03	34.3	89.3	ND	2.20	2.87	8.30	NA	ND	1.01	ND	12.4
	03/30/04	6.79	363	<1.00	34.1	312	21.2	NA	<0.200	1.65	<1.00	103
dup	03/30/04	35.7	108	<1.00	4.00	5.94	20.1	NA	<0.200	<1.00	<1.00	29.2
	09/28/04	10.6	534	<1.00	56.1	NA	68.4	NA	0.472	1.92	<1.00	NA
	03/28/05	38.8	106	<1.00	1.52	2.18	5.62	NA	<0.200	<1.00	<1.00	13.7
	09/20/05	45.3	273	<1.00	24.2	30.9	116	NA	0.270	<2.00	<1.00	140
	03/14/06	42.0	101	<1.00	1.37	17.2	6.69	NA	<0.200	<2.00	<1.00	12.0
U-12	03/18/03	32.3	136	ND	6.00	7.11	22.8	NA	ND	ND	ND	33.8
	09/25/03	41.8	1,910	ND	362	372	302	NA	0.559	4.8	ND	1,200
	03/30/04	6.55	248	<1.00	17.9	23.3	22.0	NA	<0.200	1.85	<1.00	72.8
	09/28/04	36.9	208	<1.00	10.2	NA	49.9	NA	<0.200	<1.00	<1.00	NA
	03/28/05	17.2	1,010	2.11	132	140	146	NA	<0.200	3.45	<1.00	570
	09/20/05	6.26	176	<1.00	7.98	9.98	12.5	NA	<0.200	<2.00	<1.00	41.7
	03/14/06	4.53	216	<1.00	8.23	10.5	6.92	NA	<0.200	<2.00	<1.00	27.3
U-14	09/27/06	67.4	1,970	1.84	122	159	175	NA	0.558	<2.00	<1.00	496
	03/21/07	9.93	266	<1.00	14.1	18.1	25.0	NA	<0.200	1.52	<1.00	83.1
	09/19/07	163	2,500	<0.800	83.3	106	120	NA	0.452	3.10	<0.800	822
	03/25/08	22.3	188	<1.00	11.9	14.7	21.8	949	<0.200	<2.00	<1.00	71.0
	09/25/08	16.0	104	<0.500	3.78	6.08	10.2	2,390	<0.200	<0.500	<1.00	46.3
	03/18/09	8.83	109	<0.500	5.49	7.25	14.0	780	<0.200	<0.500	<1.00	45.2
U-15	09/27/06	89.9	777	1.26	90.3	109	179	NA	0.221	<2.00	<1.00	292
	03/21/07	75.1	416	<1.00	46.1	58.1	86.3	NA	<0.200	1.15	<1.00	158
	09/19/07	126	4,790	1.99	232	388	508	NA	0.780	5.38	1.42	2,150
	03/25/08	68.5	284	<1.00	19.6	46.4	43.9	11,900	<0.200	<2.00	<1.00	146
	09/25/08	86.7	502	<1.00	55.0	71.1	81.6	12,200	<0.200	<1.00	<2.00	239
	03/17/09	60.8	144	<0.500	7.85	10.8	15.6	10,800	<0.200	<0.500	<1.00	72.2
U-16	09/27/06	85.4	866	1.31	84.7	113	111	NA	1.70	<2.00	<1.00	239
	03/21/07	112	746	1.53	76.4	113	107	NA	1.35	1.74	<1.00	260
	09/19/07	105	280	<0.800	15.6	26.2	19.1	NA	0.247	<1.60	<0.800	76.4
	03/25/08	86.8	153	<1.00	5.82	8.59	7.97	9,970	<0.200	<2.00	<1.00	54.8
	09/25/08	97.2	310	<0.500	20.6	29.6	27.1	10,600	0.345	0.763	<1.00	94.1
	03/17/09	76.8	226	<0.500	11.6	16.9	16.7	9,250	<0.200	<0.500	<1.00	51.6
U-17	09/27/06	58.1	606	<1.00	69.4	87.3	55.2	NA	<0.200	<2.00	<1.00	183
	03/21/07	23.9	141	<1.00	12.3	18.5	25.2	NA	<0.200	<1.00	<1.00	45.4
	09/19/07	47.6	294	<0.800	26.1	42.3	38.1	NA	<0.200	<1.60	<0.800	98.2
	03/25/08	24.0	87.4	<1.00	1.98	4.21	5.56	4,380	<0.200	<2.00	<1.00	13.8
	09/25/08	24.7	111	<0.500	10.2	14.8	10.9	3,160	<0.200	<0.500	<10.0	36.2
	03/17/09	21.2	62.7	0.540	2.96	4.15	5.91	3,750	<0.200	<0.500	<1.00	12.6

COP0017091

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-18	03/21/07	69.0	491	<1.00	53.9	92	64.2	NA	<0.200	1.12	<1.00	213
	09/19/07	95.7	259	<0.800	20.4	40.3	21.9	NA	<0.200	<1.60	<0.800	101
	03/25/08	81.0	95.3	<1.00	6.69	10.9	12.8	1,360	<0.200	<2.00	<1.00	45.3
	09/25/08	57.1	91.9	<0.500	8.11	15.8	14.6	2,330	<0.200	<0.500	<1.00	45.3
	03/17/09	83.8	79.9	0.500	3.62	8.71	7.68	594	<0.200	<0.500	<1.00	19.9
U-19	03/21/07	76.6	262	<1.00	12.0	22.4	23.2	NA	0.201	<1.00	<1.00	139
	09/19/07	96.8	100	<0.800	4.42	10.6	8.99	NA	<0.200	<1.60	<0.800	163
	03/25/08	93.4	160	<1.00	6.94	11.9	13.0	4,950	<0.200	<2.00	<1.00	169
U-20	03/21/07	50.0	352	<1.00	41.1	45.6	53.4	NA	<0.200	1.03	<1.00	157
	09/19/07	28.1	61.9	<0.800	<0.800	<1.60	<0.800	NA	<0.200	<1.60	<0.800	4.38
	03/25/08	17.4	61.7	<1.00	<1.00	<2.00	1.08	5,350[7]	<0.200	<2.00	<1.00	5.22
dup	03/25/08	14.5	57.5	<1.00	<1.00	<2.00	<1.00	5,170[7]	<0.200	<2.00	<1.00	<5.00
	09/25/08	47.7	910	<1.00	87.5	104	67.1	7,510	<0.200	1.87	<2.00	356
	03/17/09	43.2	84.3	<0.500	3.81	5.64	5.24	3,650	<0.200	<0.500	<1.00	15.2
U-21	03/21/07	8.28	280	<1.00	24.4	30.6	24.1	NA	<0.200	<1.00	<1.00	88.6
	09/19/07	6.28	74.8	<0.800	0.954	3.11	4.00	NA	<0.200	<1.60	<0.800	9.39
	03/26/08	2.76	83.6	<1.00	1.10	5.18	1.12	1,380[7]	<0.200	<2.00	<1.00	13.2
	09/25/08	56.2	301	<1.00	37.9	44.1	45.0	6,400	<0.200	<1.00	<2.00	180
	03/17/09	8.13	122	<0.500	7.09	10.0	9.51	4,260	<0.200	<0.500	<1.00	32.4
U-22A	03/27/08	10.3	134	<0.380	3.44	5.29	24.2	3,300	<0.200	<5.00	<0.120	41.0
	06/24/08	10.3	109	<0.500	<2.00	3.25	4.41	3,260	<0.200	<0.500	<1.00	14.5
	09/23/08	9.20	249	<5.00	<20.0	<20.0	36.9	2,730	<0.200	<5.00	<1.00	53.9
	01/06/09	13.6	119	<0.500	<2.00	<2.00	2.67	3,640	<0.200	<0.500	<1.00	17.7
	03/19/09	7.02	132	<0.500	3.00	3.36	12.0	3,640	0.0168	<5.00	<1.00	19.9

COP0017092

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-22B	03/27/08	9.78	464	<0.380	51.1	63	23.7	2,080	<0.200	<5.00	0.128	179
	06/24/08	2.57	108	<0.500	3.72	4.73	2.65	1,320	<0.200	<0.500	<1.00	25.2
	09/23/08	5.29	194	<5.00	<20.0	<20.0	7.41	1,510	<0.200	<5.00	<1.00	48.3
	01/07/09	1.34	47.8	<0.500	<2.00	<2.00	<1.00	1,130	<0.200	<0.500	<1.00	23.2
	03/19/09	1.89	71.4	<0.500	<2.00	<2.00	<1.00	1,020	<0.00500	<1.00	<1.00	5.52
dup	03/19/09	1.92	70.0	<0.500	<2.00	<2.00	<1.00	1,040	<0.00500	<1.00	<1.00	5.39
U-22C	06/25/08	10.2	110	<0.500	<2.00	<2.00	2.28	3,450	<0.200	<0.500	<1.00	10.6
U-23	03/27/08	13.6	1,450	<0.380	57.1	105	83.1	4,000	0.295	<5.00	0.333	383
	06/24/08	8.66	427	0.952	34.7	71.2	45.6[f]	5,510	<0.200	0.742	<1.00	174
	09/23/08	20.5	1,110	<10.0	168	315	67.7	9,260	<0.200	<10.0	<1.00	390
	01/06/09	3.60	120	<0.500	10.5	21.9	11.9	2,050	<0.200	<0.500	<1.00	75.6
	03/19/09	6.72	168	<0.500	5.58	22.8	12.4	5,860	0.0770	<5.00	<1.00	34.3
U-24A	03/27/08	29.4	497	<0.380	60.5	103	19.8	13,400	<0.200	<5.00	0.200	173
	06/24/08	10.1	210	<0.500	19.2	29.6	9.21[f]	6,790	<0.200	<0.500	<1.00	67.1
	09/23/08	7.20	125	<10.0	<40.0	<40.0	2.90	9,350	<0.200	<10.0	<1.00	28.8
	01/06/09	11.2	122	<0.500	9.81	16.3	3.64	9,620	<0.200	<0.500	<1.00	43.3
	03/19/09	6.77	43.8	<0.500	<2.00	<2.00	<1.00	9,610	<0.00500	<10.0	<1.00	<5.00
U-24B	03/27/08	1.58	212	<0.380	1.79	<2.70	0.823	2,970	<0.200	<5.00	0.120	<33.0
	06/25/08	<1.00	161	<0.500	<2.00	<2.00	<1.00	2,480	<0.200	<0.500	<1.00	17.5
	09/24/08	1.88	186	<0.500	4.11	3.49	1.80	2,770	<0.200	0.77	<1.00	106
	01/07/09	<1.00	100	<0.500	<2.00	<2.00	<1.00	1,970	<0.200	<0.500	<1.00	12.9
	03/19/09	1.19	112	<0.500	<2.00	<2.00	<1.00	1,900	<0.00500	<2.50	<1.00	<5.00
dup	03/19/09	1.48	129	<0.500	2.97	<2.00	<1.00	2,240	<0.00500	<5.00	<1.00	10.0
U-25	03/27/08	9.33	60.6	<0.380	3.44	5.17	2.33	4,150	<0.200	<5.00	<0.120	<33.0
	06/24/08	8.18	47.1	<0.500	<2.00	2.75	<1.00[9]	4,840	<0.200	<0.500	<1.00	8.70
	09/24/08	14.3	47.9	<0.500	<2.00	2.37	<1.00	7,900	<0.200	0.604	<1.00	9.82
	01/06/09	12.7	63.8	<0.500	4.95	5.63	2.53	5,400	<0.200	<0.500	<1.00	19.2
	03/19/09	8.10	36.5	<0.500	<2.00	2.69	<1.00	3,370	0.00941	<5.00	<1.00	5.65
U-26	03/26/08	11.2	959	<1.00	13.0	22.6	43.6	798[7]	<0.200	<2.00	<1.00	87.2
	06/25/08	5.16	140	<0.500	4.22	6.67	10.1	2,150	<0.200	<0.500	<1.00	26.5
	09/23/08	38.2	740	<10.0	124	123	35.4	9,080	<0.200	<10.0	<1.00	201
	01/07/09	5.12	63.1	<0.500	3.19	8.55	11.0	960	<0.200	<0.500	<1.00	46.8
	03/20/09	15.3	488	<0.500	12.9	22.3	43.4	824	0.0451	<0.500	<1.00	88.4
U-27	03/26/08	15.8	149	<1.00	20.9	23.6	7.45	3,120[7]	<0.200	<0.500	<1.00	43.6
	06/25/08	22.8	77.2	<0.500	10.6	13.7	3.49	4,960	<0.200	<0.500	<1.00	29.4
	09/23/08	32.3	971	<10.0	156	235	36.4	7,870	0.226	<10.0	<1.00	335
	01/07/09	3.73	77.6	<0.500	11.8	10.6	6.82	252	<0.200	<0.500	<1.00	47.2
	03/20/09	8.11	68.9	<0.500	9.63	10.8	4.43	1,340	0.0316	<0.500	<1.00	27.5

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TABLE 4
GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS
Willbridge Terminals
Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/l)	Barium (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-28	03/26/08	4.37	85.9	<1.00	2.44	3.94	1.10	3,700[7]	<0.200	<2.00	<1.00	13.0
	06/25/08	4.48	75.1	<0.500	<2.00	<2.00	<1.00	3,880	<0.200	<0.500	<1.00	9.26
	09/24/08	4.56	104	<0.500	4.00	5.94	1.48	4,390	<0.200	0.883	<1.00	21.3
	01/07/09	4.26	79.1	<0.500	<2.00	<2.00	<1.00	3,840	<0.200	<0.500	<1.00	5.74
	03/20/09	3.02	85.1	<0.500	<2.00	3.85	1.02	1,900	<0.00500	0.872	<1.00	11.6
U-29A	09/24/08	20.3	249	2.58	23.3	24.5	10.1	7,220	<0.200	0.502	<1.00	82.4
	03/20/09	23.1	174	<2.50	10.1	15.1	10.7	4,820	0.0138	<2.50	<5.00	32.6
U-29B	03/26/08	5.74	216	<1.00	5.38	7.38	2.57	1,550[7]	<0.200	<2.00	<1.00	16.6
	06/25/08	5.77	194	0.586	2.40	2.40	1.24	1,500	<0.200	<0.500	<1.00	9.87
	09/24/08	12.2	399	<1.00	56.5	55.3	15.3	1,990	<0.200	1.85	<2.00	122
dup	09/24/08	9.45	354	2.55	39.5	39.7	10.8	1,890	<0.200	1.62	<2.00	99.9
	01/07/09	6.04	239	5.71	13.3	15.9	8.20	1,320	<0.200	0.590	<1.00	64.0
U-29C	03/26/08	7.71	106	<1.00	3.67	5.76	7.20	3,890[7]	<0.200	<2.00	<1.00	25.4
	06/25/08	3.25	95.6	<0.500	<2.00	<2.00	<1.00	1,660	<0.200	<0.500	<1.00	24.6
	09/23/08	12.1	223	<5.00	<20.0	31.0	8.08	1,830	<0.200	<5.00	<1.00	64.0
	01/07/09	3.66	85.2	<0.500	<2.00	<2.00	1.54	1,350	<0.200	<0.500	<1.00	21.7

NOTES:

µg/L = micrograms per liter
NA - Not Analyzed
ND - Not detected at laboratory reporting limits
NS/F = Not sampled floating product present
NS/S = Not sampled sheen present
2/00 and 5/00 data from IT Corporation
8/00, 11/00, 2/01 and 5/01 data from KHM Environmental Management, Inc.
Sample locations are shown on Figure 2
Analytical Reports are included in Attachment B
dup* = duplicate for B-30 submitted as blind duplicate labeled as B-50
dup**= duplicate for B-30 submitted as blind duplicate labeled as B-31
dup***= duplicate for B-30 submitted as blind duplicate labeled as B-130
[1] = Sample ID was misidentified by the laboratory as D-2
[2] = Sample ID was misidentified by the laboratory as U-2
[3] = The reporting limit for this analyte was raised due to matrix interference.
[4] = The sample container type or preservation does not meet method specifications using EPA Method 1631 modified. The sample was also analyzed for total mercury by EPA Method 7470A. Total mercury was not detected above the laboratory MRL of 0.200 µg/l.
[5] = Estimated value
[6] = The laboratory control sample (LCS) and/or LCS Duplicate recovery was above the acceptance limits.
[7] = Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10 times the concentration found in the method blank.
[8] = Dissolved Metals per EPA 6000/7000 Series Methods
[9] = Analyte was detected in the associated method blank at a level that is significant relative to the sample result.
Total metals analysis by EPA 6000/7000 Series Methods
Total mercury analysis by EPA 6000/7000 Series Methods, EPA Method 1631 Modified, or EPA Method 245.1

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TABLE 5
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CHEVRON																			
B-10	09/26/06	-	-	-	**0.970**	**3.17**	**0.770**	**4.09**	<2.00	**27.4**	**0.08**	**2.27**	<1.60	**1.55**	NA	<5.00	<10.0	<0.0960	**10.3**
	03/21/07	-	-	-	**0.770**	**1.79**	<1.00	**6.20**	<1.00	**28.6**	**0.08**	**3.39**	**4.35**	**2.15**	**4,290**	**0.00618**	<1.60	<0.0960	**14.2**
dup	03/21/07	-	-	-	**0.720**	**1.74**	<1.00	**5.52**	<1.00	**31.0**	**0.104**	**4.50**	**5.81**	**2.90**	**3,950**	**0.00833**	<1.60	<0.0960	**16.9**
	09/18/07	-	-	-	<0.400[2]	<1.00[2]	<1.00[2]	<2.00[2]	<4.00[2]	**36.0**	<0.0752	**3.16**	**5.91**	**1.87**	**4,660**	<0.200	<1.60	<0.0970	**15.1**
	03/25/08	**618**	**695**	<500	**0.730**	**1.35**	<0.500	**4.30**	-	**32.4**	**<0.380**	<1.00	<2.70	<0.540	**3,860**	<0.200	<5.00	<0.120	<33.0
	09/23/08	**792**	**2,080**	<485	**1.02**	**1.14**	**0.450**	**2.90**	<1.00	**32.7**	<5.00	<20.0	<20.0	<10.0	**4,340**	**0.001170**	<5.00	<10.0	**11.7**
	03/24/09	**743**	**13,700**	<500	**1.06**	**1.46**	<1.00	**2.15**	<1.00	**32.2**	<0.500	<20.0	**9.58**	**3.90**	**4,570**	**0.0505**	<0.500	<1.00	**30.5**
dup	03/24/09	**746**	**25,100**	**722**	**0.980**	**1.31**	<1.00	**2.02**	<1.00	**32.2**	<0.500	<20.0	**22.1**	**7.22**	**4,670**	**0.0225**	<0.500	<1.00	**48.2**
CR-1	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**1.94**	**0.144**	<0.800	**2.77**	**0.44**	NA	<5.00	<2.00	<0.0960	**10.9**
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	**0.912**	<0.0752	<0.800	**3.92**	<0.432	**185**	<0.00500	<1.60	<0.800	**9.6**
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**1.41**	<0.800	<0.800	<1.60	<0.800	**862**	<0.200	<1.60	<0.800	<4.00
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**0.51**	<0.380	<1.00	**3.40**	<0.540	**76.1**	<0.200	<5.00	<0.120	<33.0
	09/24/08	**154**	**376**	<485	<0.400	<2.00	<2.00	<6.00	<2.00	**3.47**	<0.500	**1.17**	**3.97**	**1.19**	**595**	**0.00198**	<0.500	<1.00	**13.3**
	03/25/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	<1.00	<0.500	<2.00	<2.00	<1.00	**127**	<0.00500	<0.500	<1.00	**7.68**
CR-33	01/21/08	-	-	-	**0.210**	<0.500	**0.900**	**2.29**	<2.00	**23.5**	**1.17**	**93.7**	**121**	**78.2**	-	**0.395**	<5.00	**0.392**	**315**
	03/26/08	<400	**1,960**	<481	<0.400	<1.00	<1.00	<2.00	<4.00	**4.42**	**<0.380**	**4.39**	**8.12**	**5.25**	**3,860**	<0.200	<5.00	<0.120	<33.0
	06/24/08	**211**	**209**	<481	**0.140**	**0.280**	**0.250**	**0.860**	**0.300**	**23.8**	<0.500	**48.4**	**81.7**	**40.5**	**5,160**	**0.0826**	**1.71**	<1.00	**205**
	09/24/08	**145**	**547**	<485	<0.400	<2.00	<2.00	**0.180**	0.400	**19.9**	<0.500	**3.55**	**4.58**	**2.41**	**4,880**	<0.200	**0.745**	<1.00	**13.8**
	01/06/09	**205**	**1,410**	<490	<0.200	<1.00	**0.350**	**0.810**	**0.350**	**16.2**	**1.64**	<20.0	**0.430**	<10.0	**4,670**	<0.200	<5.00	**8.01**	<50.0
	03/18/09	**196**	**458**	<495	<0.200	<1.00	<1.00	<3.00	<1.00	**3.58**	<5.00	<2.00	<2.00	<1.00	**3,470**	<0.00500	<5.00	<1.00	<5.00
KINDER MORGAN																			
MW-33	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**26.3**	<0.0752	<0.800	<1.60	<0.432	-	**7.24**	<1.60	<0.0960	**24.4**
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**13.9**	**0.205**	<0.800	<1.60	<0.432	-	**0.00767**	<1.60	<0.0960	**8.27**
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**37.3**	**0.952**	**1.10**	**2.42**	<0.432	-	<0.00500	<1.60	<0.0960	**18.4**
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	**32.9**	<1.00	**1.33**	**2.73**	**<1.00**	-	**0.0166**	<2.00	<1.00	**24.5**
	03/25/08	<13	<13	**42**	<0.14	<0.11	<0.13	<0.33	<0.20	**12.1**	**0.047**	**0.58**	**1.41**	**0.478**	**1,100**	**0.0235**	<0.2	**0.009**	**3.14**
	09/23/08	<250	**14**	**34**	<0.50	<0.50	<0.50	<1.00	<0.50	**32.0**	**0.135**	**1.31**	**3.28**	**0.764**	**1,780**	**0.167**	**0.4**	**0.029**	**8.11**
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	**12.7**	<0.500	<2.00	<2.00	<1.00	NA	**0.0126**	<0.500	<1.00	<5.00
MW-34	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**14.3**	**0.103**	**0.899**	**3.18**	**1.39**	-	<0.00500	<1.60	<0.0960	**15.0**
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**25.2**	**0.176**	**4.01**	**9.22**	**5.01**	-	0.00877	<1.60	<0.0960	**32.9**
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	**32.5**	<1.00	**3.14**	**8.00**	**3.51**	-	**0.0208**	<2.00	<1.00	**20.2**
	03/25/08	**20**	**12**	**44**	<0.14	**0.17**	<0.13	<0.33	<0.20	**4.33**	**0.203**	**1.27**	**2.25**	**1.61**	-	**0.0098**	<0.2	**0.008**	**5.69**
	06/24/08	<250	**19**	**36**	<0.045	<0.048	<0.042	<0.115	<0.070	**8.70**	**0.108**	**1.87**	**4.37**	**2.95**	**1,800**	**0.00789**	**0.3**	**0.016**	**13.6**
	09/23/08	**150**	**53**	**140**	<0.50	<0.50	<0.50	**0.080**	**0.18**	**27.3**	**0.578**	**7.36**	**26.5**	**13.2**	**5,040**	**0.00776**	**0.4**	**0.075**	**49.7**
	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	**4.81**	<0.500	<2.00	**2.36**	**1.10**	**160**	**0.00422**	<0.500	<1.00	**5.59**
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	**11.0**	<0.500	**6.68**	**12.7**	**8.64**	NA	**0.0388**	<0.500	<1.00	**28.4**

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TABLE 5
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
MW-36	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**17.6**	<0.0752	<0.800	**1.70**	<0.432	-	<0.00500	<1.60	<0.0960	**4.50**
dup	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**15.7**	<0.0752	<0.800	**1.60**	<0.432	-	<0.00500	<1.60	<0.0960	<4.00
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**8.6**	<0.0752	<0.800	**2.64**	**0.652**	-	**0.00540**	<1.60	<0.0960	**6.28**
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	**18.9**	<1.00	<1.00	<2.00	<1.00	-	<0.00500	<2.00	<1.00	<5.00
dup	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	**30.4**	<1.00	<1.00	**4.49**	**1.07**	-	<0.00500	<2.00	<1.00	**9.78**
	03/25/08	<13	<12	**40**	<0.14	<0.11	<0.13	<0.33	<0.20	**8.28**	**0.032**	**0.64**	**3.85**	**0.702**	-	**0.0071**	<0.2	**0.005**	**5.45**
	09/23/08	**120**	**20**	<500	<0.50	<0.50	<0.50	**0.18**	**0.080**	**21.6**	**0.018**	**0.67**	**2.46**	**0.652**	**3,570**	**0.00443**	**0.8**	**0.018**	**2.80**
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	**24.2**	<0.500	<2.00	**3.56**	**2.70**	NA	**0.00608**	<0.500	<1.00	**5.42**
MW-37	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**19.9**	<0.0752	<0.800	<1.60	<0.432	-	<0.00500	<1.60	<0.0960	<4.00
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**21.0**	**0.173**	<0.800	<1.60	**0.81**	-	<0.00500	<1.60	<0.0960	**8.43**
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	**23.6**	<1.00	<1.00	<2.00	**3.08**	-	<0.00500	<2.00	<1.00	**8.03**
	03/25/08	**480**	**12,000**	**480**	<0.14	**0.27**	<0.13	<0.33	<0.20	**22.1**	**0.617**	**1.26**	**2.77**	**1.91**	-	**0.0034**	<0.2	**0.016**	**11.4**
dup	03/25/08	**670**	**3,500**	**130**	<0.14	**0.26**	<0.13	**0.11**	<0.20	**24.9**	**1.01**	**1.55**	**2.99**	**2.52**	-	**0.0078**	<0.2	**0.019**	**10.9**
	06/23/08	**400**	**370**	**33**	**0.12**	**0.22**	<0.042	**0.47**	<0.12	**18.0**	**0.084**	**0.380**	**0.390**	**0.39**	**2,490**	**0.00064**	<0.29	**0.004**	**2.60**
	09/23/08	**670**	**3,500**	**69**	<0.50	**0.050**	<0.50	**0.24**	<0.50	**18.7**	**0.270**	**0.37**	**0.89**	**1.29**	**2,530**	**0.00223**	**0.4**	**0.019**	**4.47**
dup	09/23/08	**550**	**3,700**	**63**	<0.50	**0.060**	<0.50	**0.36**	<0.50	**19.0**	**0.198**	**0.29**	**0.77**	**1.16**	**2,560**	**0.00197**	**0.4**	**0.009**	**4.92**
	01/05/09	**128**	**3,780**	<490	<0.200	<1.00	<1.00	<1.00	<1.00	**19.0**	**0.673**	<2.00	<2.00	**1.80**	**1,730**	**0.00267**	<0.500	<1.00	**14.8**
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	**19.8**	<0.500	<2.00	<2.00	**3.52**	NA	**0.00114**	<0.500	<1.00	<5.00
MW-40	09/26/06	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**19.1**	<0.0752	<0.800	**2.05**	**0.886**	-	**0.00558**	<1.60	<0.0960	**7.51**
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	**22.0**	<1.00	<1.00	<2.00	<1.00	-	<0.00500	<2.00	<1.00	**5.58**
	03/25/08	**48**	**14**	**46**	<0.14	<0.11	<0.13	<0.33	<0.20	**15.7**	**0.008**	**0.43**	**0.56**	**0.365**	-	**0.0023**	**0.4**	<0.003	**5.25**
	09/23/08	**53**	**21**	**64**	<0.50	<0.50	<0.50	**0.13**	**0.17**	**104**	**0.013**	**1.48**	**3.00**	**2.35**	**3,840**	**0.0158**	**0.4**	**0.012**	**9.64**
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	**23.0**	<0.500	<2.00	<2.00	<1.00	NA	**0.00280**	<0.500	<1.00	<5.00

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TABLE 5
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CONOCOPHILLIPS																			
B-40	09/26/06[1]	-	-	-	**21.5**	**2.94**	**89.4**	**225**	<4.00	**18.4**	<0.0752	<0.800	**3.67**	<0.432	NA	<0.00500	<1.60	<0.0960	**16.6**
	03/20/07	-	-	-	**15.2**	**2.74**	**86**	**213**	<4.00	**21.4**	<0.752	**1.85**	**7.12**	**2.01**	NA	<0.00500	<1.60	<0.800	**57.0**
	09/20/07	-	-	-	**15.9**	**2.12**	**63.6**	**153**	<2.00	**24.2**	<0.800	<0.800	**1.85**	<0.800	<0.800	<0.00500	<1.60	<0.800	**13.6**
	03/26/08	**2,860**	**37,600**	**5,700**	**3.40**	**1.85**	**61.6**	**132**	<2.00	**20.9**	<1.00	**14.0**	**32.8**	**9.28**	**3,160**	<0.200	<2.00	<1.00	**150**
	06/24/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/24/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
P-1	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**14.0**	**4.58**	**130**	**185**	**41.8**	NA	<0.300	<1.60	**0.732**	**358**
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	<0.800	**<0.752**	**2.26**	**3.11**	<0.800	NA	<0.00500	<1.60	<0.800	**6.98**
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-	-	-	-	-	-	**0.0665**	-	-	-
P-1A	01/28/08	<80.0	<238	<476	**0.990**	**0.590**	<0.500	<1.00	<2.00	**9.79**	**0.632**	**32.6**	**35.3**	**44.4**	-	**0.217**	-	-	**180**
	03/26/08	<80.0	<245	<490	**0.240**	<0.500	<0.500	<1.00	<2.00	**6.99**	**<1.00**	**28.3**	**36.9**	**28.2**	**797**	<0.200	<2.00	<1.00	**151**
	06/25/08	<80.0	<236	<472	**1.99**	**1.32**	<0.500	<1.00	<2.00	**1.60**	**0.746**	**2.26**	**6.51**	**4.48**	**892**	<0.200	<0.500	<1.00	**54.2**
	09/23/08	<80.0	<243	<485	**1.87**	<1.00	<1.00	<3.00	<1.00	**8.17**	<5.00	**36.2**	**51.4**	**30.2**	**2,400**	<0.200	<5.00	<1.00	**234**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**1.46**	**0.690**	**3.92**	**7.03**	**4.18**	**72.0**	<0.200	<0.500	<1.00	**50.7**
	03/20/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**1.40**	<0.500	**3.60**	**6.57**	**4.33**	**73.6**	**0.0104**	<0.500	<1.00	**37.6**
RW-5	01/28/08	**270**	**8,550**	**1,600**	<0.200	<0.500	<0.500	<1.00	<2.00	**28.6**	<0.380	**2.99**	**9.17**	**2.25**	-	**0.00659**	--	--	<33.0
U-5	09/26/06[1]	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**6.21**	**0.532**	**9.60**	**31.0**	**15.1**	-	<0.0182	**3.20**	<0.0960	**1,070**
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**11.7**	**1.45**	**26.8**	**5.48**	**43.2**	-	**0.0248**	<1.60	<0.800	**2,130**
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	**26.1**	<8.00[2]	**16.7**	**131**	**22.4**	-	**0.0233**	<16.0[2]	<0.800	**2,970**
	09/24/08	**652**	**26,700**	**3,870**	<0.200	<1.00	<1.00	<3.00	<1.00	**13.2**	<1.00	**13.5**	**46.5**	**192**	**2,910**	<0.200	<1.00	<2.00	**752**
	03/19/09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U-22A	01/23/08	**421**	**11,900**	**1,100**	<0.200	<0.500	<0.500	<1.00	<2.00	**10.6**	**0.76**	**2.52**	**4.01**	**12.6**	-	**0.0315**	<5.00	<0.120	<33.0
	03/27/08	**322**	**10,000**	**490**	<0.400	<1.00	<1.00	<2.00	<4.00	**10.3**	<0.380	**3.44**	**5.29**	**24.2**	**3,300**	<0.200	<5.00	<0.120	**41**
	06/24/08	**322**	**3,550**	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**10.3**	<0.500	<2.00	**3.25**	**4.41**	**3,260**	<0.200	<0.500	<1.00	**14.5**
	09/23/08	**237**	**2,410**	<476	<0.200	<1.00	<1.00	<3.00	<1.00	**9.20**	<5.00	<20.0	<20.0	**36.9**	**2,730**	<0.200	<5.00	<1.00	**53.9**
	01/06/09	**279**	**1,790**	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**13.6**	<0.500	<2.00	<2.00	**2.67**	**3,640**	<0.200	<0.500	<1.00	**17.7**
	03/19/09	**303**	**1,680**	<495	<0.200	<1.00	<1.00	<3.00	<1.00	**7.02**	<0.500	**3.00**	**3.36**	**12.0**	**3,640**	**0.0168**	<5.00	<1.00	**19.9**
U-22B	01/23/08	**548**	**3,770**	<472	<0.200	<0.500	<0.500	<1.00	<2.00	**18.4**	**0.680**	**106**	**114**	**59.7**	-	**0.323**	<5.00	**0.296**	**219**
	03/27/08	<80.0	**473**	<481	<0.200	<0.500	<0.500	<1.00	<2.00	**9.78**	<0.380	**51.1**	**63**	**23.7**	**2,080**	<0.200	<5.00	**0.128**	**179**
	06/24/08	<80.0	<238	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**2.57**	<0.500	**3.72**	**4.73**	**2.65**	**1,320**	<0.200	<0.500	<1.00	**25.2**
	09/23/08	<80.0	**455**	<476	<0.200	<1.00	<1.00	<3.00	<1.00	**5.29**	<5.00	<20.0	<20.0	**7.41**	**1,510**	<0.200	<5.00	<1.00	**48.3**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**1.34**	<0.500	<2.00	<2.00	<1.00	**1,130**	<0.200	<0.500	<1.00	**23.2**
	03/19/09	<80.0	**384**	<495	<0.200	<1.00	<1.00	<3.00	<1.00	**1.89**	<0.500	<2.00	<2.00	<1.00	**1,020**	<0.00500	<1.00	<1.00	**5.52**
dup	03/19/09	<80.0	**1,160**	<556	<0.200	<1.00	<1.00	<3.00	<1.00	**1.92**	<0.500	<2.00	<2.00	<1.00	**1,040**	<0.00500	<1.00	<1.00	**5.39**
U-23	01/23/08	**1,130**	**1,910**	<485	**25.0**	**2.62**	**1.04**	**3.14**	<2.00	**14.8**	**0.472**	**81.6**	**98.6**	**33.9**	-	**0.0744**	<5.00	**0.240**	**181**
	03/27/08	**1,010**	**1,740**	<476	<1.00	<2.50	<2.50	<5.00	<10.0	**13.6**	<0.380	**57.1**	**105**	**83.1**	**4,000**	**0.295**	<5.00	**0.333**	**383**
	06/24/08	**3,550**	**2,690**[5]	<476	**6.96**	**1.32**	**1.56**	**3.16**	<2.00	**8.66**	**0.952**	**34.7**	**71.2**	**45.6**	**5,510**	<0.200	**0.742**	<1.00	**174**
	09/23/08	**532**	**1,450**	<476	**17.0**	**1.58**	<1.00	**2.16**	<1.00	**20.5**	<10.0	**168**	**315**	**67.7**	**9,260**	<0.200	<10.0	<1.00	**390**
	01/06/09	**303**	**6,700**	<481	<0.200	<1.00	<1.00	<3.00	<1.00	**3.60**	<0.500	**10.5**	**21.9**	**11.9**	**2,050**	<0.200	<0.500	<1.00	**75.6**

COP0017097

TABLE 5
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
	03/19/09	<80.0	**3,430**	<495	<0.200	<1.00	<1.00	<3.00	<1.00	**6.72**	<0.500	**5.58**	**22.8**	**12.4**	**5,860**	**0.0770**	<5.00	<1.00	**34.3**

COP0017098

TABLE 5
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
U-24A	01/23/08	<80.0	**1,520**	<485	<0.200	<0.500	<0.500	<1.00	<2.00	**9.31**	<0.380	**8.18**	**9.40**	**2.35**	-	**0.0291**	<5.00	<0.120	<33.0
	03/27/08	<400	<243	<485	<1.00	<2.50	<2.50	<5.00	<10.0	**29.4**	<0.380	**60.5**	**103**	**19.8**	**13,400**	<0.200	<5.00	**0.20**	**173**
	06/24/08	<80.0	**386**[4]	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**10.1**	<0.500	**19.2**	**29.6**	**9.21**	**6,790**	<0.200	<0.500	<1.00	**67.1**
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	**1.52**	**7.20**	<10.0	<40.0	<40.0	**2.90**	**9,350**	<0.200	<10.0	<1.00	**28.8**
	01/06/09	<80.0	<236	<472	<0.200	<1.00	<1.00	<3.00	**1.17**	**11.2**	<0.500	**9.81**	**16.3**	**3.64**	**9,620**	<0.200	<0.500	<1.00	**43.3**
	03/19/09	<80.0	**281**	<495	<0.200	<1.00	<1.00	<3.00	**1.22**	**6.77**	<0.500	<2.00	<2.00	<1.00	**9,610**	<0.00500	<10.0	<1.00	<5.00
U-24B	01/23/08	-	**9,010**	<481	-	-	-	-	-	**8.12**	<0.380	**60.7**	**31.0**	**20.6**	-	**0.0337**	<5.00	<0.120	**97.5**
	01/24/08	**1,190**	**6,520**	**2,030**	<0.200	<0.500	<0.500	<1.00	<2.00	**0.664**	<0.380	<1.00	<2.70	<0.540	-	<0.200	<2.00	<0.120	<33.0
	03/27/08	<400	<238	<476	<1.00	<2.50	<2.50	<5.00	<10.0	**1.58**	<0.380	**1.79**	<2.70	**0.823**	**2,970**	<0.200	<5.00	**0.12**	<33.0
	06/25/08	<80.0	<236	<472	<0.200	<0.500	0.510	<1.00	<2.00	<1.00	<0.500	<2.00	<2.00	<1.00	**2,480**	<0.200	<0.500	<1.00	**17.5**
	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**1.88**	<0.500	**4.11**	**3.49**	**1.80**	**2,770**	<0.200	**0.770**	<1.00	**106**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	<1.00	<0.500	<2.00	<2.00	<1.00	**1,970**	<0.200	<0.500	<1.00	**12.9**
	03/19/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	**1.19**	<0.500	<2.00	<2.00	<1.00	**1,900**	<0.00500	<2.50	<1.00	<5.00
dup	03/19/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	**1.48**	<0.500	**2.97**	<2.00	<1.00	**2,240**	<0.00500	<5.00	<1.00	**10.0**
U-25	01/23/08	**940**	**1,390**	<481	<0.200	<0.500	<0.500	<1.00	<2.00	**13.3**	<0.380	**2.59**	**2.92**	**12.2**	-	<0.00500	<5.00	<0.120	<33.0
	03/27/08	**722**	<240	<481	<0.200	<0.500	<0.500	<1.00	<2.00	**9.33**	<0.380	**3.44**	**5.17**	**2.33**	**4,150**	<0.200	<5.00	<0.120	<33.0
	06/24/08	**869**	**301**[3]	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**8.18**	<0.500	<2.00	**2.75**	<1.00[9]	**4,840**	<0.200	<0.500	<1.00	**8.70**
	09/24/08	**211**	**388**	<485	<0.400	<2.00	<2.00	<6.00	<2.00	**14.3**	<0.500	<2.00	**2.37**	<1.00	**7,900**	<0.200	**0.604**	<1.00	**9.82**
	01/06/09	**555**	**309**	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**12.7**	<0.500	**4.95**	**5.63**	**2.53**	**5,400**	<0.200	<0.500	<1.00	**19.2**
	03/19/09	<80.0	<278	<556	<0.200	<1.00	<1.00	<3.00	<1.00	**8.10**	<0.500	<2.00	**2.69**	<1.00	**3,370**	**0.00941**	<5.00	<1.00	**5.65**
U-26	01/25/08	<80.0	<238	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**16.8**	**0.408**	**70.2**	**70.4**	**35.3**	-	**0.0649**	<2.00	**0.192**	**151**
	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**11.2**	<1.00	**13**	**22.6**	**43.6**	**798**	<0.200	<2.00	<1.00	**87.2**
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	**5.16**	<0.500	**4.22**	**6.67**	**10.1**	**2,150**	<0.200	<0.500	<1.00	**26.5**
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	**38.2**	<10.0	**124**	**123**	**35.4**	**9,080**	<0.200	<10.0	<1.00	**201**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**5.12**	<0.500	**3.19**	**8.55**	**11.0**	**960**	<0.200	<0.500	<1.00	**46.8**
	03/20/09	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	**15.3**	<0.500	**12.9**	**22.3**	**43.4**	**824**	**0.0451**	<0.500	<1.00	**88.4**
U-27	01/25/08	<80.0	<238	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**28.5**	**0.576**	**72.2**	**90.2**	**17**	-	**0.0675**	<2.00	**0.136**	**127**
	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**15.8**	<1.00	**20.9**	**23.6**	**7.45**	**3,120**	<0.200	<2.00	<1.00	**43.6**
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	**22.8**	<0.500	**10.6**	**13.7**	**3.49**	**4,960**	<0.200	<0.500	<1.00	**29.4**
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	**32.3**	<10.0	**156**	**235**	**36.4**	**7,870**	**0.226**	<10.0	<1.00	**335**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**3.73**	<0.500	**11.8**	**10.6**	**6.82**	**252**	<0.200	<0.500	<1.00	**47.2**
	03/20/09	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	**8.11**	<0.500	**9.63**	**10.8**	**4.43**	**1,340**	**0.0316**	<0.500	<1.00	**27.5**
U-28	01/28/08	<80.0	**365**	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**7.19**	<0.380	**7.68**	**12.3**	**2.95**	-	**0.014**	-	-	<33.0
	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**4.37**	<1.00	**2.44**	**3.94**	**1.1**	**3,700**	<0.200	<2.00	<1.00	**13**
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	**4.48**	<0.500	<2.00	<2.00	<1.00	**3,880**	<0.200	<0.500	<1.00	**9.26**
	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**4.56**	<0.500	**4.00**	**5.94**	**1.48**	**4,390**	<0.200	**0.883**	<1.00	**21.3**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**4.26**	<0.500	<2.00	<2.00	<1.00	**3,840**	<0.200	<0.500	<1.00	**5.74**
	03/20/09	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	**3.02**	<0.500	<2.00	**3.85**	**1.02**	**1,900**	<0.00500	**0.872**	<1.00	**11.6**
U-29A	01/29/08	**414**	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	-	-	-	-	-	-	**0.176**	-	-	-
	06/26/08	**1,150**	--	--	<0.200	<0.500	<0.500	<1.00	<2.00	-	-	-	-	-	-	-	-	-	-
	09/24/08	**492**	--	--	**0.210**	<1.00	<1.00	<3.00	<1.00	**20.3**	**2.58**	**23.3**	**24.5**	**10.1**	**7,220**	<0.200	**0.502**	<1.00	**82.4**

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TABLE 5
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
	03/20/09	**2,700**	**386,000**	**29,100**	<0.200	<1.00	<1.00	<3.00	<1.00	**23.1**	<2.50	**10.1**	**15.1**	**10.7**	**4,820**	**0.0138**	<2.50	<5.00	**32.6**

COP0017100

TABLE 5
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	TPH			VOCs					Metals									
		TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
Portland Harbor Joint Source Control Screening Level Values																			
EPA's 2004 NRWQC (organism only)		--	--	--	51	15,000	2,100	--	--	0.14	--	--	--	--	100	--	4,200	--	26,000
DEQ's 2004 AWQC (organism only)		--	--	--	51	15,000	2,100	--	--	0.14	--	--	--	--	100	0.146	4,200	--	26,000
EPA's 2004 NRWQC ecological receptors (chronic)		--	--	--	--	--	--	--	--	150	0.094	--	2.7	0.54	--	0.77	5	--	36
DEQ's 2004 AWQC ecological receptors (chronic)		--	--	--	--	--	--	--	--	--	0.38	--	3.6	0.54	--	0.012	35	0.12	33
Oak Ridge National Lab (Tier II SCV)		--	--	--	130	9.8	7.3	--	--	3.1	--	--	--	--	120	1.3	--	0.36	--

NOTES:
µg/l = micrograms per Liter
<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985 µg/L
Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.
NRWQC = National Recommended Water Quality Criteria
AWQC = Ambient Water Quality Criteria
Shading indicates analyte was detected above the applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2007.
Bold face font indicates analyte was detected above the laboratory MRL or MDL
-- = Not analyzed
NS = Not sampled
N/A = Not applicable
TPH = Total Petroleum Hydrocarbons in the gasoline range (TPH-G), diesel range (TPH-D), and heavy oil range (TPH-O)
VOCs = Volatile Organic Compounds
[1] = The reporting limit was raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.
[2] = The reporting limit for this analyte was raised due to matrix interference or sample matrix effects.

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TABLE 6
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
CHEVRON																		
B-10	09/26/06	-	**1.64**	<0.388	**0.527**	**0.0463**	**0.0590**	**0.0717**	**0.110**	**0.0542**	**0.0928**	**0.0265**	**0.469**	**4.89**	**0.0768**	<1.17	**3.66**	**0.635**
	03/21/07	-	**1.18**	<0.383[2]	<0.153[2]	**0.0376**	**0.0329**	**0.0403**	**0.0420**	**0.0329**	**0.0510**	**0.0121**	**0.236**	**6.81**	**0.0335**	<3.44[2]	**2.83**	**0.416**
dup	03/21/07	NA	**1.06**	<0.291[2]	<0.194[2]	**0.058**	**0.0606**	**0.0578**	**0.0643**	**0.0677**	**0.0846**	**0.0216**	**0.275**	**5.26**	**0.0545**	<2.43[2]	**1.80**	**0.440**
	09/18/07	<0.962[2]	**0.889**	<0.192	<0.962[2]	**0.0293**	**0.0288**	**0.0270**	<0.192	**0.0292**	**0.0413**	**0.0102**	<0.962[2]	**2.20**	**0.0218**	<3.85[2]	<0.962[2]	**1.35**
	03/25/08	<0.0990	**0.728**	<0.198	**0.114**	<0.0198	<0.00495	**0.00544**	<0.0990	**0.00519**	<0.0198	<0.00495	**0.214**	**0.968**	<0.00495	<0.594	**1.02**	**0.162**
	09/23/08	<0.476[1]	<1.19[1]	<0.476[1]	<0.476[1]	**0.182**	**0.148**	**0.146**	<0.476[1]	**0.131**	**0.267**	**0.0500**	**0.671**	**1.87**	**0.136**	<0.952[1]	**1.11**	**0.584**
	03/24/09	<2.43	2.69	<2.43	<2.43	0.0367	0.0247	0.0251	<0.194	0.0196	0.0853	<0.00971	<2.43	8.59	0.0215	<2.43	4.96	0.819
dup	03/24/09	<0.971	1.85	<0.971	<0.971	0.0355	0.0236	0.0249	<0.194	0.0179	0.0782	<0.00971	<0.971	7.45	0.0217	<0.971	4.66	0.782
CR-1	09/27/06	-	**0.978**	<0.197	**0.0747**	<0.00985	<0.00985	<0.0197	<0.0493	<0.0197	<0.00985	<0.00985	<0.0493	**3.19**	<0.00985	<0.788	**1.07**	**0.0513**
	03/22/07	-	**0.118**	<0.0343[2]	<0.0490[2]	<0.00490	<0.00490	<0.00490	<0.00980	<0.00490	<0.0147[2]	<0.00490	<0.0245[2]	**0.838**	<0.00490	<0.275[2]	**0.140**	<0.0784[2]
	09/20/07	<0.500[2]	**1.01**	<0.500[2]	<0.500[2]	<0.0250[2]	**0.0112[3]**	**0.0146[3]**	<0.100	**0.0120[3]**	<0.0250[2]	**0.00524[3]**	<0.500[2]	**9.81**	**0.00512[3]**	<2.50	**1.03**	<0.500[2]
	03/25/08	<0.0980	<0.0980	<0.0980	<0.0980	<0.0245	<0.00490	<0.00490	<0.0980	<0.00490	<0.0245	<0.00490	<0.0980	<0.0980	<0.00490	<0.0980	<0.0980	<0.0980
	09/24/08	<0.0952	**0.500**	<0.0952	<0.0952	**0.00712**	**0.00625**	**0.00645**	<0.0952	**0.00486**	**0.0145**	<0.00476	<0.0952	**2.38**	**0.00599**	<0.571[8]	**0.375**	<0.0952
	03/25/09	<0.0971	**0.125**	<0.0971	<0.0971	**0.00665**	**0.00565**	**0.00614**	<0.0971	**0.00595**	**0.0129**	**0.00515**	<0.0971	**0.411**	**0.00674**	<0.0971	<0.0971	<0.0971
CR-33	01/21/08	<0.985	<0.985	<0.985	<0.985	<0.0493	<0.0493	<0.0493	<0.985	<0.0493	<0.0493	<0.0493	<0.985	<0.985	<0.0493	<1.48	<0.985	<0.985
	03/26/08[2]	<0.0980	<0.980	<0.980	<0.490	<0.0245	<0.0245	<0.0245	<0.0980	<0.0245	<0.0245	<0.0245	<0.490	<0.980	<0.0245	<0.196	<0.490	<0.0980
	06/24/08	<0.398	<0.398	<0.398	<0.398	<0.00498	<0.00498	<0.00498	**0.0995**	<0.00498	**0.00751**	<0.00498	<0.398	**0.413**	<0.00498	<0.796	<0.398	<0.0995
	09/24/08	<0.385[2]	<0.385[2]	<0.385[2]	<0.385[2]	**0.00503**	<0.00481	<0.00481	<0.0962	<0.00481	**0.00821**	**0.00712**	<0.385[2]	**0.559**	**0.00873**	<0.769[2]	<0.385[2]	<0.0962
	01/06/09	<0.980	<0.980	<0.980	<0.980	**0.00710**	**0.00683**	**0.00831**	<0.0980	**0.00624**	**0.0133**	<0.00490	<0.980	**0.547**	**0.00849**	<0.980	<0.980	<0.980
	03/18/09	<0.0976	<0.976	<0.976	<0.390	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00976	<0.00488	<0.390	<0.976	<0.00488	<0.390	<0.390	<0.146

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TABLE 6
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
KINDER MORGAN																		
MW-33	09/27/06	-	<0.00990	<0.00990	<0.00990	<0.00615	<0.00495	**0.00540**	<0.00990	**0.00659**	<0.00718	<0.00495	<0.00990	<0.00990	<0.00510	**0.0468**[3,4]	<0.00990	**0.0189**
	03/22/07	-	<0.00976	<0.00976	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00976	<0.00488	**0.0146**	<0.00976	**0.0193**
	03/22/07	-	<0.00971	<0.00971	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	**0.0145**	<0.00971	**0.0157**
	09/18/07	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/25/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	**0.0030**	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.017**	<0.0050	<0.0035
	09/23/08	**0.0026**	<0.0044	<0.0034	<0.0036	**0.0069**	<0.0043	<0.0023	<0.0029	<0.0025	**0.0039**	<0.0025	<0.0044	<0.0038	<0.0026	**0.0038**	<0.0050	**0.029**
	03/16/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
MW-34	09/27/06	-	<0.00990	<0.00990	<0.00990	<0.00500	<0.00500	<0.00500	<0.00990	<0.00500	<0.00500	<0.00500	<0.00990	<0.00990	<0.00500	**0.0468**[3,4]	<0.00990	**0.0189**
	03/22/07	-	**0.0215**	<0.00985	<0.00985	<0.00493	<0.00493	<0.00493	<0.00985	<0.00493	<0.00493	<0.00493	<0.00985	<0.00985	<0.00493	<0.0591[2]	<0.00985	<0.00985
	09/18/07	<0.0971	**0.375**	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.971[2]	<0.0971	<0.0971
	03/25/08	**0.0025**	**0.071**	<0.0034	**0.0070**	<0.0026	<0.0043	<0.0025	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.075[6]	**0.0065**	**0.012**
	06/24/08	**0.0073**	**0.063**	**0.0069**	**0.010**	**0.0078**	**0.0057**	**0.0062**	**0.013**	**0.0045**	**0.0079**	**0.0068**	**0.0090**	**0.0091**	**0.014**	**0.11**	**0.020**	**0.016**
	09/23/08	**0.0089**	**0.31**	<0.0034	<0.0036	**0.0074**	<0.0043	<0.0023	**0.0029**	<0.0025	**0.0051**	<0.0025	<0.0044	<0.0038	**0.0033**	<0.18	<0.0050	**0.018**
	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909
	03/16/09	<0.100	<0.100	<0.100	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.100	<0.00500	<0.150	<0.100	<0.100
MW-36	09/27/06	-	**0.606**	<0.0200[2]	<0.0200[2]	<0.00500	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00500	<0.0100	<0.0200[2]	<0.00500	<0.400[2,5]	**0.103**	**0.121**
dup	09/27/06	-	**0.528**	<0.0199[2]	<0.0249[2]	**0.00544**	<0.00498	<0.00498	<0.00995	**0.00498**	**0.00527**	<0.00522	<0.00995	<0.0149[2]	<0.00559	<0.279[2,5]	**0.104**	**0.109**
	03/22/07	-	**0.289**	<0.0146[2]	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	<0.320[2]	**0.0513**	**0.0478**
	09/18/07	<0.0995	**0.564**	<0.0995	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.0995	<0.00498	<0.896[2]	<0.0995	**0.148**
dup	09/18/07	<0.0980	**0.552**	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<0.882[2]	**0.110**	**0.151**
	03/25/08	<0.0023	**0.088**	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	**0.0047**	<0.0038	<0.0026	<0.032[6]	**0.029**	**0.021**
	09/23/08	**0.0089**	**0.44**	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.18	**0.050**	**0.10**
	03/16/09	<0.0952	**0.272**	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.190	<0.0952	<0.0952

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TABLE 6
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
MW-37	09/27/06	-	**0.653**	<0.250[2]	<0.0400[2]	**0.0212**	**0.0486**	**0.0326**	**0.0717**	**0.0314**	**0.0296**	**0.0120**	**0.0562**	**0.342**	**0.0456**	<1.20[2,5]	**0.135**	**0.123**
	03/22/07	-	**0.579**	<0.194[2]	<0.0971[2]	**0.0183**	**0.0330**	**0.0190**	**0.0389**	**0.0230**	**0.0270**	**0.00858**	<0.0971[2]	**0.820**	**0.0315**	<2.14[2]	<0.0971[2]	**0.133**
	09/18/07	<0.388[2]	<0.971[2]	<0.971[2]	<0.0971	**0.0132**	**0.0297**	<0.0194[2]	<0.388[2]	<0.0194[2]	**0.0167**	<0.0194[2]	<0.0971	<0.971[2]	**0.0334**	<3.11[2]	<0.971[2]	**0.120**
	03/25/08	<0.0023	**1.1**	<0.48[2]	**0.041**	**0.044**	**0.083**	**0.080**	**0.15**	**0.025**	**0.021**	**0.015**	**0.098**	**1.5**	**0.15**	<1.1[2]	**0.23**	**0.17**
dup	03/25/08	<0.0023	**1.0**	<0.44[2]	**0.040**	**0.046**	**0.11**	**0.089**	**0.21**	**0.031**	**0.026**	**0.018**	**0.074**	**1.7**	**0.21**	<1.1[2]	**0.23**	**0.15**
	06/24/08	**0.012**	**0.56**	<0.19	**0.025**	<0.0075	**0.017**	**0.015**	**0.035**	**0.0053**	**0.0044**	**0.0054**	**0.033**	**0.75**	**0.036**	**0.46**	**0.099**	**0.053**
	09/23/08	<0.0023	**0.70**	<0.29	**0.031**	**0.055**	**0.071**	**0.065**	**0.085**	**0.026**	**0.051**	**0.013**	**0.10**	**0.68**	**0.081**	<0.69	**0.12**	**0.18**
dup	09/23/08	**0.031**	**0.67**	<0.22	**0.026**	**0.0079**	**0.0089**	**0.0070**	**0.013**	<0.0025	**0.0038**	<0.0025	**0.048**	**0.58**	**0.012**	<0.52	**0.10**	**0.058**
	01/05/09	<0.0930	**0.474**	<0.465[6]	<0.465[6]	**0.0119**	**0.0438**	**0.0215**	**0.222**	**0.0107**	**0.0247**	**0.0243**	<0.465[6]	**0.406**	**0.161**	<1.40[6]	<0.465[6]	<0.0930
	03/16/09	<0.286	**0.399**	<0.286	<0.0952	**0.00564**	**0.00791**	**0.00532**	<0.0952	<0.00476	**0.00894**	<0.00476	<0.0952	**0.366**	**0.0100**	<0.429	<0.0952	<0.0952
MW-40	09/26/06	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/22/07	-	**0.0655**	<0.00971	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	<0.126[2]	**0.0259**	**0.0114**
	09/18/07	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.0990	<0.00495	<0.297[2]	<0.0990	<0.0990
	03/25/08	**0.0023**	**0.075**	<0.0034	**0.010**	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.027[2]	**0.028**	**0.011**
	09/23/08	<0.0023	**0.10**	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.090	**0.022**	<0.0035
	03/16/09	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952

COP0017104

TABLE 6
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
CONOCOPHILLIPS																		
B-40	09/26/06[1]	-	**8.45**	<1.75[2]	**1.39**	**0.189**	**0.0804**	<0.100[2]	<0.500	<0.100[2]	**0.337**	<0.0500	<0.500	**9.06**	<0.0500	<213[6]	**13.8**	**1.42**
	03/20/07	-	**26.0**	<9.95	<9.95	**2.01**	**0.749**	<0.498	<4.98	<0.498	**3.86**	**0.298**	<4.98	**40.5**	**0.167**	**389**	**87.0**	**16.6**
	09/20/07	**260**	**5.71**	<1.75[2]	<2.00[2]	<0.500[1]	<0.500[1]	<0.500[1]	<0.500[3]	<0.500[1]	**0.507**	<0.500[1]	<0.500[1]	**6.97**	<0.500[1]	**141**	**12.7**	**1.90**
	03/26/08	**2,080**	**75.6**	<24.0	**36.8**	**6.81**	**2.36**	<1.92	<9.62	<1.92	**12.0**	**0.621**	**9.75**	**112**	**0.589**	**612**	**275**	**33.4**
	09/22/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
P-1	09/26/06	-	**0.0137**	<0.0102	<0.0102	<0.00508	<0.00508	<0.00508	<0.0102	<0.00508	**0.00513**	<0.00508	<0.0102	**0.0225**	<0.00508	<0.0457[2,5]	**0.0468**	**0.0195**
	03/20/07	-	<0.00976	<0.00976	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00976	<0.00488	<0.0341	**0.0139**	**0.0134**
	09/20/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P-1A	01/28/08	<0.0952	<0.0952	<0.0952	<0.0952	**0.00818**	<0.00476	**0.00818**	<0.0952	**0.00881**	**0.0143**	<0.00476	<0.0952	<0.0952	<0.00476	**0.572**	<0.0952	<0.0952
	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/20/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
RW-5	01/28/08	<4.76	<4.76	<4.76	<4.76	**0.151**	<0.0714	<0.238	<0.952	<0.238	**0.253**	<0.0476	<4.76	<4.76	<0.0476	<4.76	<4.76	**1.51**
U-5	09/26/06[1]	-	**204**	<72.8[2]	**108**	**9.40**	**5.79**	<6.07[2]	**28.3**	<7.28[2]	**23.3**	**3.69**	**27.6**	**374**	**2.33**	<121[2,5]	**996**	**119**
	03/20/07	-	**4.58**	<1.17	<2.14	**0.189**	**0.0981**	<0.0971	**0.420**	<0.0971	**0.403**	**0.0577**	<0.388	**12.5**	**0.0459**	<5.44	**11.6**	**2.56**
	09/20/07	**19.2**	**12.4**	<5.00[2]	<15.0[2]	**0.548**	<0.500[1]	<0.500[1]	**1.20[6]**	<0.500[1]	**0.999**	<0.500[1]	<5.00[2]	**19.9**	<0.500[1]	<12.0[2]	**37.6**	**8.00**
	06/25/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/24/08	**2.68**	**11.4**	<4.81	<12.0[6]	**1.02**	**0.483**	<0.481[6]	<4.81	<0.240	**2.25**	**0.276**	<4.81	**22.5**	<0.240	<7.21[6]	**63.1**	**10.2**
	03/19/09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U-22A	01/23/08	<0.952	**1.43**	<0.952	<1.90	<0.0476	<0.0476	<0.0476	<0.952	<0.0476	<0.0476	<0.0476	<1.90	**9.04**	<0.0476	<2.38	<1.90	<0.952
	03/27/08	<0.0962	**1.82**	<0.337	<0.240	<0.0385	<0.00962	<0.0192	<0.192	<0.0192	<0.0385	<0.00962	**0.105**	**6.55**	<0.00962	<1.44	<0.288	**0.121**
	06/24/08	<0.476[6]	**1.14**	<0.476[6]	<0.476[6]	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00952[6]	<0.00476	<0.476[6]	**3.35**	<0.00476	<0.952[6]	**0.741**	<0.0952
	09/23/08	<0.190[6]	**0.820**	<0.190[6]	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	**0.00656**	<0.00476	<0.0952	**2.80**	<0.00476	<0.857[6]	**0.593**	<0.0952
	01/06/09	<0.488	**0.964**	<0.488	<0.488	<0.0244	<0.00488	<0.00488	<0.0976	<0.00488	<0.0244	<0.00488	<0.488	**3.98**	<0.00488	**1.22**	**0.962**	<0.488
	03/19/09	<0.0962	**1.11**	<0.385	<0.385	**0.00720**	<0.00481	<0.00481	<0.0962	<0.00481	**0.0131**	<0.00481	<0.385	**4.13**	<0.00481	<0.433	<0.385	<0.144

COP0017105

TABLE 6
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
U-22B	01/23/08	<0.485	<0.485	<0.485	<0.485	<0.0243	<0.0243	<0.0243	<0.485	<0.0243	<0.0243	<0.0243	<0.485	**1.30**	<0.0243	<0.971	<0.485	<0.485
	03/27/08	<0.0952	**0.163**	<0.0952	<0.0952	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.0952	<0.0952	**0.746**	<0.00952	<0.238	<0.0952	<0.0952
	06/24/08	<0.0957	<0.0957	<0.0957	<0.0957	<0.00478	<0.00478	<0.00478	<0.0957	<0.00478	<0.00478	<0.00478	<0.0957	<0.0957	<0.00478	<0.0957	<0.0957	<0.0957
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	**0.159**	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/19/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
dup	03/19/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985
U-23	01/23/08	<0.962	<0.962	<0.962	<0.962	<0.0481	<0.0481	<0.0481	<0.962	<0.0481	<0.0481	<0.0481	<0.962	**1.01**	<0.0481	<1.92	<0.962	<0.962
	03/27/08	<0.0952	**0.259**	<0.0952	**0.155**	<0.0286	<0.00952	<0.00952	<0.190	<0.00952	<0.0286	<0.00952	<0.0952	**0.973**	<0.00952	<0.762	**1.20**	<0.0952
	06/24/08	<0.476[6]	**0.562**	<0.476[6]	<1.43[6]	**0.0129**	**0.00535**	**0.00596**	<0.0952	<0.00476	**0.0281**	<0.00476	<0.190[6]	**1.93**	<0.00476	<1.43[6]	**2.12**	**0.121**
	09/23/08	<0.0952	<0.238[6]	<0.0952	<0.190[6]	**0.00600**	<0.00476	<0.00476	<0.0952	<0.00476	**0.00973**	<0.00476	<0.0952	**0.926**	<0.00476	<0.619[6]	**0.314**	<0.0952
	01/06/09	<0.483	<0.483	<0.483	<0.483	<0.0242	<0.00483	<0.00483	<0.0966	<0.00483	<0.0242	<0.00483	<0.483	**0.498**	<0.00483	<0.483	<0.725	<0.483
	03/19/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.246	<0.00493	<0.0985	<0.0985	<0.148
U-24A	01/23/08	<0.0952	<0.0952	<0.0952	<0.381	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.381	<0.0952	<0.00476	<0.0952	<0.381	<0.0952
	03/27/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/24/08	<0.0962	<0.0962	<0.0962	<0.0962	**0.00780**	**0.00770**	<0.00481	<0.0962	<0.00481	**0.00824**	<0.00481	<0.0962	<0.0962	**0.00501**	<0.0962	<0.0962	<0.0962
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/06/09	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	**0.00784**	<0.0980	<0.0980	**0.00652**	<0.0980	<0.0980	<0.0980
	03/19/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985
U-24B	01/23/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/24/08	<0.952	<0.0952	<0.0952	<0.0952	<0.0476	<0.00476	<0.00476	<0.0952	<0.00476	<0.0476	<0.00476	<0.0952	<0.0952	<0.00476	<0.952	<0.0952	<0.952
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.00952	<0.0952	<0.0952	<0.00952	<0.0952	<0.0952	<0.0952
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/19/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
dup	03/19/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	**0.00527**	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976

COP0017106

TABLE 6
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
U-25	01/23/08	<0.476	<0.476	<0.476	<0.476	<0.0238	<0.0238	<0.0238	<0.476	<0.0238	<0.0238	<0.0238	<0.476	<0.476	<0.0238	<2.38	<0.476	<0.476
	03/27/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.240	<0.0962	<0.0962
	06/24/08	<0.0952	**0.0999**	<0.0952	<0.0952	<0.00476	<0.00476	<0.00952[6]	<0.0952	<0.00952[6]	<0.00476	<0.00476	<0.0952	**0.160**	<0.00476	<0.667[6]	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.577[6]	<0.0962	<0.0962
	01/06/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	**0.155**	<0.00485	**1.36**	<0.0971	<0.0971
	03/19/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	**0.00557**	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
U-26	01/25/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00714	<0.00476	<0.00714	<0.0952	<0.00714	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/20/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
U-27	01/25/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976
	03/20/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971
U-28	01/28/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	**0.00547**	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.0952	<0.00476	**0.273**	<0.0952	<0.476
	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	01/07/09	<0.0943	<0.0943	<0.0943	<0.0943	<0.00472	<0.00472	<0.00472	<0.0943	<0.00472	<0.00472	<0.00472	<0.0943	<0.0943	<0.00472	<0.0943	<0.0943	<0.0943
	03/20/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
U-29A	01/29/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	03/20/09	**105**	**18.4**	<9.95	<14.9	**1.08**	**0.792**	<0.597	**4.80**	<0.199	**2.35**	**0.541**	<9.95	**42.8**	**0.436**	<9.95	**62.4**	**24.9**

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TABLE 6
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Portland Harbor Joint Source Control Screening Level Values																		
EPA's 2004 NRWQC (organism only)		--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
DEQ's 2004 AWQC (organism only)		--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
EPA's 2004 NRWQC ecological receptors (chronic)		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEQ's 2004 AWQC ecological receptors (chronic)		--	520	--	--	--	--	--	--	--	--	--	--	--	--	620	--	--

NOTES:
µg/l = micrograms per Liter
<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985 µg/L
Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.
NRWQC = National Recommended Water Quality Criteria
AWQC = Ambient Water Quality Criteria
Shading indicates analyte was detected above the applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2007.
Bold face font indicates analyte was detected above the laboratory MRL or MDL
-- = Not analyzed
NS = Not sampled
N/A = Not applicable
PAHs = Polynuclear Aromatic Compounds
[1] = The reporting limit was raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.
[2] = The reporting limit for this analyte was raised due to matrix interference or sample matrix effects.
[3] = Analyte was detected in the associated method blank.
[4] = Naphthalene was detected in the Method Blank at 0.0165 µg/L. Sample has a detection for naphthalene at 0.0468 µg/L. The result has been qualified and should be considered an estimate. The lab was unable to perform corrective action due to insufficient volume remaining
[5] = Analyte was detected in the associated blank at greater than one-half the MRL, but samples are ND.
[6] = Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10 times the concentration found in the method blank.
[7] = The laboratory control sample (LCS) and/or LCS Duplicate recovery was above the acceptance limits.
[8] = Result is an estimated value

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TABLE 7
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CHEVRON																			
B-19	03/25/08	--	--	--	<0.400	<2.00	<2.00	<4.00	<2.00	**43.7**	<0.380	**11.3**	**17.2**	**5.08**	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	--	--	--	**0.270**	**0.630**	**0.230**	**1.74**	<1.00	**36.7**	**0.388**	**10.0**	**16.2**	**6.05**	**4,110**	<0.200	**0.146**	<1.00	**32.0**
	03/18/09	**928**	**63,100**	**1,730**	<1.00	<5.00	<5.00	<15.00	<5.00	**39.8**	<5.00	**14.0**	**18.2**	**4.84**	**4,590**	**0.0170**	<5.00	<1.00	**35.1**
dup	03/18/09	**920**	**33,900**	**816**	**0.340**	<1.00	<1.00	<3.00	<1.00	**40.7**	<5.00	**22.2**	**31.3**	**8.40**	**4,110**	**0.0590**	<5.00	<1.00	**56.0**
B-26	03/26/08	--	--	--	**43.3**	<1.00	**338**	**11.0**	<1.00	**33.6**	**0.700**	<1.00	**2.90**	**5.82**	--	<0.200	<5.00	<0.120	**163**
dup	03/26/08	--	--	--	**51.9**	**1.04**	**352**	**13.5**	<1.00	**39.2**	**1.80**	**1.78**	**8.76**	**14.7**	--	<0.200	<5.00	<0.120	**419**
	06/26/08	--	--	--	**7.66**	**0.850**	**64.8**	**6.56**	<1.00	**34.6**	**4.02**	**6.21**	**14.1**	**13.5**	**4,060**	<0.200	**0.113**	<1.00	**219**
B-33	03/27/08	--	--	--	<2.00	<10.0	<10.0	<20.0	<10.0	**24.4**	<0.380	**5.81**	**15.2**	**9.26**	--	<0.200	<5.00	<0.120	**331**
	06/26/08	--	--	--	**0.280**	**0.900**	<1.00	**0.930**	<1.00	**33.9**	**0.386**	**6.21**	**16.3**	**10.1**	**3,460**	<0.200	**0.093**	<1.00	**246**
	03/18/09	**408**	**35,500**	**1,570**	0.210	<1.00	<1.00	<3.00	<1.00	**61.7**	<5.00	**39.2**	**116**	**70.1**	**4,380**	**0.110**	<5.00	<1.00	**2,520**
CR-3	12/19/07	--	--	--	<0.200	<1.00	<1.00	<2.00	<1.00	**3.29**	<0.0752	**5.93**	**9.57**	**6.16**	--	<0.200	<1.60	<0.0970	<40.0
	03/27/08	--	--	--	<0.200	<1.00	<1.00	<2.00	<1.00	**1.21**	<0.380	**1.32**	**3.48**	**1.95**	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	--	--	--	<0.200	<1.00	<1.00	<3.00	<1.00	**1.13**	**0.109**	**0.876**	**1.37**	**1.40**	**463**	<0.200	<0.500	<1.00	**11.7**
	09/26/08	--	--	--	<0.200	<1.00	<1.00	<3.00	<1.00	**1.82**	<0.500	**3.63**	**6.21**	**4.38**	**594**	<0.200	**0.267**	<1.00	**18.4**
CR-26	12/18/07	--	--	--	<0.200	<1.00	<1.00	<2.00	<1.00	**107**	<1.00	**5.33**	**6.39**	**2.77**	--	<0.200	<2.00	<1.00	**17.4**
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**134**	<0.380	**27.9**	**37.4**	**22**	--	<0.200	<5.00	**0.18**	**97.3**
	06/24/08	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	**158**	<0.500	**0.500**	**0.743**	**0.791**	**6,900**	<0.200	**0.389**	<1.00	**7.77**
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**152**	**0.153**	**0.531**	**1.32**	**0.351**	**7,010**	<0.200	**0.954**	<1.00	**2.89**
	01/06/09	<80.0	**287**	<490	<0.200	<1.00	<1.00	<3.00	<1.00	**136**	**0.170**	**14.8**	**15.6**	**8.35**	**7,840**	<0.200	**0.170**	<1.00	**49.4**
CR-27C	12/18/07	<80.0	**827**	**1,020**	<0.200	<1.00	<1.00	<2.00	<1.00	**5.95**	<1.00	**4.81**	**9.14**	**11.5**	--	<0.200	<2.00	<1.00	**88.6**
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**7.02**	<0.380	<1.00	<2.70	**1.07**	--	<0.200	<5.00	<0.120	<33.0
	06/24/08	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	**7.70**	<0.500	<2.00	**0.795**	**0.606**	**560**	<0.200	**1.01**	<1.00	**6.55**
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**6.78**	**0.111**	**0.526**	**2.79**	**1.06**	**315**	<0.200	**1.20**	<1.00	**14.5**
	01/06/09	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	**7.42**	**0.120**	**1.18**	**1.60**	**2.20**	**446**	<0.200	<0.500	<1.00	**18.4**
CR-28A	12/19/07	**10,500**	**3,940**	<490	**15.1**	<10.0	**1,500**	**155**	<10.0	**32.8**	**0.294**	**73.7**	**103**	**83.8**	--	<0.200	**1.88**	**0.241**	**261**
	03/27/08	**9,080**	**3,460**	<490	**18.1**	<10.0	**1,770**	**151**	<10.0	**29.9**	<0.380	**22.6**	**39.4**	**37.0**	--	<0.200	<5.00	<0.120	**85.8**
	06/25/08	**9,760**	**2,330**	<485	**10.8**	**6.40**	**1,300**	**115**	<10.0	**32.0**	**0.746**	**37.6**	**64.5**	**67.5**	**4,480**	**0.106**	**0.588**	**0.221**	**132**
	09/25/08	**10,200**	**2,630**	**344**	**7.80**	**6.80**	**1,410**	**121**	<10.0	**26.8**	<5.00	**33.3**	**64.3**	**58.3**	**4,350**	**0.0906**	<5.00	<10.0	**139**
CR-28B	12/19/07	<80.0	**391**	<490	<0.200	<1.00	<1.00	<2.00	<1.00	**4.43**	**0.31**	**1.18**	**2.22**	**1.34**	--	<0.200	<1.60	<0.0970	<40.0
	03/27/08	<80.0	**428**	<500	<0.200	<1.00	<1.00	<2.00	<1.00	**3.68**	<0.380	<1.00	**5.46**	**0.611**	--	<0.200	<5.00	<0.120	<33.0
	06/25/08	**39.7**	<243	<485	<0.200	<1.00	**0.0800**	<3.00	<1.00	**3.83**	**0.127**	<2.00	<2.00	<1.00	**3,630**	<0.200	<0.500	<1.00	**2.30**
	09/25/08	<80.0	<245	<490	<0.200	<1.00	**0.150**	<3.00	<1.00	**4.38**	<5.00	<20.0	<20.0	<10.0	**3,850**	<0.200	<5.00	<10.0	<50.0
CR-28C	12/19/07	<80.0	**845**	**1,070**	<0.200	<1.00	<1.00	<2.00	<1.00	<0.360	**0.189**	**1.31**	**3.54**	**2.2**	--	<0.200	<1.60	<0.0970	<40.0
	03/27/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	**0.802**	<0.380	<1.00	<2.70	**1.68**	--	<0.200	<5.00	<0.120	<33.0
	06/25/08	<80.0	<243	<485	<0.200	**0.120**	**0.320**	<3.00	<1.00	**0.491**	**0.539**	**0.45**	**1.74**	**1.76**	**246**	<0.200	<0.500	<1.00	**29.3**
	09/25/08	**97.7**	<245	<490	<0.200	<1.00	**7.23**	**0.610**	<1.00	**0.826**	<0.500	<2.00	**1.01**	**0.429**	**400**	<0.200	**0.939**	<1.00	**5.89**

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TABLE 7
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
CR 29A	12/18/07	**1,720**	**1,350**	<490	--	--	--	--	--	**28.1**	<1.00	**67**	**110**	**45**	--	<0.200	<2.00	<1.00	**197**
	03/27/08	**627**	**721**	<485	<0.200	<1.00	**2.82**	<2.00	<1.00	**3.93**	<0.380	<1.00	<2.70	<0.540	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	**2,070**	**837**	<485	<0.200	**0.350**	**5.05**	**1.18**	<1.00	**21.7**	**0.069**	**3.26**	**4.26**	**2.96**	**3,750**	<0.200	**0.0970**	<1.00	**13.0**
	09/25/08	**2,540**	**726**	<490	<1.00	**0.700**	**13.8**	**1.90**	<5.00	**33.2**	<5.00	**27.8**	**43.1**	**16.9**	**4,790**	<0.200	**1.49**	<10.0	**79.3**
CR 29B	12/18/07	<80.0	<245	**510**	<0.200	<1.00	<1.00	<2.00	<1.00	**4.44**	<1.00	**1.42**	**4.51**	**1.68**	--	<0.200	<2.00	<1.00	**27.6**
	03/27/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	**5.79**	<0.380	**1.49**	<2.70	**1.34**	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**8.23**	**0.179**	**3.40**	**5.72**	**3.93**	**4,500**	<0.200	<0.500	<1.00	**19.4**
	09/25/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	**15.7**	<5.00	**11.6**	**24.4**	**11.5**	**6,480**	<0.200	**0.900**	<10.0	**64.3**
CR-30A	12/20/07	**370**	**1,550**	<490	<0.200	<1.00	<1.00	<2.00	<1.00	**15.6**	<0.0752	**11**	**10.3**	**4.59**	--	--	<1.60	<0.0970	<40.0
	03/26/08	**92.7**	**595**	<490	<0.200	<1.00	<1.00	<2.00	<1.00	**9.43**	<0.380	**6.11**	**10.6**	**7.70**	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	**566**	**986**	<485	<0.200	<1.00	**0.160**	**0.320**	<1.00	**20.9**	**0.366**	**23.6**	**39.9**	**23.7**	**3,400**	**0.0924**	**0.364**	<1.00	**86.5**
	09/24/08	**707**	**502**	<480	**0.0900**	**0.140**	**0.370**	**0.360**	<1.00	**19.1**	<5.00	**10.0**	**18.6**	**8.71**	**3,450**	<0.200	**1.00**	<10.0	**33.0**
CR-30B	12/20/07	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	--	--	--	**3.91**	--	--	--	--	--	<40.0
	03/26/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	**13.0**	<0.380	<1.00	**9.59**	<0.540	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	**10.9**	**0.101**	<2.00	<2.00	<1.00	**6,020**	<0.200	<0.500	<1.00	**2.67**
	09/24/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	**20.5**	**0.283**	**1.85**	**4.68**	**2.14**	**8,070**	<0.200	**1.38**	<1.00	**17.4**
CR-31A	12/19/07	**411**	**7,040**	**873**	<0.200	<1.00	<1.00	<2.00	<1.00	**14.5**	<0.0752	**5.39**	**6.2**	**2.88**	--	<0.200	<1.60	<0.0970	<40.0
	03/26/08	**134**	**2,030**	<490	<0.400	<2.00	<2.00	<4.00	<2.00	**10.4**	<0.380	<1.00	<2.70	**0.550**	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	**697**	**5,080**	**380**	**0.110**	**0.130**	<1.00	**0.470**	<1.00	**8.04**	**0.091**	**5.97**	**8.34**	**3.98**	**1,630**	<0.200	**0.0840**	**0.586**	**19.7**
	09/24/08	**328**	**4,230**	**292**	<0.400	<2.00	<2.00	<6.00	<2.00	**20.3**	<5.00	<20.0	**5.97**	<10.0	**2,530**	<0.200	<5.00	<10.0	**11.4**
CR-31B	12/20/07	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	--	--	--	**5.08**	--	--	--	--	--	<40.0
	03/26/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	**118**	**0.533**	**2.99**	**4.89**	**1.51**	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**102**	**0.239**	**0.651**	**0.394**	**0.489**	**8,170**	<0.200	<0.500	<1.00	**13.3**
	09/24/08	<80.0	<245	<490	<0.200	<1.00	**0.160**	<3.00	<1.00	**95.9**	<5.00	<20.0	**4.00**	<10.0	**8,650**	<0.200	<5.00	<10.0	**15.5**
CR-32A	12/19/07	**90.2**	**3,280**	**1,110**	<1.00	<5.00	<5.00	<15.0	<5.00	**6.38**	<0.0752	**2.47**	**5.86**	**1.46**	--	<0.200	<1.60	<0.0970	<40.0
	03/26/08	<80.0	**662**	<490	<0.400	<2.00	<2.00	<4.00	<2.00	**3.52**	<0.380	<1.00	<2.70	<0.540	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	**251**	**3,630**	**483**	<0.200	<1.00	<1.00	<3.00	<1.00	**3.40**	<0.500	**0.972**	**2.76**	**1.19**	**885**	<0.200	**0.105**	<1.00	**8.38**
	09/24/08	**132**	**3,050**	**305**	<0.400	<2.00	<2.00	<6.00	<2.00	**3.21**	<0.500	**1.36**	**3.92**	**0.928**	**1,110**	<0.200	**0.198**	<1.00	**9.55**
CR-32B	12/19/07	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	**52.3**	**0.403**	**31.1**	**8.25**	**1.4**	--	<0.200	<1.60	<0.0970	<40.0
	03/27/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	**31.5**	**0.381**	<1.00	<2.70	<0.540	--	<0.200	<5.00	<0.120	<33.0
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**62.4**	**0.411**	**0.597**	**1.37**	**0.891**	**9,280**	<0.200	<0.500	<1.00	**5.15**
	09/24/08	<80.0	<245	<490	<0.400	<2.00	<2.00	<6.00	<2.00	**57.6**	<5.00	<20.0	**3.05**	<10.0	**9,760**	<0.200	<5.00	<10.0	**7.83**
CR-32C	12/19/07	<80.0	**844**	**1,020**	<0.200	<1.00	<1.00	<2.00	<1.00	**8.21**	**0.13**	**4.03**	**8.89**	**4.08**	--	<0.200	<1.60	<0.0970	**46.1**
	03/26/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	**5.13**	**1.38**	<1.00	**3.95**	**2.37**	--	<0.200	<5.00	<0.120	**110**
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**3.40**	**1.38**	**0.588**	**1.97**	**2.20**	**771**	<0.200	<0.500	<1.00	**66.9**
	09/24/08	<80.0	<245	<490	<0.200	<1.00	**0.0800**	<3.00	<1.00	**10.2**	**0.082**	**6.44**	**17.0**	**12.3**	**1,120**	<0.200	**0.988**	<1.00	**27.9**

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TABLE 7
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

		TPH			VOCs					Metals									
Well Identification	Date Sampled	TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
KINDER MORGAN																			
MW 41B	01/23/08	<13	**360**	**500**	<0.14	<0.11	<0.13	<0.22	<0.20	**9.03**	**0.115**	**2.55**	**3.00**	**1.22**	--	**0.03**	**0.2**	**0.019**	**14.6**
dup	01/23/08	<13	**310**	**320**	<0.14	<0.11	<0.13	<0.22	<0.20	**9.22**	**0.096**	**3.03**	**4.2**	**1.82**	--	**0.03**	**0.2**	**0.018**	**14.7**
	03/25/08	<13	**12**	**52**	<0.14	**0.13**	<0.13	<0.33	<0.20	**9.68**	**0.132**	**4.93**	**7.91**	**5.74**	--	**0.0099**	<0.2	**0.037**	**22.6**
	06/24/08	<250	**14**	**59**	**0.060**	**0.11**	<0.042	<0.0115	<0.070	**8.73**	**0.085**	**3.62**	**5.29**	**2.64**	**2,050**	**0.00504**	<0.2	**0.036**	**13.8**
dup	06/24/08	<250	<11	**29**	<0.045	**0.090**	<0.042	<0.0115	<0.070	**8.40**	**0.084**	**3.34**	**5.23**	**2.67**	**2,060**	**0.00451**	**0.6**	**0.030**	**13.3**
	09/23/08	<250	**15**	**77**	<0.50	<0.50	<0.50	<1.00	<0.50	**5.65**	**0.084**	**1.42**	**3.68**	**2.59**	**1,120**	**0.00329**	**0.7**	**0.009**	**22.0**
	01/05/09	<80	<236	<472	<0.200	<1.00	<1.00	<1.00	<1.00	**9.2**	<0.500	<2.00	**2.51**	<1.00	**1,980**	**0.00158**	<0.500	<1.00	**6.00**
MW 41C	01/23/08	**36**	**1,100**	**620**	**0.23**	**0.30**	<0.13	<0.22	<0.20	**3.52**	**0.24**	**2.14**	**5.18**	**7.05**	--	**0.03**	0.4	**0.006**	**14.8**
	03/25/08	**42**	**19**	**68**	<0.14	**0.11**	<0.13	<0.33	<0.20	**4.55**	**0.126**	**2.99**	**9.16**	**5.74**	--	**0.0107**	<0.4	**0.021**	**27.6**
	06/24/08	<250	**20**	**86**	**0.050**	**0.070**	<0.042	<0.0115	<0.070	**5.50**	**0.088**	**4.17**	**10.5**	**6.17**	**1,180**	**0.00988**	**0.5**	**0.030**	**23.9**
	09/23/08	**24**	**16**	**39**	<0.50	<0.50	<0.50	<1.00	<0.50	**2.91**	**0.076**	**2.89**	**5.22**	**6.17**	**1,120**	**0.00917**	**0.5**	**0.009**	**28.4**
	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	**7.47**	<0.500	**8.76**	**11.6**	**2.95**	**1,480**	**0.00449**	<0.500	<1.00	**36.1**
MW 42B	01/23/08	<13	**70**	**120**	<0.14	<0.11	<0.13	<0.22	<0.20	**25.6**	**0.11**	**7.44**	**9.72**	**5.46**	--	**0.03**	0.2	**0.062**	**17.7**
	03/25/08	<13	<12	**58**	<0.14	**0.12**	<0.13	<0.33	<0.20	**26.5**	**0.168**	**8.1**	**9.27**	**5.82**	--	**0.0106**	<0.2	**0.054**	**18.7**
	06/24/08	<250	<11	**55**	<0.045	**0.060**	<0.042	<0.0115	<0.070	**20.7**	**0.091**	**2.35**	**5.00**	**1.80**	**8,600**	**0.00477**	<0.2	**0.019**	**14.0**
	09/23/08	<250	**16**	**42**	<0.50	**0.050**	<0.50	<1.00	<0.50	**15.4**	**0.036**	**0.91**	**2.69**	**1.07**	**8,160**	**0.00741**	**1.1**	**0.009**	**14.8**
	01/05/09	<80	<243	<485	<0.200	<1.00	<1.00	<1.00	<1.00	**37.5**	<0.500	<2.00	<2.00	<1.00	**10,500**	**0.00457**	**0.827**	<1.00	<5.00
MW 42C	01/23/08	<13	**450**	**520**	**2.3**	**0.78**	<0.13	<0.22	<0.20	**2.28**	**0.078**	**1.83**	**3.12**	**1.24**	--	**0.03**	**1.1**	**0.012**	**11.2**
	03/25/08	**17**	**15**	**110**	**0.14**	**0.20**	<0.13	<0.33	<0.20	**1.97**	**0.086**	**3.89**	**10.7**	**5.88**	--	**0.006**	<0.2	**0.032**	**20.9**
	06/24/08	<250	**14**	**78**	**0.050**	**0.060**	<0.042	<0.0115	<0.070	**1.09**	**0.068**	**0.800**	**4.32**	**3.12**	**784**	**0.00243**	**1.0**	**0.010**	**10.3**
	09/23/08	<250	**25**	**120**	<0.50	<0.50	<0.50	<1.00	<0.50	**0.76**	**0.106**	**0.49**	**3.93**	**2.69**	**711**	**0.00177**	**0.4**	**0.009**	**10.7**
	01/05/09	<80	<245	<490	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<0.500	<2.00	**3.05**	<1.00	**676**	**0.00200**	<0.500	<1.00	**8.64**
dup	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<0.500	<2.00	**2.25**	<1.00	**669**	**0.00107**	<0.500	<1.00	<5.00
CONOCOPHILLIPS																			
U-29B	01/29/08	**87.6**	**556**	<476	<0.200	<0.500	<0.500	<1.00	<2.00	**4.48**	<0.380	**29.1**	**31.7**	**7.94**	--	**0.170**	--	--	**62.4**
	03/26/08	<80.0	**430**	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**5.74**	<1.00	**5.38**	**7.38**	**2.57**	--	<0.200	<2.00	<1.00	**16.6**
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	**5.77**	**0.586**	**2.40**	**2.40**	**1.24**	**1,500**	<0.200	<0.500	<1.00	**9.87**
	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**12.2**	<1.00	**56.5**	**55.3**	**15.3**	**1,990**	<0.200	**1.85**	<2.00	**122**
dup	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	**9.45**	**2.55**	**39.5**	**39.7**	**10.8**	**1,890**	<0.200	**1.62**	<2.00	**99.9**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**6.04**	**5.71**	**13.3**	**15.9**	**8.20**	**1,320**	<0.200	**0.590**	<1.00	**64.0**
U-29C	01/29/08	<80.0	**516**	<476	**0.310**	<0.500	<0.500	<1.00	<2.00	**84.9**	<3.80	**22.4**	**46.2**	<5.40	--	<0.00500	--	--	**305**
	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	**7.71**	<1.00	**3.67**	**5.76**	**7.2**	--	<0.200	<2.00	<1.00	**25.4**
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	**3.25**	<0.500	<2.00	<2.00	<1.00	**1,660**	<0.200	<0.500	<1.00	**24.6**
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	**12.1**	<5.00	<20.0	**31.0**	**8.08**	**1,830**	<0.200	<5.00	<1.00	**64.0**
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	**3.66**	<0.500	<2.00	<2.00	**1.54**	**1,350**	<0.200	<0.500	<1.00	**21.7**

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TABLE 7
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	TPH			VOCs					Metals									
		TPH-G (µg/l)	TPH-D (µg/l)	TPH-O (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Arsenic (µg/l)	Cadmium (µg/l)	Chromium (µg/l)	Copper (µg/l)	Lead (µg/l)	Manganese (µg/l)	Mercury (µg/l)	Selenium (µg/l)	Silver (µg/l)	Zinc (µg/l)
Portland Harbor Joint Source Control Screening Level Values																			
EPA's 2004 NRWQC (organism only)		--	--	--	51	15,000	2,100	--	--	0.14	--	--	--	--	100	--	4,200	--	26,000
DEQ's 2004 AWQC (organism only)		--	--	--	51	15,000	2,100	--	--	0.14	--	--	--	--	100	0.146	4,200	--	26,000
EPA's 2004 NRWQC ecological receptors (chronic)		--	--	--	--	--	--	--	--	150	0.094	--	2.7	0.54	--	0.77	5	--	36
DEQ's 2004 AWQC ecological receptors (chronic)		--	--	--	--	--	--	--	--	--	0.38	--	3.6	0.54	--	0.012	35	0.12	33
Oak Ridge National Lab (Tier II SCV)		--	--	--	130	9.8	7.3	--	--	3.1	--	--	--	--	120	1.3	--	0.36	--

NOTES:
µg/l = micrograms per Liter
<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985 µg/L
Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.
NRWQC = National Recommended Water Quality Criteria
AWQC = Ambient Water Quality Criteria
Shading indicates analyte was detected above the applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2007.
Bold face font indicates analyte was detected above the laboratory MRL or MDL
-- = Not analyzed
NS = Not sampled
N/A = Not applicable
TPH = Total Petroleum Hydrocarbons in the gasoline range (TPH-G), diesel range (TPH-D), and heavy oil range (TPH-O)
VOCs = Volatile Organic Compounds

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TABLE 8
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
CHEVRON																		
B-19	03/25/08	<0.294	**1.76**	<0.980	**0.466**	<0.00980	<0.0245	<0.0245	<0.0980	<0.0245	<0.00980	<0.0245	<0.196	**5.45**	<0.0245	<0.882	**7.68**	**0.131**
	06/26/08	<0.952	**2.83**	<0.952	<3.81	**0.0473**	**0.0235**	**0.0193**	<0.0952	**0.0117**	**0.118**	**0.00480**	<0.952	**8.35**	**0.0154**	<2.86	**18.7**	**0.322**
	03/18/09	<0.985	**1.59**	<0.985	<0.985	**0.0132**	**0.00630**	<0.00493	<0.0985	<0.00493	**0.0397**	<0.00493	<0.985	**5.41**	<0.00493	<0.985	**7.71**	**0.234**
dup	03/18/09	<0.485	**1.69**	<0.971	<1.46	**0.0403**	**0.0187**	**0.0130**	<0.0971	**0.0115**	**0.103**	<0.00485	<0.485	**9.63**	**0.0114**	**<1.21**	**11.4**	**0.591**
B-26	03/26/08	**20.7**	**0.586**	<0.490	<0.490	**0.0349**	**0.0307**	**0.0616**	<0.490	**0.0490**	**0.0677**	<0.0245	<0.490	**0.824**	**0.0476**	**99.8**	**0.741**	<0.490
dup	03/26/08	**17.9**	**0.584**	<0.488	<0.488	**0.0326**	**0.0273**	**0.0573**	<0.488	**0.0437**	**0.0614**	<0.0244	<0.488	**0.776**	**0.0387**	**85.2**	**0.723**	<0.488
	06/26/08	**1.87**	**0.412**	<0.190	<0.190	**0.0407**	**0.0301**	**0.0603**	<0.190	**0.0415**	**0.0763**	**0.0130**	**0.163**	**0.324**	**0.0399**	**1.24**	**0.357**	**0.218**
B-33	03/27/08	<0.190	**1.22**	<0.952	<0.190	<0.0476	<0.0476	<0.0476	<0.952	<0.0476	**0.0560**	<0.0476	<0.190	**3.38**	<0.0476	<1.14	**1.45**	<0.190
	06/26/08	<0.476	**1.28**	<0.476	<0.476	**0.0855**	**0.0864**	**0.148**	<0.476	**0.0980**	**0.208**	**0.0307**	**0.450**	**2.93**	**0.0955**	<0.952	**2.86**	**0.475**
	03/18/09	<1.94	**3.17**	<1.94	<1.94	**0.418**	**0.370**	**0.615**	<1.94	**0.505**	**1.01**	**0.111**	**2.14**	**12.7**	**0.363**	<1.94	**13.5**	**3.22**
CR-3	12/19/07	<0.190	<0.190	<0.190	<0.190	**0.0214**	**0.0269**	**0.0261**	<0.190	**0.0206**	**0.0333**	<0.00952	<0.190	<0.190	**0.0187**	<0.190	<0.190	<0.190
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-26	12/18/07	<0.200	<0.200	<0.200	<0.200	**0.0155**	**0.0214**	**0.0259**	<0.200	**0.0254**	**0.0262**	**0.0171**	<0.200	<0.200	**0.0283**	<0.200	<0.200	<0.200
	03/25/08	<0.0962	<0.0962	<0.0962	<0.0962	**0.0118**	**0.0126**	**0.0145**	<0.0962	**0.0135**	**0.0206**	<0.00481	<0.0962	<0.0962	**0.0122**	<0.0962	<0.0962	<0.0962
	06/24/08	<0.0985	<0.0985	<0.0985	<0.0985	**0.0238**	**0.0271**	**0.0326**	<0.0985	**0.0283**	**0.0394**	**0.0101**	**0.0583**	**0.0849**	**0.0267**	<0.0985	**0.0720**	**0.0583**
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	**0.0144**	**0.0150**	**0.0142**	<0.0952	**0.0158**	**0.0221**	**0.00510**	<0.0952	**0.0574**	**0.0129**	<0.0952	<0.0952	<0.0952
	01/06/09	<0.0980	<0.0980	<0.0980	<0.0980	**0.0146**	**0.0151**	**0.0199**	<0.0980	**0.0162**	**0.0254**	**0.00513**	**0.0518**	**0.0508**	**0.0171**	<0.0980	<0.0980	<0.0980
CR-27C	12/18/07	<0.0995	<0.0995	<0.0995	<0.0995	**0.561**	**0.347**	**0.439**	<0.995	**0.461**	**0.582**	**0.110**	**1.01**	<0.0995	**0.326**	<0.0995	**0.346**	**0.86**
	03/25/08	<0.0995	<0.0995	<0.0995	<0.0995	**0.0375**	**0.0382**	**0.0519**	<0.0995	**0.0478**	**0.0583**	**0.0136**	<0.0995	<0.0995	**0.0415**	<0.0995	<0.0995	<0.0995
	06/24/08	<0.0971	<0.0971	<0.0971	<0.0971	**0.101**	**0.125**	**0.148**	**0.141**	**0.142**	**0.173**	**0.0455**	**0.200**	<0.0971	**0.126**	<0.0971	**0.129**	**0.198**
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	**0.0948**	**0.0996**	**0.104**	**0.105**	**0.0911**	**0.140**	**0.0344**	**0.215**	<0.0952	**0.0928**	<0.0952	**0.130**	**0.240**
	01/06/09	<0.0971	<0.0971	<0.0971	**0.0693**	**0.238**	**0.334**	**0.377**	**0.327**	**0.334**	**0.404**	**0.101**	**0.506**	<0.0971	**0.292**	<0.0971	**0.442**	**0.329**
CR-28A	12/19/07	**117**	**0.598**	<0.485	<0.485	**0.107**	**0.0965**	**0.0834**	<0.971	**0.0803**	**0.135**	<0.0485	**0.298**	**1.06**	**0.0755**	**421**	**0.670**	**0.313**
	03/27/08	**85.8**	**0.613**	<0.381	<0.381	**0.0260**	<0.0190	<0.0190	<0.381	<0.0190	**0.0324**	<0.0190	<0.381	**0.808**	<0.0190	**269**	**0.497**	<0.381
	06/25/08	**55.3**	**0.448**	<0.476	<0.476	<0.0238	<0.0238	<0.0238	<0.476	<0.0238	**0.0262**	<0.0238	<0.476	**0.535**	<0.0238	**177**	**0.399**	<0.476
	09/25/08	**55.6**	**0.422**	<0.481	<0.481	**0.0268**	<0.0240	<0.0240	<0.481	<0.0240	**0.0307**	<0.0240	<0.481	**0.557**	<0.0240	**184**	**0.442**	<0.481
CR-28B	12/19/07	<0.0980	<0.0980	<0.0980	<0.0980	**0.0110**	**0.0116**	**0.0169**	<0.0980	**0.0160**	**0.0170**	<0.00490	<0.0980	<0.0980	**0.0106**	<0.0980	<0.0980	<0.0980
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	**0.0143**	**0.0154**	**0.0218**	<0.190	**0.0185**	**0.0245**	<0.00952	<0.0952	<0.0952	**0.0120**	<0.0952	<0.0952	<0.0952
	06/25/08	<0.192	<0.192	<0.192	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.192	<0.00962	<0.192	<0.192	<0.192
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	**0.00498**	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-28C	12/19/07	<0.0980	<0.0980	<0.0980	<0.0980	**0.143**	**0.0871**	**0.147**	<0.0980	**0.0964**	**0.149**	**0.0199**	**0.536**	<0.0980	**0.0555**	<0.0980	<0.0980	**0.322**
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	**0.0250**	**0.0211**	**0.0308**	<0.190	**0.0263**	**0.0391**	<0.00952	<0.0952	<0.0952	**0.0161**	<0.0952	<0.0952	<0.0952
	06/25/08	<0.0952	<0.0952	<0.0952	<0.0952	**0.0494**	**0.0421**	**0.0517**	<0.0952	**0.0478**	**0.0649**	**0.0131**	**0.102**	<0.0952	**0.0345**	<0.0952	<0.0952	**0.119**
	09/25/08	**0.0783**	<0.0962	<0.0962	<0.0962	**0.0171**	**0.00854**	**0.0129**	<0.0962	**0.00891**	**0.0203**	<0.00481	<0.0962	<0.0962	**0.00713**	**0.481**	<0.0962	<0.0962

COP0017113

TABLE 8
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
CR 29A	12/18/07	**6.30**	**0.411**	<0.149	<0.495	**0.0418**	**0.0555**	**0.0321**	<0.0990	**0.0365**	**0.0504**	**0.00785**	<0.495	**0.491**	**0.0257**	<4.46	**0.621**	<0.495
	03/27/08	**3.48**	**0.145**	<0.0952	<0.0952	**0.00500**	<0.00476	<0.00476	<0.0952	<0.00476	**0.00586**	<0.00476	<0.0952	**0.182**	<0.00476	<3.57	**0.307**	<0.0952
	06/26/08	**10.9**	**0.473**	<0.0952	**0.0707**	**0.00636**	<0.00476	<0.00476	**0.0952**	<0.00476	**0.00733**	<0.00476	**0.0479**	**0.574**	<0.00476	**2.51**	**0.873**	**0.0621**
	09/25/08	**11.2**	**0.723**	<0.144	**0.0654**	**0.0148**	<0.00481	<0.00481	<0.0962	<0.00481	**0.0167**	<0.00481	**0.0653**	**0.685**	<0.00481	<4.33	**0.990**	**0.103**
CR 29B	12/18/07	<0.0980	<0.0980	<0.0980	<0.0980	**0.0101**	**0.0118**	**0.0167**	<0.0980	**0.0156**	**0.0177**	<0.00490	<0.0980	<0.0980	**0.0103**	<0.0980	<0.0980	<0.196
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	**0.00646**	<0.0952	**0.00564**	**0.00669**	<0.00476	<0.0952	<0.0952	**0.00498**	<0.0952	<0.0952	<0.0952
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-30A	12/20/07	<0.495	**0.572**	<0.495	<0.495	<0.0248	**0.0276**	**0.0164**	<0.0990	**0.0173**	**0.0306**	**0.00561**	<0.495	**1.20**	**0.0167**	<1.98	**0.568**	<0.495
	03/26/08	<0.0976	**0.375**	<0.195	<0.0976	<0.0244	**0.0103**	**0.00751**	<0.0976	**0.00731**	<0.0244	<0.00488	<0.0976	**1.49**	**0.00658**	<0.293	**0.550**	<0.0976
	06/26/08	<0.0952	**0.811**	<0.190	**0.0838**	**0.0117**	**0.00653**	<0.00476	<0.0952	<0.00476	**0.0154**	<0.00476	<0.0952	**1.15**	<0.00476	<0.857	**1.15**	**0.115**
	09/24/08	<0.0962	**0.602**	<0.0962	<0.0962	**0.0170**	**0.0104**	**0.00658**	<0.0962	**0.00622**	**0.0253**	<0.00481	<0.0962	**0.921**	**0.00599**	<0.817	**0.427**	**0.130**
CR-30B	12/20/07	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	**0.00581**	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.0990	<0.00495	<0.0990	<0.0990	<0.0990
	03/26/08	<0.0971	<0.0971	<0.0971	<0.0971	**0.00604**	**0.00572**	**0.00825**	<0.0971	**0.00615**	**0.00884**	<0.00485	<0.0971	<0.0971	**0.00573**	<0.0971	<0.0971	<0.0971
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-31A	12/19/07	<0.990	**1.57**	<0.990	<0.990	<0.0495	<0.00990	<0.00990	<0.0990	<0.00990	<0.0495	<0.00495	<0.990	**7.35**	<0.00495	<3.96	**1.04**	<0.990
	03/26/08	<0.392	**1.12**	<0.392	<0.392	<0.0196	<0.0196	<0.0196	<0.392	<0.0196	<0.0196	<0.0196	<0.392	**6.12**	<0.0196	<0.784	**0.579**	<0.392
	06/26/08	<0.0952	**1.50**	<0.952	<0.190	**0.0205**	**0.0148**	**0.00918**	<0.0952	**0.00794**	**0.0331**	<0.00476	<0.0952	**6.63**	**0.00892**	<0.952	**1.69**	**0.0977**
	09/24/08	<0.481	**1.23**	<0.481	<0.481	<0.0240	<0.0240	<0.0240	<0.481	<0.0240	**0.0257**	<0.0240	<0.481	**5.90**	<0.0240	<1.20	**1.34**	<0.481
CR-31B	12/20/07	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985
	03/26/08	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<0.0980	<0.0980	<0.0980
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-32A	12/19/07	<0.0990	**0.348**	<0.149	<0.495	<0.00495	<0.00495	<0.0990	<0.00495	<0.0495	<0.0495	<0.00495	<0.495	**1.41**	<0.00495	<1.49	**0.280**	<0.990
	03/26/08	<0.0995	**0.380**	<0.0995	<0.0995	<0.0249	<0.00498	<0.00995	<0.0995	<0.00995	<0.0249	<0.00498	<0.0995	**1.56**	<0.00498	<0.299	**0.202**	<0.0995
	06/26/08	<0.0952	**0.396**	<0.0952	<0.190	**0.00625**	<0.00476	<0.00476	<0.0952	<0.00476	**0.0101**	<0.00476	<0.0952	**1.41**	<0.00476	<0.381	**0.445**	<0.0952
	09/24/08	<0.192	**0.746**	<0.192	<0.192	<0.0192	<0.00962	<0.00962	<0.192	<0.00962	<0.0192	<0.00962	<0.192	**2.56**	<0.00962	<0.865	**0.646**	<0.192
CR-32B	12/19/07	<0.0995	<0.0995	<0.0995	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.0995	<0.00498	<0.0995	<0.0995	<0.0995
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	**0.00567**	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
CR-32C	12/19/07	<0.0995	<0.0995	<0.0995	<0.0995	**0.0192**	**0.0250**	**0.0347**	<0.0995	**0.0307**	**0.0340**	**0.00718**	<0.0995	<0.0995	**0.0212**	<0.0995	<0.0995	<0.0995
	03/26/08	<0.0985	<0.0985	<0.0985	<0.0985	**0.0209**	**0.0175**	**0.0333**	<0.0985	**0.0173**	**0.0253**	**0.00628**	<0.0985	<0.0985	**0.0190**	<0.0985	<0.0985	<0.0985
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	**0.00614**	**0.00780**	**0.00869**	<0.0952	**0.00884**	**0.00964**	<0.00476	<0.0952	<0.0952	**0.00737**	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962

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TABLE 8
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
KINDER MORGAN																		
MW 41B	01/23/08	**0.058**	--	<0.0034	--	<0.0026	<0.0043	--	<0.0029	<0.0025	<0.0034	<0.0025	--	**0.014**	<0.0026	**0.14**	--	**0.0052**
dup	01/23/08	**0.054**	--	<0.0036	--	<0.0027	<0.0045	--	<0.0030	<0.0026	<0.0036	<0.0026	--	**0.017**	<0.0027	**0.13**	--	<0.0037
	03/25/08	**0.010**	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.011**	<0.0050	<0.0035
	06/24/08	**0.0063**	<0.0044	<0.0034	**0.0076**	**0.0038**	<0.0043	<0.0023	**0.0031**	<0.0025	<0.0034	<0.0025	<0.0044	**0.0077**	<0.0026	**0.058**	**0.011**	**0.0036**
dup	06/24/08	**0.0074**	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.036**	<0.0050	<0.0035
	09/23/08	**0.0072**	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	**0.0062**	<0.0026	**0.046**	<0.0050	<0.0035
	01/05/09	<0.0930	<0.0930	<0.0930	<0.0930	<0.00465	<0.00465	<0.00465	<0.0930	<0.00465	<0.00465	<0.00465	<0.0930	<0.0930	<0.00465	<0.0930	<0.0930	<0.0930
MW 41C	01/23/08	**0.012**	--	<0.0034	--	<0.0026	<0.0043	--	<0.0029	<0.0025	<0.0034	<0.0025	--	**0.013**	<0.0026	**0.018**	--	<0.0035
	03/25/08	**0.012**	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.024**	<0.0050	<0.0035
	06/24/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	**0.0042**	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	**0.0028**	**0.032**	<0.0050	<0.0035
	09/23/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	**0.017**	<0.0026	<0.0030	<0.0050	<0.0035
	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909
MW 42B	01/23/08	**0.0028**	--	<0.0034	--	**0.0041**	<0.0043	--	<0.0029	<0.0025	<0.0034	<0.0025	--	<0.0038	<0.0026	**0.004**	--	<0.0035
	03/25/08	**0.0060**	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.042**	<0.0050	<0.0035
	06/24/08	**0.0070**	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.031**	**0.0065**	<0.0035
	09/23/08	**0.0090**	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.013**	**0.0083**	<0.0035
	01/05/09	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.0990	<0.00495	<0.0990	<0.0990	<0.0990
MW 42C	01/23/08	**0.011**	--	<0.0034	--	<0.0026	<0.0043	--	<0.0029	<0.0025	<0.0034	<0.0025	--	<0.0038	<0.0026	**0.017**	--	<0.0035
	03/25/08	<0.0023	**0.013**	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.012**	**0.0089**	<0.0035
	06/24/08	**0.0094**	<0.0046	**0.0073**	<0.0038	**0.0044**	<0.0045	<0.0024	**0.0031**	<0.0027	<0.0036	<0.0027	<0.0046	<0.0040	<0.0028	**0.091**	**0.012**	<0.0037
	09/23/08	<0.0023	**0.0057**	**0.011**	<0.0038	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	**0.016**	<0.0050	<0.0035
	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909
dup	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909
CONOCOPHILLIPS																		
U-29B	01/29/08	**6.69**	**0.286**	<0.143	<0.0952	**0.0143**	**0.0107**	**0.0110**	<0.0952	**0.0110**	**0.0208**	<0.00476	<0.0952	**1.28**	**0.0059**	<1.90	**1.14**	<0.0952
	03/26/08	**1.23**	**0.163**	<0.0962	<0.0962	**0.0113**	**0.0138**	**0.0125**	<0.192	<0.00962	**0.0162**	<0.00962	<0.0962	**0.257**	**0.0104**	<0.192	<0.0962	<0.0962
	06/25/08	**0.224**	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	09/24/08	**0.230**	**0.103**	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	**0.00683**	<0.00481	<0.0962	**0.145**	<0.00481	<0.144	<0.0962	<0.0962
	09/24/08	**0.457**	**0.110**	<0.0962	<0.0962	**0.00917**	**0.0111**	**0.00688**	<0.0962	**0.00647**	**0.0126**	<0.00481	<0.0962	**0.157**	**0.00651**	<0.144	**0.107**	<0.0962
	01/07/09	**0.413**	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	**0.116**	<0.00488	<0.146	**0.104**	<0.0976
U-29C	01/29/08	**0.191**	<0.0952	<0.0952	<0.0952	**0.033**	**0.0433**	**0.0421**	<0.00476	**0.0288**	**0.0393**	0.00503	<0.0952	<0.0952	**0.0239**	**0.195**	<0.0952	<0.476
	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962
	06/25/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	**0.00483**	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	01/07/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	**0.00531**	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985

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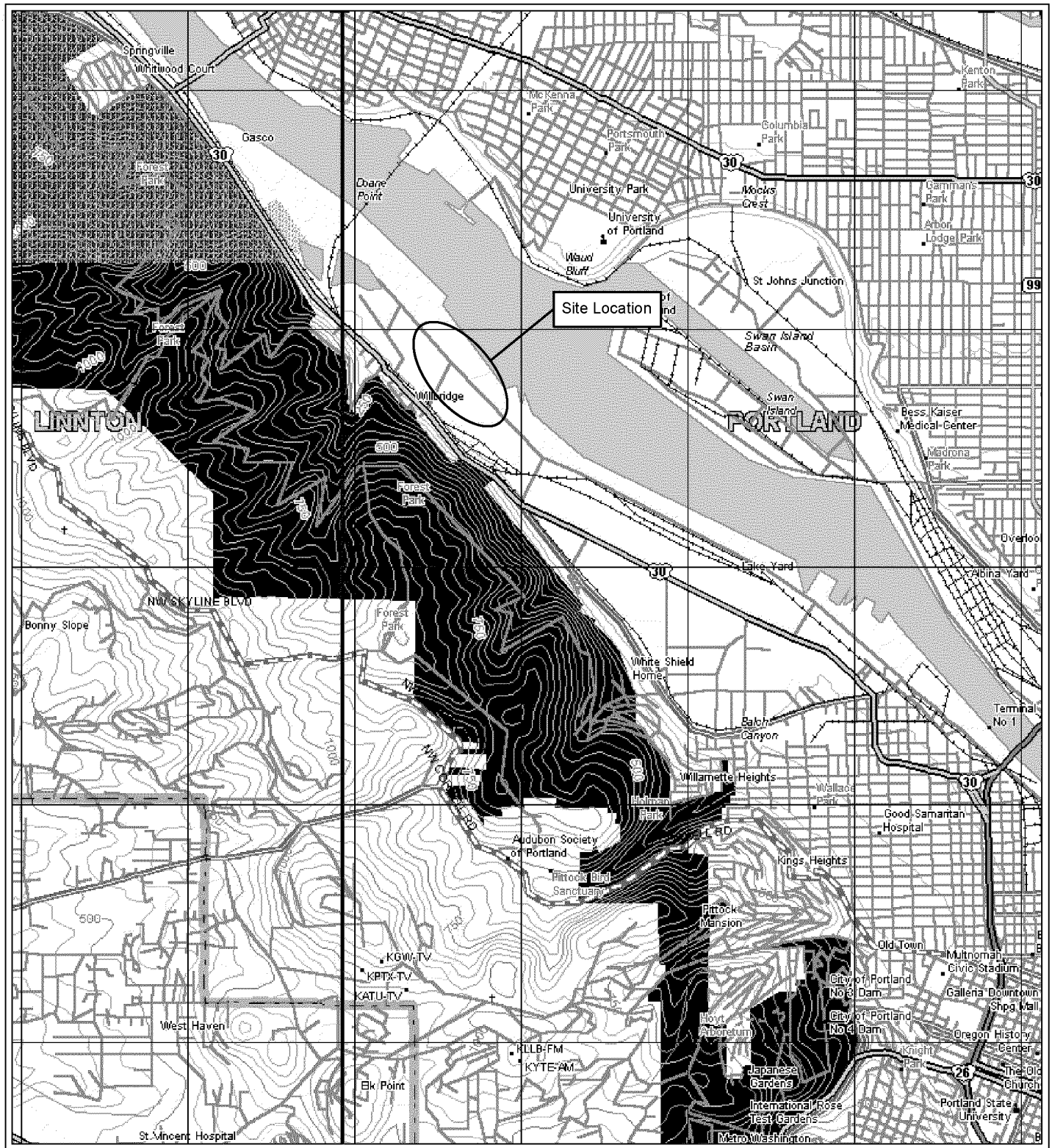
TABLE 8
GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs
Willbridge Terminals
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene (µg/l)	Acenaphthene (µg/l)	Acenaphthylene (µg/l)	Anthracene (µg/l)	Benzo (a) anthracene (µg/l)	Benzo (a) pyrene (µg/l)	Benzo (b) fluoranthene (µg/l)	Benzo (g,h,i) perylene (µg/l)	Benzo (k) fluoranthene (µg/l)	Chrysene (µg/l)	Dibenzo (a,h) anthracene (µg/l)	Fluoranthene (µg/l)	Fluorene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Naphthalene (µg/l)	Phenanthrene (µg/l)	Pyrene (µg/l)
Portland Harbor Joint Source Control Screening Level Values																		
EPA's 2004 NRWQC (organism only)		--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
DEQ's 2004 AWQC (organism only)		--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000
EPA's 2004 NRWQC ecological receptors (chronic)		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEQ's 2004 AWQC ecological receptors (chronic)		--	520	--	--	--	--	--	--	--	--	--	--	--	--	620	--	--

NOTES:
µg/l = micrograms per Liter
<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985 µg/L
Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.
NRWQC = National Recommended Water Quality Criteria
AWQC = Ambient Water Quality Criteria
Shading indicates analyte was detected above the applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2007.
Bold face font indicates analyte was detected above the laboratory MRL or MDL
NA = Not analyzed
NS = Not sampled
N/A = Not applicable
ND = Not detected
PAHs = Polynuclear Aromatic Compounds

COP0017116

FIGURES



REFERENCES

USGS 7.5 Minute Topographic Maps
Portland, Oregon-Washington
Linnton, Oregon
DeLorme TopoQuads, 1999
SCALE: 1 inch = 3750 feet

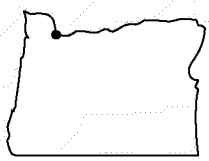


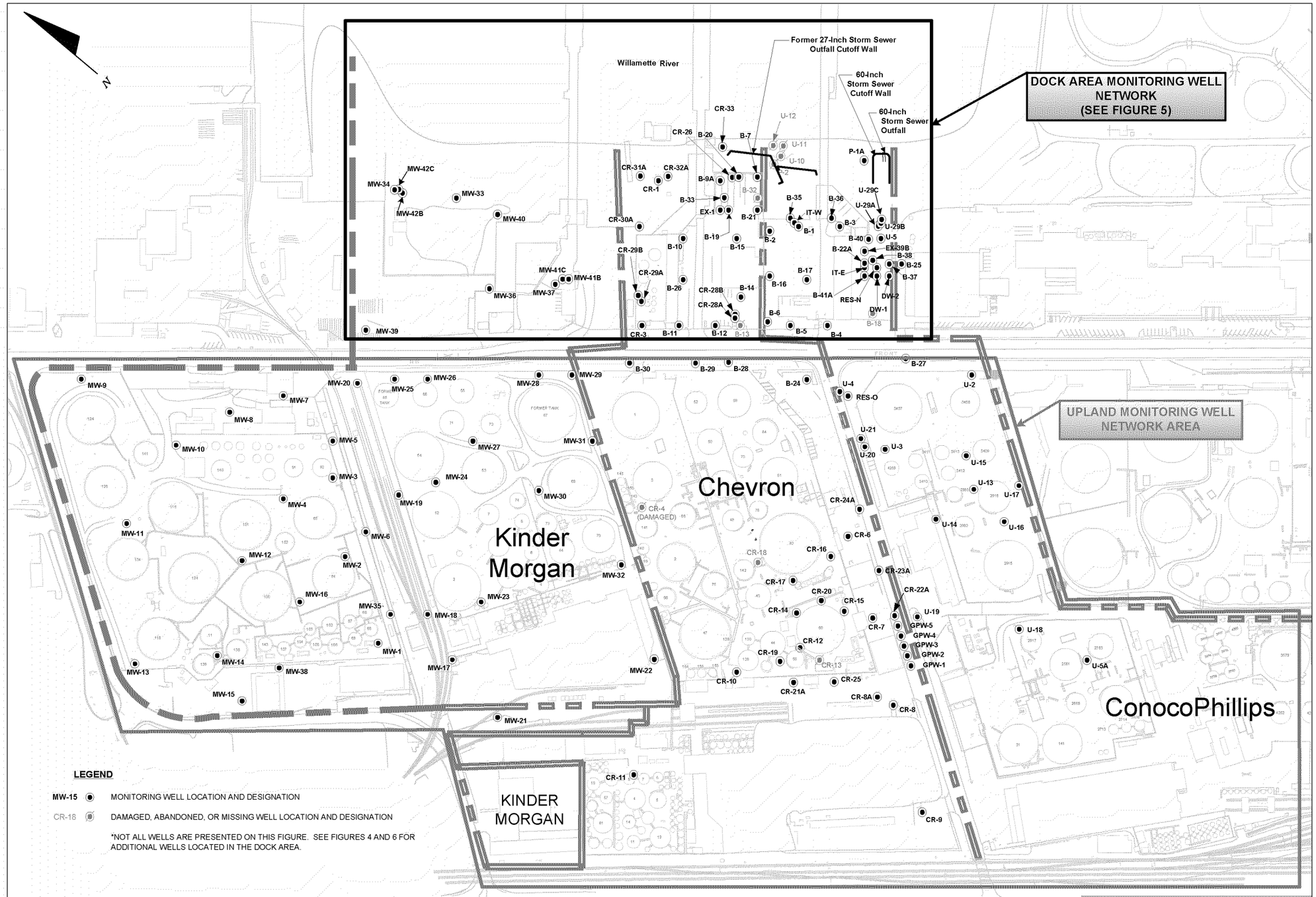
FIGURE 1

SITE LOCATION MAP

Willbridge Petroleum Terminals
Portland, Oregon

PROJECT NO. ORZ0922GW-6	DRAWN BY KNT 6-12-03
FILE NO.	PREPARED BY CRF 11/7/07
REVISION NO.	REVIEWED BY

DELTA



LEGEND

MW-15	◉	MONITORING WELL LOCATION AND DESIGNATION
CR-18	◉	DAMAGED, ABANDONED, OR MISSING WELL LOCATION AND DESIGNATION

*NOT ALL WELLS ARE PRESENTED ON THIS FIGURE. SEE FIGURES 4 AND 6 FOR ADDITIONAL WELLS LOCATED IN THE DOCK AREA.

FIGURE 2

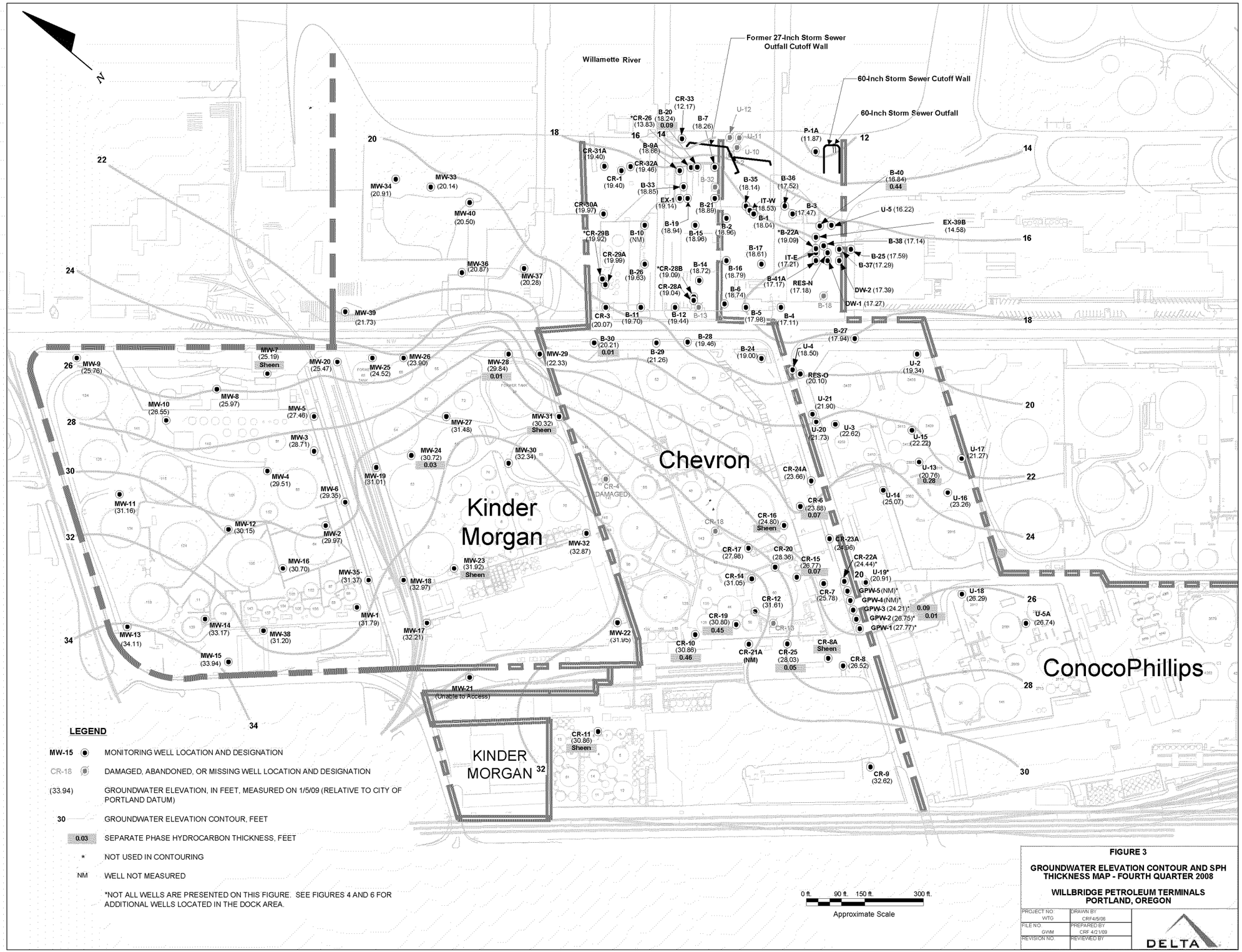
SITE PLAN

WILLBRIDGE PETROLEUM TERMINALS
PORTLAND, OREGON

PROJECT NO. WTG	DRAWN BY CRF 4/5/06
FILE NO. GWM	PREPARED BY CRF 6/1/09
REVISION NO.	REVIEWED BY

DELTA

COP0017119



LEGEND

MW-15	MONITORING WELL LOCATION AND DESIGNATION
CR-18	DAMAGED, ABANDONED, OR MISSING WELL LOCATION AND DESIGNATION
(33.94)	GROUNDWATER ELEVATION, IN FEET, MEASURED ON 1/5/09 (RELATIVE TO CITY OF PORTLAND DATUM)
30	GROUNDWATER ELEVATION CONTOUR, FEET
0.03	SEPARATE PHASE HYDROCARBON THICKNESS, FEET
*	NOT USED IN CONTOURING
NM	WELL NOT MEASURED

*NOT ALL WELLS ARE PRESENTED ON THIS FIGURE. SEE FIGURES 4 AND 6 FOR ADDITIONAL WELLS LOCATED IN THE DOCK AREA.

0 ft. 90 ft. 150 ft. 300 ft.

Approximate Scale

FIGURE 3

GROUNDWATER ELEVATION CONTOUR AND SPH THICKNESS MAP - FOURTH QUARTER 2008

WILLBRIDGE PETROLEUM TERMINALS PORTLAND, OREGON

PROJECT NO. WTG	DRAWN BY CRF 4/5/09
FILE NO. GWM	PREPARED BY CRF 4/21/09
REVISION NO.	REVIEWED BY

DELTA

COP0017120

COP0017121

WILLAMETTE RIVER

SHORELINE

SEEP-6 SEEP-4 SEEP-3 SEEP-2 SEEP-1 SEEP-5

CR-33 (12.17)

CITY OF PORTLAND OUTFALL 22

APPROXIMATE EXTENT OF PROPERTY BOUNDARY

EW-2 (6.78) U-22A (11.82) *U-22B (5.01) U-24A (12.14)

EW-1 (6.31) *U-24B (13.32)

EW-3 EW-4 U-23 (14.93) U-25 (15.98)

P-1A (11.87) RW-5 (5.66) RW-6 (6.14) U-26 (12.71) U-28 (12.27) RW-1 (5.66)

U-27 (17.36) RW-2 (11.45)

*CR-31B (16.12) CR-31A (19.40) CR-32A (19.46) *CR-32C (15.90) CR-1 (18.89) OSN OSS *CR-32B (16.05)

*CR-26 (12.82) B-20 (18.24) 0.09 B-7 (17.12) B-9A (18.66) *CR-27C (12.97) BUILDING

B-33 (18.85)

MW-34 (20.91) *MW-42C (16.95) *MW-42B (17.57) MW-33 (20.14) MW-40 (20.50)

EX-1 (19.14) B-19 (18.94) B-21 (18.89) *CR-30B (17.78) CR-30A (19.97) B-10 (NM)

*IT-W (18.16) B-35 (18.14) B-1 (18.04) B-2 (18.96) B-15 (18.96)

*B-36 (17.52) B-3 (17.47) *U-29B (13.90) *U-29C (13.74) U-29A (16.81) RW-4 (13.91) RW-3 (NM) U-5 (16.22) B-40 (16.84) 0.44

CHEVRON

KINDER MORGAN

CONOCOPHILLIPS

MAINTENANCE BUILDING 1

EX-39B (14.58) B-37 (17.29) *B-22A (19.09) B-38 (17.14) IT-E (17.21) B-41A (17.17) DW-1 (17.27) DW-2 (17.39) RES-N (17.18) B-25 (17.59)

*MW-41C (20.48) *MW-41B (19.84) MW-37 (20.28) MW-36 (20.87)

B-26 (19.63) B-16 (18.79) B-17 (18.61) B-14 (18.72)

*CR-29B (19.92) CR-29A (19.99) TANKS BUILDING 1

*CR-28B (19.09) CR-28A (19.04) *CR-28C (21.45) B-6 (18.74) B-5 (17.98) B-4 (17.11)

CR-3 (20.07) B-11 (19.70) B-12 (19.44)

BUILDING PIPE RUN

GATE

LEGEND

MW-36 (20.87)	MONITORING WELL; GROUNDWATER ELEVATION, MEASURED ON 1/5/09
	GROUNDWATER ELEVATION CONTOUR, FEET
0.44	SEPARATE PHASE HYDROCARBON THICKNESS, FEET
*	GROUNDWATER ELEVATION NOT USED TO CONSTRUCT CONTOURS
—x—x—x—	FENCE LINE

North

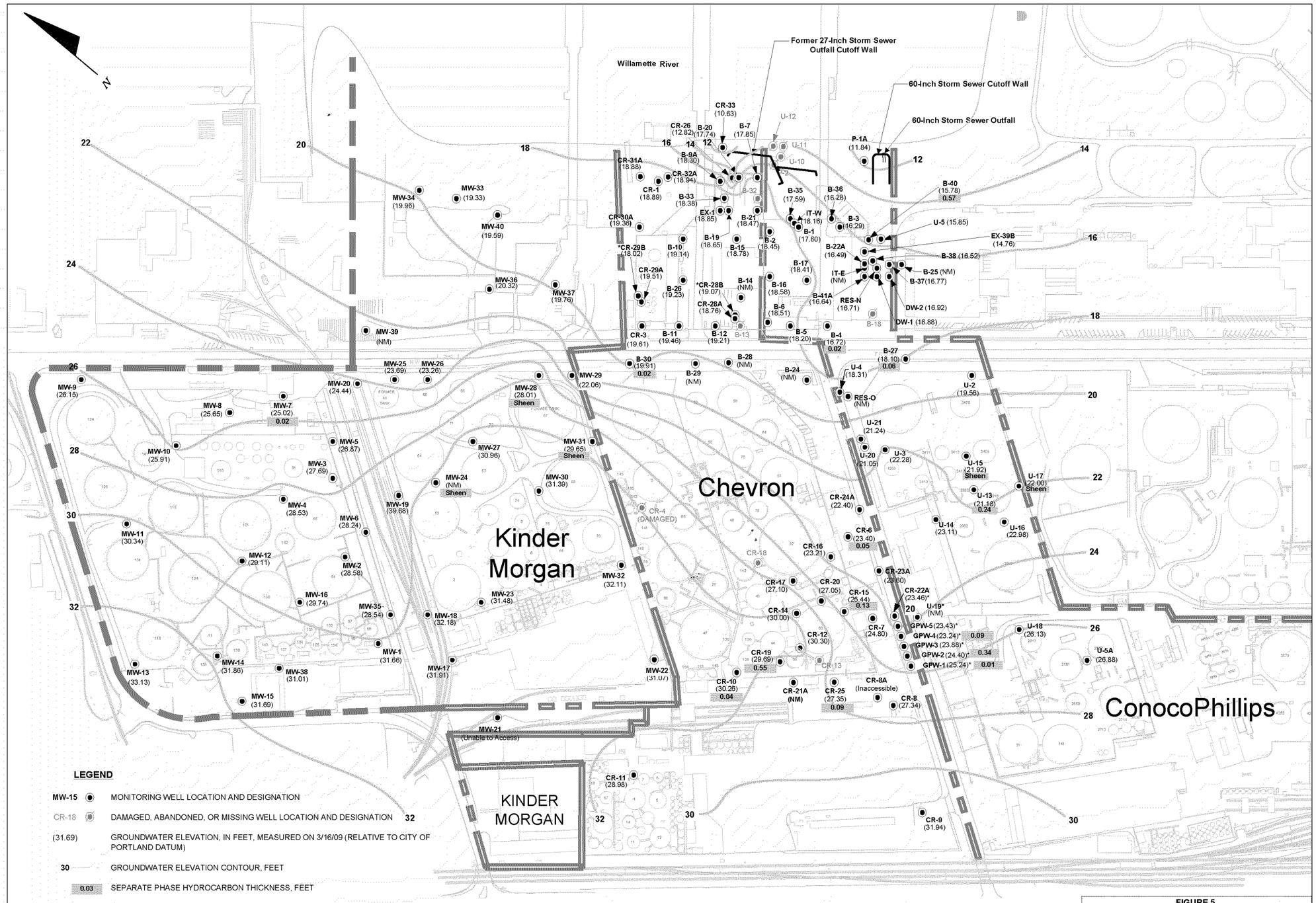
0 100

SCALE IN FEET

FIGURE 4
GROUNDWATER ELEVATION CONTOURS – DOCK AREA
FOURTH QUARTER 2008

WILLBRIDGE PETROLEUM TERMINALS
PORTLAND, OREGON

PROJECT NO.	PREPARED BY	DRAWN BY	
PTWB-01M-2	CRF	DR	DELTA
DATE	REVIEWED BY	FILE NAME	
5/12/09		PTWB01M2-Site	



LEGEND

MW-15 ◉	MONITORING WELL LOCATION AND DESIGNATION
CR-18 ◉	DAMAGED, ABANDONED, OR MISSING WELL LOCATION AND DESIGNATION
(31.69)	GROUNDWATER ELEVATION, IN FEET, MEASURED ON 3/16/09 (RELATIVE TO CITY OF PORTLAND DATUM)
30	GROUNDWATER ELEVATION CONTOUR, FEET
0.03	SEPARATE PHASE HYDROCARBON THICKNESS, FEET
*	NOT USED IN CONTOURING
NM	WELL NOT MEASURED

*NOT ALL WELLS ARE PRESENTED ON THIS FIGURE. SEE FIGURES 4 AND 6 FOR ADDITIONAL WELLS LOCATED IN THE DOCK AREA.

FIGURE 5

GROUNDWATER ELEVATION CONTOUR AND SPH THICKNESS MAP -FIRST QUARTER 2009

WILLBRIDGE PETROLEUM TERMINALS PORTLAND, OREGON

PROJECT NO. WTG	DRAWN BY CRF4/5/06
FILE NO. GWM	PREPARED BY CRF 4/21/09
REVISION NO.	REVIEWED BY

DELTA

COP0017122

WILLAMETTE RIVER

SHORELINE

60-INCH STORM SEWER CUTOFF WALL

FORMER 27-INCH STORM SEWER OUTFALL CUTOFF WALL

CITY OF PORTLAND OUTFALL 22

APPROXIMATE EXTENT OF PROPERTY BOUNDARY

SEEP-6 SEEP-4 SEEP-3 SEEP-2 SEEP-1 SEEP-5

CR-33 (10.63)

U-24A (11.19)

U-22A (8.28)

EW-2

EW-1

*U-22B (8.07)

*U-24B (11.46)

EW-3

EW-4

U-23 (14.31)

U-25 (14.62)

*CR-31B (13.04)

CR-31A (18.88)

CR-32A (18.94)

*CR-32C (12.56)

CR-1 (18.89)

OSN

OSS

*CR-32B (13.35)

*CR-26 (12.82)

B-20 (17.74)

B-7 (17.85)

B-9A (18.30)

*CR-27C (12.97)

B-33 (18.38)

BUILDING

P-1A (11.84)

U-28 (10.61)

RW-5 (9.98)

RW-6 (10.49)

RW-1 (NM)

U-26 (12.18)

U-27 (14.55)

RW-2 (16.15)

MW-34 (19.96)

*MW-42C (14.18)

*MW-42B (15.03)

MW-33 (19.33)

MW-40 (19.59)

*CR-30B (15.44)

CR-30A (19.36)

EX-1 (18.85)

B-19 (18.65)

B-21 (18.47)

B-10 (19.14)

CHEVRON

B-15 (18.78)

B-35 (17.59)

*IT-W (18.16)

B-1 (17.60)

B-2 (18.45)

*B-36 (16.28)

B-3 (16.29)

*U-29B (9.14)

*U-29C (10.17)

U-29A (15.77)

RW-4 (13.11)

RW-3 (NM)

B-40 (15.78)

0.57

U-5 (15.85)

EX-39B (14.76)

B-37 (16.77)

B-22A (16.49)

B-38 (16.52)

RES-N (16.71)

*IT-E (NM)

B-41A (16.64)

DW-1 (16.88)

DW-2 (16.92)

B-25 (NM)

KINDER MORGAN

*MW-41C (18.75)

*MW-41B (18.36)

MW-37 (19.70)

MW-36 (20.32)

TANKS

BUILDING 1

*CR-29B (18.02)

CR-29A (19.51)

B-26 (19.23)

MAINTENANCE BUILDING 1

CONOCOPHILLIPS

B-16 (18.58)

B-14 (NM)

*CR-28B (19.07)

CR-28A (18.76)

*CR-28C (20.59)

B-17 (18.41)

BUILDING

PIPE RUN

Manhole 77

B-6 (18.51)

B-5 (18.20)

B-4 (16.72)

0.02

CR-3 (19.61)

B-11 (19.46)

B-12 (19.21)

LEGEND

MW-36	MONITORING WELL
(20.32)	GROUNDWATER ELEVATION, MEASURED ON 3/16/09
	GROUNDWATER ELEVATION CONTOUR, FEET
0.15	SEPARATE PHASE HYDROCARBON THICKNESS, FEET
*	GROUNDWATER ELEVATION NOT USED TO CONSTRUCT CONTOURS
	FENCE LINE
	TOPOGRAPHIC CONTOUR LINES

North

0 100

SCALE IN FEET

FIGURE 6
GROUNDWATER ELEVATION CONTOURS – DOCK AREA
FIRST QUARTER 2009

WILLBRIDGE PETROLEUM TERMINALS
PORTLAND, OREGON

PROJECT NO.	PREPARED BY	DRAWN BY
PTWB-01M-2	CRF	DR
DATE	REVIEWED BY	FILE NAME
3/11/08		PTWB01M2-Site

DELTA

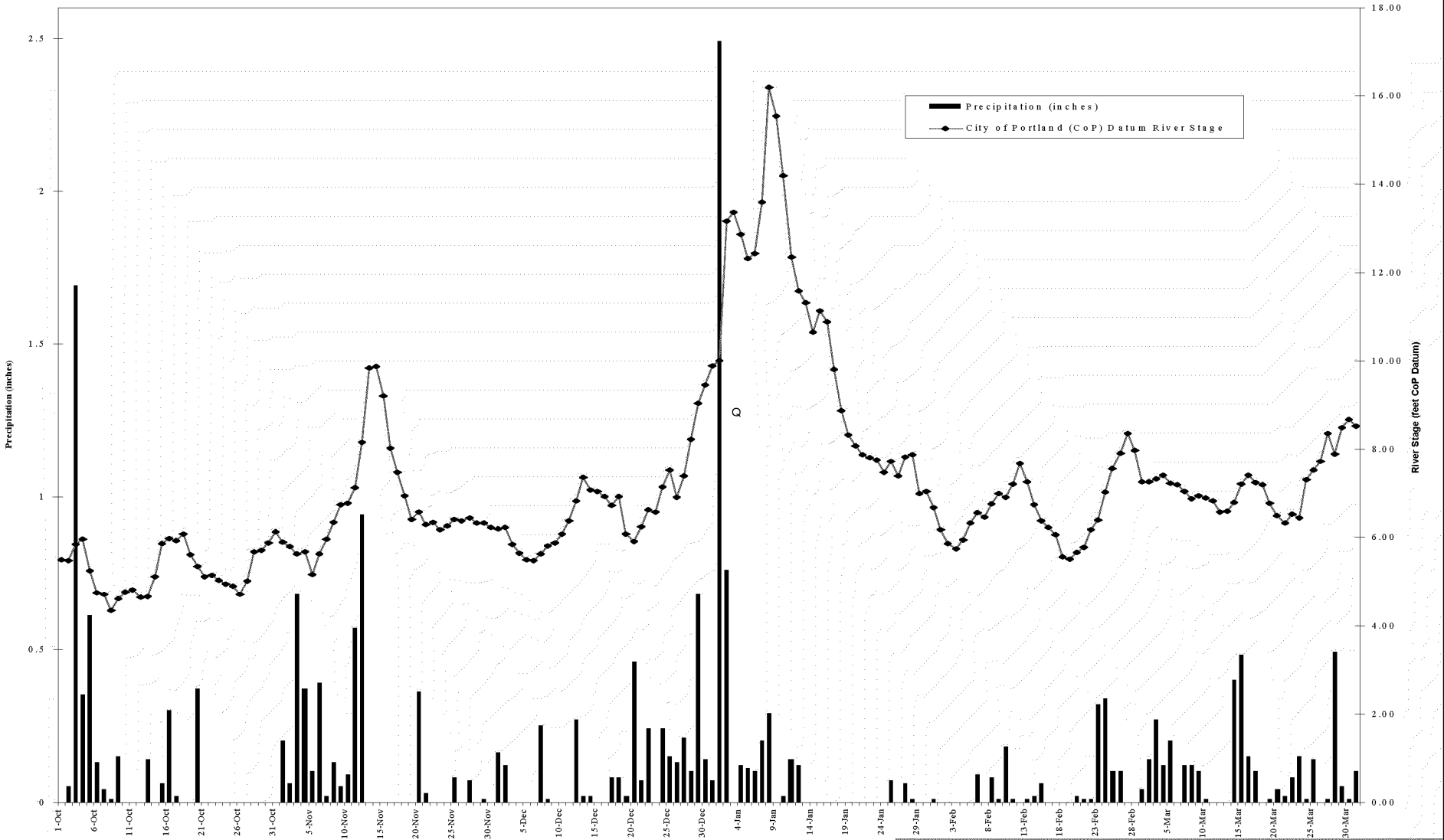


FIGURE 7

PRECIPITATION AND RIVER STAGE
(OCTOBER 2008 TO MARCH 2009)

Willbridge Terminal
Portland, Oregon

Sources:

Precipitation data from Preliminary Climatology Data at National Weather Service Forecast Office, Portland, Oregon.

River stage data from United States Geological Survey (USGS) National Water Information System:
Station 14211720 Willamette River at Portland, Oregon
(Location--Lat 45° 31'07", long 122° 40'00", in NW 1/4 NE 1/4 sec.3, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090012, in pier at east end of drawspan, on upstream side of Morrison Bridge, in Portland, and at mile 12.8.) USGS elevation is adjusted to City of Portland Datum using a correction of +2.925 feet.

PROJECT NO. KMWB-09-01	DRAWN BY CRF 4/28/09
FILE NO. WTG	PREPARED BY CRF 4/28/09
REVISION NO. 0	REVIEWED BY

DELTA

APPENDIX A

GROUNDWATER MONITORING AND SAMPLING PROCEDURES, CERTIFIED ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION (CD ONLY)

Incident ID: 102808

Short Description: Portland Product Terminal - 3rd Party Truck Drips Gasoline at Loading Rack [N/A-E]

Status: Closed

Responsible Dept\Unit: Terminals : Terminals - West Coast Division : Portland Product Terminal

Incident Type: Incident

Potential Risk Rating: I - Low

General

Responsible Supervisor: THOMAS LYONS

High Learning Value Event Status: Not Reviewed for HLVE

Location:

Specific Location: Refined Load Rack

Date Occurred: (mm/dd/yyyy) 6/30/2009 12:30:00 PM

Date Reported: (mm/dd/yyyy) 6/30/2009 3:48:00 PM

Date Entered: 6/30/2009 4:08:01 PM (GMT-07:00)

REPORTEDBY: THOMAS LYONS

Incident Description: At 12:30 PM, tanker truck attached gasoline loading arm to trailer compartment. When driver opened dry brake, he realized the trailer compartment's sightglass was dripping gasoline from the open load arm. He immediately closed the dry brake, put a bucket under the leak, and called Terminal Operations. Operations personnel donned appropiate PPE, drained approximately 11 gallons into buckets, and transferred to terminal containment.

Notified Environmental Coordinator & Safety Coordinator. No external notifications are required.

Trailer will be locked out until repairs are verified.

Weather: Clear

Lighting: Day

Address: 5528 NW Doane Avenue

City: Portland

Country: United States

Zip/Postal Code: 97210

Incident Flags: Hydrocarbon Loss of Containment , Third Party Incident , Truck, Motor Carrier Incidents

Entered By: LYONS, THOMAS

Immediate Actions Taken: Operations personnel donned appropiate PPE, drained approximately 11 gallons into buckets, and transferred to terminal containment.

Notified Environmental Coordinator & Safety Coordinator. No external notifications are required.

Trailer will be locked out until repairs are verified.

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)
General: Vehicle (e.g.: Vehicle Accidents, Cars/Pickups/Trucks, Barges/Boats/Ships, Aircrafts, Railcars, Tankers/Transports, Cranes/Drotts/Fork Trucks)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Loading Rack: Loading Arm	NO	Reinhardt Trailer 620

People

Name	Employee Type	Consequence Number: Injury / Illness	Property	Transportation	Security	Quality	Environmental
UYEDA, VALERIE	Employee						17404 Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Berrnado Bower	Contractor	800-789-1110

Contractor Involvement

Contractor	Involvement Type
REINHARD TRANSPORTATION (WESTERN REGION)	Other

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
17404 Open View	Environmental	...	UYEDA, VALERIE J	Closed

Pending Consequences

ID	Type	Description	Party Involved
Recommended	Transportation	Transportation Consequence	

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

Summary

July 24, 2009

Mr. Michael Romero
Oregon Department of Environmental Quality – NW Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201

RE: Feasibility Study Scoping Document Addendum
Willbridge Terminals
Portland, Oregon
DEQ File No. WMCSR-NWR-94-06

DELTA

Dear Mr. Romero:

On behalf of the Willbridge Terminals Group (WTG), Delta Consultants (Delta) has prepared this Feasibility Scoping Document Addendum for the Willbridge Terminals. The original *Feasibility Study Scoping Document* was submitted on September 20, 2005. The WTG consists of Kinder Morgan Liquid Terminals (KMLT), Chevron Products Company (Chevron), and ConocoPhillips Company (ConocoPhillips).

In a letter dated June 21, 2006, the Oregon Department of Environmental Quality (DEQ) conditionally approved the 2005 Feasibility Study (FS) Scoping Document provided the WTG address several outstanding items of concern. Additionally, in a letter dated June 15, 2006, the DEQ conditionally approved the 2005 Remedial Investigation Report Addendum and the 2005 Revised Source Control Evaluation provided the WTG re-evaluate groundwater to surface water pathways and evaluate storm water and erodible soils to surface water pathways.

This Feasibility Scoping Document Addendum is intended to provide the DEQ with the status of the outstanding investigations and evaluations conducted following the two June 2006 DEQ approval letters to fill data gaps in support of the Feasibility Study and the Joint Source Control Evaluation (JSCS). Although the JSCS investigation is not mandated in the 1994 Consent Order, it will be completed consistent with the December 2005 JSCS guidance and in conjunction with the Feasibility Study to better define areas of potential concern and support proposed remedial alternatives or source control measures. Finally, this document proposes a general approach, schedule, and defines roles and responsibilities to complete terminal specific Feasibility Studies and source control evaluations in accordance with the DEQ and JSCS.

a member of Inogen Environmental Alliance

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Phone +1 503.639.8098 / USA Toll Free 800.477.7411
Fax +1 503.639.7619 www.deltaenv.com

June 21, 2006 Comment Letter – Approval Conditions

The outstanding items of concern identified in the June 21, 2006 DEQ comment letter fall into two general groups, contaminant migration and human health risk. These are as follows:

Contaminant Migration: The FS should incorporate the outstanding issues and concerns identified for the *Remedial Investigation (RI) Report Addendum* (dated June 30, 2005), summarized as follows:

a) The FS must identify and evaluate remedies that control vertical migration of site contaminants to the underlying Columbia River Basalts (CRB) aquifer and protect the beneficial uses of the CRB aquifer, including the beneficial use of the Chevron (now Paramount) asphalt well for industrial water supply.

b) The FS must identify and evaluate remedies to control the lateral migration of separate phase hydrocarbons (SPH) and dissolved-phase contamination in groundwater to the Willamette River.

c) The hot spot determination must include the current hot spot in groundwater due to the potential for contaminant migration to the Willamette River that would result in exceedances of water quality criteria. The FS must identify and evaluate alternatives that address this hot spot.

d) The FS should include the identification and evaluation of alternatives that address the protection of the small wetlands and Saltzman Creek outfall areas from migration of contaminants in groundwater.

Human Health Risk:

a) The conditional approval specified that unacceptable risks were identified for site workers in the Human Health Risk Assessment section of the *RI Report* (dated August 1, 2003) due to the groundwater/vapor intrusion pathway and trench workers from inhalation of volatile organic compounds (VOCs) from groundwater at the Chevron facility should be evaluated and addressed.

b) The potential for future risks to Certain Teed workers from offsite migration of contaminants should be evaluated and addressed.

June 15, 2006 Comment Letter – Approval Conditions

The outstanding items of concern identified in the June 15, 2006 DEQ comment letter fall into two general groups, groundwater pathway and storm water pathway. These are as follows:

Groundwater Pathway Evaluation: The conditional approval stated that groundwater data needed to be re-evaluated against JCSC Screening Level Values (SLV). Based on this screening, additional areas of potential concern were identified. Additional monitoring was also required including the sheet pile cutoff and recovery system performance monitoring program and modification to the site groundwater sampling and analysis plan.

Storm Water Pathway Evaluation: This evaluation included summarizing each facility's storm water conveyance system, and collection catch basin sediment and storm water samples. Analytical data will be compared against SLV and areas of potential concern would be identified.

STATUS - MIGRATION PATHWAY EVALUATION

To date several investigations have been conducted to better characterize potential impacts and migration pathways to satisfy the various RI approval conditions and the JSCS requirements.

Groundwater to Columbia River Basalt Aquifer Pathway

Monitoring well clusters were installed across the WTG properties to monitor the shallow, intermediate, and deep water bearing zones in the alluvium above the Columbia River Basalt interface. An evaluation of the vertical gradients and extent of impacted groundwater based on analytical data collected from these wells will be presented in the *Vertical Migration Pathway Evaluation Report*, to be delivered to the DEQ in third quarter 2009.

To further address the potential of WTG contaminants to migrate to the underlying CRB, the WTG is completing an evaluation of the nearby Paramount Asphalt production well constructed into the CRB. The goal of the evaluation will be to address the potential of WTG contaminants to adversely impact both the Paramount well and the general CRB aquifer. If necessary, each WTG site-specific FS will address remedies to protect the beneficial use of the CRB aquifer.

Groundwater to Surface Water Pathway

In accordance with the DEQ *Conditional Approval of the Remedial Investigation Report Addendum and Feasibility Scoping Document*, observed seeps not addressed by the sheet pile cut-off wall were monitored and sampled in 2006. All observed and sampled seeps were on Kinder Morgan property. As presented in *Seep Sampling Results*, dated May 18, 2007, the WTG concluded that the polycyclic aromatic hydrocarbon (PAH) and metals concentrations detected in the seeps above Source Control screening level values (SLVs) were not due to operations at the Kinder Morgan and Chevron sites.

In addition, a groundwater to surface water source control evaluation will be conducted in accordance with the JCSC. Groundwater conditions within the ConocoPhillips and Chevron facilities will be evaluated separately from groundwater with the Kinder Morgan facility however both evaluations may use data collected from the neighboring facility. Following initial groundwater evaluation scoping discussion with the DEQ, the representatives conducting the evaluations for the three facilities will participate in a meeting to discuss DEQ comments and discuss areas in which potential groundwater plumes may exist across the property lines overlap may occur. During this meeting, the parties will identify the most effective path forward to address these areas in the FS. Similarly, following the completion of the terminal specific groundwater evaluations, representatives for the individual terminals will meet to discuss preliminary results of groundwater evaluation at the Kinder Morgan and Chevron property boundaries. It is currently anticipated that these reports will be submitted to DEQ in first quarter 2010. A weight-of-evidence evaluation based on groundwater data collected from the various

investigations will be included in WTG site specific source control evaluation reports to evaluate and identify potential areas of concern. The report will also include an assessment of known releases, source areas, and the potential for these areas to impact the Willamette River. These potential areas of concern will be addressed in a site-specific FS if necessary.

Erodable Soil to Surface Water Pathway

In the February 27, 2008 *Erodable Soil Assessment Report* the WTG identified pesticides and metals concentrations above SLVs in shoreline soils at all three facilities. A weight-of-evidence evaluation based on these data will be included in WTG site specific source control evaluation reports as well as a site-specific FS if necessary.

Storm Water to Surface Water Pathway

Stormwater pathway data are currently under review. Storm water sampling events have been completed at all three facilities. Results will be presented in site-specific reports in fourth quarter 2009. Each facility is expected to include the results of the site-specific stormwater pathway evaluations. If necessary, risks identified from the storm water pathway can be addressed in a respective site FS.

Hot Spot Evaluation

The approved remedial investigation defined the SPH as a hot spot. Each site's FS will evaluate alternatives to address hot spots in groundwater due to the potential for SPH migration in groundwater to the Willamette River.

Saltzman Creek, Small Wetland Evaluation

Kinder Morgan will complete an assessment on the potential impacts of migration of contaminants to Saltzman Creek in the third quarter 2009. Results of this investigation will be submitted to DEQ in late August 2009 and if necessary remedial alternatives will be addressed in the Kinder Morgan specific FS.

STATUS - UPDATED RISK EVALUATION

The DEQ expressed concerns regarding the potential for off-site migration of contaminants in groundwater from the Kinder Morgan facility onto the Certain Teed property in addition to the shallow groundwater at the Chevron and ConocoPhillips Terminals. These concerns will be addressed in site-specific FS Reports.

The Chevron ethanol release area is currently under investigation. The work plan was submitted for DEQ approval in March 2009. The investigation includes post remediation monitoring and installation of soil vapor probes in areas where benzene concentration were measured above the appropriate risk-based concentration. Implementation of this investigation is anticipated in August 2009. The Chevron FS section will include an evaluation of the human health risks associated with VOC inhalation by workers both on and off-site, as well as an evaluation of the vapor extraction system in mitigating any such risk on the Chevron facility.

In addition, vapor intrusion risk will be evaluated in accordance with the DEQ's Risk-Based Decision Making guidance and if appropriate the anticipated vapor intrusion guidance document. Terminal specific risks with respect to vapor intrusion, if applicable, will be presented in site-specific sections of the FS Report.

WTG INDEPENDENT PATH FORWARD

The DEQ mentioned in the June 2006 comment letters that outstanding items and concerns to the conditional approvals of both the Feasibility Scoping Document, Remedial Investigation, and Revised Groundwater Source Control documents can be addressed in the WTG FS and revised source control documents. Most of the data needed to address the outstanding items and concerns have been collected and, if necessary will be addressed in site-specific FS documents.

To accommodate the separate interests of the three WTG parties, each site will compile its own individual JSCS source control evaluation and FS to evaluate site-specific remedial actions and objectives. Each site's JSCS and FS reports will be prepared as stand alone documents. The formal outline and structure of each FS will be dependent on the site-specific risks and hot spots identified in the approved remedial investigation and subsequent JSCS investigations. Some ongoing evaluations have already been approved to be conducted on a terminal specific basis (e.g. storm water source control evaluation). A summary of these evaluations, responsible parties, and basis for split are presented in subsequent paragraphs.

The 1994 Consent Order Section 7.B.1 General Provisions states that "For working purposes with DEQ, Respondents shall assign responsibility for project management to one person enabling more efficient communication and decision making". It is not the intention of the WTG to eliminate this role. Currently, Ms. Jessica Eckart of Delta Consultants is the primary contact for the WTG. Ms. Eckart will remain the primary contact and will be involved in the planning and review stages of each project regardless of the facility(ies) involved. As each facility conducts their investigations and evaluations, routine communication with Ms. Eckart is important to satisfy the condition of the Consent Order provided above. The Consent Order Section 7.O.2 General Provisions also states "Respondents are jointly and severally responsible for carrying out all activities required by this Consent Order other than those where the State has agreed to seek penalties from only the individual Respondent(s) responsible for the violation". To satisfy this clause, the WTG will continue to have regularly scheduled quarterly meetings to keep each other and the DEQ informed of progress. The WTG is committed to working as a team regardless of who is performing the work.

Below is a summary of expected reports to be generated during the completion of the JSCS evaluation and FS. Separating these documents provides the flexibility to move projects forward while data collection for other site specific investigations are still being collected and/or evaluated. In some cases a Feasibility Study may not be necessary provided that no major source control measures are required.

Groundwater to CRB Pathway:

- Vertical Migration Pathway Report: Delta Consultants on behalf of the WTG
- Feasibility Study (if necessary): ConocoPhillips (consultant to be determined)
- Feasibility Study (if necessary): ARCADIS on behalf of Chevron
- Feasibility Study (if necessary): Delta Consultants on behalf of Kinder Morgan

Groundwater to Surface Water Pathway:

- Groundwater Source Control Evaluation (including sheet pile cut-off wall effectiveness): ARCADIS on behalf of ConocoPhillips and Chevron
- Groundwater Source Control Evaluation (may include Saltzman Creek and Certain Teed evaluations): Delta Consultants on behalf of Kinder Morgan
- Feasibility Study (if necessary): ConocoPhillips (consultant to be determined)
- Feasibility Study (if necessary): ARCADIS on behalf of Chevron
- Feasibility Study (if necessary): Delta Consultants on behalf of Kinder Morgan

Erodable Soil to Surface Water Pathway:

- Erodable Soils Source Control Evaluation: ConocoPhillips (consultant to be determined)
- Erodable Soils Source Control Evaluation: ARCADIS on behalf of Chevron
- Erodable Soils Source Control Evaluation: Delta consultants on behalf of Kinder Morgan
- Feasibility Study (if necessary): ConocoPhillips (consultant to be determined)
- Feasibility Study (if necessary): ARCADIS on behalf of Chevron
- Feasibility Study (if necessary): Delta Consultants on behalf of Kinder Morgan

Storm Water to Surface Water Pathway:

- Storm Water Source Control Evaluation: Stantec on behalf of ConocoPhillips
- Storm Water Source Control Evaluation: ARCADIS on behalf of Chevron
- Storm Water Source Control Evaluation: Delta consultants on behalf of Kinder Morgan
- Feasibility Study (if necessary): Stantec on behalf of ConocoPhillips
- Feasibility Study (if necessary): ARCADIS on behalf of Chevron
- Feasibility Study (if necessary): Delta Consultants on behalf of Kinder Morgan

Hot Spot Evaluation (SPH):

- Feasibility Study: ConocoPhillips (consultant to be determined)
- Feasibility Study: ARCADIS on behalf of Chevron
- Feasibility Study: Delta Consultants on behalf of Kinder Morgan

Ethanol Spill Area:

- Feasibility Study: ARCADIS on behalf of Chevron

A revised schedule will be prepared before the next quarterly meeting and will include these investigations and evaluations as well as other routine and non-routine monitoring, source control measures, or remedial actions that are currently scheduled.

Sincerely,
DELTA CONSULTANTS

Jessica Eckart, R.G.
Project Manager

cc.
Myron Smith, ConocoPhillips
Brett Hunter, Chevron Environmental Management Company
Robert Truedinger, KMEP
Rick Fetterly, Stantec
Grant V. Sprick, P.E.,ARCADIS
Tim Browning, R.G., Delta Consultants

Incident ID: 102808

Short Description: Portland Product Terminal - 3rd Party Truck Drips Gasoline at Loading Rack [N/A-E]

Status: Closed

Responsible Dept\Unit: Terminals : Terminals - West Coast Division : Portland Product Terminal

Incident Type: Incident

Potential Risk Rating: I - Low

General

Responsible Supervisor: THOMAS LYONS

High Learning Value Event Status: Not Reviewed for HLVE

Location:

Specific Location: Refined Load Rack

Date Occurred: (mm/dd/yyyy) 6/30/2009 12:30:00 PM

Date Reported: (mm/dd/yyyy) 6/30/2009 3:48:00 PM

Date Entered: 6/30/2009 4:08:01 PM (GMT-07:00)

REPORTEDBY: THOMAS LYONS

Incident Description: At 12:30 PM, tanker truck attached gasoline loading arm to trailer compartment. When driver opened dry brake, he realized the trailer compartment's sightglass was dripping gasoline from the open load arm. He immediately closed the dry brake, put a bucket under the leak, and called Terminal Operations. Operations personnel donned appropiate PPE, drained approximately 11 gallons into buckets, and transferred to terminal containment.

Notified Environmental Coordinator & Safety Coordinator. No external notifications are required.

Trailer will be locked out until repairs are verified.

Weather: Clear

Lighting: Day

Address: 5528 NW Doane Avenue

City: Portland

Country: United States

Zip/Postal Code: 97210

Incident Flags: Hydrocarbon Loss of Containment , Third Party Incident , Truck, Motor Carrier Incidents

Entered By: LYONS, THOMAS

Immediate Actions Taken: Operations personnel donned appropiate PPE, drained approximately 11 gallons into buckets, and transferred to terminal containment.

Notified Environmental Coordinator & Safety Coordinator. No external notifications are required.

Trailer will be locked out until repairs are verified.

Sub Types

Check All That Apply: General: Environmental (e.g.: Spills, Releases, Odor Complaints, Unplanned Releases, Permit Exceedences, RV Operations, Process Upsets)
General: Vehicle (e.g.: Vehicle Accidents, Cars/Pickups/Trucks, Barges/Boats/Ships, Aircrafts, Railcars, Tankers/Transports, Cranes/Drotts/Fork Trucks)

Responsibilities

Workflow Supervisor *

Name	Response
THOMAS LYONS	

Incident Owner *

Name	Response
THOMAS LYONS	

Creator *

Name	Response
THOMAS LYONS	

Notes

Notes: No Data is Available

Equipment

Equipment

Equipment Involved	Critical	Equipment Number/Description
Loading Rack: Loading Arm	NO	Reinhardt Trailer 620

People

Name	Employee Type	Consequence Number: Injury / Illness	Property	Transportation	Security	Quality	Environmental
UYEDA, VALERIE	Employee						17404 Open View

Witnesses

Name	Employee,Contractor,or Other	Phone
Berrnado Bower	Contractor	800-789-1110

Contractor Involvement

Contractor	Involvement Type
REINHARD TRANSPORTATION (WESTERN REGION)	Other

Consequence

Incident Consequences

ID	Type	Description	Party Involved	Status
17404 Open View	Environmental	...	UYEDA, VALERIE J	Closed

Pending Consequences

ID	Type	Description	Party Involved
Recommended	Transportation	Transportation Consequence	

Investigation

Investigations: No Data is Available

Action Items

Action Items: No Data is Available

Summary

ConocoPhillips

COMBINED
STORMWATER POLLUTION CONTROL PLAN (SWPCP)
AND
ACCIDENTAL SPILL PREVENTION PLAN (ASPP)

Stormwater Discharges Regulated by:
Oregon Department of Environmental Quality
1200-Z General Permit
Site ID No. OR000138-4, File No. 90845

Wastewater Discharges Regulated by:
City of Portland
Industrial Wastewater Permit
Permit Number 400.181

ConocoPhillips Portland Terminal
5528 NW Doane Avenue
Portland, Oregon 97210
Multnomah County
Contact Person: Tom Lyons
503-248-1572

Prepared by:
AMEC Earth & Environmental, Inc.
7376 SW Durham Road
Portland, Oregon 97224
9-61M-120050

August 17, 2009

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1.0 INTRODUCTION

This plan combines the previously separate Stormwater Pollution Control Plan (SWPCP) and Accidental Spill Prevention Plan (ASPP) into one management document (referred herein as the "Plan") for the ConocoPhillips Portland Terminal located at 5528 NW Doane Avenue in Portland, Oregon (Site). The combined plan was prepared by Kurt Harrington, AMEC Earth & Environmental, Inc. (AMEC) Portland, Oregon on August 13, 2009 and addresses the applicable requirements pertaining to a SWPCP under National Pollutant Discharge Elimination System (NPDES) 1200-Z General Permit (Appendix A) and pertaining to an ASPP under City of Portland's (City's) Industrial Waste Discharge (IWD) Permit number 400.181 (Appendix C).

1.1 Plan Format

This Plan follows the general format of a SWPCP as required in the NPDES 1200-Z permit. The requirements for the SWPCP are more detailed than and overlap with the requirements for the ASPP; therefore, this Plan is organized according to SWPCP requirements. This Plan addresses both site stormwater that flows to the City's storm system and process water (which originates as mostly site stormwater) that flows to the City's sanitary system. The following list includes the ASPP contents according to IWD Permit Schedule E.1.a - e with cross references to sections in this Plan shown in parentheses.

- A description of hazardous substances handled and their potential points of entry into the City sewer system or storm runoff (Section 3.0).
- A description of the measure to be taken to prevent entry at the described points before a spill occurs (Section 4.0).
- Measures to be taken to contain a spill if one occurs (Section 4.0).
- Description of employee training in prevention and control of spills (Section 4.4).
- A posted notice informing employees of the requirement to notify the Bureau of Environmental Services (City) in case of spills or uncontrolled discharges (Section 8.0).

The monitoring and reporting requirements differ for each permit. The NPDES 1200-Z monitoring and reporting requirements are addressed in Section 7.0 and the IWD permit monitoring and reporting requirements are addressed in Section 8.0.

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1.2 Background on Permits and Plans

A SWPCP was originally prepared for the Site to comply with requirements stipulated in a former NPDES General Permit Number 1300-J. General Permit Number 1300-J was renewed for the Portland Terminal on January 11, 2000. The SWPCP was revised on December 15, 2006 and submitted in response to the Oregon Department of Environmental Quality's (DEQ) November 9, 2006 letter requesting an updated version for adoption of the NPDES General Permit Number 1200-Z as a replacement to the 1300-J permit. This version of the SWPCP has been updated according to the requirements of the most recent NPDES 1200-Z permit with effective date July 1, 2007 and expiration date of June 30, 2012.

An ASPP was prepared for ConocoPhillips Portland Terminal in compliance with the City of Portland's Bureau of Environmental Services (BES) requirements described in the terminal's IWD Permit. The Site's most recent IWD Permit Number 400.181 has an effective date of April 24, 2008 and an expiration date of May 1, 2013.

1.3 Management Certification

I certify under penalty of law that this Plan and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature _____ Date _____

Name: Tom Lyons Title: Terminal Supervisor

1.4 Supervisor's Inspection and Plan Review Log

ConocoPhillips' policy is to inspect the Portland Terminal's stormwater and wastewater (referred to herein as process water) system and annually review the contents of the combined Plan, as required by NPDES Permit Number 1200-Z and City of Portland Industrial Waste Discharge Permit number 400.181.

The annual inspection and Plan review are conducted by the Terminal Supervisor and include consideration of any changes in terminal personnel, equipment, tank contents, and control or communication systems. Particular attention is focused on any modifications to facility design, construction, operation, or maintenance with potential to affect the likelihood of a discharge of petroleum products to the storm or process water systems. This includes any modifications to area drainage, tank farm drainage, wastewater handling, or equipment installations and additions (i.e., new tanks, loading areas, or stormwater/wastewater collection sumps). In the event of modifications of this nature, the Plan is reviewed as soon as practicable by the Terminal Supervisor to reflect the changes in the facility's operation. Even if significant changes do not occur during the year, the plan is still reviewed annually and the review documented. Historical reviews of the SWPCP, ASPP, and the combined Plan are summarized in Tables 1.1, 1.2 and 1.3, respectively.

Table 1.1: Historical SWPCP Review Log

Reviewed By	Date	Changes Made
John Sherman	7/1/2002	Section 3.0 updated
John Sherman	7/3/2003	Section 3.0 updated, permit updated appendix A; section 7 and 8 updated
John Sherman	10/6/2004	Updated 5.4.10
Gary Lefebvre	10/8/2004	Updated 3.3, section 4 products stored by tank #, section 4.2.6 updated to include new warehouse
John Sherman	10/26/2004	Owner updated from Tosco to ConocoPhillips
John Sherman	4/11/2005	No updates needed after review following an oil and grease test result of 15.8 in separator 004
Gary Lefebvre	9/15/2005	Updated table 4-1 pages 1 and 2, removed reference to pump G266 and G267, updated 4-14 and 5-1
Gary Lefebvre	9/15/2005	Updated table 4-1 pages 1 and 2, removed reference to pump G266 and G267, updated 4-14 and 5-1
Carrie Wildin	1/10/2006	Facility contact name changes only
Gary Lefebvre	5/16/2006	Updated table 4-1 pages 1 and 2
Carrie Wildin	12/7/2006	Resubmitted for transfer to NPDES General permit No. 1200-Z from 1300-J

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Table 1.2: Historical ASPP Review Log

Reviewed By	Date	Changes Made
John Sherman	7/1/2002	Section 3.0 updated
John Sherman	7/3/2003	Updated phone numbers and tank contents, and process water discharge permit
John Sherman	10/6/2004	Updated 4.4, 5.1, 5.4.10
Gary Lefebvre	10/8/2004	Plan reviewed updated 3.3, section 4, 4.26, and 6.3.
John Sherman	10/20/2004	Owner updated from Tosco to ConocoPhillips
Gary Lefebvre	10/30/2004	Updated tank contents spreadsheet
Gary Lefebvre	9/15/2005	Updated addresses, upgrades in TF3 drainage, 4-13 and 5-1, tank changes in table 4-1, pages 1 and 2
John Sherman	9/17/2005	None
Carrie Wildin	1/10/2006	Facility contact name changes only
Gary Lefebvre	5/17/2006	Updated table 4-1 pages 1 and 2
Carrie Wildin	1/15/2007	Resubmitted as combined document with the SWPCP

Table 1.3: Combined SWPCP and ASPP (Plan) Review Log

Reviewed By	Date	Changes Made
Tom Lyons	3/28/08	Updated responsible official and phone number Updated stormwater contamination log
Tom Lyons	6/7/09	Updated Plan with AMEC revisions as detailed in Action Plan sent to City/DEQ; changes include plan organization changes
Tom Lyons	8/13/09	Updated Plan with AMEC to revision to the Plan organization and facility descriptions

A copy of this Plan should be distributed to the following locations:

- Terminal Supervisor/Control Room Area
- Oregon Department of Environmental Quality
- City of Portland, Bureau of Environmental Services

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2.0 FACILITY ORGANIZATION AND CONTACTS

2.1 Facility Information

Name
ConocoPhillips Portland Terminal (Portland Terminal)

Type
Petroleum products bulk storage and distribution terminal; Lubricants blending and packaging facility

Location
5528 NW Doane Avenue
Multnomah County
Portland, Oregon 97210

Name of Owner/Operator
ConocoPhillips Company
600 North Dairy Ashford Road
Houston, Texas 77079

2.2 Designated Person Accountable for Corporate Policy or Decision Making

Name and Title
Tom Lyons, Terminal Supervisor
Gary LeFebvre, Lubricants Plant Manager

Address
ConocoPhillips Portland Terminal
5528 NW Doane Avenue
Portland, Oregon 97210

Telephone
(503) 248-1572 (Tom Lyons)
(503) 248-1533 (Gary LeFebvre)

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2.3 Telephone Numbers of ConocoPhillips Personnel

The following personnel at the Portland Terminal are designated and authorized to take actions necessary to operate and maintain the stormwater and process water systems at the Portland Terminal. These individuals can commit resources necessary to adequately contain any spills and minimize the potential for contamination of onsite stormwater runoff and nearby surface water receptors:

Bulk Handling Operations Primary Qualified Individual

Tom Lyons	Terminal Supervisor
Portland Office Phone	(503) 248-1572
Cell	(503) 849-9604

Bulk Handling Operations Alternate Qualified Individual

Jeff Fossum	Maintenance Technician
Portland Office Phone	(503) 248-1558
Cell	(503) 867-0728

Lube Oil Operations Primary Qualified Individual

Gary LeFebvre	Plant Manager
Portland Office Phone	(503) 248-1533
Cell	(503) 849-9812

Lube Oil Operations Alternate Qualified Individual

Dave Hauck	Lead of Operations
Portland Office Phone	(503) 248-1542
Cell	(503) 849-9813

2.4 Other Plans and Procedures

ConocoPhillips has prepared other plans and procedures which require coordination with this Plan. These plans include:

- Local Operating Procedures (LOPs)
- Emergency Action Guide
- Spill Prevention, Control, and Countermeasure (SPCC) Plan (40 CFR 112)
- Emergency Response Plan (40 CFR 112, 33 CFR 154, and OAR 340-47)
- United States Coast Guard Marine Operations Manual (33 CFR 154)

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3.0 SITE DESCRIPTION

3.1 General Information

The Portland Terminal is a bulk storage and distribution facility for finished petroleum products and lubricant oils. The lubricants plant also performs blending and packaging operations at the facility. Major components of the terminal include product storage tanks, product transfer systems, a marine dock, a lubricants blending and packaging facility, and related maintenance facilities.

The terminal is located in the northwest portion of the City of Portland on the west bank of the Willamette River at river mile marker 7.8 and southeast of the St. John's Bridge. A general location map is contained in Figure 1, and a general location river map is contained in Figure 2. The full site map is shown in Figure 3. Sectional enlargements of the site map are included in Figures 4 through 7.

The main terminal area has an estimated surface area of 870,000 square feet (ft^2). Approximately 41 percent (%) of this area, or 357,000 ft^2, is paved or otherwise impervious. In addition, the terminal owns approximately 117,000 ft^2 of property along the Willamette River for the marine dock. Approximately 20% of this area is paved or otherwise impervious. The unpaved areas are generally covered with gravel. A summary of impervious stormwater areas throughout the site is provided in Table 3.1.

An estimated 75% of the Site's stormwater runoff discharges to the City of Portland municipal storm system which flows to the Willamette River. Stormwater drains to the municipal storm system from one of three site stormwater oil/water separators: Separators #001, #002, and #004. Each of these separators is a stormwater monitoring outfall for purposes of the NPDES permit. Separator #001 drains to the municipal storm system which eventually drains to the Willamette River at the Kittridge Avenue outfall. Separators #002 and #004 drain to the municipal storm system which eventually drains to the Willamette River at the Doane Avenue outfall. Drainage conveyance lines to these two Willamette River outfalls are illustrated on Figure 3.

The remaining estimated 25% of site stormwater is managed by the process water system where it is treated by an oil/water separator (Separator #003) and diffused air flotation (DAF) hydrocleaner before being discharged to the City of Portland sanitary sewer system. Included in the 25% of stormwater treated by the process water system is runoff collected within the bermed areas around the dock risers, railcar transfer station containment system, lube cells, tank truck loading and offloading racks/stations, equipment washing area, as well as minor quantities which are collected on pump, valve, and flange containment pads within the tank farms where contact with petroleum products is more likely.

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Table 3.1: Impervious Stormwater Areas

Area Description	Area ft^2	Comments
	Tank Farms	
Tank Farm 1		
Storage Tank Roofs	18,201	
Paved Areas	1,004	
Tank Farm 1 Total	19,205	
Tank Farm 2		
Storage Tank Roofs	44,557	
Paved Areas	1,314	
Tank Farm 2 Total	45,871	
Tank Farm 3		
Storage Tank Roofs	43,678	
Paved Areas	1,520	
Tank Farm 3 Total	45,198	
	Areas Outside Tank Farms	
Area 1 - Lube Warehouse, Truck Rack, Driveway		
Roofs	58,695	Includes truck rack canopy
Pavement	74,992	
Total Area 1	133,687	
Area 2 - Maintenance Building Area		
Roofs	13,685	
Pavement	27,448	
Total Area 2	41,133	
Area 3 - Lube Warehouse #2, Boiler Room		
Roofs	12,000	
Pavement	60,302	
Total Area 3	72,302	
Total Areas	**357,396**	

Source: Focused Hydrologic Analysis for Estimating Stormwater Runoff Volumes, Amendment 1, Stormwater Separators 001, 002 and 004, Portland Terminal, Portland, Oregon, AMEC Earth & Environmental Letter Report dated March 19, 2009

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3.2 Site Facilities

The primary Portland Terminal facilities include:

- Six tank farms storing refined products, black oil, re-refined fuel oil (RFO), lube oils, and additives,
- Nine transfer facilities including truck loading and unloading racks/stations, railcar loading/unloading station, and marine vessel loading/unloading dock,
- Lube oil blending and packaging area,
- Office and warehouse buildings,
- Hazardous waste storage area,
- Maintenance garage,
- Stormwater collection and treatment system, and
- Process water collection and treatment system.

The majority of the refined products stored at the Portland Terminal are received by pipeline and marine vessel. Other products, typically in lesser volumes, are received by truck or railcar. The Olympic Pipe Line Company owns and operates two 12-inch pipelines which supply the majority of gasoline and #2 diesel to the terminal, as well as intermittent transfers of #1 diesel. Similarly, two 10-inch inter-company pipelines, running between the Kinder Morgan, Chevron, and ConocoPhillips terminals are also used to transfer gasoline and #2 diesel to the terminal. Marine vessels are used to transfer gasoline, #2 diesel, #1 diesel, black oils (i.e., cutter, decant, marine diesel oil (MDO), re-refined fuel oil (RFO) and PS300 boiler fuels), as well as lube oil base stocks, to the terminal. Gasoline and diesel additives, lube oil additives, ethanol and biodiesel are delivered to the terminal via tanker truck.

Transfers of gasoline, #2 diesel, #1 diesel, black oils, and blended lube oils from the terminal are conducted primarily by tank truck at various loading racks. Marine vessels are also used to move #2 diesel, black oils, and blended lube oils from the terminal. Gasoline and #2 diesel are also transferred from the terminal through an 8-inch pipeline that is owned and operated by Kinder-Morgan terminal or through the two 10-inch inter-company pipelines mentioned above. Black oils are primarily loaded into barges but also into tank trucks. Blended lube oils are transferred from the terminal by railcar and tank truck.

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3.2.1 Storage Tanks

The terminal's petroleum product storage consists of 121 above ground storage tanks, 90 of which store lubricants and 29 of which store light oil (i.e., gasoline, distillates, and black oils). The storage tanks are located in six tank farms; three of which consist of primarily of light oil products product and additive tanks and three which are lube oil tank farms. Tanks are of welded and riveted steel construction and contain different grades of gasoline, #2 diesel, #1 diesel, black oil, lube oil and lube blend/base stocks, RFO, additives, ethanol, slops and transmix. The total capacity of the tanks is approximately 731,500 barrels (30,723,000 gallons) with the capacity of the largest tank being 80,269 barrels (3,371,298 gallons). A list of these tanks and their contents is presented in the terminal's SPCC Plan.

The Terminal also has two underground storage tanks (USTs) associated with the lubricants plant. Several other USTs were removed from the terminal during 1997. A summary of the remaining USTs are provided in the SPCC Plan.

General descriptions of the six tank farms, their tanks, and drainage/spill containment systems are provided in the following sections.

Tank Farm 1

Tank Farm 1 is located adjacent to Doane Avenue between the Refined Products Loading Rack and the Main Office/Warehouse Building. The tank farm contains 14 storage tanks of various sizes; the contents range from fuel oils, diesel, cutter stock, lube oils, slop oils, gasoline additives, and black (decant) oil. Both the stormwater oil/water Separator #002 and the process water oil/water Separator #003 and hydrocleaner are located in Tank Farm 1. The tank farm also contains the facility's vapor recovery system for processing vapors from the Refined Products Loading Rack. Tank Farm 1 is shown in Figure 4.

Tank Farm 2

Tank Farm 2 is located at the corner of Doane Avenue and Front Street and contains 16 tanks of various sizes. The contents of these tanks are primarily gasoline, but #1 diesel, transmix, ethanol, lube oil, slops, and additives are also stored in Tank Farm 2. The stormwater oil/water Separator #004 is located within the tank farm. Tank Farm 2 is shown in Figure 5.

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Tank Farm 3

Tank Farm 3 is located at the southeast portion of the terminal and contains 25 tanks of various sizes; the contents consist primarily of lube oils in addition to diesel, marine fuel oil, RFO, black oil, flush oil, bio-diesel, and a few out of service tanks. Tanks containing heavier oils are insulated and heated to prevent the oil from solidifying or becoming too viscous to pump. The stormwater oil/water Separator #001 is situated just outside the southwest corner of the tank farm. Tank Farm 3 is shown in Figure 6.

Lower and Upper Lube Cells (Tank Farms 4 and 5)

The Lower and Upper Lube Cells (Tank Farms 4 and 5) are adjoining and located next to the southwest corner of the Main Office/Warehouse Building. The lube cells contain a total of 40 smaller lube oil base stock, additive and finished product storage tanks and their associated pumps and interconnecting above ground piping. Tank Farms 4 and 5 are shown in Figure 4.

F-Tank Farm (Tank Farm 6)

The F-Tank Farm (Tank Farm 6) is located between Tank Farm 3 and the Upper and Lower Lube cells. It consists of eight relatively small tanks containing lube oil base stocks and additives and their associated pumps and above ground piping. Tank Farm 6 is shown in Figure 6.

3.2.2 Transfer Facilities

The Portland Terminal contains the following transfer facilities:

- Refined Products Loading Rack
- Lube Oil Loading Rack
- Black Oil Loading Rack
- Railcar Loading/Unloading Rack
- Tank Truck Unloading Station
- Gasoline Additive Unloading Station
- Marine Vessel Loading/Unloading and Tug Fueling Stations
- Offloading Stations
    - Ethanol Offloading Station

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- Biodiesel Offloading Station
- Primary Fuel Oil Offloading Station
- Transmix Pump Off Station
- Refined Products Additive Offloading Station
- Lube Oil Additive Offloading Station
- Diesel Pump Off Station

Descriptions of the transfer facilities are provided in the following sections.

Refined Products Loading Rack

The Refined Products Loading Rack has three lanes for filling tank trucks. It is located on the west side of the terminal adjacent to Tank Farm 1. Each lane is supplied with gasoline, #2 diesel, or #1 diesel primarily from Tank Farm 2; however, selected tanks in Tank Farms 1 and 3 also supply #2 diesel. The storage tanks are connected to the rack by above and below ground piping within the diked tank farms and by below ground piping between the tank farms and the loading rack. Transfers to the tank trucks are conducted entirely within the loading rack containment area. The loading rack utilizes bottom loading equipment only and is equipped with a Phase I vapor recovery system. The location of the Refined Products Loading Rack relative to Tank Farm 1 is shown in Figure 4.

Lube Oil Loading Rack

The Lube Oil Loading Rack is located on the southeast side of Tank Farm 1 and consists of only one lane or station. The rack is supplied with lube oil from the Tank Farms 1, 3, and/or the lube cells through above ground piping. This loading rack is fitted with top loading equipment. Oil transfers are monitored by weight instead of volume via a certified truck scale beneath the rack. The location of the Lube Oil Loading Rack relative to Tank Farm 1 is shown in Figure 4.

Black Oil Loading Rack

The Black Oil Loading Rack is located adjacent to the Lube Oil Loading Rack and has two loading lanes, one on either side. The rack is supplied with black oil and RFO from Tank Farm 3 through piping in a below grade pipe trench. The rack is fitted with top loading equipment; oil transfers are monitored by weight rather than by volume by weighing the truck before and after the transfer. The location of the Black Oil Loading Rack relative to the Lube Oil Loading Rack and Tank Farm 1 is shown in Figure 4.

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Railcar Loading/Unloading Rack

Railcar unloading of lube oil additives, black oil, and lube oil base stocks and the loading of finished lube oils are conducted at the Railcar Loading/Unloading Rack adjacent to the F-Tank Farm and southeast of the Upper and Lower Lube Cells. The rack can accommodate up to four railcars with two stations on either side of the rack. The railcars are unloaded using flexible hoses attached to the bottom of the cars and top-loaded through pivoting arms and flexible hoses. The location of the Railcar Loading/Unloading Rack relative to the F-Tank Farm and Tank Farm 3 is shown in Figure 6.

Marine Vessel Loading/Unloading and Tug Fueling Stations

The Portland Terminal marine dock is located on the Willamette River just northeast of Tank Farm 2 across Front Street is equipped with Vessel Loading/Unloading and Tug Fueling Stations. The Marine Vessel Loading/Unloading Station is located near the center of the dock and is used to load and unload gasoline, diesel, heating oil, black oil, and lube oil. Vessels calling at the dock are primarily barges, although transfers from tankers and ships are occasionally conducted. The Tug Fueling Station is located near the end of the dock and is used to fuel tugs with diesel and to supply tugs with lube oils. The locations of the Marine Vessel Loading/Unloading and Tug Fueling Stations are shown in Figure 7.

All transfers at the Marine Vessel Loading/Unloading Station are conducted using flexible cargo hoses between the vessels and the piping risers. The risers are connected to the storage tanks within the tank farms through a combination of above and below ground piping. Flexible hoses on reels with dispenser nozzles are used to transfer diesel and lube oil at the Tug Fueling Station. Transfers to the terminal are conducted using pumps on board the tanker or barge whereas transfers to barges are conducted using pumps at the terminal.

Offloading Stations

A variety of products, off-specification products, product returns and additives are offloaded at seven different stations at the terminal. These stations are referred to by terminal personnel as the 1) Ethanol Offloading Station, 2) Biodiesel Offloading Station, 3) Primary Fuel Oil Offloading Station, 4) Transmix Pump Off Station, 5) Refined Products Additives Offloading Station, 6) Lube Oil Additives Offloading Station, and 7) Diesel Pump Off Station. Some stations, however, have capability to offload products in addition to that specified in the station's name. A brief description of each offloading station is provided below.

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Ethanol Offloading Station - The Ethanol Offloading Station is located in a paved and contained area west of Tank Farm 3 near the Black Oil Loading Rack. Ethanol is transported to the terminal via tanker truck and offloaded through a system of above ground piping into Tanks 3410 and 3412 (Tank Farm 2). Ethanol is blended with gasoline at the Refined Products Loading Rack. Fuel oil/RFO is also offloaded at the Ethanol Offloading Station, as are various lubricant base stocks on occasion. The location of the Ethanol Offloading Station relative to the Black Oil Loading Station is shown in Figure 4.

Biodiesel Offloading Station - B100 biodiesel is transported to the terminal via tanker truck and offloaded into Tank 4255 (Tank Farm 3) through aboveground piping at the Biodiesel Offloading Station. Biodiesel is blended with petroleum diesel at the Refined Products Loading Rack using a system of above ground piping and valves. The Biodiesel Offloading Station is located in the paved contained area between the Ethanol Offloading Station and the Black Oil Loading Rack as shown in Figure 4.

Primary Fuel Oil Offloading Station - Fuel oil/RFO is most often unloaded at the Primary Fuel Oil Offloading Station. The Primary Fuel Oil Offloading Station is located at the Black Oil Loading Rack. At this station, fuel oils/RFO are unloaded from tank trucks through flexible hoses via gravity flow to manifolds adjacent to the station and then pumped to the appropriate tank. The location of the Primary Fuel Oil Offloading Station is shown in Figure 4.

Transmix Pump Off Station - Transmix, or mixtures of gasoline and distillates, are pumped to Tank 4259 (Tank Farm 2) at the Transmix Pump Off Station. Offloading of transmix is typically from tanker truck; although lesser volumes of transmix generated during line drain downs or meter proving are also pumped off at the Transmix Pump Off Station. The Transmix Pump Off Station also serves as a secondary station for unloading ethanol from tanker trucks into storage. This station is paved and contained and located west of Tank Farm 2 and north of the Garage and truck scale as shown in Figure 5.

Refined Products Additive Offloading Station - Additives for gasoline and #2 diesel are offloaded from tanker trucks and pumped into Tanks 3623 and 4441 (Tank Farm 1) from the Refined Products Additive Offloading Station. This station is located in the paved and contained area near where tanker trucks exit the Refined Products Loading Rack, as shown in Figure 4.

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Lube Oil Additive Offloading Stations -The Lube Oil Additive Unloading Station consists of a paved and contained area located along the east side of the F-Tank Farm. Additives are unloaded via gravity flow from tank trucks through flexible hoses connected to pump manifolds at the base of each tank. The additives are then pumped into the tanks within the F-Tank Farm. Lube oil additives are also occasionally offloaded near the hot box located near the connection of the Upper and Lower Lube Cells. The location of the Lube Oil Additive Unloading Stations relative to the F-Tank Farm and Tank Farm 3 is shown in Figure 6

Diesel Pump Off Station - A station to pump off #2 diesel is located within the paved and contained area north of and near where trucks exit the Lube Oil Loading Rack. Diesel is unloaded from tank trucks through flexible hoses via gravity flow to manifolds adjacent to the station and then pumped to the appropriate tank. The location of the Diesel Pump Off Station relative to the Lube Oil Loading Rack is shown in Figure 4.

3.2.3 Hazardous Waste Storage Area

The Hazardous Waste Storage Area is located north of the boiler room and outside the southwest corner of Tank Farm 3 as shown in Figure 6.. The storage facility is primarily used to store drums or totes of hazardous, as well as non-hazardous, wastes prior to shipment to an approved disposal facility. Occasionally, the Hazardous Waste Storage Areas is also used to store totes of additives, lube oil samples or other products since the area is contained and equipped with a drain into the process water system. The location of the Hazardous Waste Storage Area is shown in Figure 6.

3.2.4 Lube Blending/Packaging Area and Warehouse

The Lube Oil Blending/Packaging Area and Warehouse is situated on the first floor of the Main Office/Warehouse Building as shown in Figure 4. The east end of the warehouse contains a blending facility with a multitude of piping and pumps used to blend various lube oil base stocks and additives to produce finished lube products. The blending area also contains 10 small tanks used to store lube oil additives and some base stocks. The finished products are stored in above ground tanks in the lube cells or F-Tank Farm. These finished products are either shipped in bulk or pumped back into the warehouse to the packaging area where they are placed in drums, totes, or pails. Packaged lube products are temporarily stored in other parts of the warehouse prior to being shipped off-site. The Lube Blending/Packaging Area and Warehouse is shown in Figure 4.

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3.2.5 Maintenance Garage

The Maintenance Garage is situated along Doane Avenue adjacent to Tank Farm 2 and is used to conduct maintenance work on the terminal's miscellaneous equipment. Insignificant quantities of virgin and used lubricating oils, antifreeze, paint, etc., are stored at the garage in association with the normal maintenance and repair operations. The used oil is typically stored in a small (approximately 150-gallon) steel tank, whereas antifreeze is typically stored in drums. Both are periodically transported to approved recycling facilities. The garage area is equipped with several catch basins that are connected to the terminal's process water system; there are no stormwater catch basins in the vicinity. The Maintenance Garage is shown in Figure 5.

Due to the small quantities of materials stored, the relatively remote location, and the local drainage being routed to the process water system, there is little or no potential for these materials to enter the stormwater system and be discharged to the Willamette River. Therefore, these materials will not be considered further in this plan and no monitoring for the associated contaminants in the terminal's stormwater discharge will be conducted.

3.2.6 Office and Warehouse Buildings

Office and warehouse buildings at the Portland Terminal consist of the:

- Main Office/Warehouse,
- Boiler House,
- Asphalt Shed (dock warehouse),
- Dock Office,
- Office Trailers, and
- Warehouse Annex.

Main Office/Warehouse

The Main Office/Warehouse is located at the southeast corner of the terminal. The office is situated above the Lube Warehouse previously described. No petroleum products are stored in the office area. The roof drains from this building discharge collected stormwater to an underground pipe that runs down the adjacent alley; in turn, the water is discharged directly to the municipal storm drain along Doane Avenue.

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Boiler House

The Boiler House contains the boilers that provide steam to the terminal and houses the product quality room for the light oil terminal. The boiler house is situated on a sloped concrete pad which drains to a process system catch basin. Water treatment chemicals used to minimize boiler scale and very small quantities of cleaners and solvents are stored in the boiler house. The drums of water treatment chemicals are situated inside secondary containment drums, when in use, to minimize the potential for spills and migration to the process water system. Due to the minimal potential for these chemicals to reach the stormwater system, they will not be considered further in this plan. The location of the Boiler House is shown in Figure 4.

Asphalt Shed

The Asphalt Shed is located along Front Street and is adjacent to the dock as shown in Figure 3; it is used to store supplies, equipment, and excess furniture. A portion of the shed is also used to conduct welding or minor equipment repair operations. The shed is equipped with a concrete slab floor but no floor drains. Roof drains discharge to the ground surrounding the shed. No petroleum products or other potential contaminants in quantities that would be classified as significant are stored there. Because the Asphalt Shed is not a potential source of stormwater contamination, it will not be considered further in this plan.

Dock Office/Office Trailer

The Dock Office and Office Trailer are small buildings and are not used to store petroleum products or hazardous materials. The Dock Office is situated on the dock between the Vessel Loading/Unloading and the Tug Fueling Stations. The Office Trailer is located in the main terminal area adjacent to the Lube Warehouse. Roof drains from the Office Trailer discharge to the ground surrounding the trailer, whereas stormwater from the Dock Office roof drains directly to the Willamette River. Because the Dock Office and Office Trailers are not potential sources of stormwater contamination, they will not be considered further in this plan.

Warehouse Annex

The Warehouse Annex is located at the east end of the terminal. Finished lube oil products are stored in this area as are miscellaneous package raw materials such as empty buckets and bottle caps. Materials are temporarily stored in this warehouse prior to being shipped off-site or in the case of the raw materials used in the production process. Spills of individual containers within the Warehouse Annex would be contained in the building. The location of the Warehouse Annex is shown in Figure 6.

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3.2.7 Stormwater System

The stormwater collection and treatment system, at the terminal, consists of a network of catch basins, lift stations, underground piping, valves, and separators designed to collect and treat stormwater. Under the terminal's NPDES stormwater discharge permit, treated stormwater is discharged to the municipal storm drain system and from there, to the Willamette River. Most of the system operates under gravity flow although there are lift stations, where required, for transferring stormwater to the oil/water separators.

The stormwater catch basins are located throughout the terminal, particularly in the tank farms, and are intended to collect stormwater from those areas where the potential for contact with oil or other contaminants is minimal. The majority of these catch basins are connected to the stormwater collection system that routes the water to one of three oil/water separators for treatment. In areas where the potential for oil contact is very small or non-existent, such as paved alley ways and parking areas, the stormwater is routed directly to the municipal storm drain system or allowed to surface flow off-site. This system, including the various separators and their capacities, is described in greater detail in Section 4.0.

3.2.8 Process Water System

Like the stormwater system, the process water collection and treatment system consists of a network of catch basins, drains, lift stations, an oil/water separator and hydrocleaner treatment system, underground piping, and valves designed to collect process water and/or stormwater from areas or sources where potential contact with oil and other contaminants is more likely. These areas or sources include the:

- Storage tank water draws,
- Pump, valve, and flange containment pads within the tank farms,
- Upper and Lower Lube Cells and F-Tank Farm,
- Tank truck transfer areas, except the Refined Products and Lube Oil Additive Offloading Stations,
- Railcar Loading/Unloading Rack,
- Dock transfer station containment systems,
- Vapor Recovery Unit,
- Boiler House,
- Laboratory,

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- Warehouse, and
- Maintenance Garage.

The process system primarily operates by gravity flow, although lift stations are used where necessary to transfer collected process water to the oil/water separator (Separator #003) and hydrocleaner in Tank Farm 1. The process water undergoes initial oil/water separation in Separator #003 where oil is recovered and pumped to the nearby slops tank (Tank 36) for storage and recycling. The water is then pumped from the separator to the hydrocleaner (a DAF-type treatment unit) for further treatment prior to discharge through an inspection box to the municipal sewer system under the terminal's IWD permit.

3.3 Drainage Pattern

The Portland Terminal drainage pattern and storm and process water systems are shown on Figure 3. The site map also shows the facility layout, storage tank locations, transfer facility locations, secondary containment systems, buildings, stormwater outfalls, paved areas, and site access. In addition, the plan identifies areas that drain to the stormwater system and those that drain to the process water system. More detailed drainage discussions are provided in Section 4. These containment, drainage collection, and stormwater/process systems are designed to prevent non-storm or untreated water from draining into the Willamette River.

The majority of the stormwater runoff at the terminal drains to the stormwater collection and treatment system; however, the uncovered transfer facilities, lube oil tank farms, and other higher-risk areas with potential for small leaks and drips (e.g., pump pads) drain to the process water collection and treatment system. Due to the facility's relative level surface, the terminal is designed to direct surface runoff to the nearest catch basin. However, the overall slope and drainage is to the northeast towards the river. Lift (pump) stations are used to transfer storm and process waters from areas where gravity drainage is insufficient. The majority of the stormwater at the facility, especially within the tank farms, infiltrates through the gravel fill surface. The volume of stormwater runoff managed by the facility's stormwater separators is estimated using Rational Method runoff coefficients in accordance with the City of Portland's BES stormwater management manual.

3.4 Material Inventory

The Portland Terminal stores various grades of gasoline, distillate, fuel oils, black oils, lube oils, and various lube oil and refined product additives (including ethanol and biodiesel) for distribution and sale. A comprehensive list of tank capacities and

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products is located in the SPCC Plan. Insignificant quantities of hazardous wastes are also stored at the terminal and consist primarily of oily rags and sorbents, used oil, used antifreeze, spent non-halogenated solvents (i.e., hexane and methanol), and miscellaneous other wastes generated through normal terminal maintenance operations. Drums and containers of wastes are stored in the waste storage area to the west of Tank Farm 3. This area is located on a concrete slab that drains to a central catch basin and then to the process water system. This area is covered, fenced, and locked.

3.5 Potential Pollutants

The primary potential pollutants potentially present in stormwater discharges at the facility are petroleum products. The monitoring parameter "total oil and grease" may be considered the primary potential parameter in stormwater discharges. More specifically, the constituents of concern would be the lighter hydrocarbon components of gasoline, diesel, and lube oils that are generally the most soluble. These would be benzene, toluene, ethlybenzene and total xylenes (BTEX compounds), as well as, total petroleum hydrocarbons (TPH). Ethanol is also very soluble in water as are selected components of other additives. Petroleum products could contact stormwater from spills during storage or transfer operations or from the occasional drip of crankcase or lube oils from the tank trucks or vehicles passing through the terminal. Controls used to keep petroleum products out of stormwater discharges are discussed in Section 4.0.

4.0 SITE CONTROLS

Section 4.0 discusses the site controls ConocoPhillips has implemented at the Portland Terminal to minimize the exposure of pollutants to stormwater or to remove pollutants from stormwater before discharging. As required in the 1200-Z Permit, this section of the SWPCP includes discussion of stormwater Best Management Practices (BMPs), Spill Prevention and Response Procedures, Preventative Maintenance, and Employee Education.

4.1 Best Management Practices

Stormwater BMPs are site controls that minimize the exposure of pollutants to stormwater or to remove pollutants from stormwater before discharge to surface waters. Those BMPs utilized at the terminal are described in the following subsections.

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4.1.1 Management Practices

The petroleum product storage and transfer facilities at the Portland Terminal are equipped with a variety of spill prevention and containment devices. BMPs are followed to isolate potential sources of contamination from the stormwater system. Transfers of products are conducted in areas that are segregated from stormwater drainage areas by walls, curbs, or other means of containment. Management procedures stress safe transfer operations, maintenance of safety and containment systems, and rapid, accurate communications between operating personnel during transfers or in responding to a spill.

Whenever products are being transferred, facility personnel have access to internal alarms or emergency communication devices. Employees do not work on the premises alone unless they have immediate access to a cellular telephone or a hand-held two-way radio, or are otherwise capable or summoning assistance in the event of a spill or other emergency.

Spill prevention and containment equipment and procedures implemented at each of the product storage and transfer areas at the terminal are described below.

4.1.2 Exposure Prevention BMPs

Materials stored at the terminal are not exposed to stormwater since they are contained in enclosed storage tanks, piping, or transfer hoses. The potential for stormwater exposure to petroleum products exists in the form of minor leaks or spills that may occur in the tank farms or drips from vehicles driving on the terminal. Leaks or spills may also occur from transfer piping outside the tank farms, or from tank trucks entering or leaving the terminal. Small spills can occur during equipment maintenance or repair activities. These operational or maintenance related spills or leaks are generally cleaned up immediately but if they happen during rainfall events, contact with stormwater potentially could occur.

The equipment or areas that have the highest probability for the occurrence of small leaks or drips within the terminal and subsequent contact with stormwater include the product transfer stations that do not drain to the process water system and selected valves and flanges along the above ground piping. All of the pumps and the large majority of valves and flanges are equipped with underlying concrete containment pads that drain to the process water system.

Most transfer stations are covered to minimize the collection of stormwater; they all drain to the process water system with the exception of the Lube Oil and Gasoline Additive Unloading Stations where drainage to the stormwater system is possible.

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Both of stations, however, are used infrequently and exposure prevention measures are discussed in appropriate sections below.

To further prevent or minimize the exposure of stormwater to contact with petroleum products, the drains to the terminal's storm, process, and sanitary sewer systems are color coded. Drains/catch basins, valves, manholes, and cleanouts associated with the stormwater system that drain to one of the oil/water separators are color coded purple whereas orange is used for similar equipment associated with the process water system. There are no external drains to the sanitary sewer system but all corresponding manholes, cleanouts, and valves, including those connecting the process water treatment system to the sanitary sewer are color coded green. Terminal storm drains, manholes, valves, etc., associated with lines draining directly to the municipal storm drain system, including the discharge lines from the stormwater separators, are color coded light blue.

The color coding of the different drainage systems enables facility personnel to more quickly identify the ultimate destination of liquids entering the drains. If a small spill occurs and is flowing towards a purple or blue catch basin, personnel will take quick action to contain the spill or block the catch basin to prevent contamination of the stormwater system. Should a spill enter the system, the color coding of the valves also enables quick identification of which valve(s) to close to isolate the affected portion of the system. Each drainage system is equipped with a post indicator valve (PIV) where the piping exits the terminal (most valves are along Doane Avenue) and can be used to further prevent spills from leaving the terminal. Terminal personnel are trained to use the PIVs to contain spills and prevent further migration.

4.1.3 Stormwater System BMPs

The site stormwater system encompasses numerous stormwater BMPs. For example, Oil and Grease BMPs include oil/water separators, inverted tees in catch basins, oil-sorption pads in catch basins; Debris Control BMPs include catch basins with grates and screens, sedimentation separation chambers; Stormwater Diversion BMPs are incorporated into the stormwater systems throughout the site; Erosion and Sediment Control BMPs include covering most site ground surfaces with pavement or gravel; Housekeeping BMPs include routine catch basin, piping and separator cleaning and maintenance.

Rainfall within the majority of the terminal is collected and treated by the stormwater system prior to discharge to the Willamette River. The stormwater drainage area includes the tank farms, terminal parking areas, vehicle access areas, graveled areas, and paved drives. Drainage from product transfer areas, which is collected and treated by the process water system, is discussed in Section 4.1.4.

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The stormwater collection and treatment system consists of four separate subsystems. Tank Farms 1, 2, and 3 each have their own stormwater collection and treatment subsystem with the fourth consisting of several collection systems that discharge untreated stormwater collected along vehicle drives and parking areas to the municipal storm sewers and ultimately to the Willamette River. In some cases, the tank farm systems also collect and treat stormwater from small adjacent areas.

The areas that drain to each of the stormwater treatment subsystems associated with Tank Farms 1, 2, 3, and the dock area are shown in the Figures 4, 5, 6, and 7 respectively. Those areas that drain to the process water system are also shown on the above figures as are the various catch basins and storm, process, sanitary, and city water piping systems. As shown in the Figures, the areas draining to the different separators are color coded as are the catch basins and connecting pipelines.

Stormwater System BMPs in Tank Farms

The stormwater systems in Tank Farms 1, 2, and 3 each consist of several catch basins located at topographical low points with interconnecting pipelines that direct stormwater runoff to an API-type oil/water separator. Effluent from Separators #002 and #004 is discharged through underground piping to the municipal storm sewer on Doane Avenue; effluent from Separator #001 is discharged to the municipal storm system on Kittridge Avenue located approximately 1/2 mile to the east. The individual tank farms, associated separators, separator capacities, and discharge points are listed in Table 4.1.

Table 4.1: Tank Farm Stormwater Systems

Tank Farm	Separator Number	Capacity	Discharge Point
1	002	7,125 gallons	Doane Avenue
2	004	23,060 gallons	Doane Avenue
3	001	17,300 gallons	Kittridge Avenue

Stormwater runoff from the Upper and Lower Lube Cells and the F-Tank Farm are routed to the process water system.

The separators, including the final box prior to discharge, are open at the top to allow visual monitoring. The separator discharge valves are generally kept closed except during storm events as an additional measure to minimize potential for large accidental spills from discharge off-site through the stormwater separators. These valves will also close in the event of a power failure. The condition of the water in the final boxes

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of the separators is visually monitored; any evidence of oil or other contamination is removed prior to discharge.

In addition to collecting and treating runoff within the tank farms themselves, the stormwater systems for Tank Farms 1 and 3 also collect some runoff from adjacent areas. Runoff from the paved areas to the south and just north of the Refined Products Loading Rack is collected in catch basins which drain to Lift Station 2 just to the west of Tank Farm 1. Runoff to the lift station is then automatically pumped to Separator #002 within Tank Farm 1 for treatment.

Runoff from the paved area outside the west corner of Tank Farm 3 near Separator #001 is collected by a catch basin near the separator and gravity drains directly to the separator itself. Because Separator #001 is outside the tank farm containment dike, runoff collected from within Tank Farm 3 drains to Lift Station 4 where it is automatically pumped to Separator #001 for treatment.

Stormwater System BMPs in Other Areas

Stormwater from areas outside the tank farms, not discussed in Section 4.1.3 above and that does not drain to the process water system is either transported through underground piping to a municipal storm sewer or surface flows off-site to surrounding areas. The latter occurs primarily in the gravel area to the southwest of Tank Farm 3 where the surface is graded towards the railroad tracks to the west and then southeast towards Kittridge Avenue.

Most of the runoff from the roof drains and paved areas to the southwest of Tank Farms 1 and 3 flows into catch basins and then through underground piping along the alley between Tank Farm 1 and the Warehouse to the municipal storm sewer along Doane Avenue. The small area just to the west of the Railcar Loading/Unloading Rack flows to a catch basin which drains into the underground piping that transfers effluent from Separator #001 to the municipal storm sewer along Kittridge Avenue. All catch basins in areas that run-off directly to municipal storm systems are color-coded and marked as such.

The other portions of the main terminal including: 1) the area to the east of the Black Oil and Lube Oil Loading Racks, 2) the alley between Tank Farms 1 and 2, and 3) the roof drains and paved areas around the maintenance building and garage all drain through underground piping to the municipal storm sewer along Doane Avenue. Runoff from the paved and open areas around the Asphalt Shed building near the dock flow primarily to catch basins that discharge either directly to the Willamette River or to the municipal storm sewer along Front Street that, in turn, discharges to the Willamette River.

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4.1.4 Process Water System BMPs

The primary sources of surface drainage that flow to the process water system are the runoff from the following areas:

- Pump containment area in the northeast corner of Tank Farm 1,
- Southwest corner of Tank Farm 3,
- Lower and Upper Lube Cells,
- F-Tank Farm,
- Refined Products Loading Rack,
- Lube and Black Oil Loading Rack areas,
- Railcar Loading/Unloading Rack,
- Hazardous Waste Storage Area, and
- Various offloading stations.

Other minor sources that drain to the process water system include the following: runoff from the various concrete containment pads beneath the pumps, valves, flanges, and the vapor recovery unit within the tank farms; floor drains within the boiler house and maintenance garage; the laboratory drains; and tank water draws.

The process water system consists of numerous catch basins that drain to interconnecting underground piping that all discharge to an API-type oil/water separator (Separator #003) in Tank Farm 1. Effluent from the separator is processed through DAF-type hydrocleaner, which then drains to a final inspection box before discharge to the municipal sanitary sewer along Doane Avenue. Oil recovered from the separator and hydrocleaner is pumped to Tank 36 (slop tank) in Tank Farm 1 for storage prior to blending into black oil, at an approved ratio, and being sold for boiler fuel.

The process water collection system is equipped with a number of valves which allow for the isolation of various portions of the system if the need arises. There are also several lift stations that can be deactivated to further isolate spills or other discharges to the process system. Valves are installed on the separator and hydrocleaner discharge points as well as the final inspection box. A PIV is located along Doane Avenue where the process system discharge line connects to the municipal sanitary sewer line. This PIV can be closed to prevent spills or out-of-compliance process water from reaching the municipal sewer system.

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As with the stormwater separators the inspection box is also open at the top to allow for visual monitoring prior to discharge. The fail-close valve will also close in the event of a power failure. In these situations, the lift pumps feeding the process separator will continue operating to prevent the associated lift stations from overflowing.

4.1.5 Area-Specific BMPs

Tank Farms

Secondary containment for the tank farms and lube cells is provided by concrete block, cast-in-place concrete walls or asphalt covered berms on all sides. The base in Tank Farms 1, 2, and 3 consists primarily of silty sand fill overlain by gravel in most areas whereas the Upper and Lower Lube Cells and F-Tank Farm are equipped with concrete liners. The containment capacity of each tank farm is designed to contain the maximum capacity of the largest storage tank plus the rainfall from a 25-year 24-hour storm event and 20 minutes of fire protection water. The actual containment volumes and calculations for each tank farm are provided in the facility's SPCC plan.

The discharge valves from the stormwater separators to the municipal stormwater system are normally kept closed except during storm events when they are opened as necessary to drain water accumulations in the separators. This is done as an additional safeguard to prevent potential spills from entering the municipal stormwater system. The valves are fitted with position indicators that can be monitored remotely by terminal personnel in the control room to determine if the valves are open or closed. The discharge valves are pneumatic and designed to fail in the closed position in the event of a power failure, loss of air pressure, or emergency shut down.

The storage tanks are equipped with various level gauges and overfill alarms. Each tank is equipped with an automatic tank level gauge at the base of the tank that can be monitored visually by terminal personnel. Tank levels are also indicated on a computerized gauging system monitor in the terminal control rooms. If the volume in a tank reaches a preset level, the system will activate both a visual and an audible high level alarm in the control room. If the tank volume continues to increase, a redundant high level alarm will be triggered which activates another audible alarm in the control rooms as well as emergency horns strategically located throughout the facility. The redundant high level alarms are set to activate approximately 35 minutes before the tank overflows at the tank's maximum fill rate.

All tanks were designed to meet or exceed the requirements of the applicable standards and regulations at the time of construction. The tanks are maintained and inspected per API 653 requirements including periodic internal and external inspections and non-destructive shell thickness testing to verify tank condition and

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integrity. In addition, when a tank is removed from service, its interior is usually inspected and necessary repairs made prior to returning the tank to service.

Refined Products Loading Rack

The bulk transfer of refined products (i.e., gasoline, diesel, heating oil, and jet fuel) from the storage tanks to tank trucks is conducted at the Refined Products Loading Rack along Doane Avenue. The rack is constructed on a concrete pad with perimeter curbing and strip drains at either end forming the containment area. The rack is covered with a canopy to minimize the introduction of stormwater into the containment area. The strip drains are connected to a 10,000-gallon underground spill containment tank. The rack's concrete containment area and spill containment tank along with and process system are intended to contain a spill greater than the largest compartment of a typical tank truck and trailer compartment servicing the terminal.

The loading rack is equipped with an overfill protection system and meter stops that are designed to automatically stop filling tank trucks when they become full. The rack is also equipped with brake interlock equipment to prevent the trucks from departing before the transfer hoses are disconnected. The truck drivers are also instructed to inspect the trucks and drain valves for leakage prior to departure and report any problems to terminal personnel.

Lube/Black Oil Loading Racks, Ethanol/Biodiesel/Primary Fuel Oil Offloading Stations and Diesel Pump Off Area

The entire area in the vicinity of the Lube and Black Oil Loading Racks, Ethanol, Biodiesel and Primary Fuel Oil Offloading Stations and the Diesel Pump Off Area is paved and equipped with perimeter asphalt and concrete berms. Several catch basins drain the area to the process water system. Although the Lube and Black Oil Loading Racks are equipped with canopies, the majority of the area is uncovered. The entire area is designed to contain a spill from a typical tank truck or trailer compartment servicing this area of the terminal.

The Black Oil Loading Rack is equipped with a spring loaded "deadman switch" that requires constant pressure from the operator to continue loading operations. Although The Lube Oil Loading Rack is equipped with a Scully auto-overfill-protection system. As with the Refined Products Loading Rack, truck drivers are instructed to inspect their trucks and drain valves after filling and prior to departure and report problems. Lube oil filling is conducted by a ConocoPhillips employee.

The Primary Lube Oil Offloading and Diesel Pump Off Stations are not equipped with any mechanical spill prevention devices as there is no potential to overfill a vehicle.

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The only spill potential is related to leaks in, or ruptures of, the transfer hoses or failures of the truck tanks or valves. The containment system around the unloading stations drains to the process system and is more than adequate to prevent potential spills from escaping the unloading area and reaching the stormwater system.

Offloading at the Ethanol and Biodiesel Offloading stations is visually monitored by terminal personnel in the control room using cameras installed at the stations and is only conducted by drivers trained in offloading procedures. Pumps used to transfer ethanol and biodiesel to storage tanks are set to automatically turn off when safe fill levels in the storage tanks are exceeded. Additional containment in these areas is provided by a concrete vault holding piping to the Lube and Black Oil Loading Racks equal to approximately 9,600 gallons.

Lube Oil Additive Unloading Stations

The Lube Oil Additive Unloading Stations are located adjacent to the F-Tank Farm and are used to transfer additives from tank trucks to storage tanks in the F-Tank Farm. The transfers are made via flexible hoses connected between the tank truck and the storage tanks. The area is paved but not equipped with a dedicated containment system. Terminal procedures require the operators to place a magnetic covers over the nearby stormwater catch basin during additive transfers as that basin drains directly to the municipal stormwater system. Spill response kits containing sorbents materials are also positioned nearby. These measures prevent spills from entering the stormwater system and instead causes the spill to continue flowing down-gradient to the process water catch basin located beneath the laboratory.

Railcar Loading/Unloading Rack

The Railcar Loading/Unloading Rack, located southeast of the lube cells and adjacent to the F-Tank Farm, is used for offloading of ethanol, lube oil base stocks, black oil and lube oil additives and for loading of finished lube oils. The rack consists of four transfer stations to accommodate two railcars on each side. The railcars are unloaded using flexible hoses attached to the bottom of the cars; loading occurs at the top of the cars through pivoting arms and flexible hoses.

The railcar area is situated in a natural depression with an asphalt berm at one end to provide adequate containment. Each station is equipped with a dished concrete apron and catch basin, which drain to the process water system. There are no stormwater drains in this area. The combination of the natural depression, catch basins, and the capacity of the process water system provides more than sufficient containment for the contents of a typical (30,000 gallons).

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Spill prevention is achieved by training operators in proper procedures for railcar loading and unloading. Transfer operations are not generally manned continuously but personnel are required to monitor transfer operations at least every 20 minutes. An operator is, however, required to continuously monitor levels in the railcars during the loading of the final 2,000 gallons. If a spill were to occur, the concrete aprons and catch basins will catch the product and drain it to the process water system. In addition, during the unloading of black oil, drainage from the area is routed to the ethanol spill basin (also referred to as the ethanol pit). The spill basin itself has a capacity of 40,000 gallons, which will easily contain the contents of a typical railcar servicing the terminal (30,000 gallons).

Transmix Pump Off Station

The Truck Unloading Station is located adjacent to the northwest side of the Maintenance Garage and consists of two dished concrete pads that drain to separate process water catch basins. Spills in this area would collect in the catch basins and drain to the process water system for recovery at the separator. The containment capacity of the dished areas and catch basins is more than adequate to contain the largest single compartment of a typical tank truck serving the station.

Refined Products Additive Unloading Station

The Refined Products Additive Unloading Station is located east of the Refined Products Loading Rack and north of Tank Farm 1 and used to transfer additives from tank trucks to Tank 4441 and Tank 3623 in Tank Farm 1. The transfers are made via flexible hoses connected between the tank truck and additive pipeline along the north perimeter of Tank Farm 1. The area is paved but not equipped with a dedicated containment system. Spills or leaks at the station will primarily drain to the south towards the Refined Product Loading Rack containment area. If the spill were large, a portion of the spill could potentially drain to the west and to a catch basin connected to the stormwater oil/water Separator #002 in Tank Farm 1. Therefore, terminal procedures require the operators to place a weighted cover over the catch basin during additive transfers. This will minimize spills in this area from entering the stormwater system and instead cause the spill to collect in the area surrounding the catch basin and/or drain to the loading rack containment area.

Vessel Loading/Unloading and Tug Fueling Stations

The terminal dock located on the Willamette River is used for loading and unloading gasoline, diesel, heating oil, black oil and lube oil. Barges, tankers, and tugs moored at the dock use flexible hoses to transfer oil and products between the vessel and the terminal product storage tanks.

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There are no stormwater drains on the dock. The dock risers and tug fueling/lube oil dispensers are located on a dished concrete pad that drain to a 2,050 gallon holding tank located beneath the dock. The contents of the holding tank are automatically transferred to the process water system located in Tank Farm 1.

The potential for spills in this area is minimized by the attendance of at least two personnel during the entire transfer operations: one of the vessel crew and one of the terminal operators. These personnel are trained in procedures for proper product transfer and are familiar with emergency procedures in the event of a spill.

Prior to receiving a vessel, terminal personnel check to ensure that the receiving tank or tanks have the capacity to accept the quantity of oil to be transferred. In addition, the cargo hoses used for marine transfers are pressure tested regularly and replaced as required to minimize the potential for leaks or ruptures.

Hazardous Waste Storage Area

The Hazardous Waste Storage Area is located outside the southwest corner of Tank Farm 3 and consists of a concrete pad surrounded by a 6-inch curb that drains to a process water catch basin. The drain is covered with a weighted spill pad. If a hazardous waste spill drains past the spill pad, it would collect in the catch basin and drain to the process water system for recovery at the separator. The containment capacity of the curbed area and catch basins is more than adequate to contain the largest single container typically stored in the area.

Olympic Pipelines

Potential spills caused by a delivery pipeline failure within the dike walls will be contained therein. The potential for such a failure is minimized by inclusion of thermal relief valves on the lines and regular inspection of the overall system. In the event of a pipeline failure, the spill could be detected visually by personnel operating in the area. Olympic Pipeline personnel also monitor pressures and flow rates on their pipelines and will rapidly detect and respond to leak and shut down the pipeline.

Sediment and Erosion Control

All dike walls used for spill containment are made of cast-in-place concrete, concrete block, concrete, or asphalt curbing, or asphalt covered earthen berms. To control traffic related erosion, the terminal access ways and parking are paved with asphalt. All operation areas of the terminal are covered with gravel, paved with asphalt, and/or contained by a curb to prevent sediment accumulation and land erosion. The exception is the unused strip of land behind the Asphalt Shed (warehouse) near the dock. In this area sandy sediments extend from the water's edge up the slope to the

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Asphalt Shed and the adjacent parking area and vacant lot (i.e., the Sand Lot). Erosion from this slope is minimized by moving stormwater off the slope though pipes to lower elevations near the beach where discharge is to catchments filled with gravel and cobbles to allow infiltration.

Other Runoff Sources

There are no other operations or equipment in the Portland Terminal that could reasonably be expected to cause a spill or result in the contamination of stormwater runoff.

4.2 Spill Prevention and Response

ConocoPhillips has prepared a SPCC Plan and an Emergency Response Plan, which identify methods of spill prevention and the response and notification procedures, which should be followed in the event of a spill. The Emergency Response Plan contains the response and notification procedures, as well as lists of equipment maintained at the facility, in addition to equipment available from local spill response contractors. These plans are reviewed by the appropriate terminal personnel and are available to all personnel at all times. It should also be noted that many stormwater-related spill prevention measures and response action items have been discussed in the above Section 4.1 BMPs.

4.3 Preventive Maintenance

ConocoPhillips regularly inspects and maintains pertinent equipment to reduce the likelihood of a spill impacting the stormwater system. The stormwater and process water systems are inspected daily to ensure effective operation. Any significant accumulations of oil in the oil/water separator are recovered and recycled.

In addition, the terminal operators perform at least two visual inspections per day of the entire terminal including tanks, containment systems, pipelines, and process and stormwater collection systems. Any problems or potential problems are noted and rectified as soon as practical.

4.3.1 Inspections and Repairs

ConocoPhillips personnel regularly inspect the terminal for malfunctions and deteriorations, operator errors, and/or discharges that may lead to or cause a release of oil from the terminal or into the stormwater system. They also conduct routine inspections of monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment.

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In addition, personnel make regular inspections around all storage facilities looking for faulty or leaking equipment. Daily inspections of the stormwater drainage system will reveal any required maintenance to the stormwater system. Any necessary cleaning or repairs to the stormwater system are conducted as soon as practical.

4.3.2 Housekeeping

As part of ConocoPhillips's BMPs, the operators practice the following operational procedures to reduce the potential for pollutants to enter the stormwater discharge:

- All spills and leaks will be cleaned up immediately or as soon as practical.
- All outdoor areas of the facility are kept clean and orderly.
- Activities such as vehicle washing, equipment washing, pad wash downs, and any other activity with potential to generated impacted water are conducted in areas which are contained and drain to the process water system.
- Vehicle maintenance activities are conducted within the garage structure or within a contained area, whenever possible. Any contamination resulting from a maintenance activity will be removed immediately.
- Loading and unloading areas at the terminal and the dock are maintained and inspected for signs of spillage.

4.4 Employee Education and Training

Terminal employees are given detailed instructions in the maintenance and operation of all facilities which they are expected to operate. New employees work with other personnel until they are deemed qualified by their supervisor to work alone. Periodic meetings are held for all employees on duty, in order to keep them informed of any changes in procedure, equipment, and regulations. LOPs are written, reviewed, and updated by regional staff members. They are kept on file in the operator's office for future reference.

Training is essential for an efficient and safe operation and ensures rapid and effective response to emergency situations. Employees with responsibility for the operation and maintenance of the stormwater and process water systems are provided training upon beginning work and at least annually thereafter. These training sessions will also emphasize accident prevention in order to minimize the potential for oil to enter the storm and process water systems and to safeguard human health and the environment.

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ConocoPhillips maintains a record of training classes attended by employees. This training documentation is kept on record at the terminal office for a minimum of three years.

5.0 RECORD KEEPING AND INTERNAL REPORTING

The Portland Terminal maintains records of the time, date, and details of the implementation of this Plan. This information is maintained at the Portland Terminal Office. Schedule A.3.d of the 1200-Z Permit indicates that the permit registrant must record and maintain, at the facility, inspection, maintenance, repair, education, and spill history information.

5.1 Stormwater Contamination Records

Whenever there are leaks, spills, or other instances at the facility which contaminates stormwater, a description of the occurrence is documented. All records regarding stormwater contamination are maintained at the Terminal for a minimum of three years.

5.2 Written Records

ConocoPhillips maintains copies of the maintenance, repair, and inspection records for a minimum of three years from the date of action. The annual inspection and certification of the effectiveness of the Plan are kept on record for at least three years, as well. Incidents involving product spills or leaks, which impacted or may have impacted stormwater runoff, are documented in addition to a description of the corrective actions taken.

ConocoPhillips maintains a record of training classes attended by their employees. This training documentation is kept on record at the terminal office for a minimum of three years.

5.3 General Management Plans

The Portland Terminal maintains a copy of all permits, documents, and other terminal plans listed under Section 2.4.

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6.0 PLAN AMENDMENT

6.1 Annual Internal Review

The Terminal Supervisor inspects the facility and reviews the contents of the combined Plan annually prior to the onset of the rainfall season. According to Schedule A.1.f of the 1200-Z permit, "the SWPCP must be kept current and updated as necessary to reflect any changes in facility operation." The annual inspection and plan review are intended to ensure that the terminal is in compliance with the NPDES permit and the Plan and to ensure that the Plan accurately reflects the configuration and operation of the terminal. Another purpose of the internal annual inspection is to identify non-stormwater activity which discharges to the stormwater drainage system. The Plan review includes evaluating whether adequate measures are taken to reduce pollutant loading or whether additional controls are needed. This Plan review includes consideration of any changes in terminal personnel, equipment, tank contents, controls and communications systems.

Particular attention if focused on any modifications to facility design, construction, operation, or maintenance that will materially affect the facility's potential for the discharge of pollutants. This will include any modification to area drainage, tank farm drainage, process water handling, or equipment additions (e.g., new tanks, loading lanes). If modifications of this nature are made, the Plan is reviewed and revised and necessary and re-certified by the Terminal Supervisor. At a minimum, the Plan is reviewed annually by the Terminal Supervisor.

6.2 Plan Revisions and Action Plans

According to Schedule A.2.a of the 1200-Z permit, revisions to this Plan must be described in an Action Plan. The Action Plan must be submitted to the City within 30 calendar days of making the Plan revision. In addition, any monitoring benchmark exceedance must be reported to the City in an Action Plan as described in section 7.2 below.

7.0 NPDES 1200-Z PERMIT MONITORING AND REPORTING REQUIREMENTS

The terminal has developed and implemented a daily inspection and planned maintenance program to meet the monitoring and sampling requirements detailed in this Plan and the terminal's SPCC Plan. The daily inspection and planned maintenance program will meet the following objectives in relation to the NPDES general permit requirements and the SWPCP.

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- Ensure that stormwater discharge is in compliance with discharge prohibitions, effluent limitations, and receiving water limitations specified in the general permit.
- Ensure practices at the facility to control pollutants in stormwater discharges are evaluated and revised to meet changing conditions.
- Aid in the implementation of the combined Plan.
- Measure the effectiveness of best management practices in removing pollutants in stormwater discharge.
- Meet the requirements of the Annual Site Inspection and Certification.

7.1 Monitoring Program

As described in Section 3.1, the terminal discharges stormwater to the municipal storm sewers on Kittridge and Doane Avenue from the three oil/water separators:

- Separator #001 located adjacent to Tank Farm 3,
- Separator #002 located in Tank Farm 1, and
- Separator #004 located in Tank Farm 2.

Monitoring of each stormwater system discharge is conducted for selected parameters and at various intervals as required under Schedule B of the 1200-Z permit. The monitoring requirements of the 1200 Z permit are as follows:

Table 7.1: Monitoring Requirements

Parameter	Minimum Frequency	Type of Sample
Total Oil and Grease	Four times per year	Grab
Oil and Grease Sheen	Once per month (when discharging)	Visual
Floating Solids	Once per month (when discharging)	Visual
Flow	Daily when discharging	Estimate
Total Copper	Four times per year	Grab
Total Lead	Four times per year	Grab
Total Zinc	Four times per year	Grab
pH	Four times per year	Grab
Total Suspended Solids	Four times per year	Grab

Note: BES and DEQ prefer all four grab samples are collected from each of the separators during the same rainfall event.

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A description of sampling methods, sampling locations, analytical requirements for each of the above monitoring requirements is provided below. It is recognized that ConocoPhillips is allowed to and may collect additional data to supplement that described by the minimum frequency requirement above to further evaluate compliance. It is also recognized that any additional data colleted must be made available if requested; however, correspondence with BES and DEQ requests that only results of the four required grab samples be reported in conjunction with annual discharge monitoring reporting.

7.1.1 Total Oil and Grease

An oil and grease sample is required to be collected and evaluated at least four times per year. Grab samples must be representative of the discharge and must be taken at least 14 calendar days apart. Two samples must be collected before December 31st, and two samples must be collected after January 1st. The grab sample method should be used to obtain a representative discharge sample in an appropriate container as described in Section 7.1.7. The sample location is the last chamber of the final box of each oil/water separator just before the separator discharge outlet. These sampling locations are shown in Figure 3. The samples should be analyzed for total oil and grease by an EPA approved method under 40 CFR 136 (EPA Method 1664A). The permit requires that the oil and grease concentration not exceed the following benchmark concentration:

Parameter	Benchmark
Total Oil and Grease	10 mg/L

7.1.2 Stormwater System Oil/Water Separator Visual Observations

Each oil/water separator and the entire stormwater system should be observed visually at lease once per month when discharging to check for floating solids and significant accumulations of oil in each separator, as well as any unusual conditions, malfunctions, or repairs that may be necessary. The separator discharge should also be checked for the presence of oil or sheens. Visual observations are recorded in the stormwater daily log maintained by the terminal personnel.

7.1.3 Flow

The rate of discharge from each oil/water separator should be determined when discharges are occurring. The quantity of stormwater flowing to each separator is currently determined using Rational Method run-off coefficients, surface areas, and measured rainfall quantity. It is conservatively assumed that all stormwater which

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flows to a particular separator is eventually discharged. Rain gauges are installed at each separator to measure rainfall quantity. The relationships between rainfall and stormwater quantity flowing into each separator is described in the following conversion factors:

Separator #	Discharge After 0.5" of Rain	Discharge After 1" of Rain
001	2,305 gallons	4,611 gallons
002	2,049 gallons	4,098 gallons
004	1,464 gallons	3,928 gallons

Source: Focused Hydrologic Analysis for Estimating Stormwater Runoff Volumes, Amendment 1, Stormwater Separators 001, 002 and 004, Portland Terminal, Portland, Oregon, AMEC Earth & Environmental Letter Report dated March 19, 2009.

7.1.4 Total Copper, Lead, and Zinc

Grab samples to evaluate for the presence of total copper, lead, and zinc should be collected and evaluated at least four times per year. Grab samples must be representative of the discharge and must be taken at least 14 calendar days apart. Two samples must be collected before December 31st, and two samples must be collected after January 1st. The grab sample method should be used to obtain a representative discharge sample in an appropriate container as described in Section 7.1.7. The sample location is the last chamber of the final box of each oil/water separator just before the separator discharge outlet. These sampling locations are shown in Figure 3. The samples should be analyzed for total copper, lead and zinc by an EPA approved method under 40 CFR 136 (EPA Method 200.7/6010B). The permit requires that the total copper, lead and zinc concentrations not exceed the following benchmark concentrations:

Parameter	Benchmark
Total Copper	0.1 mg/L
Total Lead	0.4 mg/L
Total Zinc	0.6 mg/L

7.1.5 pH

Grab samples to evaluate for pH should be collected and evaluated at least four times per year. Grab samples must be representative of the discharge and must be taken at least 14 calendar days apart. Two samples must be collected before December 31st, and two samples must be collected after January 1st. The grab sample method should be used to obtain a representative discharge sample in an appropriate

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container as described in Section 7.1.7. The sample location is the last chamber of the final box of each oil/water separator just before the separator discharge outlet. These sampling locations are shown in Figure 3.

The samples should be analyzed in the field using a calibrated pH meter as well as in a laboratory using an EPA approved method under 40 CFR 136 (SM 4500 H+B). Rainfall pH data should also be collected in the field using a calibrated pH meter. Field sample and rain sample pH data is recorded in the daily log maintained by the terminal personnel. Additionally, the field sample is also written on the chain-of-custody form used for transferring the laboratory samples for purposes of comparing field and laboratory pH results. The pH meter should be calibrated to know standards at least monthly and the results maintained in the pH meter calibration log maintained by terminal personnel. The permit requires pH not to exceed the following benchmark concentration:

Parameter	Benchmark
pH	5.5 - 9.0 SU

7.1.6 Total Suspended Solids

Grab samples to evaluate for total suspended solids should be collected and evaluated at least four times per year. Grab samples must be representative of the discharge and must be taken at least 14 calendar days apart. Two samples must be collected before December 31st, and two samples must be collected after January 1st. The grab sample method should be used to obtain a representative discharge sample in an appropriate container as described in Section 7.1.7. The sample location is the last chamber of the final box of each oil/water separator just before the separator discharge outlet. These sampling locations are shown in Figure 3. The samples should be analyzed for total suspended solids by an EPA approved method under 40 CFR 136 (SM 2540D). The permit requires total suspended solids not exceed the following benchmark concentration:

Parameter	Benchmark
Total Suspended Solids	130 mg/L

7.1.7 Grab Sampling Procedures and Handling

The grab samples collected should be large enough for all the laboratory analyses to be performed, but must be at least 100 milliliters (ml). Grab samples are typically collected by filling the sample container just below the water surface in the final box of

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the oil/water separator. The grab sample should be collected from near the center of the chamber.

All samples must be properly handled (i.e., proper holding time before analysis, storage temperature, preservation method) and analyzed by the methods contained in 40 CFR Part 136. Quality assurance/quality control (QA/QC) methods must be implemented in the field by the personnel conducting the sampling and in the laboratory to ensure the accuracy and validity of the laboratory results.

7.2 Sample and Monitoring Records and Reporting

The Portland Terminal will retain copies of all stormwater sampling and monitoring information and reports required by NPDES Permit Number 1200-Z, for at least three years from the date of sample, observation, measurement and report. Included in these records are the analytical laboratory reports from the samples.

Results the monitoring activities (grab sampling and visual monitoring results) should be submitted to DEQ by July 31st of each for the previous monitoring period (i.e., July 1 through July 30). DEQ monitoring activities will be presented using approved discharge monitoring report (DMR) forms available from DEQ. Examples of the forms are provided in Appendix B.

The following information will be included in the DMR:

1. The date, exact place, time, and methods of sampling or measurements.
2. The date the analyses were performed.
3. The individual(s) who performed the analyses.
4. The analytical techniques and minimum detection limits used for each parameter.
5. The results of such analyses.

If results of stormwater monitoring activities indicate a benchmark concentration has been exceeded, a courtesy notification to the City should be made within 24 hours from the time sampling results were received. Additionally, the cause of the exceedance will be investigated within 30 calendar days of receiving the sampling results. The investigation will include a review of the SWPCP and submittal of an Action Plan to the City as described in Schedule A.9 of the 1200-Z permit.

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8.0 IWD PERMIT MONITORING AND REPORTING REQUIREMENTS

This terminal has developed and implemented a daily inspection and planned maintenance program to meet the inspection and sampling requirements detailed in the terminal's IWD permit. The daily inspection and planned maintenance program will meet the following objectives:

- Ensure that process water discharge is conducted in compliance with discharge limitations, monitoring and reporting requirements, and general conditions as specified in the IWD Permit Schedule B Monitoring and Reporting Requirements and Schedule E.14 Monitoring.
- Ensure practices at the facility to control pollutants in process water discharges are evaluated and revised to meet changing conditions.
- Aid in the implementation of the combined SWPCP and ASPP.
- Measure the effectiveness of best management practices in removing pollutants in process water discharge.
- Maintain a posted notice (at employee information board) informing employees of the requirements to notify the City in case of spill or uncontrolled discharges.

8.1 Monitoring Program

As described in Section 3.2.8 and 4.3, the terminal discharges process water to the City of Portland's municipal sanitary sewer system from one oil/water separator:

- Separator #003 located in Tank Farm 1.

Monitoring of process water system discharge is conducted for selected parameters and at quarterly intervals as required under Schedules A and B of IWD Permit Number 400.181. The minimum monitoring requirements of are as follows:

Parameter	Minimum Frequency	Type of Sample
Total Oil & Grease	Four times per year	Grab
pH	Four times per year	Grab

Each of the above monitoring requirements are discussed in greater detail below, including a description of sampling methods, sampling locations, analytical requirements, and special conditions which may affect the monitoring frequency. As with stormwater monitoring, it is recognized that ConocoPhillips is allowed to and may collect additional data to supplement that described by the minimum frequency

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requirement above to further evaluate compliance. It is also recognized that any additional data collected must be reported.

8.1.1 Total Oil and Grease

An oil and grease sample is required to be collected and evaluated at least four times per year. Grab samples must be representative of the discharge and must be collected on a quarterly basis during March, June, September and December. The grab sample method should be used to obtain a representative discharge sample in an appropriate container as described in Section 7.1.7. The sample location is the last chamber of the final box of the process stream oil/water separator, before the separator discharge outlet. These sampling locations are shown in Figure 8. The samples should be analyzed for total oil and grease by an EPA approved method under 40 CFR 136 (EPA Method 1664A). The permit requires that the oil and grease concentration not exceed the following limitation:

Parameter	Benchmark
Non-polar Oil and Grease	110 mg/L

8.1.2 Process Water System Oil/Water Separator Visual Observations

The water oil/water separator should be observed visually at least once per month when discharging to check for floating solids and significant accumulations of product, as well as any unusual conditions, malfunctions, or repairs that may be necessary. Product accumulating on the surface of the process water separator should be periodically skimmed and recovered.

8.1.3 Flow

The rate of discharge from the process water oil/water separator should be gauged and the discharge volume recorded. Records of gauge readings and discharge volumes should be maintained on the storm and process water inspection sheets.

8.1.4 pH

Grab samples to evaluate for pH should be collected and evaluated at least four times per year. Grab samples must be representative of the discharge and must be collected on a quarterly basis during March, June, September and December. The grab sample method should be used to obtain a representative discharge sample in an appropriate container as described in Section 7.1.7. The sample location is the last chamber of the final box of the process water oil/water separator, before the separator

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discharge outlet. The sampling location is shown in Figure 8. The samples should be analyzed for pH by an EPA approved method under 40 CFR 136. Evaluation for pH will involve laboratory samples as well as pH measurements collected in the field using a calibrated pH meter. The permit requires pH not exceed the following limitation:

Parameter	Benchmark
pH	5.0 - 11.5 SU

8.2 Sample and Monitoring Records and Reporting

The Portland Terminal will retain copies of all process water sampling and monitoring information and reports required by Permit Number 400.181, for at least three years from the date of sample, observation, measurement and report. Included in these records are the analytical laboratory reports from the samples submitted for analysis.

Results the monitoring activities should be submitted to BES by the 15th of the month following the conclusion of the reporting period (i.e., April 15th, July 15th, October 15th, and January 15th). BES monitoring activities will be presented using the self monitoring report form approved by BES. Examples of the forms are provided in Appendix B.

The following information will be included in the self monitoring report:

- The date, exact place, time and methods of sampling or measurements
- The individual(s) who performed the sampling or measurements
- The date the analyses were performed
- The individual(s) who performed the analyses
- The analytical techniques and minimum detection limits used for each parameter.
- The results of such analyses.

If results of process water monitoring activities indicate a limitation has been exceeded, BES will be contacted within 24 hours from the time sampling results were received. Sampling must be repeated within 24 hours of the effluent non-compliance or the next process day. An analysis of the non-compliance shall be submitted to BES within 30 days of receiving sampling results.

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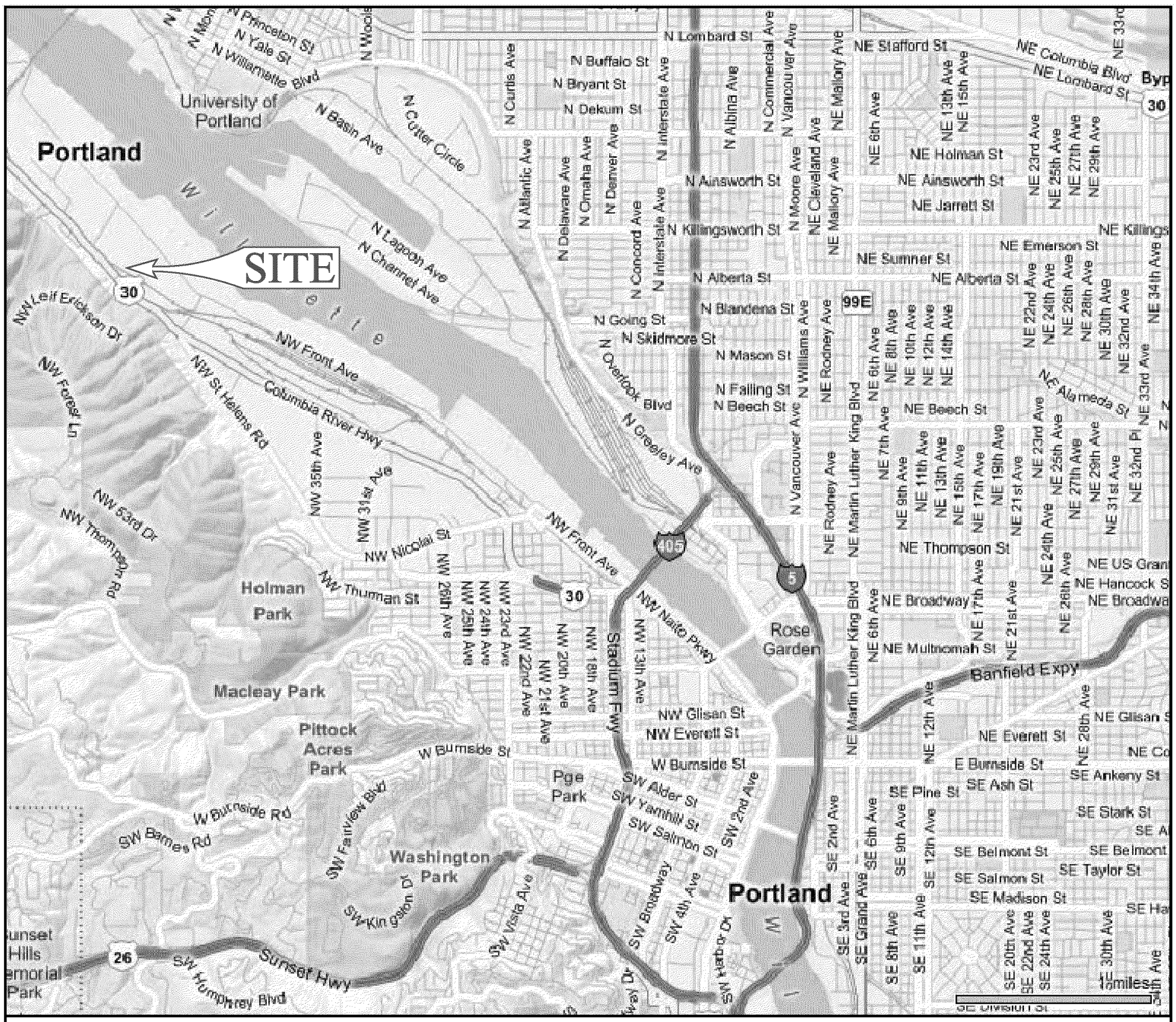
FIGURES



CLIENT LOGO	CLIENT ConocoPhillips 5528 N.W. DOANE AVE., PORTLAND, OREGON 97210	DWN BY: DD CHK'D BY: LJ DATUM: - PROJECTION: - SCALE: AS NOTED	PROJECT PORTLAND TERMINAL	REV. NO.: - DATE: MAY 2009 PROJECT NO: 9-61M-12005-0 FIGURE No. 1
AMEC Earth & Environmental 7376 S.W. Durham Road Portland, OR. U.S.A. 97224	amec		TITLE SITE LOCATION MAP	

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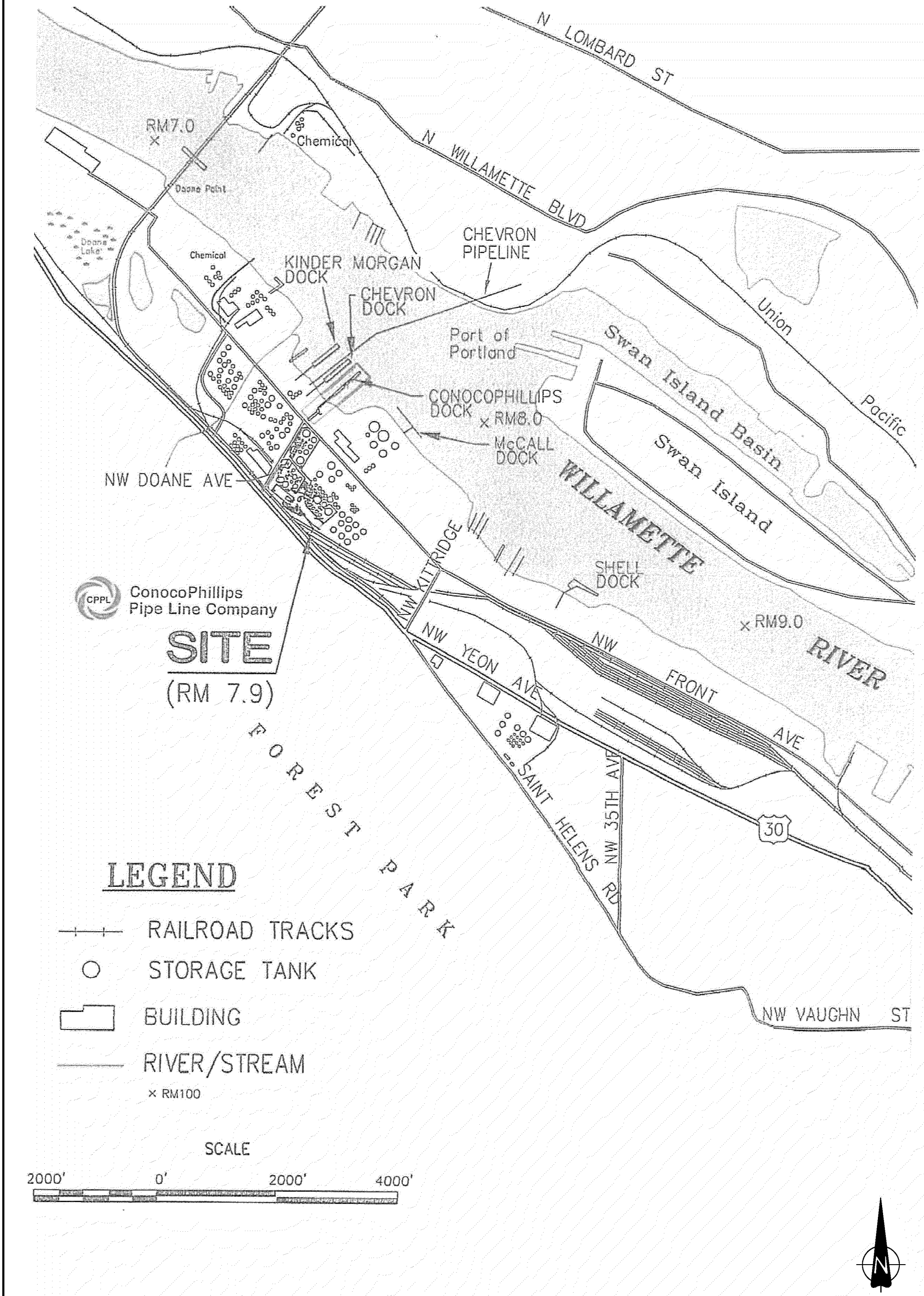
COP0017185



CLIENT LOGO	CLIENT: ConocoPhillips, 5528 N.W. DOANE AVE., PORTLAND, OREGON 97210	DWN BY: DD CHK'D BY: LJ DATUM: - PROJECTION: - SCALE: AS NOTED	PROJECT: PORTLAND TERMINAL TITLE: SITE LOCATION RIVER MAP	REV. NO.: - DATE: MAY 2009 PROJECT NO: 9-61M-12005-0 FIGURE No. 2
AMEC Earth & Environmental, 7376 S.W. Durham Road, Portland, OR. U.S.A. 97224	amec			

K:\12000\12000\120050\DWG\FIGURE_2_SITE_LOC_RIVER_MAP.dwg – – – Jun. 02, 2009 9:34am – doug.davis

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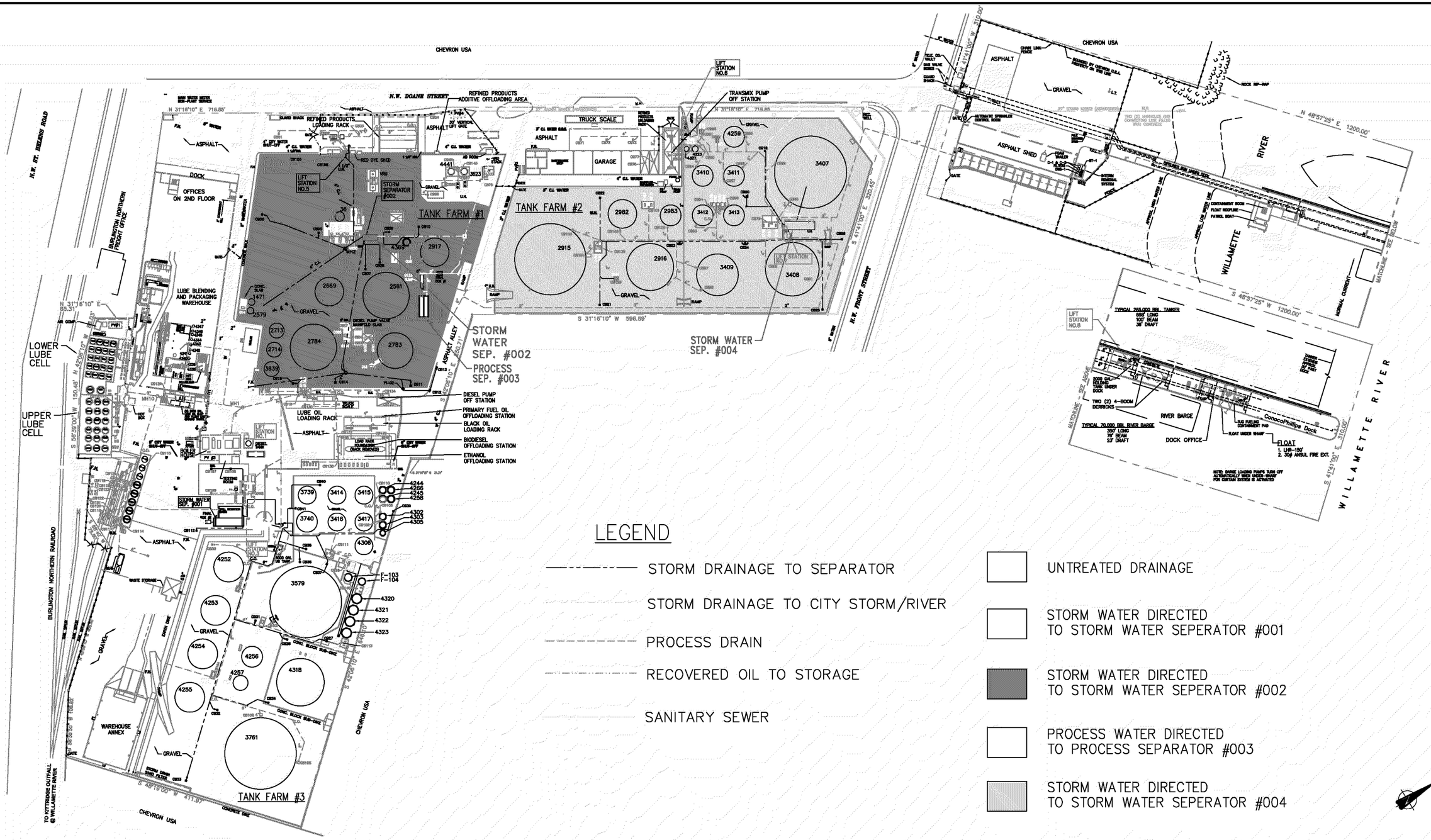


LEGEND

- STORM DRAINAGE TO SEPARATOR
- STORM DRAINAGE TO CITY STORM/RIVER
- PROCESS DRAIN
- RECOVERED OIL TO STORAGE
- SANITARY SEWER

- UNTREATED DRAINAGE
- STORM WATER DIRECTED TO STORM WATER SEPERATOR #001
- STORM WATER DIRECTED TO STORM WATER SEPERATOR #002
- PROCESS WATER DIRECTED TO PROCESS SEPARATOR #003
- STORM WATER DIRECTED TO STORM WATER SEPERATOR #004

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE COMBINED STORMWATER POLLUTION CONTROL PLAN (SWPCP) AND ACCIDENTIAL SPILL PREVENTION PLAN (ASPP) DATED JUNE 2009. THIS DRAWING WAS CREATED FROM ALPHA ENGINEERS & CONSTRUCTORS, INC. DWG NO. 0608-C-7010 REV. F AND 0608-C-7011-C.

CLIENT LOGO

CLIENT:
ConocoPhillips
5528 N.W. DOANE AVE., PORTLAND, OREGON 97210

AMEC Earth & Environmental
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DWN BY:	DD
CHK'D BY:	LJ/BC
DATUM:	-
PROJECTION:	-
SCALE:	1" = 160'

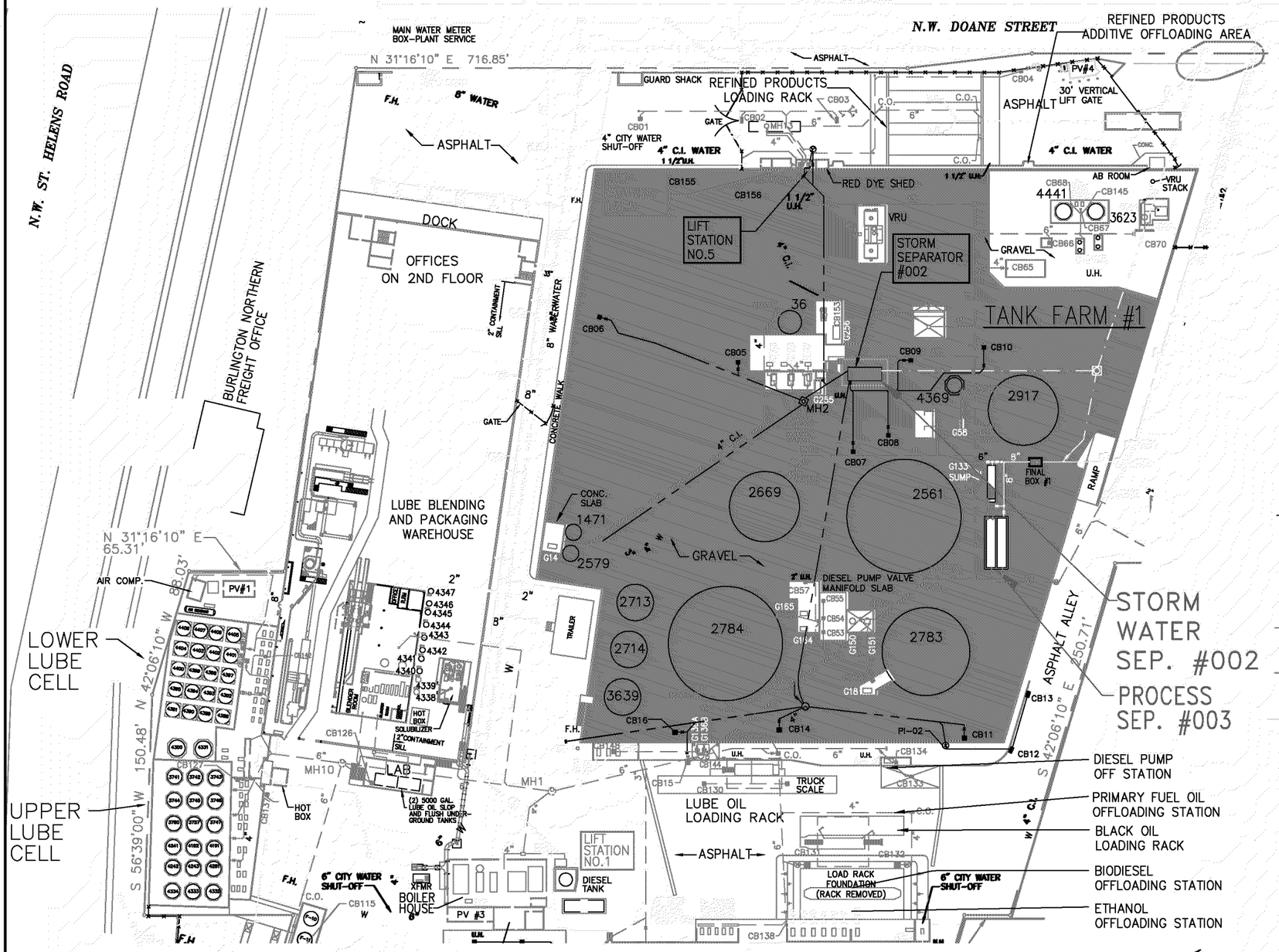
PROJECT: PORTLAND TERMINAL

TITLE: SITE MAP

DATE: AUGUST 2009
PROJECT NO: 9-61M-12005-0
REV. NO.: -
FIGURE No. 3

K:\12000\12000\12005\120050\DWG\FIGURE_3_SITE_MAP_11x17.dwg – 11x17 – Aug. 12, 2009 10:43am – patrick.mccarthy

COP0017187



LEGEND

- STORM DRAINAGE TO SEPARATOR
- STORM DRAINAGE TO CITY STORM/RIVER
- PROCESS DRAIN
- RECOVERED OIL TO STORAGE
- SANITARY SEWER
- UNTREATED DRAINAGE
- STORM WATER DIRECTED TO STORM WATER SEPERATOR #002
- PROCESS WATER DIRECTED TO PROCESS SEPARATOR #003

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE COMBINED STORMWATER POLLUTION CONTROL PLAN (SWPCP) AND ACCIDENTIAL SPILL PREVENTION PLAN (ASPP) DATED JUNE 2009. THIS DRAWING WAS CREATED FROM ALPHA ENGINEERS & CONSTRUCTORS, INC. DWG NO. 0608-C-7010 REV. F AND 0608-C-7011-C.

CLIENT LOGO

CLIENT:
ConocoPhillips
5528 N.W. DOANE AVE., PORTLAND, OREGON 97210

AMEC Earth & Environmental
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DWN BY:	DD
CHK'D BY:	LJ/BC
DATUM:	-
PROJECTION:	-
SCALE:	1" = 80'

PROJECT: PORTLAND TERMINAL

TITLE: SITE MAP TANK FARM 1

DATE:	AUGUST 2009
PROJECT NO:	9-61M-12005-0
REV. NO.:	-
FIGURE No.	4

K:\12000\12000\12005\120050\DWG\FIGURE_4_SITE_MAP_TANK_FARM_1.dwg – 11x17 – Aug. 12, 2009 10:35am – patrick.mccarthy

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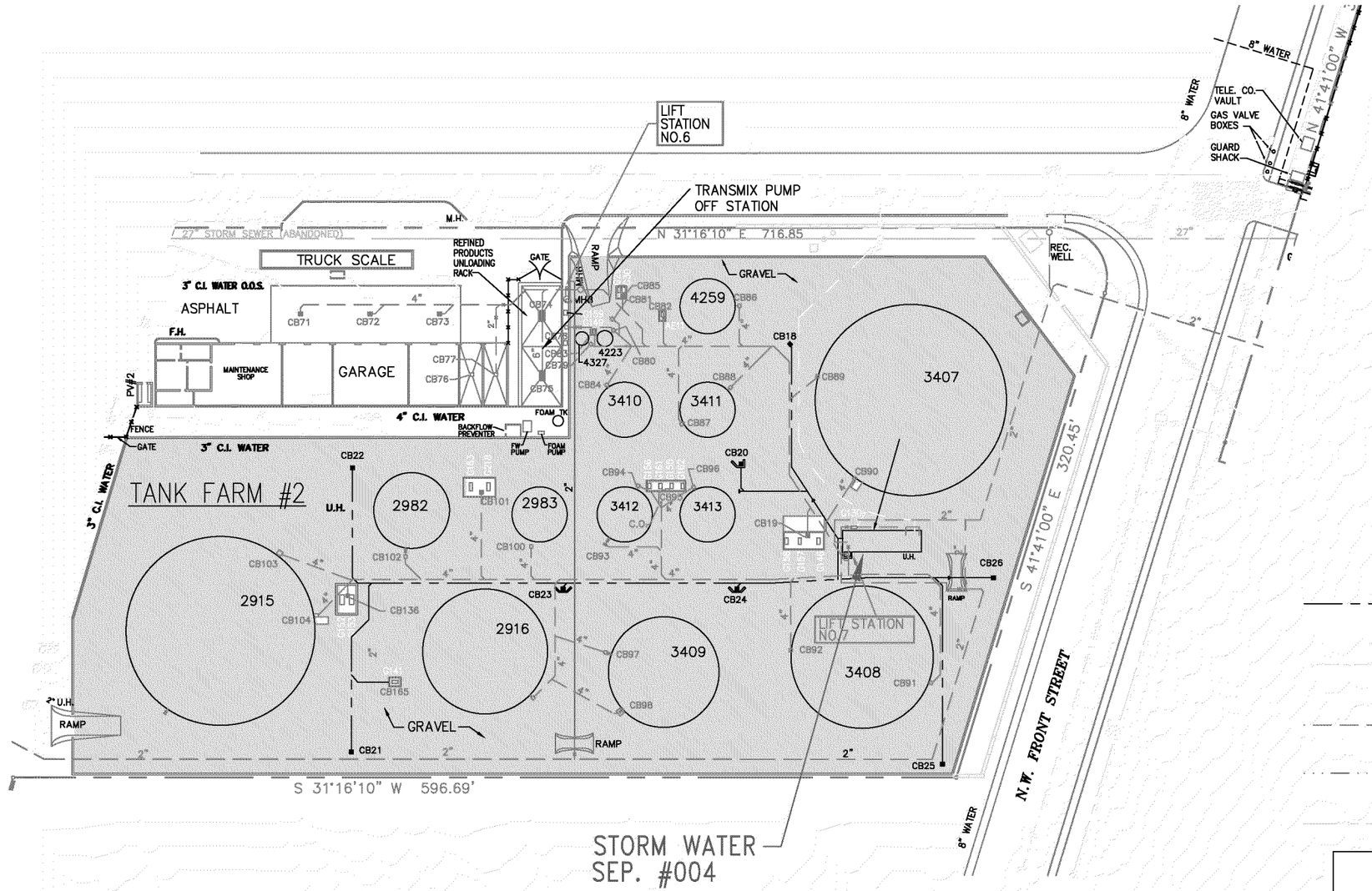

LEGEND

- STORM DRAINAGE TO SEPARATOR
- STORM DRAINAGE TO CITY STORM/RIVER
- PROCESS DRAIN
- RECOVERED OIL TO STORAGE
- SANITARY SEWER
- UNTREATED DRAINAGE
- PROCESS WATER DIRECTED TO PROCESS SEPARATOR #003
- STORM WATER DIRECTED TO STORM WATER SEPERATOR #004

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE COMBINED STORMWATER POLLUTION CONTROL PLAN (SWPCP) AND ACCIDENTIAL SPILL PREVENTION PLAN (ASPP) DATED JUNE 2009. THIS DRAWING WAS CREATED FROM ALPHA ENGINEERS & CONSTRUCTORS, INC. DWG NO. 0608-C-7010 REV. F AND 0608-C-7011-C.

CLIENT LOGO

CLIENT: ConocoPhillips
5528 N.W. DOANE AVE., PORTLAND, OREGON 97210

AMEC Earth & Environmental
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DWN BY:	DD
CHK'D BY:	LJ/BC
DATUM:	-
PROJECTION:	-
SCALE:	1" = 80'

PROJECT: PORTLAND TERMINAL

TITLE: SITE MAP TANK FARM 2

DATE:	AUGUST 2009
PROJECT NO:	9-61M-12005-0
REV. NO.:	-
FIGURE No.	5

K:\12000\12000\12005\120050\DWG\FIGURE_5_SITE_MAP_TANK_FARM_2.dwg – 11x17 – Aug. 12, 2009 10:39am – patrick.mccarthy

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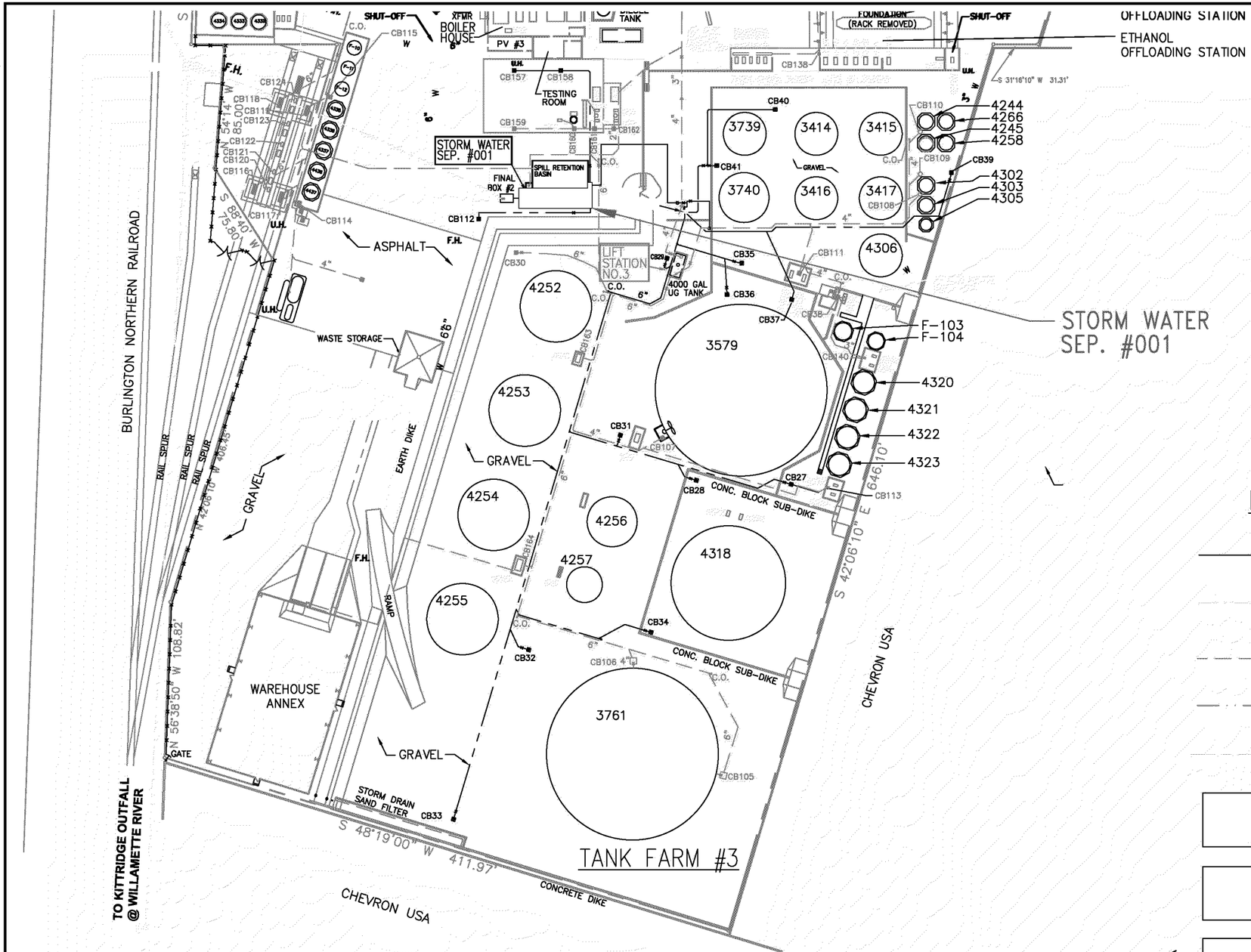

LEGEND

- STORM DRAINAGE TO SEPARATOR
- STORM DRAINAGE TO CITY STORM/RIVER
- PROCESS DRAIN
- RECOVERED OIL TO STORAGE
- SANITARY SEWER
- UNTREATED DRAINAGE
- STORM WATER DIRECTED TO STORM WATER SEPERATOR #001
- PROCESS WATER DIRECTED TO PROCESS SEPARATOR #003

NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE COMBINED STORMWATER POLLUTION CONTROL PLAN (SWPCP) AND ACCIDENTIAL SPILL PREVENTION PLAN (ASPP) DATED JUNE 2009. THIS DRAWING WAS CREATED FROM ALPHA ENGINEERS & CONSTRUCTORS, INC. DWG NO. 0608-C-7010 REV. F AND 0608-C-7011-C.

CLIENT LOGO

CLIENT: ConocoPhillips
5528 N.W. DOANE AVE., PORTLAND, OREGON 97210

AMEC Earth & Environmental
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DWN BY:	DD
CHK'D BY:	LJ/BC
DATUM:	-
PROJECTION:	-
SCALE:	1" = 80'

PROJECT: PORTLAND TERMINAL

TITLE: SITE MAP TANK FARM 3

DATE:	AUGUST 2009
PROJECT NO:	9-61M-12005-0
REV. NO.:	-
FIGURE No.	6

K:\12000\12000\12005\120050\DWG\FIGURE_6_SITE_MAP_TANK_FARM_3.dwg – 11x17 – Aug. 12, 2009 10:40am – patrick.mccarthy

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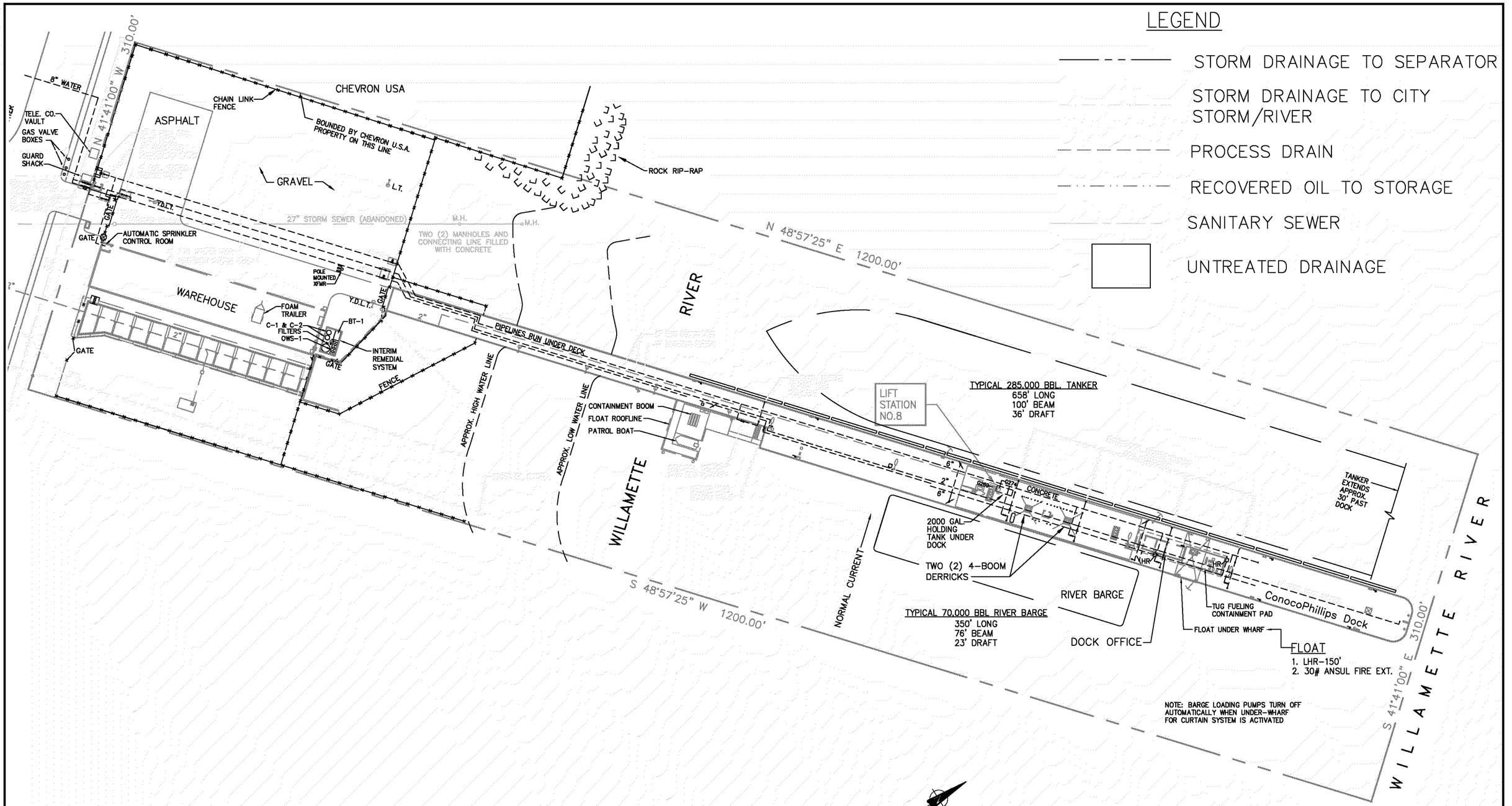


NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE COMBINED STORMWATER POLLUTION CONTROL PLAN (SWPCP) AND ACCIDENTIAL SPILL PREVENTION PLAN (ASPP) DATED JUNE 2009. THIS DRAWING WAS CREATED FROM ALPHA ENGINEERS & CONSTRUCTORS, INC. DWG NO. 0608-C-7010 REV. F AND 0608-C-7011-C.

CLIENT LOGO

CLIENT:
ConocoPhillips
5528 N.W. DOANE AVE., PORTLAND, OREGON 97210

AMEC Earth & Environmental
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DWN BY:	DD
CHK'D BY:	LJ
DATUM:	-
PROJECTION:	-
SCALE:	1" = 80'

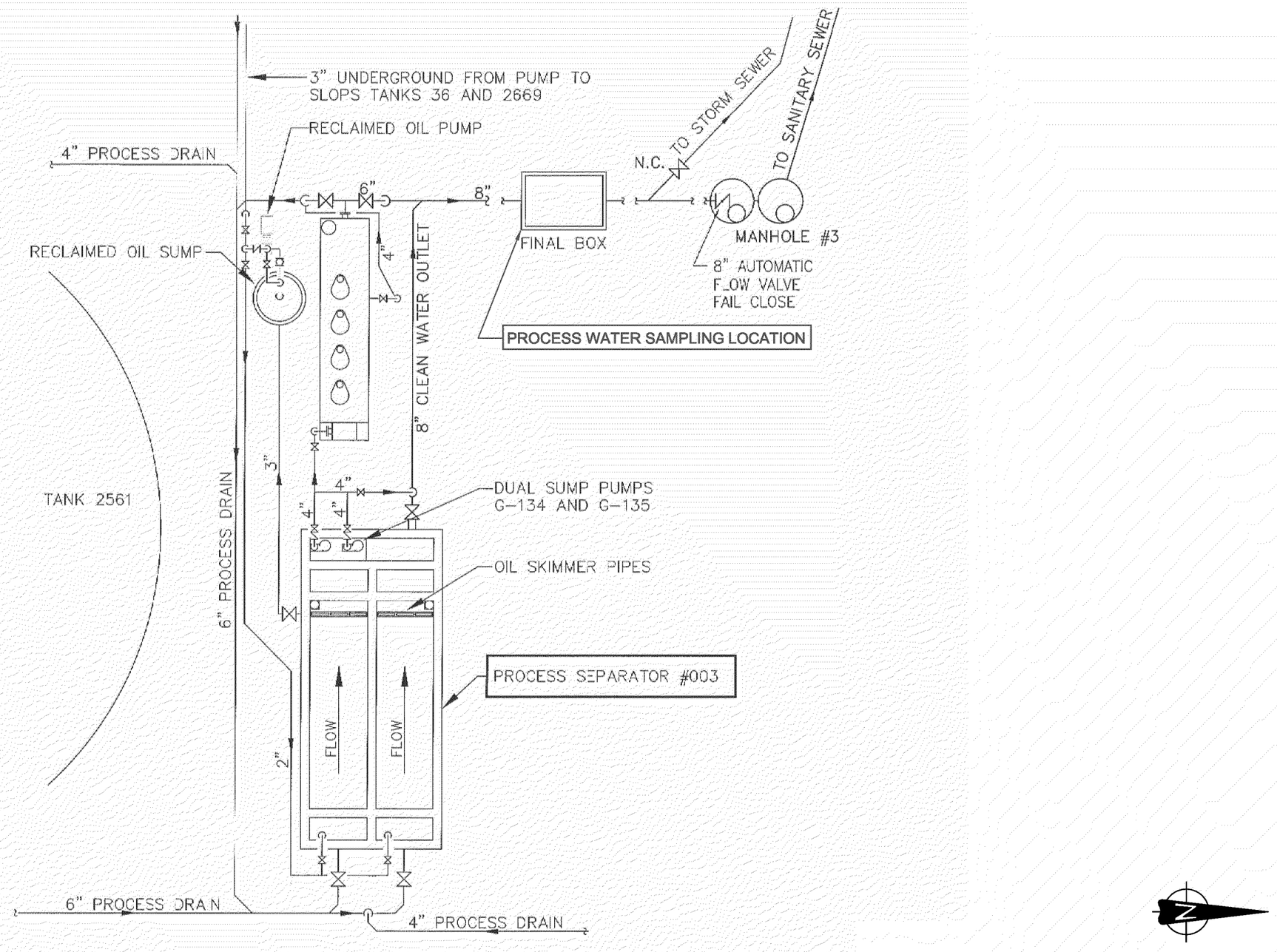
PROJECT: PORTLAND TERMINAL

TITLE: DOCK FACILITIES

DATE:	MAY 2009
PROJECT NO:	9-61M-12005-0
REV. NO.:	-
FIGURE No.	7

K:\12000\12000\120050\DWG\FIGURE_7_DOCK_FACILITIES.dwg – 11x17 – Jun. 02, 2009 10:48am – doug.davis

COP0017191



NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE AMEC EARTH & ENVIRONMENTAL REPORT No. ___ DATED ___.

CLIENT LOGO

CLIENT:
ConocoPhillips
5528 N.W. DOANE AVE., PORTLAND, OREGON 97210

AMEC Earth & Environmental
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DWN BY:	DD
CHK'D BY:	LJ
DATUM:	-
PROJECTION:	-
SCALE:	1" = 100'

PROJECT: PORTLAND TERMINAL

TITLE: PROCESS WATER SAMPLING LOCATION

DATE:	MAY 2009
PROJECT NO:	9-61M-12005-0
REV. NO.:	-
FIGURE No.	8

K:\12000\12000\120050\DWG\FIGURE_8_PROCESS_WATER_SAMPLING_LOC.dwg – – – Jun. 02, 2009 9:31am – doug.davis

COP0017192

APPENDIX A

NPDES 1200-Z General Permit

GENERAL PERMIT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORMWATER DISCHARGE PERMIT

Department of Environmental Quality
811 S.W. Sixth Avenue, Portland, OR 97204
Telephone: (503) 229-5630 or 1-800-452-4011 toll free in Oregon
Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

ISSUED TO:

SOURCES THAT ARE REQUIRED TO OBTAIN COVERAGE UNDER THIS PERMIT

Pursuant to 40 Code of Federal Regulation (CFR) §122.26(b)(14)(i - ix, xi) and OAR 340-045-0033(5), facilities identified in *Table 1: Sources Covered* on p. 3 below that may discharge stormwater from a point source to surface waters or to conveyance systems that discharge to surface waters. These facilities must complete the application and registration procedures to obtain coverage under the permit; see *Permit Coverage and Exclusion from Coverage* on p. 5 below.

Note:
1) Facilities may apply for conditional exclusion from the requirement to register for coverage under this permit if there is no exposure of industrial activities and materials to stormwater pursuant to 40 CFR §122.26(g); see *Permit Coverage and Exclusion from Coverage* on p. 5 below.

2) Sources meeting the description above, but that are excluded from this permit include: (i) Construction activities, asphalt mix batch plants, concrete batch plants and Standard Industrial Classification code 14, *Mining and Quarrying of Nonmetallic Minerals, Except Fuels*. These activities are regulated under separate general permits; and (ii) any source that has obtained a individual NPDES permit for the discharge.

Date: August 23, 2006

Lauri Aunan , Administrator
Water Quality Division

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permit registrant is authorized to construct, install, modify, or operate stormwater treatment or control facilities, and to discharge stormwater to public waters in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

		Page
Permit Coverage and Exclusion From Coverage		5
Schedule A -	Stormwater Pollution Control Plan, Additional Requirements, Limitations, and Benchmarks	8
Schedule B -	Monitoring and Reporting Requirements	15
Schedule C -	Compliance Conditions and Schedules	18
Schedule D -	Special Conditions	20
Schedule F -	General Conditions	22

Unless specifically authorized by this permit, by regulation issued by EPA, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharges to an underground injection control system.

Schedule F contains General Conditions that are included in all general permits issued by DEQ. Should conflicts arise between Schedule F and any other schedule of the permit, the requirements in Schedule F will not apply.

TABLE 1: SOURCES COVERED **Types of Industrial Sources required to obtain coverage under this permit.**
Facilities with the following primary Standard Industrial Classification (SIC) codes: 10 Metal Mining 12 Coal Mining 13 Oil and Gas Extraction 20 Food and Kindred Products 21 Tobacco Products 22 Textile Mill Products 23 Apparel and Other Finished Products Made From Fabrics and Similar Material 24 Lumber and Wood Products, Except Furniture and 2491 Wood Preserving. (Activities with SIC 2411 Logging that are defined in 40 CFR §122.27 as silvicultural point source discharges are covered by this permit.) 25 Furniture and Fixtures 26 Paper and Allied Products 27 Printing, Publishing and Allied Industries 28 Chemicals and Allied Products (excluding 2874 Phosphate Fertilizer Manufacturing) 29 Petroleum Refining and Related Industries 30 Rubber and Miscellaneous Plastics Products 31 Leather and Leather Products 32 Stone, Clay, Glass, and Concrete Products 33 Primary Metal Industries 34 Fabricated Metal Products, Except Machinery and Transportation Equipment 35 Industrial and Commercial Machinery and Computer Equipment 36 Electronic and Other Electrical Equipment and Components, Except Computer Equipment 37 Transportation Equipment 38 Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks 39 Miscellaneous Manufacturing Industries 4221 Farm Product Warehousing and Storage 4222 Refrigerated Warehousing and Storage 4225 General Warehousing and Storage 5015 Motor Vehicle Parts, Used 5093 Scrap and Waste Materials
Facilities with the following primary SIC codes that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations: 40 Railroad Transportation 41 Local and Suburban Transit and Interurban Highway Passenger Transportation 42 Motor Freight Transportation and Warehousing (excluding 4221 Farm Product Warehousing and Storage, 4222 Refrigerated Warehousing and Storage, and 4225 General Warehousing and Storage) 43 United States Postal Service 44 Water Transportation 45 Transportation by Air 5171 Petroleum Bulk Stations and Terminals, except as provided in Note 1 below.
Facilities storing, transferring, formulating, or packaging bulk petroleum products or vegetable oils, except as provided in Note 1 below.
Steam Electric Power Generation including coal handling sites
Landfills, land application sites and open dumps (excluding landfills regulated by 40 CFR §445 that discharge "contaminated stormwater" (as defined by 40 CFR §445.2) to waters of the U.S.)
Hazardous Waste Treatment, Storage and Disposal Facilities [excluding hazardous waste landfills regulated by 40 CFR §445 that discharge "contaminated stormwater" (as defined by 40 CFR §445.2) to waters of the U.S.]

TABLE 1: SOURCES COVERED
Types of Industrial Sources required to obtain coverage under this permit.
Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, recycling, and reclamation of municipal or domestic sewage (including land dedicated to the disposal of sewage sludge that are located within the confines of the facility) with the design flow capacity of 1.0 mgd or more, or required to have a pretreatment program under 40 CFR §403.

Note 1:
Permit registration is not required for a facility covered in Table 1 if discharges are only from:

a) Stormwater that contacts oil-filled electrical equipment in transformer substations that are equipped with properly functioning oil spill prevention measures such as containment areas or oil/water separators.
b) Stormwater that contacts petroleum product receiving or dispensing areas or product dispensing equipment from which product is dispensed to final users, whether or not the stormwater is treated by an oil/water separator.
c) Stormwater that collects in a secondary containment area at a petroleum product dispensing site, where the secondary containment area is associated with storage tanks from which product is dispensed only to final users, and the discharge from the containment area is treated by an oil/water separator.
d) Stormwater that collects in a secondary containment area at a bulk petroleum product storage site, where the total storage capacity at the site does not exceed 150,000 gallons, and the discharge from the containment area is treated by an oil/water separator. A site with multiple containment areas is considered a single site for determining total storage capacity.

PERMIT COVERAGE AND EXCLUSION FROM COVERAGE

1) **New Application for Permit Coverage**
   a) An owner or operator of a new facility or existing facility that is required to be covered under this permit must:
      i) *New facility* - Submit a complete application, which includes a department-approved application form; a Stormwater Pollution Control Plan (SWPCP); and applicable permit fees, to the department or agent at least 60 calendar days before the planned activity that requires permit coverage, unless otherwise approved by the department or agent (see Schedule D for description of agent). If an agent is receiving the application materials, submit two copies of the SWPCP.
      ii) *Existing facility operating without coverage under the permit* - Submit a complete application, which includes a department-approved application form; a SWPCP; and applicable permit fees, to the department or agent immediately. If an agent is receiving the application materials, submit two copies of the SWPCP.
      iii) *Existing facility operating under permit coverage that intends to change industrial processes* - Submit a complete application, which includes a department-approved application form; a SWPCP; and applicable permit fees, to the department or agent at least 60 calendar days before the planned change, unless otherwise approved by the department or agent. If an agent is receiving the application materials, submit two copies of the SWPCP.
   b) Public Review Period on new application and SWPCP*
      i) The application form and SWPCP are subject to a 14-calendar day public review period before permit registration is granted by the department.
      ii) The public review period will not begin if the application form or SWPCP are incomplete.
   c) Registration
      i) The department or agent will notify the applicant in writing if registration is approved or denied. Permit coverage does not begin until the applicant receives written notice from the department or agent that the registration is approved.
      ii) If registration is denied or the applicant does not wish to be regulated by this permit, the applicant may apply for an individual permit in accordance with OAR 340-045-0030.

2) **Renewal Application for Permit Coverage**
   a) An owner or operator of a facility registered under the 1200-Z permit that expires on June 30, 2007 must submit a complete renewal application, which includes a department-approved renewal application form; an updated SWPCP, if revisions to the SWPCP are necessary to address changed conditions or meet new permit requirements of this permit; and applicable permit fees, to the department or agent by January 30, 2007 to ensure uninterrupted permit coverage for industrial stormwater discharges. If an updated SWPCP is not submitted, the department will use the existing SWPCP for public notice purposes.
   b) Public Review Period on renewal application and SWPCP*
      i) The renewal application and SWPCP are subject to a 14-calendar day public review period before permit coverage may be renewed by the department or agent.
      ii) The public review period will not begin if the renewal application or SWPCP are incomplete.
   c) Registration
      i) The department or agent will notify the applicant in writing if registration is approved or denied.
      ii) If registration is denied or the applicant does not wish to be regulated by this permit, the applicant may apply for an individual permit in accordance with OAR 340-045-0030.

* The public review period described in conditions 1.b and 2.b above do not apply to registration applications and accompanying SWPCPs for new or existing facilities that were subject to public notice and comment requirements prior to July 1, 2007.

3. **Name Change or Transfer of Permit Coverage**
   a) For a name change or transfer of permit coverage between legal entities with no industrial process changes at the site, the owner or operator must submit a complete copy of the department-approved Name Change or Permit Transfer application form; an updated SWPCP, if revisions are necessary to address changed conditions, and applicable fees to the department or agent within 30 calendar days of the name change or planned transfer. If submittal is made to the agent, two copies of the SWPCP are required.
   b) The department or agent will notify the applicant in writing if the transfer is approved or denied. The department will transfer coverage under the permit after the department approves the application.
   c) For a name change or transfer of permit coverage between legal entities that intend to change industrial processes, the owner or operator must submit a new application for coverage under this permit as required in condition 1.a.iii above.

4) **"No Exposure" Conditional Exclusion from Permit Coverage**
   a) An owner or operator that applies for a "no exposure" conditional exclusion from coverage under this permit must:
      i) Provide a storm resistant shelter to protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff, except as provided in the Environmental Protection Agency (EPA) *Guidance Manual for Conditional Exclusion from Stormwater Permitting Based on "No Exposure" of Industrial Activities to Stormwater* (EPA 833-B-00-001, June 2000). Storm resistant shelters with unsealed zinc or copper roofing materials are not eligible for the "no exposure" conditional exclusion.
      ii) Ensure that contaminated soil or materials from previous operations is not exposed.
      iii) Complete and sign a certification, on a form approved by the department, that there is no stormwater exposure to industrial materials and activities from the entire facility, except as provided in 40 CFR §122.26(g)(2). The EPA *Guidance Manual (*EPA 833-B-00-001) may be used to determine whether the no exposure criteria are met.
      iv) Submit the signed certification to the department or agent once every five years. If the department or agent does not comment on the "no exposure" certification within 30 days, the "no exposure" conditional exclusion is deemed approved. The department or agent may notify the applicant in writing or by email of its approval. The owner or operator must keep a copy of the certification on site and any notification of approval on site.
      v) Allow the department or agent to inspect the facility to determine compliance with the "no exposure" conditions, and allow the department or agent to make any "no exposure" inspection reports available to the public upon request.
      vi) Submit a copy of the "no exposure" certification to the municipal separate storm sewer system (MS4) operator (i.e., local municipality, district), upon their request, if facility discharges through an MS4; and allow inspection and public reporting by the MS4 operator.
   b) Limitations for obtaining or maintaining the exclusion:
      i) This exclusion is available on a facility-wide basis only, not for individual outfalls.
      ii) If industrial materials or activities become exposed to rain, snow, snow melt, or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who

anticipates changes in circumstances must apply for and obtain permit coverage before the change of circumstances.

iii) The department or agent retains the authority to make a determination that the "no exposure" conditional exclusion no longer applies and require the owner or operator to obtain permit coverage.

5. **Revocation of Permit Coverage** - The department may revoke a permit registrant's coverage under the permit pursuant to OAR 340-045-033(10).

SCHEDULE A
STORMWATER POLLUTION CONTROL PLAN

1. **Preparation and Implementation of Stormwater Pollution Control Plan (SWPCP)**
   a) The permit registrant must ensure that the SWPCP contains the applicable information described in condition A.3.
   b) The SWPCP must be prepared by a person knowledgeable in stormwater management and familiar with the facility.
   c) The name of the person(s) preparing the SWPCP must be included in the plan.
   d) The SWPCP must be signed and certified in accordance with 40 CFR §122.22.
   e) The SWPCP must be implemented according to conditions A.3.c and Schedule C. Failure to implement any portion of the SWPCP constitutes a violation of the permit.
   f) The SWPCP must be kept current and updated as necessary to reflect any changes in facility operation.
   g) A copy of the SWPCP must be kept at the facility and made available upon request to government agencies responsible for stormwater management in the permit registrant's area.

2. **SWPCP Revisions and Actions Plans**
   a) After the permit registration is approved, if the permit registrant proposes to revise its SWPCP or the department or agent require revisions to the SWPCP, the permit registrant must clearly describe these revisions in an Action Plan.
   b) The Action Plan is considered an addendum to the SWPCP and must be prepared in compliance with condition A.1 above.
   c) Within 30 calendar days of making SWPCP revisions, permit registrant must submit an Action Plan to the department or agent for approval. If the department or agent does not comment within 10 business days of receiving the Action Plan, it is deemed approved. Failure to implement any portion of the Action Plan constitutes a violation of the permit.

3. **Required SWPCP Elements**
   a) **Title Page** - The title page of the SWPCP must contain the following information:
      i) Name of the site.
      ii) Name of the site operator or owner.
      iii) Site or file number as indicated on the permit.
      iv) Contact person's name and telephone number.
      v) Physical address, including county, and mailing address if different.

   b) **Site Description** - The SWPCP must contain the following information:
      i) A description of the industrial activities conducted at the site. Include a description of the significant materials (see condition D.3, Definitions) that are stored, used, treated or disposed of in a manner that allows exposure to stormwater. Also describe the methods of storage, usage, treatment or disposal.
      ii) A general location map showing the location of the site in relation to surrounding properties, transportation routes, surface waters and other relevant features.
      iii) A site map including the following:
         (1) drainage patterns;
         (2) drainage and discharge structures (piping, ditches, etc.);
         (3) outline of the drainage area for each stormwater outfall;
         (4) paved areas and buildings within each drainage area;
         (5) areas used for outdoor manufacturing, treatment, storage, or disposal of significant materials;
         (6) existing structural control measures for reducing pollutants in stormwater runoff;

(7) material loading and access areas;
(8) hazardous waste treatment, storage and disposal facilities;
(9) location of wells including waste injection wells, seepage pits, drywells, etc., and
(10) location of springs, wetlands and other surface waterbodies both on site and adjacent to the site.

iv) Estimates of the amount of impervious surface area (including paved areas and building roofs) relative to the total area drained by each stormwater outfall.

v) For each area of the site where a reasonable potential exists for contributing pollutants to stormwater runoff, identify the potential pollutants that could be present in stormwater discharges.

vi) The name(s) of the receiving water(s) for stormwater drainage. If drainage is to a municipal storm sewer system, the name(s) of the ultimate receiving waters and the name of the municipality.

vii) Identification of the discharge outfall(s) and the point(s) where stormwater monitoring will occur as required by Schedule B. If multiple discharge outfalls exist but will not all be monitored, include a description of the outfalls and data or analysis supporting that the outfalls are representative as described in condition B.2.b.

c) **Site Controls** - The permit registrant must develop, implement, and maintain the controls that are appropriate for the site. The purpose of these controls is to eliminate or minimize the exposure of pollutants to stormwater or to remove pollutants from stormwater before it discharges to surface waters. In developing a control strategy, the permit registrant must include the following four (4) types of controls in the SWPCP and describe the specific components of each control:

i) *Stormwater Best Management Practices* - The permit registrant must employ the following types of best management practices that are appropriate for the site. A schedule for implementation of these practices must be included in the SWPCP if the practice has not already been accomplished. This schedule must be consistent with the requirements for implementing the SWPCP in Schedule C of this permit.

(1) Containment - All hazardous substances (see condition D.3, Definitions) must be stored within berms or other secondary containment devices to prevent leaks and spills from contaminating stormwater. If the use of berms or secondary containment devices is not possible, then hazardous substances must be stored in areas that do not drain to the storm sewer system.

(2) Oil and Grease - Oil/water separators, booms, skimmers or other methods must be employed to eliminate or minimize oil and grease contamination of stormwater discharges.

(3) Waste Chemicals and Material Disposal - Wastes must be recycled or properly disposed of in a manner to eliminate or minimize exposure of pollutants to stormwater. All waste contained in bins or dumpsters where there is a potential for drainage of stormwater through the waste must be covered to prevent exposure of stormwater to these pollutants. Acceptable covers include, but are not limited to, storage of bins or dumpsters under roofed areas and use of lids or temporary covers such as tarps.

(4) Erosion and Sediment Control - Erosion control methods such as vegetating exposed areas, graveling or paving must be employed to minimize erosion of soil at the site. Sediment control methods such as detention facilities, vegetated filter strips, bioswales, or other permanent erosion or sediment controls must be employed to minimize sediment loads in stormwater discharges. For activities that involve land disturbance, the permit registrant must contact the local municipality to determine if there are other applicable requirements.

(5) Debris Control - Screens, booms, settling ponds, or other methods must be employed to eliminate or minimize debris in stormwater discharges.
(6) Stormwater Diversion - Stormwater must be diverted away from fueling, manufacturing, treatment, storage, and disposal areas to prevent exposure of uncontaminated stormwater to potential pollutants.
(7) Covering Activities – Fixed fueling, manufacturing, treatment, storage, and disposal areas must be covered to prevent exposure of stormwater to potential pollutants. Acceptable covers include, but are not limited to, permanent structures such as roofs or buildings and temporary covers such as tarps.
(8) Housekeeping - Areas that may contribute pollutants to stormwater must be kept clean. Sweeping, litter pick-up, prompt clean up of spills and leaks, and proper maintenance of vehicles must be employed to eliminate or minimize exposure of stormwater to pollutants.

ii) *Spill Prevention and Response Procedure* - Permit registrant must include in the SWPCP methods to prevent spills along with clean-up and notification procedures. These methods and procedures must be made available to appropriate personnel. The required clean-up material must be on-site or readily available and the location of materials must either be shown on the site drawings or indicated in the text of the SWPCP. Spills prevention plans required by other regulations may be substituted for this provision providing that stormwater management concerns are adequately addressed.

iii) *Preventative Maintenance* - Permit registrant must include in the SWPCP a preventative maintenance program to ensure the effective operation of all stormwater best management practices. At a minimum the program must include:
(1) Monthly inspections of areas where potential spills of significant materials or industrial activities could impact stormwater runoff.
(2) Monthly inspections of stormwater control measures, structures, catch basins, and treatment facilities.
(3) Cleaning, maintenance or repair of all materials handling and storage areas and all stormwater control measures, structures, catch basins, and treatment facilities as needed upon discovery. Cleaning, maintenance, and repair of such systems must be performed in such a manner as to prevent the discharge of pollution.

iv) *Employee Education* - Permit registrant must develop and maintain an employee orientation and education program to inform personnel of the components and goals of the SWPCP. The program must also address spill response procedures and the necessity of good housekeeping practices. A schedule for employee education must be included in the SWPCP. The education and training must occur within 30 calendar days of hiring an employee who works in areas where stormwater is exposed to industrial activities or conducts duties related to the implementation of the SWPCP, and annually thereafter.

d) **Record Keeping and Internal Reporting Procedures** - Permit registrant must record and maintain at the facility the following information, which does not need to be submitted to the department, agent or other government agencies, unless it is requested.
i) Inspection, maintenance, repair and education activities as required by the SWPCP.
ii) Spills or leaks of significant materials (See condition D.3, Definitions) that impacted or had the potential to impact stormwater or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.

ADDITIONAL REQUIREMENTS

4. **Non-Stormwater Discharges**
   a) The following non-stormwater discharges are authorized by this permit:
      i) Discharges from fire-fighting activities.
      ii) Fire hydrant flushings.
      iii) Potable water, including water line flushings.
      iv) Uncontaminated air conditioning condensate.
      v) Irrigation drainage.
      vi) Landscape watering, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions.
      vii) Pavement wash waters where no detergents or hot water are used, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept before washing.
      viii) Routine external building washdown that does not use detergents or hot water.
      ix) Uncontaminated ground water or spring water.
      x) Foundation or footing drains where flows are not contaminated with process materials.
      xi) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).
   b) Piping and drainage systems for interior floor drains and process wastewater discharge points must be separated from the storm drainage system to prevent inadvertent discharge of pollutants to waters of the state. Discharge from floor drains to the stormwater drainage system is a violation of this permit.
   c) Any other wastewater discharge or disposal, including stormwater mixed with wastewater, must be permitted in a separate permit, unless the wastewater is reused or recycled without discharge or disposal, or discharged to the sanitary sewer with approval from the local sanitary authority.

5. **Water Quality Standards**
   a) The permit registrant must not cause a violation of instream water quality standards as established in OAR 340-041.
   b) If the permit registrant develops, implements, and revises its SWPCP in compliance with Schedule A of this permit, the department presumes that the discharges authorized by this permit will comply with instream water quality standards unless the department obtains evidence to the contrary. Coincident samples of the discharge and at upstream and downstream locations in the receiving waterbody must be collected to establish a violation of an instream water quality standard is caused by the discharge.
   c) In instances where the department determines that the permit registrant's stormwater discharges are not complying with instream water quality standards, the department may take enforcement action for violations of the permit and will require the permit registrant to do one or more of the following:
      i) Develop and implement an Action Plan that describes additional effective BMPs to address the parameters of concern and their locations at the site;
      ii) Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is meeting water quality standards; or
      iii) Curtail stormwater pollutant discharges to the extent possible and submit an individual permit application.

6. **Discharges to Impaired Waterbodies** - If a Total Maximum Daily Load (TMDL) Order (see condition D.3, Definitions) is established and the discharge from a permitted source is assigned a

waste load allocation or is required to meet other conditions in the TMDL Order, then an application for an individual or different general permit or other appropriate tools may be required to address the allocation or other requirements.

CODE OF FEDERAL REGULATION STORMWATER DISCHARGE LIMITATIONS

7. **Effluent Limitations** - The permit registrant with the following activities must comply with the applicable limitations:

CFR Industry		Parameter	Limitation	
Category	**Subcategory**			
Cement manufacturing (40 CFR §411)	Materials storage piles runoff	pH	6.0 - 9.0 SU	
		Total Suspended Solids (TSS)	50 mg/l	
Steam powered electric power generating (40 CFR §423)	Coal pile runoff	TSS	50 mg/l, Daily Maximum	
Paving and roofing materials (tars and asphalt) (40 CFR §443)	Runoff from manufacturing of asphalt paving or roofing emulsion	Oil & Grease	15 mg/l, Daily Maximum	10 mg/l, 30 Day Average
		pH	6.0 - 9.0 SU	

STORMWATER DISCHARGE BENCHMARKS

8. **Benchmarks** - Benchmarks are guideline concentrations, not limitations. They are designed to assist the permit registrant in determining whether their SWPCP is effectively reducing pollutant concentrations in stormwater discharged from the site. For facilities that are subject to federal limitations, benchmarks apply to only those pollutants that are not limited by the federal regulations. See condition A.7 for a list of facilities subject to federal limitations.

   The following benchmarks apply to each point source discharge of stormwater associated with industrial activity:

Parameter	Benchmark
Total Copper	0.1 mg/l
Total Lead	0.4 mg/l
Total Zinc	0.6 mg/l
pH*	5.5 – 9.0 SU
Total Suspended Solids*	130 mg/l
Total Oil & Grease*	10 mg/l
E. coli**	406 counts/100 ml
Floating Solids (associated with industrial activities)	No Visible Discharge
Oil & Grease Sheen	No Visible Sheen

   * See condition A.7 for list of facilities subject to federal limitations.

   **The benchmark for E. coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

9. **Response to a Benchmark Exceedance**
   a) If a stormwater sampling result exceeds any of the benchmark values, the permit registrant must, within 30 calendar days of receiving the sampling results, investigate the cause of the elevated pollutant levels, review the SWPCP and submit an Action Plan for department or agent approval.
   b) The purpose of this review is to determine if:
      i) The SWPCP is being followed;
      ii) There are alternative methods for implementing the existing site controls identified in the SWPCP;
      iii) The benchmark exceedance resulted from background or natural conditions not associated with industrial activities at the site; and
      iv) Additional effective site controls are needed to address the parameters of concern.
   c) The Action Plan must contain the following, unless condition A.9.d applies:
      i) The results of the review;
      ii) The corrective actions the permit registrant will take to address the benchmark exceedance; and
      iii) An implementation schedule including alternative methods for implementing existing site controls or methods for implementing additional effective site controls, if the site controls have not already been implemented.
   d) If the permit registrant believes that the benchmark exceedance resulted from natural or

background conditions, the Action Plan must propose a sampling plan and methodology for demonstrating that the elevated pollutant levels are due to background or natural conditions.

e) If the department or agent does not comment on the Action Plan within 10 business days of its receipt, it is deemed approved. The department or agent's approval of the Action Plan does not constitute compliance with this permit.

f) Upon approval, the permit registrant must implement the corrective actions identified in the Action Plan within 60 calendar days, unless otherwise approved by the department or agent.

g) If the department or agent affirms the assertion that background or natural conditions contributed to the benchmark exceedance, the permit registrant is not required to make this demonstration again during the term of this permit.

10. **Benchmark Compliance Evaluation**

a) By June 30th of the 4th year of permit coverage, the permit registrant must evaluate the last four samples collected from each outfall monitored and determine whether the geometric mean of the samples exceeds benchmark(s). This condition is not applicable to a permit registrant with a monitoring waiver as described in condition B.3.

b) The permit registrant must report this information in a Discharge Monitoring Report (DMR) and submit the DMR to the department or agent by July 31st of the 4th year of permit coverage as described in condition B.4.a.

c) If the geometric mean of the samples exceeds benchmark(s), the department will revoke the permit registrant's coverage under this permit and will require the permit registrant to apply for an individual permit pursuant to OAR 340-045-0033(10) and OAR 340-045-0060.

SCHEDULE B
MONITORING AND REPORTING REQUIREMENTS

1. **Minimum Monitoring Requirements** - All permit registrants must monitor stormwater associated with industrial activity for the following:

GRAB SAMPLES OF STORMWATER*	
Parameter	**Frequency****
Total Copper	Four times per Year
Total Lead	Four times per Year
Total Zinc	Four times per Year
pH	Four times per Year
Total Suspended Solids	Four times per Year
Total Oil & Grease	Four times per Year
E. coli***	Four times per Year

* For each outfall monitored, the permit registrant may collect a single grab sample or a series of equal volume grab samples. Samples must be collected from the same storm event.

** The permit registrant is allowed to collect more samples than the minimum frequency requires and must report this data.

***The monitoring for E. coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

VISUAL MONITORING OF STORMWATER	
Parameter	**Frequency**
Floating Solids (associated with industrial activities)	Once per Month (when discharging)
Oil & Grease Sheen	Once per Month (when discharging)

2. **Grab Sampling and Visual Monitoring Procedures and Locations** - The following requirements apply to monitoring conducted in compliance with condition B.1 above.

   a) **Grab Sampling and Visual Monitoring Methodology** - The monitoring period is from July 1 to June 30th. Grab samples must be representative of the discharge and must be taken at least 14 calendar days apart. Two samples must be collected before December 31, and two samples must be collected after January 1. Time or flow-weighted compositing of samples may be used as an alternative to grab samples, except when monitoring for pH, oil and grease, and E. coli. Visual monitoring must occur at outfall(s) or discharge point(s) identified in the SWPCP as outfall(s) or point(s) where stormwater monitoring will occur.

   b) **Multiple Point Source Discharges** - Each stormwater outfall must be monitored unless:
      i) The outfall serves an area with no exposure of stormwater to industrial activities; or
      ii) The outfall has effluent that is substantially similar to the effluent(s) of a monitored outfall and the same BMPs are implemented and maintained at the similar outfalls or drainage areas that lead to the outfalls. Substantially similar effluent(s) are discharges from drainage areas serving comparable activities where the discharges are expected to be similar in composition. The determination of substantial similarity or effluent(s) must be based on past monitoring or an analysis of industrial activities and site

characteristics. The data or analysis supporting that the outfalls are representative must be included in the SWPCP as described in A.3.b.vii.

iii) If sampling points are modified, permit registrants must notify the department or agent and submit an Action Plan as described in condition A.2.c.

c) **Monitoring Location** - All samples must be taken at monitoring points specified in the SWPCP before the stormwater joins or is diluted by any other wastestream, body of water or substance, unless otherwise approved in writing by the department.

d) **Sampling Variance**

i) Permit registrants may request a sampling variance for missed samples if one of the following criteria is met:

a) State or federal authorities declared the year a drought year.

b) Demonstrate that rainfall in the area where the permit registrant's facility is located was 20% or more below the three-year average rainfall for that area.

c) Demonstrate to the department or agent's satisfaction that samples were unable to be collected due to the infrequency of storm events of sufficient magnitude to produce run-off. Supporting data and analysis must be submitted to the department or agent.

ii) Permit registrants must submit to the department or agent a written request for a sampling variance by July 31st of the monitoring year in which the missed sampling occurred.

3. **Monitoring Waiver**

a) **Visual Observations** - There is no reduction allowed of the required visual observations.

b) **Grab Samples** - If at least four consecutive sampling results meet the benchmarks specified in condition A.8, the permit registrant is not required to collect grab samples for the remainder of the permit term. Where the permit registrant demonstrates to the department or agent's satisfaction that a benchmark exceedance resulted from background or natural conditions as described in condition A.9, the department or agent will consider these samples as meeting the benchmark(s) for the purposes of granting a monitoring waiver. There is no reduction in monitoring allowed for facilities subject to CFR limitations as described in condition A.7.

i) Results from sampling events cannot be averaged to meet the benchmarks.

ii) Monitoring waivers may be allowed for individual parameters.

iii) The permit registrant must submit to the department or agent a request to exercise the monitoring waiver that includes the analytical results from the four sampling events. If the department or agent does not comment within 30 calendar days, the monitoring waiver is deemed approved.

c) **Revocation of Monitoring Waiver**

i) The permit registrant must conduct monitoring as specified in condition B.1 if:

a) The department or agent determines that prior monitoring efforts used to establish the monitoring waiver were improper or sampling results were incorrect;

b) The department, agent or permit registrant determines that changes to site conditions are likely to affect stormwater discharge characteristics, or

c) The department, agent or permit registrant conducts additional monitoring and the sampling results exceed benchmark(s).

ii) The department or agent will notify the permit registrant in writing if the monitoring waiver is revoked.

4. **Monitoring Reporting Requirements** - The permit registrant must submit the following to the appropriate DEQ regional office or agent:

   a) **Monitoring Data** - The permit registrant must submit by July 31st of each year grab sampling and visual monitoring results for the previous monitoring period (July 1- June 30). The permit registrant must also report the minimum detection levels and analytical methods for the parameters analyzed. Non-detections must be reported as "ND" with the detection limit in mg/L parentheses, e.g., ND (0.005 mg/L). In calculating the geometric mean as described in condition A.10, one-half of the detection limits must be used for non-detections.

   b) **Report Forms** - The permit registrant must use a department-approved Discharge Monitoring Report (DMR) form for both visual and analytical monitoring results.

SCHEDULE C
COMPLIANCE CONDITIONS AND SCHEDULES

1. **An Existing Permit Registrant** that is either renewing or transferring coverage under the permit where there are no changes to operation or industrial type (for a facility operating under an NPDES stormwater discharge permit prior to July 1, 2007):

   a) Not later than 90 calendar days after renewing or transferring coverage under the permit, permit registrant must implement new site controls identified in the SWPCP to meet new permit requirements.

   b) Site controls that are developed to meet new permit requirements that require capital improvements (see Schedule D.3, Definitions) must be completed in accordance with the schedule set forth in the SWPCP, but must be completed within two years of renewing or transferring coverage under this permit.

2. **A New Permit Registrant with an Existing Facility** (for a facility operating before July 1, 2007, without an NPDES stormwater discharge permit):

   a) Not later than 90 calendar days after obtaining permit coverage, the permit registrant must implement site controls identified in the SWPCP to meet the new permit requirements.

   b) Site controls that are developed to meet new permit requirements that require capital improvements (see Schedule D.3, Definitions) must be completed in accordance with the schedule set forth in the SWPCP, but must be completed within two years of obtaining permit coverage.

3. **A New Permit Registrant with a New Facility** (for a facility beginning operation after July 1, 2007 without an NPDES stormwater discharge permit):

   a) A permit registrant must begin implementation of the SWPCP before starting operations. Not later than 90 calendar days after obtaining permit coverage, the permit registrant must fully implement site controls identified in the SWPCP.

   b) Site controls that require capital improvements (see Schedule D.3, Definitions), must be completed in accordance with the schedule set forth in the SWPCP, but must be completed within two years of obtaining permit coverage.

4. **A New Permit Registrant Discharging to Clackamas River, McKenzie River above Hayden Bridge (River Mile 15) or North Santiam River** (For potential or existing dischargers that did not have a permit prior to January 28, 1994, and existing dischargers that have a NPDES stormwater discharge permit but request an increased load limitation.)

   a) Not later than 180 calendar days after obtaining permit coverage, permit registrant must submit to the department a monitoring and water quality evaluation program. This program must be effective in evaluating the in-stream impacts of the discharge as required by OAR 340-041-0470.

   b) Within 30 calendar days of department approval, the permit registrant must implement the monitoring and water quality evaluation program.

SCHEDULE D
SPECIAL CONDITIONS

1. **Releases in Excess of Reportable Quantities.** This permit does not relieve the permit registrant of the reporting requirements of 40 CFR §117 Determination of Reportable Quantities for Hazardous Substances and 40 CFR §302 Designation, Reportable Quantities, and Notification.

2. **Availability of SWPCP and Monitoring Data.** The Stormwater Pollution Control Plan (SWPCP) or stormwater monitoring data must be made available to government agencies responsible for stormwater management in the permit registrant's area.

3. **Definitions**

   a) *Action Plan* means an addendum to the SWPCP developed in response to modification to the SWPCP or in response to a benchmark exceedance.

   b) *Capital Improvements* means the following improvements that require capital expenditures:
      i) Treatment best management practices including but not limited to settling basins, oil/water separation equipment, catch basins, grassy swales, detention/retention basins, and media filtration devices.
      ii) Manufacturing modifications that incur capital expenditures, including process changes for reduction of pollutants or wastes at the source.
      iii) Concrete pads, dikes and conveyance or pumping systems utilized for collection and transfer of stormwater to treatment systems.
      iv) Roofs and appropriate covers for manufacturing areas.

   c) *Hazardous Substances* as defined in 40 CFR §302 Designation, Reportable Quantities, and Notification.

   d) *Material Handling Activities* include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.

   e) *Point Source Discharge* means a discharge from any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, or conduit.

   f) *Significant Materials* includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with stormwater discharges.

   g) *Site Controls* is analogous to Best Management Practices.

   h) *Stormwater Associated With Industrial Activity* includes, but is not limited to, stormwater discharges from the following:
      - Industrial plant yards

- Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility
- Material handling sites (Material handling activities include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.)
- Refuse sites
- Sites used for the application or disposal of process waste waters (as defined in 40 CFR § 401)
- Sites used for storage or maintenance of material handling equipment
- Sites used for residual treatment, storage, or disposal; shipping and receiving areas
- Manufacturing buildings
- Storage areas (including tank farms) for raw materials, and intermediate and finished products
- Areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. Significant materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with stormwater discharges.

i) *Stormwater Conveyance* means a sewer, ditch, or swale that is designed to carry stormwater; a stormwater conveyance may also be referred to as a storm drain or storm sewer.

j) *Total Maximum Daily Load (TMDL)* is the sum of the individual Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources and background. If a receiving water body has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

4. **Local Public Agencies Acting as the Department's Agent**

The department authorizes local public agencies to act as its agent in implementing this permit if they entered into a Memorandum of Agreement (MOA). The agent may be authorized to conduct the following activities, including but not limited to: application review and approval, inspections, monitoring data review, stormwater and wastewater monitoring, SWPCP review, and verification and approval of no-exposure certifications. Where the department has entered into such an agreement, the department or its agent must notify the permit registrant of where to submit no-exposure certifications, and other notifications or correspondence associated with this permit. Annual discharge monitoring reports, including analytical monitoring data and visual monitoring results, SWPCPs and Actions Plans must be submitted to both the department and the agent.

SCHEDULE F
NPDES GENERAL CONDITIONS – INDUSTRIAL FACILITIES

SECTION A. STANDARD CONDITIONS

1. Duty to Comply
The permit registrant must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and 40 CFR 122.41(a) and is grounds for enforcement action; for permit termination, revocation, reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Water Pollution and Permit Condition Violations
ORS 468.140 allows the department to impose civil penalties up to $10,000 per day for violation of a term, condition, or requirement of a permit. Additionally, 40 CFR 122.41, modified by 40 CFR 19.4, provides that any person who violates any permit condition, term, or requirement may be subject to a federal civil penalty not to exceed $32,500 per day of each violation.

Under ORS 468.943 and 40 CFR 122.41, modified by 40 CFR 19.4, unlawful water pollution, if committed by a person with criminal negligence, is punishable by a fine of up to $32,500 or by imprisonment for not more than one year, or by both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, a person who knowingly discharges, places or causes to be placed any waste into the waters of the state or in a location where the waste is likely to escape into the waters of the state, is subject to a Class B felony punishable by a fine not to exceed $200,000 and up to 10 years in prison. Additionally, under 40 CFR §122.41(a) any person who knowingly discharges, places, or causes to be placed any waste into the waters of the state or in a location where the waste is likely to escape into the waters of the state is subject to a federal civil penalty not to exceed $100,000, and up to 6 years in prison.

3. Duty to Mitigate
The permit registrant must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permit registrant must correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

4. Duty to Reapply
If the permit registrant wishes to continue an activity regulated by this permit after the expiration date of this permit, the permit registrant must apply to have the permit renewed. The application must be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions
This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;
b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts;
c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;
d. The permit registrant is identified as a Designated Management Agency or allocated a wasteload under a Total Maximum Daily Load (TMDL);
e. New information or regulations;
f. Modification of compliance schedules;
g. Requirements of permit re-opener conditions;
h. Correction of technical mistakes made in determining permit conditions;
i. Determination that the permitted activity endangers human health or the environment, or
j. Other causes as specified in 40 CFR §§122.62, 122.64, and 124.5.

The filing of a request by the permit registrant for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants
The permit registrant must comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights
The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References
Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance
The permit registrant must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permit registrant to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permit registrant only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity
For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permit registrant must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permit registrant in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities
   a. Definitions
      (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
      (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

   b. Prohibition of bypass.
      (1) Bypass is prohibited unless:
         (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;
         (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
         (c) The permit registrant submitted notices and requests as required under General Condition B.3.c.
      (2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).

c. Notice and request for bypass.
   (1) Anticipated bypass. If the permit registrant knows in advance of the need for a bypass, it must submit prior written notice, if possible at least ten days before the date of the bypass.
   (2) Unanticipated bypass. The permit registrant must submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset
   a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permit registrant. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

   b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of General Condition B.4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

   c. Conditions necessary for a demonstration of upset. A permit registrant who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      (1) An upset occurred and that the permit registrant can identify the causes(s) of the upset;
      (2) The permitted facility was at the time being properly operated;
      (3) The permit registrant submitted notice of the upset as required in General Condition D.5, hereof (24-hour notice); and
      (4) The permit registrant complied with any remedial measures required under General Condition A.3 hereof.

   d. Burden of proof. In any enforcement proceeding the permit registrant seeking to establish the occurrence of an upset has the burden of proof.

5. Treatment of Single Operational Event
   For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter must be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations
   a. Definitions
      (1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.
      (2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.
      (3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

   b. Prohibition of overflows. Overflows are prohibited unless:
      (1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;
      (2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and
      (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.

   c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permit registrant becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow
If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permit registrant must take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances
Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling
Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of the Director.

2. Flow Measurements
Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures
Monitoring must be conducted according to test procedures approved under 40 CFR §136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering
The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit must, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than $20,000 per day of violation, or by imprisonment of not more than four years or both.

5. Reporting of Monitoring Results
Monitoring results must be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permit registrant
If the permit registrant monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR §136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency must also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value must be recorded unless otherwise specified in this permit.

7. Averaging of Measurements
Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean, except for bacteria which must be averaged as specified in this permit.

8. Retention of Records
Except for records of monitoring information required by this permit related to the permit registrant's sewage sludge use and disposal activities, which must be retained for a period of at least five years (or longer as required by 40 CFR §503), the permit registrant must retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents
Records of monitoring information must include:
   a. The date, exact place, time and methods of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

10. Inspection and Entry
The permit registrant must allow the Director, or an authorized representative upon the presentation of credentials to:
   a. Enter upon the permit registrant's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
   d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes
The permit registrant must comply with Oregon Administrative Rules (OAR) 340, Division 052, "Review of Plans and Specifications". Except where exempted under OAR 340-052, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers must be commenced until the plans and specifications are submitted to and approved by the Department. The permit registrant must give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance
The permit registrant must give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers
This permit may be transferred to a new permit registrant provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit must be transferred to a third party without prior written approval from the Director. The permit registrant must notify the Department when a transfer of property interest takes place.

4. Compliance Schedule
Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance must include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting
The permit registrant must report any noncompliance which may endanger health or the environment. Any information must be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permit registrant becomes

aware of the circumstances. During normal business hours, the Department's Regional office must be called. Outside of normal business hours, the Department must be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission must also be provided within 5 days of the time the permit registrant becomes aware of the circumstances. If the permit registrant is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission must contain:

a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected;
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
e. Public notification steps taken, pursuant to General Condition B.7.

The following must be included as information which must be reported within 24 hours under this paragraph:

a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
b. Any upset which exceeds any effluent limitation in this permit.
c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance
The permit registrant must report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports must contain:
a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected; and
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information
The permit registrant must furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permit registrant must also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permit registrant becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it must promptly submit such facts or information.

8. Signatory Requirements
All applications, reports or information submitted to the Department must be signed and certified in accordance with 40 CFR §122.22.

9. Falsification of Reports
Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed $100,000 per violation and up to 5 years in prison.

SECTION E. DEFINITIONS

1. BOD means five-day biochemical oxygen demand.
2. TSS means total suspended solids.
3. mg/l means milligrams per liter.
4. kg means kilograms.
5. m^3/d means cubic meters per day.
6. MGD means million gallons per day.
7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.

8. FC means fecal coliform bacteria.
9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR §125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-041.
10. CBOD means five day carbonaceous biochemical oxygen demand.
11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
12. Quarter means January through March, April through June, July through September, or October through December.
13. Month means calendar month.
14. Week means a calendar week of Sunday through Saturday.
15. Total residual chlorine means combined chlorine forms plus free residual chlorine.
16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
17. POTW means a publicly owned treatment works.

APPENDIX B

Discharge Monitoring Report and
Self Monitoring Report Samples

Valerie Uyeda
ConocoPhillips Company
3900 Kilroy Airport Way, Suite 210
Long Beach, CA 90806
562-290-1715

ConocoPhillips

July 1, 2009

CERTIFIED MAIL 7007 1490 0004 6459 5232

Mr. Timothy P. Dean
Permit Manager – Industrial Stormwater Section
City of Portland Bureau of Environmental Services
6543 N. Burlington Avenue
Portland, Oregon 97203-5452

Subject: **Industrial Stormwater Discharge Monitoring Report -1200-Z Permit**
ConocoPhillips Portland Terminal
5528 NW Doane Ave Portland, OR 97210

Dear Mr. Dean

Enclosed please find the Industrial Stormwater Discharge Monitoring Report for July 1, 2008 through June 30, 2009 and the accompanying laboratory analysis. During the reporting period, ConocoPhillips reported two benchmark exceedances as summarized below.

Oil & Grease - November 3, 2008

Oil and grease concentration of 23.4 mg/l was detected in Separator 002. A response to the benchmark exceedance and action plan were submitted to your office on December 1, 2008.

Oil & Grease – April 15, 2009

Oil and grease concentrations of 15.7 mg/l and 16.5 mg/l were detected in Separator 001 and Separator 002, respectively. A response to the benchmark exceedance and action plan were submitted to your office on May 15, 2009.

ConocoPhillips takes benchmark exceedances seriously and will continue to implement facility improvements and best management practices to minimize oil and grease in the stormwater system. If you have any questions, please contact Tom Lyons, Terminal Supervisor, at (503) 248-1572 or myself at (562) 290-1715.

Sincerely,

Valerie J. Uyeda
Environmental Coordinator

Attachments

cc: Mr. Tom Rosetta, Oregon Department of Environmental Quality

T. Lyons, ConocoPhillips Terminal Supervisor
DRM code: ENV 140.0400 HSE920 5Y

COP0017224

Industrial Stormwater Discharge Monitoring Report - 1200-Z Permit

Permittee Legal Name:	ConocoPhillips Company	*ODEQ File No./Facility ID:*	90845 / OR000138-4
Facility Common Name:	ConocoPhillips Portland Terminal	Reporting Period:	July 1, 2008 to June 30, 2009
Facility Location:	Portland, OR	Laboratory Name:	Columbia Inspection
County:	Multnomah	Laboratory ORELAP #:	

DEQ
State of Oregon Department of Environmental Quality

Monitor for the following pollutants at sampling point(s) specified in your SWPCP. Add more sheets if necessary (e.g., if more than 4 samples are collected per pollutant or facility has more than 4 sampling points). You MUST also attach a copy of laboratory results sheet(s) and associated QA/QC information to this form.

Name or Number of Sampling Point(s) (group data per sampling point)	Sample Date	pH **	Suspended Solids, Total **	Oil and Grease, Total **	Copper, Total	Lead, Total	Zinc, Total	E. coli *
		s.u.	mg/L	mg/L	mg/L	mg/L	mg/L	counts/100 ml
Separator 001	12/8/2008	6.28	ND (10.0)	6.8	ND (0.020)	ND (0.010)	0.083	
Separator 001	12/29/2008	6.05	64	ND (6.0)	ND (0.020)	0.011	0.11	
Separator 001	4/15/2009	6.4	21	15.7	ND (0.036)	ND (0.020)	0.062	
Separator 001	5/6/2009	6.14	ND (10.0)	ND (6.0)	ND (0.036)	ND (0.020)	ND (0.020)	
Geometric Mean (Note 4)		**6.216**	**15.042**	**5.568**	**0.019**	**0.009**	**0.049**	
Separator 002	12/8/2008	5.82	ND (10.0)	ND (6.0)	ND (0.020)	ND (0.010)	0.085	
Separator 002	12/29/2008	6.12	62	6.8	ND (0.020)	0.015	0.15	
Separator 002	4/15/2009	5.9	ND (10.0)	16.5	ND (0.036)	ND (0.020)	0.09	
Separator 002	5/6/2009	5.59	ND (10.0)	ND (6.0)	ND (0.036)	ND (0.020)	0.054	
Geometric Mean (Note 4)		**5.854**	**9.383**	**5.637**	**0.019**	**0.009**	**0.089**	
Separator 004	12/8/2008	6.56	ND (10.0)	ND (6.0)	ND (0.020)	ND (0.010)	0.082	
Separator 004	12/29/2008	7.08	ND (10.0)	ND (6.0)	ND (0.020)	ND (0.010)	0.036	
Separator 004	4/15/2009	7.1	ND (10.0)	ND (6.0)	ND (0.036)	ND (0.020)	0.052	
Separator 004	5/6/2009	6.43	10	6.9	ND (0.036)	ND (0.020)	0.038	
Geometric Mean (Note 4)		**6.786**	**5.946**	**3.694**	**0.019**	**0.007**	**0.049**	
Geometric Mean (Note 4)								
Permit Benchmark		**5.5 - 9.0**	**130**	**10**	**0.1**	**0.4**	**0.6**	**406**

* Only applies to landfills accepting septage/biosolids and sewage treatment plants.

** Effluent limits for these parameters apply to some industries - see permit, Schedule A.7.

Note 1: Submit this report to the appropriate DEQ regional or agent offices (see below) annually by July 31st. The report must contain the results of all stormwater monitoring conducted during the year. If you have a monitoring waiver for one or more of the pollutant(s), please report "M" in the column(s)-see permit-Schedule B.3.

Note 2: Non-detects must be reported as "ND" along with the applicable method detection limit in parentheses - e.g. ND (0.001).

Note 3: If a stormwater sampling result exceeds any of the benchmark values, the permit registrant must, within 30 calendar days of receiving the sampling results, investigate the cause of the benchmark exceedance(s), review the SWPCP and submit an Action Plan for department or agent approval.

Note 4: For the 4th year of coverage under the permit that became effective on July 1, 2007, report the geometric mean value of the last 4 samples collected for each pollutant parameter, from each sampling point. The geometric mean value is automatically calculated if using the Excel version of the DMR form.

Name/Title Principal Executive Officer or Authorized Delegate

(Please Print) TOM LYONS

Telephone: 503-248-1572 *Email:* thomas.lyons@conocophillips.com

I certify, under penalty of law, that this document and all attachments were prepared under my direct supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Sign here: Tom Lyons Date July 6, 2009

See reverse side for additic visual monitoring requirements

07-WQ-001f

Monthly Visual Observations

Record Visual Observations for Oil and Grease Sheen and Floating Solids:

Oil and Grease Sheen - No visible sheen allowed. Monthly observation when discharging. For months when no discharges occur, please write in "No Discharge" for that month.

Floating Solids (associated with industrial activities) – No visible discharge allowed. Monthly observation when discharging. For months when no discharges occur, please write in "No Discharge" for that month.

	Date	Observations (please note the sampling point(s) name or number)
July	No discharge	Separator 001, Separator 002, Separator 004
August	8/20/2008 8/20/2008	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no discharge
September	No discharge	Separator 001, Separator 002, Separator 004
October	10/3/2008 10/3/2008	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no discharge
November	11/1/2008 11/3/2008 11/1/2008	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no visible oil and grease sheen, no visible floating solids
December	12/8/2008 12/2/2008 12/8/2008	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no visible oil and grease sheen, no visible floating solids
January	1/1/2009 1/1/2009 1/1/2009	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no visible oil and grease sheen, no visible floating solids
February	2/24/09	Separator 001 - no discharge Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no discharge
March	3/15/2009 3/30/2009 3/1/2009	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no visible oil and grease sheen, no visible floating solids
April	4/2/2009 4/2/2009 4/2/2009	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no visible oil and grease sheen, no visible floating solids
May	5/2/2009 5/2/2009 5/2/2009	Separator 001 - no visible oil and grease sheen, no visible floating solids Separator 002 - no visible oil and grease sheen, no visible floating solids Separator 004 - no visible oil and grease sheen, no visible floating solids
June	No discharge	Separator 001, Separator 002, Separator 004

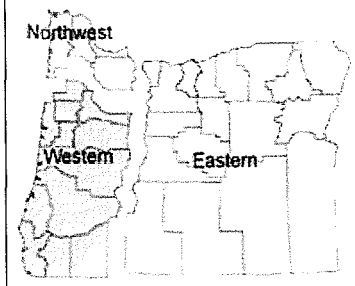
For facilities located within the following local jurisdictions, please submit one (1) copy of this report and laboratory results sheet(s) and QA/QC documentation to the local jurisdiction annually by July 31st:

Clean Water Services
Industrial Stormwater
2550 SW Hillsboro Hwy.
Hillsboro, OR 97123

City of Portland
Industrial Stormwater
Section
Water Pollution Control Lab
6543 N Burlington Ave.
Portland, OR 97203-5452

City of Eugene
Industrial Source Control
410 River Ave.
Eugene, OR 97404

For all other locations, please submit one (1) copy of this report and laboratory results sheet(s) and the QA/QC documentation to the appropriate DEQ regional office annually by July 31st:



DEQ Northwest Region Office
2020 SW 4th Ave. Suite 400
Portland, OR 97201
Phone: (503) 229-5263
Hours: 8 am - 5 pm

DEQ Eastern Region Office
300 SE Reed Market Rd.
Bend, OR 97702-2237
Phone: (541) 388-6146
Hours: 8 am - 5 pm

DEQ Western Region Office
(Benton, Lincoln, Marion,
Polk, and Yamhill counties)
750 Front St NE, #120
Salem, OR 97301-1039
Phone: (503) 378-8240
Hours: Mon - Thurs: 8 am - 5 pm
Fri: 8 am - noon, 1 - 5 pm

DEQ Western Region Office
(Lane and Linn counties)
1102 Lincoln St. Suite 210
Eugene, OR 97401
Phone: (541) 686-7838
Hours: 8 am - 5 pm

DEQ Western Region Office
(Coos, Curry, Douglas, Jackson,
and Josephine counties)
221 Stewart Ave. Suite 201
Medford, OR 97501
Phone: (541) 776-6010
Hours: 8 am – noon, 1 - 5 pm

CERTIFICATE OF ANALYSIS

CLIENT: Conoco Phillips - Portland
ATTN: Andrew Janke
5528 NW Doane Avenue
Portland OR, 97210

PHONE: (503) 248-1565
FAX: (503) 248-1522

PROJECT NAME: 1200Z

ORIGINAL

REGULATORY SAMPLES TAKEN

SUBMITTED: 12/08/08 12:19

REPORT DATE: 12/10/08 16:01 **REPORT NUMBER: 8120805** **PAGE: 1 OF 6**

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
8120805-01	001	12/08/2008	1015	Water
8120805-01	001	12/08/2008	1015	Water
8120805-02	002	12/08/2008	1040	Water
8120805-02	002	12/08/2008	1040	Water
8120805-03	004	12/08/2008	1110	Water
8120805-03	004	12/08/2008	1110	Water

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME	NOTES
8120805-01	**SAMPLE ID: 001**							
General Bench Analysis								
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	6.8	mg/L	6.0	SOB	12/09/2008 11:54	
PH	SM 4500 H+ B	pH	6.28	SU		DK	12/08/2008 13:14	
		TEMPERATURE (C)	13.7	SU				
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	DK	12/10/2008 15:15	
Total Metals by Inductively Coupled Plasma								
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.020	AJH	12/10/2008 13:05	
LEAD - ICP		LEAD	ND	mg/L	0.010	AJH	12/10/2008 13:05	
ZINC - ICP		ZINC	0.083	mg/L	0.020	AJH	12/10/2008 13:05	
8120805-02	**SAMPLE ID: 002**							
General Bench Analysis								
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	SOB	12/09/2008 11:54	
PH	SM 4500 H+ B	pH	6.82	SU		DK	12/08/2008 13:14	
		TEMPERATURE (C)	12.8	SU				
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	DK	12/10/2008 15:15	
Total Metals by Inductively Coupled Plasma								
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.020	AJH	12/10/2008 13:11	
LEAD - ICP		LEAD	ND	mg/L	0.010	AJH	12/10/2008 13:11	
ZINC - ICP		ZINC	0.085	mg/L	0.020	AJH	12/10/2008 13:11	
8120805-03	**SAMPLE ID: 004**							
General Bench Analysis								
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	SOB	12/09/2008 11:54	
PH	SM 4500 H+ B	pH	6.56	SU		DK	12/08/2008 13:14	
		TEMPERATURE (C)	12.5	SU				

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Authorized for Release By:

Morgan Schafer - QAQC Director

COP0017226

CERTIFICATE OF ANALYSIS

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	DETECTION LIMIT	TECH	DATE/TIME	NOTES
8120805-03	**SAMPLE ID: 004**							
General Bench Analysis								
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	DK	12/10/2008 15:15	
Total Metals by Inductively Coupled Plasma								
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.020	AJH	12/10/2008 13:17	
LEAD - ICP		LEAD	ND	mg/L	0.010	AJH	12/10/2008 13:17	
ZINC - ICP		ZINC	0.082	mg/L	0.020	AJH	12/10/2008 13:17	

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General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L08003 - * DEFAULT PREP *** **										
QC SAMPLE: Blank (8L08003-BLK1)					Prepared & Analyzed: 12/08/08					
OIL/GREASE, TOTAL	ND	2.0	mg/L							
QC SAMPLE: LCS (8L08003-BS1)					Prepared & Analyzed: 12/08/08					
OIL/GREASE, TOTAL	33.9	6.0	mg/L	40.5		83.7	79-114			
QC SAMPLE: LCS Dup (8L08003-BSD1)					Prepared & Analyzed: 12/08/08					
OIL/GREASE, TOTAL	36.8	6.0	mg/L	40.5		90.9	79-114	8.20	18	
BATCH: Batch 8L08005 - General Preparation										
QC SAMPLE: Duplicate (8L08005-DUP1)					Source: 8120805-03 Prepared & Analyzed: 12/08/08					
pH	6.70		SU		6.56			2.11	10	
TEMPERATURE (C)	12.6		"		12.5			0.797	200	
QC SAMPLE: Reference (8L08005-SRM1)					Prepared & Analyzed: 12/08/08					
pH	4.97		SU	5.00		99.4	97.5-102.			
QC SAMPLE: Reference (8L08005-SRM2)					Prepared & Analyzed: 12/08/08					
pH	8.01		SU	8.00		100	97.5-102.			
BATCH: Batch 8L09009 - General Preparation										
QC SAMPLE: Blank (8L09009-BLK1)					Prepared: 12/09/08 Analyzed: 12/10/08					
SUSPENDED SOLIDS, TOTAL	ND	10.0	mg/L							
QC SAMPLE: Duplicate (8L09009-DUP1)					Source: 8120805-03 Prepared: 12/09/08 Analyzed: 12/10/08					
SUSPENDED SOLIDS, TOTAL	ND	10.0	mg/L		ND				20	

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General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L09009 - General Preparation										
QC SAMPLE: Reference (8L09009-SRM1)					Prepared: 12/09/08 Analyzed: 12/10/08					
SUSPENDED SOLIDS, TOTAL	54.0	10.0	mg/L	51.8		104	78-114			

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L09002 - ***Metals Prep* **										
QC SAMPLE: Blank (8L09002-BLK1)					Prepared: 12/09/08 Analyzed: 12/10/08					
COPPER	0.027	0.020	mg/L							
LEAD	ND	0.010	"							
ZINC	0.044	0.020	"							
QC SAMPLE: LCS (8L09002-BS1)					Prepared: 12/09/08 Analyzed: 12/10/08					
COPPER	0.203	0.020	mg/L	0.200		102	85-115			
LEAD	0.201	0.010	"	0.200		100	85-115			
ZINC	0.200	0.020	"	0.200		100	85-115			
QC SAMPLE: LCS Dup (8L09002-BSD1)					Prepared: 12/09/08 Analyzed: 12/10/08					
COPPER	0.194	0.020	mg/L	0.200		97.0	85-115	4.53	15	
LEAD	0.198	0.010	"	0.200		99.0	85-115	1.50	15	
ZINC	0.193	0.020	"	0.200		96.6	85-115	3.56	15	
QC SAMPLE: Calibration Blank (8L09002-CCB1)					Prepared: 12/09/08 Analyzed: 12/10/08					
COPPER	ND	0.020	mg/L							
LEAD	ND	0.010	"							
ZINC	ND	0.020	"							
QC SAMPLE: Calibration Blank (8L09002-CCB2)					Prepared: 12/09/08 Analyzed: 12/10/08					
COPPER	ND	0.020	mg/L							
LEAD	ND	0.010	"							
ZINC	ND	0.020	"							
QC SAMPLE: Calibration Blank (8L09002-CCB3)					Prepared: 12/09/08 Analyzed: 12/10/08					
COPPER	ND	0.020	mg/L							
LEAD	ND	0.010	"							
ZINC	ND	0.020	"							

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CERTIFICATE OF ANALYSIS

Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L09002 - ***Metals Prep*										
QC SAMPLE: Matrix Spike (8L09002-MS1)				Source: 8120506-01		Prepared: 12/09/08	Analyzed: 12/10/08			
COPPER	0.269	0.020	mg/L	0.200	0.070	99.5	80-120			
LEAD	0.375	0.010	"	0.200	0.185	95.0	80-120			
ZINC	1.40	0.020	"	0.200	1.2	100	80-120			
QC SAMPLE: Matrix Spike Dup (8L09002-MSD1)				Source: 8120506-01		Prepared: 12/09/08	Analyzed: 12/10/08			
COPPER	0.272	0.020	mg/L	0.200	0.070	101	80-120	1.11	15	
LEAD	0.383	0.010	"	0.200	0.185	99.0	80-120	2.11	15	
ZINC	1.44	0.020	"	0.200	1.2	120	80-120	2.82	15	
QC SAMPLE: Reference (8L09002-SRM1)						Prepared: 12/09/08	Analyzed: 12/10/08			
COPPER	1.91		mg/L	2.00		95.5	85-115			
LEAD	1.93		"	2.00		96.5	85-115			
ZINC	1.96		"	2.00		98.0	85-115			
QC SAMPLE: Reference (8L09002-SRM2)						Prepared: 12/09/08	Analyzed: 12/10/08			
COPPER	1.89		mg/L	2.00		94.5	85-115			
LEAD	1.94		"	2.00		97.0	85-115			
ZINC	1.97		"	2.00		98.5	85-115			
QC SAMPLE: Reference (8L09002-SRM3)						Prepared: 12/09/08	Analyzed: 12/10/08			
COPPER	1.90		mg/L	2.00		95.0	85-115			
	1.92		"	2.00		96.0	85-115			
	1.94		"	2.00		97.0	85-115			

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COLUMBIA INSPECTION, INC.

CHAIN OF CUSTODY RECORD
AND
NON-COMMERCIAL BILL OF LADING

☐ 7133 N. Lombard, Portland, OR 97203 — Ph: (503) 286-9464 Fax: (503) 285-7831
☐ 4901 E. 20th Street, Fife, WA 98424 — Ph: (253) 922-8781 Fax: (253) 922-8957
☐ 4592 E 2nd Street, Ste 'A', Benicia, CA 94510 — Ph: (707) 748-7587 Fax: (707) 748-7764
☐ 797 Channel Street, San Pedro, CA 90731 — Ph: (310) 833-1557 Fax: (310) 833-1585

Customer Name: Conoco Phillips
Attention: Andrew, Tom, Rob
Address: 5528 NW Dorne Ave
Phone: (503) 248-1565
Fax: (503) 248-1522
Sampler: HBB ☐ Submitted
andrew.jacke@conocophillips.com

Project Name: 12008
Project Number: STORM. [illegible]
P.O. Number:

Testing Priority: ☐ Normal ☒ Rush 24 hr turn
Due Date: O&G, Ph.

Notification Method(s): ☐ Telephone ☐ Email ☐ Mail

Analysis To Be Performed

Sample id#	Sample Description/UN Number	Sample Matrix	Sample Date	Sample Time	Ph		TSS		O&G		Metals			Field Ph.				
001	UNPRESERVED	method 150.1 method 160.1	12-8-03	1015	X		X											
001	H_2SO_4 (SULFURIC ACID)	method 1664	12-8-03	1015					X					6.96	@ 8.62			
001	HNO_3 (metals)	method 200.7	12-8-03	1015							X							
002	UNPRESERVED	method 150.1 method 160.1	12-8-08	1040	X	X												
002	H_2SO_4 (SULFURIC ACID)	method 1664	12-8-08	[illegible]					X					6.69	@ 11.3			
002	HNO_3 (metals)	method 200.7	12-8-08	[illegible]							X							
004	UNPRESERVED	method 150.1 method 160.1	12-8-03	1110	X	X												
004	H_2SO_4 (SULFURIC ACID	method 1664	12-8-03	1110					X					7.45	@ 9.4			
004	HNO_3 (metals)	method 200.7	12-8-08	1110							X							

Relinquished By:	Date/Time	Received By:	Date/Time
Rob Gross	12-8-08 12:10	Vay Vong	12-18-08 12:10
Relinquished By:	Date/Time	Received By:	Date/Time

FOR LABORATORY USE ONLY

Inspection Job Number: _____ PO# _____
Laboratory Project Number: _____ Cash/check # _____
Due Date: _____ Amount Paid: $ _____

CERTIFICATE OF ANALYSIS

CLIENT: Conoco Phillips - Portland
ATTN: Andrew Janke
5528 NW Doane Avenue
Portland OR, 97210

PHONE: (503) 248-1565
FAX: (503) 248-1522

PROJECT NAME: 1200Z

ORIGINAL

SUBMITTED: 12/29/08 12:29

REPORT DATE: 12/31/08 16:20 **REPORT NUMBER: 8122909** **PAGE: 1 OF 6**

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
8122909-01	001	12/29/2008	0940	Water
8122909-01	001	12/29/2008	0940	Water
8122909-02	002	12/29/2008	1010	Water
8122909-02	002	12/29/2008	1010	Water
8122909-03	004	12/29/2008	1040	Water
8122909-03	004	12/29/2008	1040	Water

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
8122909-01	**SAMPLE ID: 001**								
General Bench Analysis									
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	AJH	12/29/2008 15:50	12/29/2008 16:41	
PH	SM 4500 H+ B	pH	6.05	SU		JLC	12/29/2008 11:35	12/29/2008 11:35	
		TEMPERATURE (C)	13.6	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	64.0	mg/L	10.0	AJH	12/31/2008 10:10	12/31/2008 13:06	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.020	AJH	12/30/2008 9:37	12/30/2008 13:30	
LEAD - ICP		LEAD	0.011	mg/L	0.010	AJH	12/30/2008 9:37	12/30/2008 13:30	
ZINC - ICP		ZINC	0.11	mg/L	0.020	AJH	12/30/2008 9:37	12/30/2008 13:30	
8122909-02	**SAMPLE ID: 002**								
General Bench Analysis									
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	6.8	mg/L	6.0	AJH	12/29/2008 15:50	12/29/2008 16:41	
PH	SM 4500 H+ B	pH	6.12	SU		JLC	12/29/2008 11:35	12/29/2008 11:35	
		TEMPERATURE (C)	9.70	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	62.0	mg/L	10.0	AJH	12/31/2008 10:10	12/31/2008 13:06	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.020	AJH	12/30/2008 9:37	12/30/2008 13:33	
LEAD - ICP		LEAD	0.016	mg/L	0.010	AJH	12/30/2008 9:37	12/30/2008 13:33	
ZINC - ICP		ZINC	0.15	mg/L	0.020	AJH	12/30/2008 9:37	12/30/2008 13:33	
8122909-03	**SAMPLE ID: 004**								
General Bench Analysis									
O & G, TOTAL	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	AJH	12/29/2008 15:50	12/29/2008 16:41	

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SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
8122909-03	**SAMPLE ID: 004**								
General Bench Analysis									
PH	SM 4500 H+ B	pH	7.08	SU		JLC	12/29/2008 11:35	12/29/2008 11:35	
		TEMPERATURE (C)	11.2	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	AJH	12/31/2008 10:10	12/31/2008 13:06	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.020	AJH	12/30/2008 9:37	12/30/2008 13:37	
LEAD - ICP		LEAD	ND	mg/L	0.010	AJH	12/30/2008 9:37	12/30/2008 13:37	
ZINC - ICP		ZINC	0.036	mg/L	0.020	AJH	12/30/2008 9:37	12/30/2008 13:37	

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COLUMBIA INSPECTION, INC 7133 N. Lombard, Portland, OR 97203 Ph:(503) 286-9464 Fax:(503) 286-5355 E-mail:cilabqa@ColumbiaInspection.com

General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L29001 - * DEFAULT PREP *** **										
QC SAMPLE: Blank (8L29001-BLK1)						Prepared & Analyzed: 12/29/08				
OIL/GREASE, TOTAL	ND	2.0	mg/L							
QC SAMPLE: LCS (8L29001-BS1)						Prepared & Analyzed: 12/29/08				
OIL/GREASE, TOTAL	32.2	6.0	mg/L	40.5		79.5	79-114			
QC SAMPLE: LCS Dup (8L29001-BSD1)						Prepared & Analyzed: 12/29/08				
OIL/GREASE, TOTAL	32.5	6.0	mg/L	40.5		80.2	79-114	0.927	18	
QC SAMPLE: Duplicate (8L29001-DUP1)					Source: 8121604-01	Prepared & Analyzed: 12/29/08				
OIL/GREASE, TOTAL	100	6.0	mg/L		111			10.4	10	
BATCH: Batch 8L30002 - * DEFAULT PREP *** **										
QC SAMPLE: Duplicate (8L30002-DUP1)					Source: 8122906-02	Prepared & Analyzed: 12/29/08				
pH	6.25		SU		6.15			1.61	10	
TEMPERATURE (C)	15.2		"		13.8			9.66	200	
QC SAMPLE: Reference (8L30002-SRM1)						Prepared & Analyzed: 12/29/08				
pH	5.07		SU	5.00		101	97.5-102.			
QC SAMPLE: Reference (8L30002-SRM2)						Prepared & Analyzed: 12/29/08				
pH	8.07		SU	8.00		101	97.5-102.			
BATCH: Batch 8L31005 - * DEFAULT PREP *** **										
QC SAMPLE: Blank (8L31005-BLK1)						Prepared & Analyzed: 12/31/08				
SUSPENDED SOLIDS, TOTAL	6.00	1.00	mg/L							

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General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L31005 - * DEFAULT PREP *** **										
QC SAMPLE: Duplicate (8L31005-DUP1)					**Source: 8122909-01**	Prepared & Analyzed: 12/31/08				
SUSPENDED SOLIDS, TOTAL	56.0	10.0	mg/L		64.0			13.3	20	
QC SAMPLE: Reference (8L31005-SRM1)						Prepared & Analyzed: 12/31/08				
SUSPENDED SOLIDS, TOTAL	54.0	10.0	mg/L	51.8		104	78-114			

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L30008 - ***Metals Prep*										
QC SAMPLE: Blank (8L30008-BLK1)					Prepared & Analyzed: 12/30/08					
COPPER	ND	0.020	mg/L							
LEAD	ND	0.010	"							
ZINC	ND	0.020	"							
QC SAMPLE: LCS (8L30008-BS1)					Prepared & Analyzed: 12/30/08					
COPPER	0.194	0.020	mg/L	0.200		97.0	85-115			
LEAD	0.198	0.010	"	0.200		99.0	85-115			
ZINC	0.195	0.020	"	0.200		97.5	85-115			
QC SAMPLE: LCS Dup (8L30008-BSD1)					Prepared & Analyzed: 12/30/08					
COPPER	0.195	0.020	mg/L	0.200		97.5	85-115	0.514	15	
LEAD	0.193	0.010	"	0.200		96.5	85-115	2.56	15	
ZINC	0.190	0.020	"	0.200		95.0	85-115	2.60	15	
QC SAMPLE: Calibration Blank (8L30008-CCB1)					Prepared & Analyzed: 12/30/08					
COPPER	ND	0.020	mg/L							
LEAD	ND	0.010	"							
ZINC	ND	0.020	"							
QC SAMPLE: Calibration Blank (8L30008-CCB2)					Prepared & Analyzed: 12/30/08					
COPPER	ND	0.020	mg/L							
	ND	0.010	"							
	ND	0.020	"							
QC SAMPLE: Calibration Blank (8L30008-CCB3)					Prepared & Analyzed: 12/30/08					
COPPER	ND	0.020	mg/L							
LEAD	ND	0.010	"							
ZINC	ND	0.020	"							

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 8L30008 - ***Metals Prep* **										
QC SAMPLE: Matrix Spike (8L30008-MS1)				Source: 8122909-03		Prepared & Analyzed: 12/30/08				
COPPER	0.196	0.020	mg/L	0.200	ND	98.0	80-120			
LEAD	0.192	0.010	"	0.200	ND	96.0	80-120			
ZINC	0.224	0.020	"	0.200	0.036	94.0	80-120			
QC SAMPLE: Matrix Spike Dup (8L30008-MSD1)				Source: 8122909-03		Prepared & Analyzed: 12/30/08				
COPPER	0.195	0.020	mg/L	0.200	ND	97.5	80-120	0.612	15	
LEAD	0.196	0.010	"	0.200	ND	98.0	80-120	2.06	15	
ZINC	0.226	0.020	"	0.200	0.036	95.0	80-120	0.889	15	
QC SAMPLE: Reference (8L30008-SRM1)						Prepared & Analyzed: 12/30/08				
COPPER	1.98		mg/L	2.00		99.0	0-200			
LEAD	1.98		"	2.00		99.0	0-200			
ZINC	1.96		"	2.00		98.0	0-200			
QC SAMPLE: Reference (8L30008-SRM2)						Prepared & Analyzed: 12/30/08				
COPPER	1.94		mg/L	2.00		97.0	0-200			
LEAD	1.97		"	2.00		98.5	0-200			
ZINC	1.99		"	2.00		99.5	0-200			
QC SAMPLE: Reference (8L30008-SRM3)						Prepared & Analyzed: 12/30/08				
COPPER	1.91		mg/L	2.00		95.5	0-200			
	1.90		"	2.00		95.0	0-200			
	1.89		"	2.00		94.5	0-200			

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COC Page 1 of 1

SPECIAL INSTR.

SAMPLED BY:

CLIENT ConocoPhillips
CONTACT Andrew, Tom, Rob
ADDRESS 5525 NW Doane Ave
CITY, ST, ZIP
e mail andrew.janke@conocophillips.com
PHONE 503-298-1565
FAX 503-298-1522
CLIENT PROJECT NAME 12002 Storm Samples
CLIENT PROJECT #

TURN AROUND REQUESTED
- ☐ STANDARD (10 DAYS)
- ☐ PRIORITY (7 6 5 DAYS)
- ☒ RUSH (4 3 2 1 0 DAYS)

SPECIFIC DUE DATE: 24 hrs thru O&G 5th.

- ☐ COD
- ☒ ON ACCOUNT

CLIENT PO

ANALYSES REQUESTED

SAMPLE ID	Bottle Qnty	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	MATRIX	TPH	TSS	O&G	METALS		Field pH					
001	1	UNPRESERVED	12-29-08	0940		X	X				6.55					
001	1	H_2SO_4 (SULFURIC)	12-29-08	0940				X			@ 7.7°C					
001	1	HNO3 (METALS)	12-29-08	0940					X							
002	1	UNPRESERVED	12-29-08	1010		X	X				7.12					
002	1	H_2SO_4 (SULFURIC Acid)	12-29-08	1010				X			@ 5.7°C					
002	1	HNO3 (METALS)	12-29-08	1010					X							
004	1	UNPRESERVED	12-29-08	1220		X	X				7.65					
004	1	H_2SO_4 (SULFURIC Acid)	12-29-08	1220				X			@ 4.8°C					
004	1	HNO3 (METALS)	12-29-08	1220					X							

RELINQUISHED BY		DATE	TIME	RECEIVED BY		DATE	TIME
PRINT	Rob Gross	12/29/08	1229	PRINT	Jennifer Compernolle	12/29/08	1229
SIGNATURE				SIGNATURE			
PRINT				PRINT			
SIGNATURE				SIGNATURE			

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CI, IS AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH CONDITIONS LISTED ON THE BACK OF CLIENTS COPY.

WHITE COPY - Laboratory **YELLOW COPY - Client**

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CERTIFICATE OF ANALYSIS

CLIENT: Conoco Phillips - Portland
ATTN: Tom Lyoms
5528 NW Doane Avenue
Portland OR, 97210

PHONE: (503) 248-1572
FAX: (503) 248-1522

PROJECT NAME: 1200Z

ORIGINAL

SUBMITTED: 04/15/09 09:07

REPORT DATE: 04/23/09 14:11 REPORT NUMBER: 9041501 PAGE: 1 OF 6

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
9041501-01	001	04/15/2009	0730	Water
9041501-01	001	04/15/2009	0730	Water
9041501-02	002	04/15/2009	0800	Water
9041501-02	002	04/15/2009	0800	Water
9041501-03	004	04/15/2009	0815	Water
9041501-03	004	04/15/2009	0815	Water

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
9041501-01	**SAMPLE ID: 001**								
General Bench Analysis									
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	15.7	mg/L	6.0	AJH	4/21/2009 14:24	04/21/2009 14:26	
PH	SM 4500 H+ B	pH	6.4	SU		BAB	4/15/2009 9:45	04/15/2009 15:44	
		TEMPERATURE (C)	15	SU					
SUS ED SOL	SM2540 D	SUSPENDED SOLIDS, TOTAL	21.0	mg/L	10.0	BAB	4/17/2009 11:30	04/21/2009 11:40	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.036	AJH	4/16/2009 14:53	04/17/2009 14:22	
LEAD - ICP		LEAD	ND	mg/L	0.020	AJH	4/16/2009 14:53	04/17/2009 14:22	
ZINC - ICP		ZINC	0.062	mg/L	0.020	AJH	4/16/2009 14:53	04/17/2009 14:22	
9041501-02	**SAMPLE ID: 002**								
General Bench Analysis									
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	16.5	mg/L	6.0	AJH	4/21/2009 14:24	04/21/2009 14:26	
PH	SM 4500 H+ B	pH	5.9	SU		BAB	4/15/2009 9:45	04/15/2009 15:44	
		TEMPERATURE (C)	15	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	BAB	4/17/2009 11:30	04/21/2009 11:40	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.036	AJH	4/16/2009 14:53	04/17/2009 14:26	
LEAD - ICP		LEAD	ND	mg/L	0.020	AJH	4/16/2009 14:53	04/17/2009 14:26	
ZINC - ICP		ZINC	0.090	mg/L	0.020	AJH	4/16/2009 14:53	04/17/2009 14:26	
9041501-03	**SAMPLE ID: 004**								
General Bench Analysis									
O & G, TOTAL HEM	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	AJH	4/21/2009 14:24	04/21/2009 14:26	

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SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
9041501-03	**SAMPLE ID: 004**								
General Bench Analysis									
PH	SM 4500 H+ B	pH	7.1	SU		BAB	4/15/2009 9:45	04/15/2009 15:44	
		TEMPERATURE (C)	16	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	BAB	4/17/2009 11:30	04/21/2009 11:40	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.036	AJH	4/16/2009 14:53	04/17/2009 14:29	
LEAD - ICP		LEAD	ND	mg/L	0.020	AJH	4/16/2009 14:53	04/17/2009 14:29	
ZINC - ICP		ZINC	0.052	mg/L	0.020	AJH	4/16/2009 14:53	04/17/2009 14:29	

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General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9D15002 - General Preparation										
QC SAMPLE: Duplicate (9D15002-DUP1)					Source: 9041501-01	Prepared & Analyzed: 04/15/09				
pH	6.49		SU		6.4			1.40	10	
TEMPERATURE (C)	15.0		"		15			0.00	200	
QC SAMPLE: Reference (9D15002-SRM1)						Prepared & Analyzed: 04/15/09				
pH	4.99		SU	5.00		99.8	97.5-102.			
QC SAMPLE: Reference (9D15002-SRM2)						Prepared & Analyzed: 04/15/09				
pH	7.92		SU	8.00		99.0	97.5-102.			
BATCH: Batch 9D21005 - General Preparation										
QC SAMPLE: Blank (9D21005-BLK1)						Prepared & Analyzed: 04/21/09				
SUSPENDED SOLIDS, TOTAL	ND	10.0	mg/L							
QC SAMPLE: Duplicate (9D21005-DUP1)					Source: 9041403-01	Prepared & Analyzed: 04/21/09				
SUSPENDED SOLIDS, TOTAL	ND	10.0	mg/L		ND				20	
QC SAMPLE: Reference (9D21005-SRM1)						Prepared & Analyzed: 04/21/09				
SUSPENDED SOLIDS, TOTAL	68.0	10.0	mg/L	70.0		97.1	83-115			
BATCH: Batch 9D21008 - * DEFAULT PREP *****										
QC SAMPLE: Blank (9D21008-BLK1)						Prepared & Analyzed: 04/21/09				
OIL/GREASE, TOTAL	ND	6.0	mg/L							
QC SAMPLE: LCS (9D21008-BS1)						Prepared & Analyzed: 04/21/09				
OIL/GREASE, TOTAL	36.5	6.0	mg/L	42.1		86.7	78-114			

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General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9D21008 - *** DEFAULT PREP ***										
QC SAMPLE: LCS Dup (9D21008-BSD1)					Prepared & Analyzed: 04/21/09					
OIL/GREASE, TOTAL	35.8	6.0	mg/L	42.1		85.0	78-114	1.94	18	

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9D16003 - ***Metals Prep*										
QC SAMPLE: Blank (9D16003-BLK1)						Prepared: 04/16/09 Analyzed: 04/17/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							
QC SAMPLE: LCS (9D16003-BS1)						Prepared: 04/16/09 Analyzed: 04/17/09				
COPPER	0.202	0.036	mg/L	0.200		101	85-115			
LEAD	0.204	0.020	"	0.200		102	85-115			
ZINC	0.200	0.020	"	0.200		100	85-115			
QC SAMPLE: LCS Dup (9D16003-BSD1)						Prepared: 04/16/09 Analyzed: 04/17/09				
COPPER	0.192	0.036	mg/L	0.200		96.0	85-115	5.08	15	
LEAD	0.199	0.020	"	0.200		99.5	85-115	2.48	15	
ZINC	0.194	0.020	"	0.200		97.0	85-115	3.05	15	
QC SAMPLE: Calibration Blank (9D16003-CCB1)						Prepared: 04/16/09 Analyzed: 04/17/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							
QC SAMPLE: Calibration Blank (9D16003-CCB2)						Prepared: 04/16/09 Analyzed: 04/17/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							
QC SAMPLE: Calibration Blank (9D16003-CCB3)						Prepared: 04/16/09 Analyzed: 04/17/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9D16003 - ***Metals Prep*										
QC SAMPLE: Matrix Spike (9D16003-MS1)				Source: 9041505-01		Prepared: 04/16/09	Analyzed: 04/17/09			
COPPER	0.238	0.036	mg/L	0.200	0.033	102	80-120			
LEAD	0.213	0.020	"	0.200	0.007	103	80-120			
ZINC	0.283	0.020	"	0.200	0.072	106	80-120			
QC SAMPLE: Matrix Spike Dup (9D16003-MSD1)				Source: 9041505-01		Prepared: 04/16/09	Analyzed: 04/17/09			
COPPER	0.234	0.036	mg/L	0.200	0.033	100	80-120	1.69	15	
LEAD	0.211	0.020	"	0.200	0.007	102	80-120	0.943	15	
ZINC	0.286	0.020	"	0.200	0.072	107	80-120	1.05	15	
QC SAMPLE: Reference (9D16003-SRM1)						Prepared: 04/16/09	Analyzed: 04/17/09			
COPPER	1.98		mg/L	2.00		99.0	90-110			
LEAD	2.00		"	2.00		100	90-110			
ZINC	1.98		"	2.00		99.0	90-110			
QC SAMPLE: Reference (9D16003-SRM2)						Prepared: 04/16/09	Analyzed: 04/17/09			
COPPER	2.02		mg/L	2.00		101	90-110			
LEAD	2.09		"	2.00		104	90-110			
ZINC	2.10		"	2.00		105	90-110			
QC SAMPLE: Reference (9D16003-SRM3)						Prepared: 04/16/09	Analyzed: 04/17/09			
COPPER	2.02		mg/L	2.00		101	90-110			
LEAD	2.05		"	2.00		102	90-110			
ZINC	2.04		"	2.00		102	90-110			

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SPECIAL INSTR:

SAMPLED BY: _____

CLIENT ConocoPhillips
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ADDRESS 5526 NW Doane
CITY, ST, ZIP Portland
e mail Rob.Gross@ConocoPhillips.com
PHONE 503-240-1565
FAX 503-240-1522
CLIENT PROJECT NAME 12007 Storm Samples
CLIENT PROJECT #

TURN AROUND REQUESTED
- [X] STANDARD (10 DAYS)
- [ ] PRIORITY (7 6 5 DAYS)
- [ ] RUSH (4 3 2 1 0 DAYS)

SPECIFIC DUE DATE: ~~24 HR TURN~~ 4/16/09

- [ ] COD
- [ ] ON ACCOUNT

CLIENT PO _____

ANALYSES REQUESTED

SAMPLE ID	Bottle Qnty	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	MATRIX	pH	TSS	O&G	METALS		Field pH					
001	1	UNPRESERVED	4-15-09	0930	MTD 150.1 1631	X	X									
001	1	H_2SO_4 (SULFURIC ACID)	4-15-09	0930	METHOD 1664			X			6.73 @ 9.5°C					
001	1	HNO3 (METALS)	4-15-09	0930	METHOD 200.7				X							
002	1	UNPRESERVED	4-15-09	0800	MTD 150.1 1631	X	X									
002	1	H_2SO_4 (SULFURIC ACID)	4-15-09	0800	MTD 1664			X			6.13 @ 11.0°C					
002	1	HNO3 (METALS)	4-15-09	0800	MTD 200.7				X							
004	1	UNPRESERVED	4-15-09	0815	MTD 150.1 1631	X	X									
004	1	H_2SO_4 (SULFURIC ACID)	4-15-09	0815	MTD 1664			X								
004	1	HNO3 (METALS)	4-15-09	0815	MTD 200.7				X							

RELINQUISHED BY		DATE	TIME	RECEIVED BY		DATE	TIME
PRINT	Rob Gross	4/15/09	0900	PRINT		4-15-09	9:00
SIGNATURE	Rob Gross			SIGNATURE			
PRINT				PRINT			
SIGNATURE				SIGNATURE			

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CI, IS AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH CONDITIONS LISTED ON THE BACK OF CLIENT COPY.

WHITE COPY - Laboratory YELLOW COPY - Client

COP0017247

ConocoPhillips

ConocoPhillips Company
5528 N.W. Doane Avenue
Portland, OR 97210

3 June, 2009

Mr. Eric De Berry
City of Portland
Environmental Services
Water Pollution Control Lab
6543 North Burlington Ave.
Portland, OR 97203-5452

Re: Self-Discharge Monitoring Report

Dear Mr. DeBerry:

Please find enclosed the quarterly Self-Discharge Monitoring Report for the following facility:

ConocoPhillips Portland Terminal
Permit #400.181
5528 NW Doane Avenue
Portland, OR 97210

Should you have any questions, please call me at (503) 248-1572.

Sincerely,

Tom Lyons

Tom Lyons
Terminal Supervisor

Cc: Terminal File

CITY OF PORTLAND
INDUSTRIAL WASTEWATER DISCHARGE
SELF-MONITORING REPORT

INDUSTRY NAME: ConocoPhillips Inc, Portland Terminal

PERMIT NUMBER: 400.181

REPORT DUE DATE: June-09

SAMPLING PERIOD: **May-09**

For Industrial Source Control Division Use Only	
Date Postmarked/Received	Date Entered
	Entered By:
Comments:	

SAMPLE DATE	POINT OF COMPLIANCE	SAMPLE TYPE
	1A	GRAB

PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	MDL	LIMITS DAILY	LIMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total)[1]		mg/L **ND**	6.0	110 mg/L	N/A	
HEM Oil & Grease (Non-Polar)		mg/L		110 mg/L	N/A	
HEM Oil & Grease (Polar)		mg/L				
pH		SU **6.84**		5.0 - 11.5	N/A	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Tom Lyons Date: June 8, 2009

Columbia Inspection, Inc.

Members of ASTM & API
U.S. Customs Certified Gauger and Laboratory

DATE: 06/02/2009

Portland
7133 N. Lombard
Portland, OR 97203
(503) 286-9464
FAX (503) 285-7831

Other office locations:

Seattle	San Francisco	Los Angeles
5013 Pacific Hwy East, Unit #2	845 Marina Bay Pkwy., Suite 8	797 W. Channel St.
Fife, WA 98424	Richmond, CA 94804	San Pedro, CA 90731
(253) 922-8781	(570) 215-6380	(310) 833-1557
FAX(253) 922-8957	FAX (707) 748-7764	FAX (310) 833-1585

TO: **Conoco Phillips - Portland**
Tom Lyoms
5528 NW Doane Avenue
Portland OR, 97210

Columbia Inspection, Inc.

Members of ASTM & API
U.S. Customs Certified Gauger and Laboratory

Fax Transmittal from the office at:
Portland
7133 N. Lombard
Portland, OR 97203
(503) 286-9464
FAX (503) 285-7831

Other office locations:

Seattle	San Francisco	Los Angeles
5013 Pacific Hwy East, Unit #2	845 Marina Bay Pkwy., Suite 8	797 W. Channel St.
Fife, WA 98424	Richmond, CA 94808	San Pedro, CA 90731
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FAX(253) 922-8957	FAX (707) 748-7764	FAX (310) 833-1585

DATE: **06/02/2009**
CLIENT: **Conoco Phillips - Portland**
5528 NW Doane Avenue
Portland OR, 97210

ATTN: **Tom Lyoms**
FAX: **(503) 248-1522**
Transmittal of the following number of pages:_____

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Fax Transmittal from the office at:
Portland
7133 N. Lombard
Portland, OR 97203
(503) 286-9464
FAX (503) 285-7831

Other office locations:

Tacoma	San Francisco	Los Angeles
4902 20th E	4592 E. 2nd St.	790 Basin St.
Fife, WA 98424	Benicia, CA 94510	San Pedro, CA 90731
(253) 922-8781	(707) 748-7587	(310) 833-1557
FAX(253) 922-8957	FAX (707) 748-7764	FAX (310) 833-1585

DATE: 06/02/2009
CLIENT: Conoco Phillips - Portland
5528 NW Doane Avenue
Portland OR, 97210

ATTN: Tom Lyoms

PROJECT: QUARTERLYSAMPLES 003

Enclosed are the results of analyses for samples received by the laboratory on 5/20/09 15:25. The holding time for each batch of analyses was in accordance with the recommended analytical methods, unless otherwise noted. The 40 CFR Part 136 states that pH should begin testing in 15 minutes or less and E-Coli in 6 hours or less. All qualifiers on QC data apply to the sample analysis within the corresponding batch.

The data submitted in this report is for the sole and exclusive use of Conoco Phillips - Portland. All results pertain only to samples submitted and to the anlyses requested on the chain-of-custody document. This anlytical report shall not be reproduced except in its entirety without the written approval of Columbia Inspection, Inc.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Vay Vong - Project Manager

CERTIFICATE OF ANALYSIS

CLIENT: Conoco Phillips - Portland
ATTN: Tom Lyoms
5528 NW Doane Avenue
Portland OR, 97210

PHONE: (503) 248-1572
FAX: (503) 248-1522

PROJECT NAME: QUARTERLYSAMPLES 003
PROJECT NUMBER: Permit #400.181

ORIGINAL

SUBMITTED: 05/20/09 15:25

REPORT DATE: 06/01/09 16:37 **REPORT NUMBER: 9052008**

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
9052008-01	003	05/19/2009	1500	Water
9052008-01	003	05/19/2009	1500	Water
9052008-01	003	05/19/2009	1500	Water

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
9052008-01 (0	**SAMPLE ID: 003**								
BTEX Compounds by EPA 8260B					Apex Laboratories				
8260B BTEX	EPA 8260B	Benzene	ND	ug/L	0.250	bsj	5/22/2009 12:22	05/22/2009 13:45	
		Toluene	ND	ug/L	1.00				
		Ethylbenzene	ND	ug/L	0.500				
		Xylenes, total	ND	ug/L	1.50				
		Pentafluorobenzene (ISTD)	50.0	ug/L					
		Chlorobenzene-d5 (ISTD)	50.0	ug/L					
		1,4-Dichlorobenzene-d4 (ISTD)	50.0	ug/L					
		Surrogate: Dibromofluoromethane (	106 %	%Recovery	80-120				
		Surrogate: 1,4-Difluorobenzene (Sur	106 %	%Recovery	80-120				
		Surrogate: Toluene-d8 (Surr)	95 %	%Recovery	80-120				
		Surrogate: 4-Bromofluorobenzene (	102 %	%Recovery	80-120				

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
9052008-01	**SAMPLE ID: 003**								
General Bench Analysis					Columbia Inspection, Inc.				
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	SOB	5/28/2009 20:15	05/28/2009 20:16	
PH	SM 4500 H+ B	pH	6.84	SU		JLC	5/20/2009 15:50	05/20/2009 15:50	O-04
		TEMPERATURE (C)	22.6	SU					O-04
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	BAB	5/26/2009 14:00	05/29/2009 11:16	

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Vay Vong - Project Manager

COP0017253

General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9E21002 - * DEFAULT PREP *** **										
QC SAMPLE: Duplicate (9E21002-DUP1)					**Source: 9052008-01**	Prepared & Analyzed: 05/20/09				
pH	6.87		SU		6.84			0.438	10	
TEMPERATURE (C)	22.6		"		22.6			0.00	200	
QC SAMPLE: Reference (9E21002-SRM1)						Prepared & Analyzed: 05/20/09				
pH	8.03		SU	8.00		100	97.5-102.			
QC SAMPLE: Reference (9E21002-SRM2)						Prepared & Analyzed: 05/20/09				
pH	5.03		SU	5.00		101	97.5-102.			
BATCH: Batch 9E28008 - * DEFAULT PREP *** **										
QC SAMPLE: Blank (9E28008-BLK1)						Prepared & Analyzed: 05/28/09				
OIL/GREASE, TOTAL	ND	2.0	mg/L							
QC SAMPLE: LCS (9E28008-BS1)						Prepared & Analyzed: 05/28/09				
OIL/GREASE, TOTAL	30.8	6.0	mg/L	40.2		76.6	79-114			Z-01
QC SAMPLE: LCS Dup (9E28008-BSD1)						Prepared & Analyzed: 05/28/09				
OIL/GREASE, TOTAL	25.0	6.0	mg/L	40.2		62.2	79-114	20.8	18	Z-01
BATCH: Batch 9E29002 - General Preparation										
QC SAMPLE: Blank (9E29002-BLK1)						Prepared & Analyzed: 05/29/09				
SUSPENDED SOLIDS, TOTAL	ND	1.00	mg/L							
QC SAMPLE: Duplicate (9E29002-DUP1)					**Source: 9052002-02**	Prepared & Analyzed: 05/29/09				
SUSPENDED SOLIDS, TOTAL	767	10.0	mg/L		900			16.0	20	

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CERTIFICATE OF ANALYSIS

General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9E29002 - General Preparation										
QC SAMPLE: Reference (9E29002-SRM1)					Prepared & Analyzed: 05/29/09					
SUSPENDED SOLIDS, TOTAL	64.0	10.0	mg/L	70.0		91.4	83-115			

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BTEX Compounds by EPA 8260B - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9050253 - EPA 5030B										
QC SAMPLE: Blank (9050253-BLK1)					Prepared & Analyzed: 05/22/09					
Benzene	ND	0.250	ug/L							
Toluene	ND	1.00	"							
Ethylbenzene	ND	0.500	"							
Xylenes, total	ND	1.50	"							
Pentafluorobenzene (ISTD)	50.0		"	50.0		96	50-200			
Chlorobenzene-d5 (ISTD)	50.0		"	50.0		96	50-200			
1,4-Dichlorobenzene-d4 (ISTD)	50.0		"	50.0		98	50-200			
Surrogate: Dibromofluoromethane (Surr)	*52.0*		"	*50.0*		*104*	*80-120*			
Surrogate: 1,4-Difluorobenzene (Surr)	*51.2*		"	*50.0*		*102*	*80-120*			
Surrogate: Toluene-d8 (Surr)	*48.4*		"	*50.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene (Surr)	*48.2*		"	*50.0*		*96*	*80-120*			
QC SAMPLE: LCS (9050253-BS1)					Prepared & Analyzed: 05/22/09					
Benzene	22.3	0.250	ug/L	20.0		112	70-130			
Toluene	19.7	1.00	"	20.0		98	70-130			
Ethylbenzene	20.7	0.500	"	20.0		103	70-130			
Xylenes, total	62.8	1.50	"	60.0		105	70-130			
Pentafluorobenzene (ISTD)	50.0		"	50.0		98	50-200			
Chlorobenzene-d5 (ISTD)	50.0		"	50.0		99	50-200			
1,4-Dichlorobenzene-d4 (ISTD)	50.0		"	50.0		100	50-200			
Surrogate: Dibromofluoromethane (Surr)	*52.4*		"	*50.0*		*105*	*80-120*			
Surrogate: 1,4-Difluorobenzene (Surr)	*52.4*		"	*50.0*		*105*	*80-120*			
Surrogate: Toluene-d8 (Surr)	*48.6*		"	*50.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene (Surr)	*48.5*		"	*50.0*		*97*	*80-120*			
QC SAMPLE: Duplicate (9050253-DUP1)					**Source: A905186-0** Prepared & Analyzed: 05/22/09					
Benzene	1.01	0.250	ug/L		1.10			9	20	
Toluene	0.220	1.00	"		0.230			4	20	
Ethylbenzene	0.330	0.500	"		0.400			19	20	
Xylenes, total	0.790	1.50	"		0.850			7	20	
Pentafluorobenzene (ISTD)	50.0		"	50.0		93	50-200			
Chlorobenzene-d5 (ISTD)	50.0		"	50.0		96	50-200			
1,4-Dichlorobenzene-d4 (ISTD)	50.0		"	50.0		96	50-200			
Surrogate: Dibromofluoromethane (Surr)	*53.8*		"	*50.0*		*108*	*80-120*			
Surrogate: 1,4-Difluorobenzene (Surr)	*52.5*		"	*50.0*		*105*	*80-120*			
Surrogate: Toluene-d8 (Surr)	*47.1*		"	*50.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene (Surr)	*51.2*		"	*50.0*		*102*	*80-120*			

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BTEX Compounds by EPA 8260B - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9050253 - EPA 5030B										
QC SAMPLE: Matrix Spike (9050253-MS1)				**Source: 9052008-01**	Prepared & Analyzed: 05/22/09					
Benzene	21.6	0.250	ug/L	20.0	ND	108	70-130			
Toluene	19.6	1.00	"	20.0	ND	98	70-130			
Ethylbenzene	20.7	0.500	"	20.0	ND	104	70-130			
Xylenes, total	61.8	1.50	"	60.0	ND	103	70-130			
Pentafluorobenzene (ISTD)	50.0		"	50.0		94	50-200			
Chlorobenzene-d5 (ISTD)	50.0		"	50.0		95	50-200			
1,4-Dichlorobenzene-d4 (ISTD)	50.0		"	50.0		96	50-200			
Surrogate: Dibromofluoromethane (Surr)	*51.7*		"	*50.0*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene (Surr)	*51.2*		"	*50.0*		*102*	*80-120*			
Surrogate: Toluene-d8 (Surr)	*48.6*		"	*50.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene (Surr)	*49.6*		"	*50.0*		*99*	*80-120*			

Data Qualifiers:

Qualifier	Notes
O-04	This sample was analyzed outside the EPA recommended holding time.
Z-01	Recovery outside of spike limits but was accepted based on reproducibility. Samples may be biased low.

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COC Page 1 of 1

SPECIAL INSTR:

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SAMPLED BY:

CLIENT ConocoPhillips
CONTACT ANDREW, ROB, TOM
ADDRESS 5528 NW DOANE AVE
CITY, ST, ZIP PORTLAND, OR
e mail andrew.jantz@gmail.com
PHONE (503) 248-1565
FAX (503) 248-5522
CLIENT PROJECT NAME PERMIT #400.181
CLIENT PROJECT #

TURN AROUND REQUESTED

- [x] STANDARD (10 DAYS)
- [ ] PRIORITY (7 6 5 DAYS)
- [ ] RUSH (4 3 2 1 0 DAYS)

SPECIFIC DUE DATE:

- [ ] COD
- [ ] ON ACCOUNT

CLIENT PO _____

ANALYSES REQUESTED

SAMPLE ID	Bottle Qnty	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	MATRIX		O&G	TSS	Alk.	BTEX		Field pH				
003	1	H_2SO_4 (ACID SULFURIC)	5/19/09	1500	WATER		X					6.77 @ 20.8°C				
003	1	UNPRESERVED	5/19/09	1500	WATER			X	X							
003	1	BTEX Compounds	5/19/09	1500	WATER					X						

RELINQUISHED BY		DATE	TIME	RECEIVED BY		DATE	TIME
PRINT	Rob Gross	05/20/09	1525	PRINT	Jennifer Cimperman	05/20/09	1525
SIGNATURE	Rob Gross			SIGNATURE	Jennifer Cimperman		
PRINT				PRINT			
SIGNATURE				SIGNATURE			

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CI, IS AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH CONDITIONS LISTED ON THE BACK OF CLIENT'S COPY.

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COP0017258

CERTIFICATE OF ANALYSIS

CLIENT: Conoco Phillips - Portland
ATTN: Tom Lyoms
5528 NW Doane Avenue
Portland OR, 97210

PROJECT NAME: 1200Z

ORIGINAL

PHONE: (503) 248-1572
FAX: (503) 248-1522

SUBMITTED: 05/07/09 11:00

REPORT DATE: 05/21/09 11:00 REPORT NUMBER: 9050702 PAGE: 1 OF 7

CI SAMPLE	CLIENTS ID#	DATE	TIME	MATRIX
9050702-01	001	05/06/2009	1720	Water
9050702-01	001	05/06/2009	1720	Water
9050702-02	002	05/06/2009	1735	Water
9050702-02	002	05/06/2009	1735	Water
9050702-03	004	05/06/2009	1755	Water
9050702-03	004	05/06/2009	1755	Water

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
9050702-01	**SAMPLE ID: 001**								
General Bench Analysis									
O & G, NP (SGT-HEM) FOLLOW-UP	EPA 1664A	NONPOLAR OIL & GREASE	5.2	mg/L	3.0	SOB	5/19/2009 10:45	05/20/2009 20:56	
O & G, POLAR (HEM)	CALCULATED	POLAR OIL AND GREASE	ND	mg/L	1.5	SOB	5/19/2009 10:45	05/20/2009 20:56	
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	SOB	5/19/2009 10:45	05/20/2009 20:56	
PH	SM 4500 H+ B	pH	6.14	SU		BAB	5/7/2009 11:25	05/07/2009 11:25	
		TEMPERATURE (C)	18.7	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	BAB	5/13/2009 16:30	05/14/2009 15:23	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.036	AJH	5/15/2009 9:13	05/18/2009 11:35	
LEAD - ICP		LEAD	ND	mg/L	0.020	AJH	5/15/2009 9:13	05/18/2009 11:35	
ZINC - ICP		ZINC	ND	mg/L	0.020	AJH	5/15/2009 9:13	05/18/2009 11:35	
9050702-02	**SAMPLE ID: 002**								
General Bench Analysis									
O & G, NP (SGT-HEM) FOLLOW-UP	EPA 1664A	NONPOLAR OIL & GREASE	3.5	mg/L	3.0	SOB	5/19/2009 10:45	05/20/2009 20:56	
O & G, POLAR (HEM)	CALCULATED	POLAR OIL AND GREASE	ND	mg/L	1.5	SOB	5/19/2009 10:45	05/20/2009 20:56	
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	ND	mg/L	6.0	SOB	5/19/2009 10:45	05/20/2009 20:56	
PH	SM 4500 H+ B	pH	5.59	SU		BAB	5/7/2009 11:25	05/07/2009 11:25	
		TEMPERATURE (C)	18.1	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	ND	mg/L	10.0	BAB	5/13/2009 16:30	05/14/2009 15:23	
Total Metals by Inductively Coupled Plasma									

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Authorized for Release By:

Vay Vong - Project Manager

CERTIFICATE OF ANALYSIS

SAMPLE/ ANALYSIS	METHOD	PARAMETER	RESULTS	UNITS	REPORTING LIMIT	TECH	PREPARED	ANALYZED	NOTES
9050702-02	**SAMPLE ID: 002**								
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.036	AJH	5/15/2009 9:13	05/18/2009 11:38	
LEAD - ICP		LEAD	ND	mg/L	0.020	AJH	5/15/2009 9:13	05/18/2009 11:38	
ZINC - ICP		ZINC	0.054	mg/L	0.020	AJH	5/15/2009 9:13	05/18/2009 11:38	
9050702-03	**SAMPLE ID: 004**								
General Bench Analysis									
O & G, NP (SGT-HEM) FOLLOW-UP	EPA 1664A	NONPOLAR OIL & GREASE	4.7	mg/L	3.0	SOB	5/19/2009 10:45	05/20/2009 20:56	
O & G, POLAR (HEM)	CALCULATED	POLAR OIL AND GREASE	2.2	mg/L	1.5	SOB	5/19/2009 10:45	05/20/2009 20:56	
O & G, TOTAL (HEM)	EPA 1664A	OIL/GREASE, TOTAL	6.9	mg/L	5.0	SOB	5/19/2009 10:45	05/20/2009 20:56	
PH	SM 4500 H+ B	pH	6.43	SU		BAB	5/7/2009 11:25	05/07/2009 11:25	
		TEMPERATURE (C)	18.4	SU					
SUSPENDED SOLIDS	SM2540 D	SUSPENDED SOLIDS, TOTAL	10.0	mg/L	10.0	BAB	5/13/2009 16:30	05/14/2009 16:23	
Total Metals by Inductively Coupled Plasma									
COPPER - ICP	EPA 200.7/6010B	COPPER	ND	mg/L	0.036	AJH	5/15/2009 9:13	05/18/2009 11:41	
L - ICP		LEAD	ND	mg/L	0.020	AJH	5/15/2009 9:13	05/18/2009 11:41	
ZINC - ICP		ZINC	0.038	mg/L	0.020	AJH	5/15/2009 9:13	05/18/2009 11:41	

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General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9E08010 - General Preparation										
QC SAMPLE: Duplicate (9E08010-DUP1)				Source: 9050701-01	Prepared & Analyzed: 05/07/09					
pH	7.73		SU		7.78			0.645	10	
TEMPERATURE (C)	19.9		"		20.3			1.99	200	
QC SAMPLE: Duplicate (9E08010-DUP2)				Source: 9050702-03	Prepared & Analyzed: 05/07/09					
pH	6.52		SU		6.43			1.39	10	
TEMPERATURE (C)	18.5		"		18.4			0.542	200	
QC SAMPLE: Reference (9E08010-SRM1)					Prepared & Analyzed: 05/07/09					
pH	5.02		SU	5.00		100	97.5-102.			
QC SAMPLE: Reference (9E08010-SRM2)					Prepared & Analyzed: 05/07/09					
pH	8.03		SU	8.00		100	97.5-102.			
QC SAMPLE: Reference (9E08010-SRM3)					Prepared & Analyzed: 05/07/09					
pH	8.07		SU	8.00		101	97.5-102.			
BATCH: Batch 9E14006 - General Preparation										
QC SAMPLE: Blank (9E14006-BLK1)					Prepared & Analyzed: 05/14/09					
SUSPENDED SOLIDS, TOTAL	ND	10.0	mg/L							
QC SAMPLE: Duplicate (9E14006-DUP1)				Source: 9050802-01	Prepared & Analyzed: 05/14/09					
SUSPENDED SOLIDS, TOTAL	60.0	10.0	mg/L		64.0			6.45	20	
QC SAMPLE: Reference (9E14006-SRM1)					Prepared & Analyzed: 05/14/09					
SUSPENDED SOLIDS, TOTAL	64.0	10.0	mg/L	70.0		91.4	83-115			

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CERTIFICATE OF ANALYSIS

General Bench Analysis - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9E19002 - * DEFAULT PREP *** **										
QC SAMPLE: Blank (9E19002-BLK1)						Prepared: 05/19/09 Analyzed: 05/20/09				
NONPOLAR OIL & GREASE	ND	3.0	mg/L							
OIL/GREASE, TOTAL	ND	2.0	"							
POLAR OIL AND GREASE	ND	1.5	"							
QC SAMPLE: LCS (9E19002-BS1)						Prepared: 05/19/09 Analyzed: 05/20/09				
NONPOLAR OIL & GREASE	15.0	3.0	mg/L	20.2		74.3	64-132			
OIL/GREASE, TOTAL	38.1	6.0	"	40.2		94.8	79-114			
POLAR OIL AND GREASE	23.1	1.5	"	20.0		116	78-132			
QC SAMPLE: LCS Dup (9E19002-BSD1)						Prepared: 05/19/09 Analyzed: 05/20/09				
NONPOLAR OIL & GREASE	19.0	3.0	mg/L	20.2		94.1	64-132	23.5	34	
OIL/GREASE, TOTAL	40.7	6.0	"	40.2		101	79-114	6.60	18	
POLAR OIL AND GREASE	21.7	1.5	"	20.0		108	78-114	6.25	18	

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9E15001 - ***Metals Prep*										
QC SAMPLE: Blank (9E15001-BLK1)						Prepared & Analyzed: 05/15/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							
QC SAMPLE: LCS (9E15001-BS1)						Prepared & Analyzed: 05/15/09				
COPPER	0.214	0.036	mg/L	0.200		107	85-115			
LEAD	0.209	0.020	"	0.200		104	85-115			
ZINC	0.202	0.020	"	0.200		101	85-115			
QC SAMPLE: LCS Dup (9E15001-BSD1)						Prepared & Analyzed: 05/15/09				
COPPER	0.210	0.036	mg/L	0.200		105	85-115	1.89	15	
LEAD	0.202	0.020	"	0.200		101	85-115	3.41	15	
ZINC	0.205	0.020	"	0.200		102	85-115	1.47	15	
QC SAMPLE: Calibration Blank (9E15001-CCB1)						Prepared & Analyzed: 05/15/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							
QC SAMPLE: Calibration Blank (9E15001-CCB2)						Prepared & Analyzed: 05/15/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							
QC SAMPLE: Calibration Blank (9E15001-CCB3)						Prepared: 05/15/09 Analyzed: 05/18/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9E15001 - ***Metals Prep*										
QC SAMPLE: Calibration Blank (9E15001-CCB4)						Prepared: 05/15/09 Analyzed: 05/18/09				
COPPER	ND	0.036	mg/L							
LEAD	ND	0.020	"							
ZINC	ND	0.020	"							
QC SAMPLE: Matrix Spike (9E15001-MS1)				Source: 9050701-01		Prepared & Analyzed: 05/15/09				
COPPER	0.305	0.036	mg/L	0.200	0.102	102	80-120			
LEAD	0.204	0.020	"	0.200	ND	102	80-120			
ZINC	0.320	0.020	"	0.200	0.12	100	80-120			
QC SAMPLE: Matrix Spike Dup (9E15001-MSD1)				Source: 9050701-01		Prepared & Analyzed: 05/15/09				
COPPER	0.294	0.036	mg/L	0.200	0.102	96.0	80-120	3.67	15	
LEAD	0.208	0.020	"	0.200	ND	104	80-120	1.94	15	
ZINC	0.332	0.020	"	0.200	0.12	106	80-120	3.68	15	
QC SAMPLE: Reference (9E15001-SRM1)						Prepared & Analyzed: 05/15/09				
COPPER	2.00		mg/L	2.00		100	0-200			
LEAD	1.98		"	2.00		99.0	0-200			
ZINC	2.02		"	2.00		101	0-200			
QC SAMPLE: Reference (9E15001-SRM2)						Prepared & Analyzed: 05/15/09				
COPPER	1.96		mg/L	2.00		98.0	0-200			
LEAD	2.08		"	2.00		104	0-200			
ZINC	2.04		"	2.00		102	0-200			
QC SAMPLE: Reference (9E15001-SRM3)						Prepared: 05/15/09 Analyzed: 05/18/09				
COPPER	2.01		mg/L	2.00		100	0-200			
LEAD	2.08		"	2.00		104	0-200			
ZINC	2.10		"	2.00		105	0-200			

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Total Metals by Inductively Coupled Plasma - Quality Control

Batch/Sample/Analyte	Result	Detection Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
BATCH: Batch 9E15001 - ***Metals Prep* **										
QC SAMPLE: Reference (9E15001-SRM4)					Prepared: 05/15/09 Analyzed: 05/18/09					
COPPER	2.01		mg/L	2.00		100	0-200			
LEAD	2.00		"	2.00		100	0-200			
ZINC	2.02		"	2.00		101	0-200			

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SPECIAL INSTR:

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SAMPLED BY: _____

CLIENT ConocoPhillips
CONTACT Tom, Rob, Andrew
ADDRESS 5528 NW Doane
CITY, ST, ZIP Portland 97210
e mail
PHONE 563-248-1572
FAX 503-240-1522
CLIENT PROJECT NAME 1200 Z Storm Samples
CLIENT PROJECT #

TURN AROUND REQUESTED
[X] STANDARD (10 DAYS)
[ ] PRIORITY (7 6 5 DAYS)
[ ] RUSH (4 3 2 1 0 DAYS)
SPECIFIC DUE DATE:
[ ] COD
[ ] ON ACCOUNT
CLIENT PO _____

ANALYSES REQUESTED

SAMPLE ID	Bottle Qnty	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	MATRIX	PAH	TSS	O&G	METALS		Field pH					
001	1	UNPRESERVED	5-6-09	1720	H2O						6.09 @ 14.2°C					
001	1	H2SO4	5-6-09	1720	H2O											
001	1	HNO3 (METALS)	5-6-09	1720	H2O											
002	1	UNPRESERVED	5-6-09	1735	H2O						6.36 @ 14.3°C					
002	1	H2SO4	5-6-09	1735	H2O											
002	1	HNO3 (METALS)	5-6-09	1735	H2O											
004	1	UNPRESERVED	5-6-09	1755	H2O						7.29 @ 14.8°C					
004	1	H2SO4	5-6-09	1755	H2O											
004	1	HNO3 (METALS)	5-6-09	1755	H2O											

RELINQUISHED BY		DATE	TIME	RECEIVED BY		DATE	TIME
PRINT	Rob Gross	5/7/09	1100	PRINT		5-7-09	11:00
SIGNATURE				SIGNATURE			
PRINT				PRINT			
SIGNATURE				SIGNATURE			

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO CL IS AN AGREEMENT SERVICES IN ACCORDANCE WITH CONDITIONS LISTED ON THE BACK OF CL COPY.

WHITE COPY - Laboratory YELLOW COPY - Client

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APPENDIX C

Industrial Wastewater Discharge Permit

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
Water Pollution Control Laboratory
6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Sam Adams, Commissioner • Dean Marriott, Director

WASTEWATER DISCHARGE PERMIT

ISSUED TO:	ConocoPhillips Company
SIC CODE:	2992, 5171
PLANT TYPE:	Petroleum Products Storage, Packaging, and Distribution
EPA CATEGORY:	Non-Categorical, Non-SIU
LOCATION:	5528 NW Doane Ave. Portland, Oregon 97203
MAILING ADDRESS:	5528 NW Doane Ave. Portland, Oregon 97203
RESPONSIBLE OFFICIAL:	Tom Lyons
PHONE NUMBER:	(503) 248-1572
FAX NUMBER:	(503) 248-1522

EXPIRATION DATE: 05/01/2013

INDUSTRIAL SOURCE CONTROL MANAGER — Gerald W. Baumgartner — 4-24-08 Effective Date

PREPARED BY: EDB
CHECKED BY : MAS MAS

Ph: 503-823-5600, Fax: 503-823-5656 • www.cleanriverspdx.org • Using recycled paper. • An Equal Opportunity Employer.
For disability accommodation requests call 503-823-7740, Oregon Relay Service at 1-800-735-2900, or TDD 503-823-6868.

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INTRODUCTION

PERMITTED ACTIVITIES

The permittee is authorized to discharge industrial wastewater to the City of Portland's sewer system in compliance with Chapter 17.34 of the City Code, the Bureau of Environmental Services Administrative Rules and any applicable provisions of federal or state laws or regulations and in accordance with discharge point(s), effluent limitations, monitoring requirements, and all other conditions set forth herein.

It is the permittee's duty to comply with all conditions of this permit. Any noncompliance with permit requirements constitutes a violation of Chapter 17.34 of Portland's City Code and, as such, subjects the permittee to enforcement action(s).

Schedule A
WASTEWATER DISCHARGE LIMITATIONS

Listed below are the waste discharge limitations not to be exceeded after **the permit effective date.** Applicable regulations include Chapters 17.34 (Schedule F of this permit lists the General Discharge Prohibitions) and 17.36 of the Code of the City of Portland and 40 CFR 403. The point of compliance with the discharge limitations shall be #1A, the filter box after OWS #003.

POC (*)	Pollutant Name	Local Limit Daily Max (mg/L)	Categorical Limit (mg/Lmg/l, lb / off lb) Daily	Monthly
	METALS			
	Arsenic	0.2		
	Cadmium	0.7		
	Chromium	5.0		
	Copper	3.7		
	Lead	0.7		
	Mercury	0.010		
	Molybdenum	1.4		
	Nickel	2.8		
	Selenium	0.6		
	Silver	0.4		
	Zinc	3.7		
	NON-METALS (INORGANICS)			
	Cyanide	1.2		
*	**pH**	**5.0-11.5 su**	**5.0-11.5 su**	
	NON-METALS (ORGANICS)			
	1,2-Dichloroethane	0.50		
	2,4-Dinitrotoluene	0.13		
	Acrylonitrile	1.00		
	Chlordane	0.03		
	Chlorobenzene	0.20		
	Chloroform	0.20		
	Nitrobenzene	2.00		
	Pentachlorophenol	0.04		
	Trichloroethylene	0.20		
*	**Non-polar Oil & Grease**	**110**	**110 mg/L**	

Notes:

1. This schedule may be revised upon written notification by the City to accommodate process changes by the permittee or as determined by the Director of Environmental Services.

2. In addition to the limits stated in Schedule A, the permittee shall comply with all other applicable City, State and Federal regulations.

3. The pollutant parameters marked with an asterisk (*) are the pollutants of concern. At a minimum, the permittee is required to monitor for pollutants of concern. All limits are applicable at the point of compliance.

4. The permittee is required to meet the MOST stringent limitation listed, denoted in bold type in the above table, when comparing the *Local Limit* column with the *Categorical Limit* column.

5. The City has Pollutant Prohibitions for certain individual organic compounds that are not amenable to biological treatment or that have a screening value or local limit that is less than the practical method detection level (MDL). Discharges containing concentrations of a prohibited pollutant above the MDL, as listed in Appendix 4, is a violation of City Code and this permit.

Schedule B
MONITORING AND
REPORTING REQUIREMENTS

I. Periodic Compliance Self-Monitoring Report:

Parameter	Sample Type	First Quarter			Second Quarter			Third Quarter			Fourth Quarter		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Non Metals													
pH			✓			✓			✓			✓	
Oil and Grease (total)			✓			✓			✓			✓	
Due Dates		Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sept 15	Oct 15	Nov 15	Dec 15	Jan 15

I. Periodic Compliance Self-Monitoring Report, Notes:

1. Periodic Compliance Reports are to be submitted to the Industrial Source Control Division by the 15th of the month following the conclusion of the reporting period. Sampling, analysis, and reporting will follow the schedule above.

2. All official sampling shall be taken at the approved sampling location. (See Appendix 2: sampling location map.)

3. The permittee shall analyze samples for all listed parameters plus any other which might be expected to be present in significant quantities.

4. The permittee shall submit all self-monitoring results to the Industrial Source Control Division as part of their monitoring and reporting requirements.

5. All monitoring results are to be mailed to:

   Industrial Source Control Division
   Bureau of Environmental Services
   City of Portland
   6543 N. Burlington Ave.
   Portland, OR 97203

6. Periodic Compliance Reports are to be submitted by the 15th of each month following the report period for each sampling location. The reports shall consist of:

II. Periodic Compliance Self-Monitoring Report (Notes continued):

a. Statement of compliance/noncompliance, signed by the officially designated contact person (statement is found on bottom of the self-monitoring report form).

b. Sample analysis results recorded on the appropriate self-monitoring report form and chain of custody for sample collected.

c. Originals of all laboratory analysis sheets showing who analyzed sample, date and time sample was analyzed, analytical methods used, method detection limit, test result, and quality assurance/quality control.

d. Copies of pH charts (if any) showing violations (if any).

e. Any other reports that may be required.

f. Calculations of monthly average, if appropriate.

7. The permittee should instruct its laboratory that, if the oil and grease (total) concentration exceeds 110 mg/L, the laboratory should determine the concentrations of the polar and non-polar oil and grease fractions.

8. The City may reduce or increase the frequency of sampling, based on the analytical results submitted.

9. As per 40 CFR 403.12(g)(5), if an industrial user subject to the reporting requirements of Schedule B monitors any parameter from the official sampling location more frequently than required, using procedures specified in Schedule E14(c), the results of their monitoring must be submitted in the required report.

Schedule C
COMPLIANCE SCHEDULE

Schedule D
SPECIAL CONDITIONS

Schedule E
GENERAL CONDITIONS

1. Accidental Spill Prevention Plan

To comply with Section 17.34.090 of the City Code, the permittee shall submit a new or revised Accidental Spill Prevention Plan (ASPP) to the Industrial Wastewater Management Section 90 days after the effective date of this permit. The plans shall include the following elements.

a. A description of the hazardous substances handled and their potential points of entry into the City sewer system or storm runoff

b. A description of the measures to be taken to prevent entry at the described points before a spill occurs

c. Measures to be taken to contain a spill if one occurs

d. A description of employee training in the prevention and control of spills

e. A posted notice informing employees of the requirement to notify the Bureau of Environmental Services in case of spills or uncontrolled discharges.

2. Appeal

Upon receipt of a final industrial wastewater discharge permit, a permittee may appeal any of its terms or conditions to the Code Hearings Officer in accordance with procedures set out at Chapter 22.10 of the Portland City Code; provided that such an appeal shall include a copy of the permit that is the subject of the appeal, shall state the basis for the appeal, and shall be filed with the Code Hearings Officer and the Bureau of Environmental Services.

3. Authorized Discharge

All discharge and activities authorized herein shall be consistent with the terms and conditions of this permit, Chapter 17.34 of the City Code and the Administrative rules. The discharge of any pollutant in excess of these limits shall constitute a violation of the terms and conditions of this permit.

4. Bypass or Diversion

The diversion or bypass (the intentional diversion of wastestreams from any portion of a permittee's treatment facility) of any discharge, from facilities used by the permittee, to maintain compliance with the terms and conditions of this permit is prohibited except:

a. When unavoidable to prevent loss of life or severe property damage.

b. When excessive storm drainage or runoff would damage facilities necessary for compliance with the terms and conditions of this permit.

4. Bypass or Diversion (continued)

The permittee shall immediately notify the City in writing of each such diversion or bypass, in accordance with the procedure specified in condition No. 23.

5. Certification

Legible copies of all applications, reports, and information submitted to the City shall be signed and certified as follows in accordance with 40 CFR 403.12.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

6. Chemical Storage

Chemicals shall be stored in a manner that will prevent the entry of these substances into the sanitary, combined sewer, or storm sewer system, or waters of the state.

7. Continuous Compliance

Compliance with Schedule E, No. 23 shall not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit.

8. Dilution Prohibition

It is unlawful for a discharger to use dilution as a partial or complete substitute for adequate treatment to achieve compliance with the standards and limitations set forth in this permit. The Director may impose mass limitations on dischargers who are using dilution to meet the applicable pretreatment standards or the requirement set forth in this permit.

9. Enforcement Provision

A violation of any conditions, standards or requirements of this permit constitutes a violation of Chapter 17.34 of the City Code and any rules promulgated thereunder. Therefore, the City may seek any or all of the remedies or penalties provided for in Section 17.34.110 of the City Code, including recovery of costs incurred by the City, in response to the following:

a. Any violation by the permittee of the provisions in this Industrial Wastewater Discharge Permit.

b. Any violation by the permittee of the provisions of the City Code.

9. Enforcement Provision (continued)

c. Any violation by the permittee of an Enforcement Action requirement with respect to provisions set forth in this Industrial Wastewater Discharge Permit and the City Code and Administrative Rules.

The range or severity of enforcement actions taken by the City against the permittee will be determined by, but not limited to, the nature, magnitude, duration, and frequency of the violation as provided by City Code and Administrative Rules.

10. Extra-Strength Sewer Charge (ESSC)

Discharges exceeding 300 mg/L for the 5-day biochemical oxygen demand (BOD) or 350 mg/L total suspended solids (TSS) concentrations (as defined in Section 17.36.060(1) of the City Code) shall be subject to the extra-strength sewer charge (ESSC) established in Section 17.36.060(1).

11. Hazardous Waste Notification

The industrial user shall notify the Industrial Source Control Division Section, the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities in writing of any discharge into the POTW of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the industrial user discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification shall also contain the following information to the extent such information is known and readily available to the industrial user: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following 12 months.

12. Inspection and Entry

The permittee shall, at all reasonable times, allow authorized representatives of the City:

a. To enter the permittee's premises where an effluent source or disposal system is located or where any records associated with this permit are kept.

b. To have access to any required records and permission to copy these records. At no time can wastewater effluent data be claimed or held as confidential information.

c. To inspect and evaluate any monitoring equipment or monitoring methods required by this permit.

d. To sample any discharge to the sewer system.

13. Liability

The City of Portland, its officers, agents or employees shall not sustain any liability due to the issuance of this permit or the construction or maintenance of facilities resulting from this permit.

14. Monitoring

a. The permittee shall record the following information:

* The exact date, time, and place of sampling
* Name of person who collected the sample(s)
* Type of sample(s) collected
* The dates analyses were performed
* Who performed the analyses
* The analytical techniques or methods used
* The results of all required analyses
* Whether quality assurance and quality control laboratory procedures are followed

b. Samples and measurements, taken to meet the requirements of the above condition, shall be representative of the effluent. Grab samples must be collected for pH, cyanide, phenol, sulfide, volatile organic compounds and oil and grease monitoring.

c. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless otherwise approved in writing by the City, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136. Laboratory quality assurance and quality control programs should be documented. EPA QA/QC programs should be followed.

d. The permittee is required to document proper installation, and maintenance of flow monitoring and sampling equipment.

e. If the results of the permittee's wastewater analysis indicate that a noncompliance has occurred, the permittee must notify the City's Industrial Source Control Division Section within 24 hours of becoming aware of the noncompliance. The permittee must also repeat the sampling within 24 hours of the effluent noncompliance or next process day and submit the analysis to the City within 30 days after becoming aware of the noncompliance.

f. The permittee shall take all reasonable steps to minimize or correct any adverse impact to the POTW or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

14. Monitoring (continued)

g. If requested, the permittee shall provide or split discharge samples with the City of Portland Water Pollution Control Laboratory.

15. Permit Modification

This permit may be modified with 30 days prior written notification, in whole or in part, for causes including but not limited to the following:

a. A change in the City's NPDES permit or any other condition that requires either a temporary or permanent elimination of any authorized discharge.

b. To incorporate new or revised federal, state, or local pretreatment standards or requirements.

c. Information indicating that the permitted discharge poses a threat to the City's collection and treatment system, POTW personnel, or the receiving waters and sludge.

d. To correct typographical or other errors in the permit.

e. Any significant change in the volume of a permitted discharge.

16. Permit Renewal

This permit is issued to a specific entity and cannot be transferred by the industrial user and must be renewed pursuant to Section 17.34.070 of the Code of the City of Portland and Permit Applications must be received 90 days prior to:

a. Expiration date of current permit.

b. In the event the permittee plans to cease operations at the present location, and plans to relocate within the City of Portland's jurisdiction and continue the same permitted activities.

c. The permitted industrial process being significantly altered or changed so that pollutants not specifically mentioned in the current permit are present in the permittee's discharge.

17. Permit Suspension or Termination

a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the director of the Bureau of Environmental Services.

b. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts.

c. Falsifying self-monitoring reports.

d. Tampering with monitoring equipment.

17. Permit Suspension or Termination (continued)

e. Refusing to allow prompt access to the facility premises and records.

f. Failure to meet effluent limitations.

g. Failure to pay fines.

h. Failure to meet compliance schedules.

18. Plant Closure

In the event the permittee plans to cease operations at the present business location, and not to relocate within the City of Portland's jurisdiction, the permittee shall inform this office, in writing, 60 days prior to plant closure.

19. Property Rights or Privileges

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges; it does not authorize any injury to private property or any invasion of personal rights; and it does not authorize any infringements or federal, state, or local laws or regulations.

20. Records Retention

All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation (and calibration and maintenance records), shall be retained by the permittee for a minimum of three years. This retention period shall be extended during the course of any unresolved litigation pertaining to the discharge of pollutants by the permittee, or whenever it is requested by the City, the Approval Authority (DEQ), the Regional Administrator (EPA).

21. Reporting Requirements

a. Accidental or Slug Loading

If accidental or slug loading to the sanitary sewer occurs, the permittee shall notify the City Permit Manager immediately, if no response then call the City Duty Officer at 503-823-7180 (M-F 8:00am - 4:30pm) or 503-323-3398 (after 4:30pm and weekends). A formal written report, discussing circumstances and remedies, shall be submitted to the City within 5 days of the occurrence

b. Changes in Wastewater Characteristics

The permittee shall give notice to the Industrial Source Control Division Section 90 days before any facility expansion, production increase, or process modifications that result in new or substantially increased discharges or a change in the nature of the discharge.

c. Change in representative

21. Reporting Requirements (continued)

If the responsible corporate official changes, notify the City within 10 days, as per 40 CFR 403.12 (1) (4).

22. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to the other circumstances and the remainder of this permit shall not be affected.

23. Slug Load Notification

If the permittee is unable to comply with all the conditions of this permit due to a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, or should any condition cause the release of any slug load, the permittee shall:

a. Immediately take action to stop, contain, clean up the unauthorized discharges, and correct the problem.

b. Immediately call the City Permit Manager, if no response then call the City Duty Officer at 503-823-7180 (M-F 8:00am - 4:30pm) or 503-323-3398 (after 4:30pm and weekends).

c. Within five (5) days submit a detailed written initial report to the City Permit Manager describing the breakdown, the actual quantity of resultant waste discharges, the corrective action taken, the steps taken to prevent recurrence, and any other pertinent information.

d. Samples shall be taken immediately upon discovery of the Slug load. Within 15 days, a follow-up report shall be submitted. The report shall contain analysis of samples taken during such discharge and samples taken after normal conditions have been restored. The samples, at a minimum, shall be analyzed for the parameters required in Schedule B. Sampling shall be continued until all parameters are within discharge limits.

24. Upset

a. Definition:

For the purposes of this section, upset means an exceptional incident in which there is unintentional and temporary noncompliance with applicable pretreatment standards, because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an Upset:

An upset will constitute an affirmative defense to an action brought for noncompliance with applicable pretreatment standards, if the requirements of paragraph c are met.

24. Upset (continued)

c. Conditions Necessary for a Demonstration of an Upset:

A permittee who wishes to establish the affirmative defense of an upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and the permittee can identify the specific cause(s) of the upset.

(2) The facility was, at the time, being operated prudently, efficiently, and in compliance with applicable operation and maintenance procedures.

(3) The permittee has submitted the following information to the Industrial Source Control Division within 24 hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within 5 days).

* A description of the indirect discharge and cause of noncompliance

* The period of noncompliance, including exact dates and times or, if not corrected, the anticipated duration of noncompliance

* Steps planned or now being taken to reduce, eliminate, and prevent recurrence of the noncompliance

d. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset shall have the burden of proof.

e. Permittee Responsibility in Case of an Upset.

If reduction, loss, or failure of its treatment facility occurs, the permittee shall control production of all discharges in order to maintain compliance with applicable pretreatment standards until the facility is restored or an alternative method of treatment is provided. This requirement especially applies if the primary source of the treatment facility power is reduced, lost, or failed.

Schedule F
GENERAL DISCHARGE PROHIBITIONS

The permittee shall not discharge, cause to discharge or allow to discharge directly or indirectly into the City sewer system any of the following:

1. Wastewater containing substances in such concentrations that they inhibit or interfere with the operation or performance of the sewer system, or that are not amenable to treatment or reduction by the sewage treatment process employed, or are only partially amenable to treatment such that the sewage treatment plant effluent cannot meet the requirements of any agency having jurisdiction over its discharge to the receiving waters, or that prevent or impair the use or disposal of sewage treatment plant sludge and sludge products in accordance with applicable State and federal regulations;

2. Any liquids, solids, or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction to cause fire or explosion or be injurious in any other way to the operation of the sewer system, or wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Celsius (using test methods prescribed at 40 CFR 261.21), or discharges which cause the atmosphere in any portion of the sewer system to reach a concentration of 10% or more of the Lower Explosive Limit (LEL).

3. Any solid or viscous substances capable of obstructing wastewater which will or may cause obstruction to the flow of wastewater or other interference with the operation of the sewer system;

4. Any noxious, malodorous or toxic liquids gases, vapors or fumes, solids, or other substances which, either singly or by interaction with other wastes, may cause acute or chronic worker health and safety problems, a public nuisance, a hazard or interference with any part of the sewer system;

5. Any industrial wastewater containing a hazardous or toxic substance which, either singly or by interaction with other substances, injures or interferes with the sewer system or constitutes a hazard to humans or animals, or creates a hazard in, or adversely affects the receiving waters, or results in such substances being discharged in combined sewer overflows or sewage treatment plant effluent in any concentrations in excess of limitations imposed by any permit, law or regulation;

6. Any wastes, wastewaters or substances having a pH less than 5.0 or more than 11.5, or capable of causing damage or hazard to structures, equipment, processes or personnel of the sewer system, unless these limits are modified by permit.

7. Any liquid or vapor having a temperature higher than 65 degrees Celsius (149 degrees Fahrenheit) or containing heat in amounts which will inhibit biological activity, or result in interference at the treatment plant. In no case shall a discharge to the sewer system contain heat in such quantities that the temperature of the treatment plant influent exceeds 27 degrees Celsius (80 degrees Fahrenheit);

8. Any material trucked or hauled from a cesspool, holding or septic tank or any other nondomestic source, except such material received at designated locations under City contract or permit in accordance with any other applicable requirements of the City Code 17.34 or rules adopted hereunder;

9. Any substance which may solidify or become discernibly viscous at temperatures above 0 degrees Celsius or 32 degrees Fahrenheit;

10. Any material that has not been properly comminuted to 0.65 centimeters (1/4 inch) or less in any dimension;

11. Any slugload, as defined in City Code 17.34 or rules adopted hereunder;

12. Any substances with excessive color, as determined by the Director of Environmental Services, which are not removed in the treatment process;

13. Any batch discharges without written permission from the Director of Environmental Services. Batch discharges shall comply with all other requirements of City Code 17.34 and rules adopted hereunder;

14. Any concentrations of inert suspended or settleable solids which may interfere with the operation of the sewer system;

15. Any concentrations of dissolved solids which may interfere with the operation of the sewer system;

16. Any radioactive material, except in compliance with a current permit issued by the Oregon State Health Division or other state or federal agency having jurisdiction;

17. Any substance which may cause sewer system effluent or treatment residues, sludges, or scums, to be unsuitable for reclamation and reuse or which interferes with the reclamation process. (In no case, shall a substance discharged to the sewer system cause the City to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under the Clean Water Act; any criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act (42 USC 6901), the Clean Air Act (42 USC 1857), the Toxic Substances Control Act (15 USC 2601), or any other federal or State statutes, regulations or standards applicable to the sludge management method being used, or any amendments thereto.)

18. Petroleum oil, nonbiodegradeable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.

19. Noncontact cooling water (except that noncontact cooling water may be discharged to the separate storm sewer system upon approval by the Director of Environmental Services);

20. Any substance that causes the City to violate the terms of its NPDES permit.

Appendix 1
DEFINITIONS

Abbreviations

BOD_5	Five-day biochemical oxygen demand
mg/L	Milligrams per liter
k	Kilograms
m^3/d	Cubic meters per day
ppm	Parts per million (assumed equal to milligrams per liter)
POTW	Publicly owned treatment works
WPCL	Water Pollution Control Laboratory

Averages for BOD, TSS, and chemical parameters are based on arithmetic mean of samples taken.

Definitions

Bypass

The intentional diversion of wastestreams from any portion of a permittee's treatment facility.

Compatible Pollutant

Biochemical oxygen demand, suspended solids, pH and fecal coliform bacteria, and additional pollutants that the City treatment works is designed to treat.

Conventional Pollutants

Classification of industrial pollutants, which includes BOD (biochemical oxygen demand), suspended solids, fecal coliform, pH (acidity/alkalinity), and other pollutants so designated by EPA, as defined by Section 304(a)(4) of the Clean Water Act.

Director of Environmental Services

The Director of Environmental Services of the City of Portland, Oregon, or that person's duly authorized representative or agent.

City, or City of Portland

The municipality of Portland, Oregon, a municipal corporation of the State of Oregon, acting through the City Council or any board, committee, body, official, or person to whom the Council shall have lawfully delegated the power to act on behalf of the City. Unless a particular board, committee, official, or person is specifically designated in these rules and regulations, wherever action by the City is explicitly required or implied herein, it shall be understood to mean action by the Director of Environmental Services of Portland, Oregon, or that person's duly authorized representative or agent.

Effective Date of this Permit

The date this permit is signed by the Director of the Bureau of Environmental Services.

Expiration Date

From 1 to 5 years beyond the effective date of this permit.

Hazardous or toxic substances

Hazardous or toxic substances are those substances referred to in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S. Code 9601 et seq.), section 502(13) of the Clean Water Act, and any other substances so designated by the Director of Environmental Services and contained in rules adopted pursuant to this Chapter.

Industrial Waste

Any liquid, solid, or gaseous substance (or combination thereof) resulting from any process of industry, manufacturing, commercial food processing, business, agriculture, trade, or research, including but not limited to the development, recovery, or processing of natural resources and leachate from landfills or other disposal sites.

Industrial Wastewater Discharge Permit

A permit to discharge industrial wastewater into the City sewer system issued under the authority of the City Code, which prescribes certain discharge requirements and limitation.

Interference

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the normal operation of the City sewer system, or which causes a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or any increase in the cost of treatment of sewage or in the cost of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations); Section 405 of the Clean Water Act, the Solid Waste Disposal Act (including Title II, more commonly referred to as the Resource Conservation and Recovery Act), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of RCRA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum Daily Discharge Limitation

The highest allowable daily discharge.

Nonconventional Pollutants

All pollutants that are not specifically designated as either conventional or toxic.

COP0017288

Oil and Grease

Fats, Oils and Grease. Fats, oils and grease are those substances which are measured by USEPA Method 1664: N-Hexane Extractable Method (HEM) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM).

(a) Non-polar fats, oils and grease are that portion of fats, oils and grease which is measured as non-polar (from petroleum sources) by USEPA Method 1664.

(b) Polar fats, oils and grease are that portion of fats, oils and grease which is determined to be polar (of animal or vegetable origin) by USEPA Method 1664.

Pass Through

Pass through means a discharge which exits the POTW into waters of the United States in Quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

POTW

POTW means Publicly Owned Treatment Works, which includes any devices and systems, owned by a State or municipality, used in the collection, transportation, storage, treatment, recycling and reclamation of wastewater.

Pretreatment

The reduction of the amount of pollutants, the elimination of pollutants, or the alternation of the nature of pollutant properties in wastewater to a non-harmful state, prior to or in lieu of discharge of such pollutants into the City sewer system.

Sampling

a. The "monthly average" other than pH is the arithmetic mean of samples collected during a calendar month.

b. The "daily maximum" is defined as the greatest allowable value for any calendar day.

c. The “four day average” is defined as the average of four discrete sampling events for a particular pollutant, which is determined by the sampling frequency and not necessarily four consecutive calendar days.

d. A " composite sample" is a series of individual discrete samples taken at selected intervals based on either an increment of flow or time. The samples are mixed together to approximate the average composition of discharge to the City sewer system. A composite sample for one day shall consist of a pool of samples, collected over the operational period of the production day.

e. A "Grab" sample is an individual sample collected in less than 15 minutes, without regard for flow or time.

f. A "Grab-Composite" is a minimum of four grab samples collected and preserved over a 24-hour period and combined to provide a representative sample of effluent being discharged.

Schedule of Compliance

A schedule of remedial measures, including an enforceable sequence of actions or operations leading to compliance with an effluent limitation or other limitation, prohibition, or standard.

Severe Property Damage

Substantial physical damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Slugload

A slugload is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge.

Solid Waste

Any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits.

Solid Waste Disposal

The final placement of refuse that cannot be salvaged or recycled.

Solvent Management Plan

A plan that specifies the toxic organic compounds used, the method of disposal used (instead of dumping into wastestreams), and procedures for ensuring that toxic organics do not spill or leak into wastewater discharged to the City sewer system.

Total Dissolved Solids

The total dissolved (filterable) solids as determined by use of the method specified in the list of approved test procedures.

Total Organic Active Ingredients

The sum of all organic active ingredients covered by the organic pesticide chemicals manufacturing subcategory, which are manufactured at a facility subject to the effluent guidelines for pesticides chemicals manufacturing.

Total Solids

The sum of dissolved and undissolved constituents in water or wastewater, usually expressed as milligrams per liter.

Total Suspended Solids

Total suspended matter that either floats on the surface or is in suspension in water or wastewater and that are removable by laboratory filtering (as described in *Standard Methods for the Examination of Water and Wastewaters,* current edition) or Guidelines Establishing Test Procedures for the analysis of Pollutants, contained in 40 CFR 136, as published in the *Federal Register.*(Bureau of Environmental Services Administrative Rules I[22])

Upset

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with applicable pretreatment standards, because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Waste

Unwanted materials left over from manufacturing processes, or refuse from places of human or animal habitation.

Wastewater

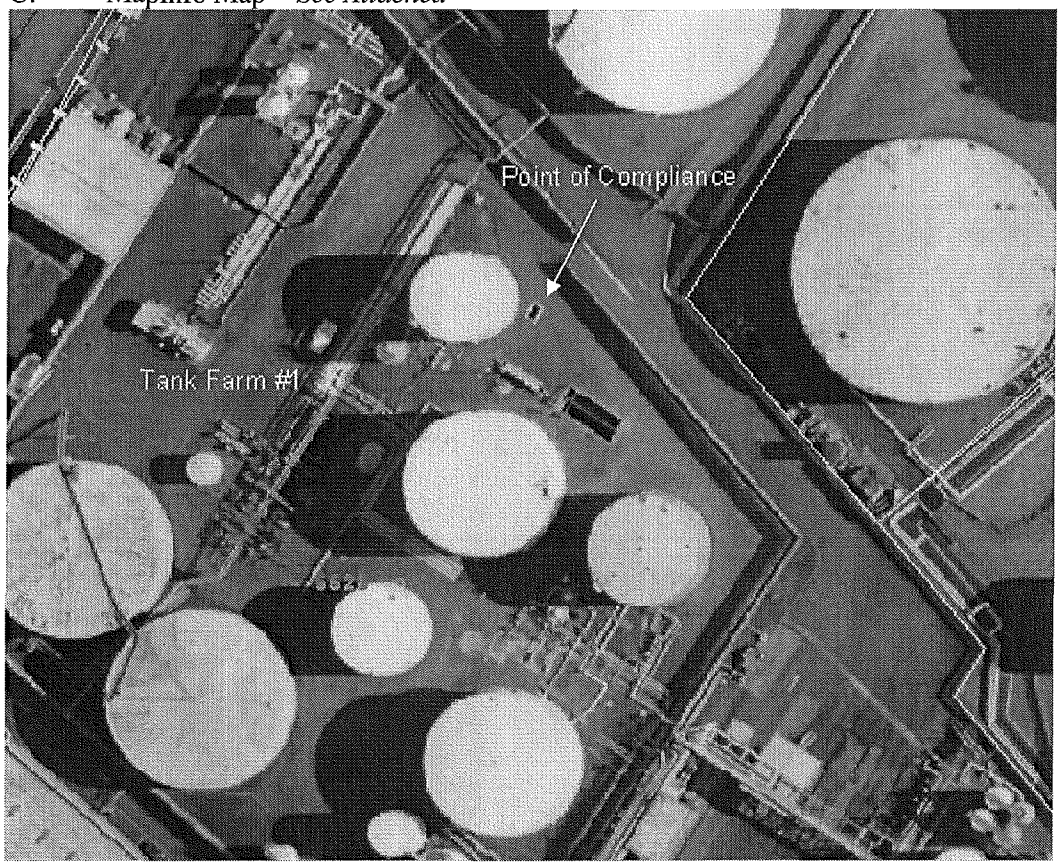
Industrial waste, sewage, or any other waste, including that which may be combined with any groundwater, surface water, or stormwater that may be discharged to the city sewer system.

Water Pollution

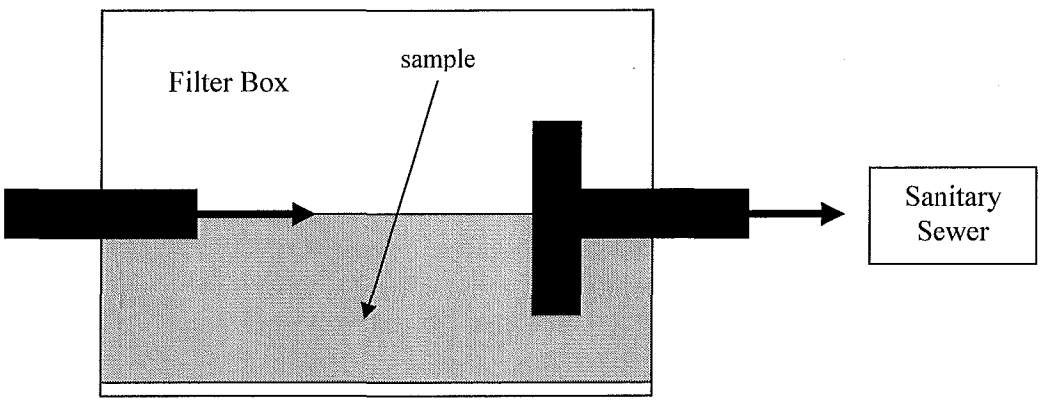
The addition of enough harmful or objectionable material to damage water quality.

Appendix 2
SAMPLING LOCATION MAP

C: MapInfo Map *See Attached*



The point of compliance is the filter box sump, after the Hydrocleaner.



Appendix 3
RESERVED: ACCIDENTAL SPILL PREVENTION PLAN

Already on file with the City.

Appendix 4
Individual Organic Compounds - Pollutant Prohibitions

POLLUTANT PROHIBITIONS	*METHOD DETECTION LIMIT(mg/L)*
Volatiles	
Bromodichloromethane	0.005
Bromoform	0.005
Bromomethane	0.010
1,1,1,2-Tetrachloroethane	0.010
1,1,2-Trichloroethane	0.005
1,1-Dichloroethene	0.005
Chloroethane	0.050
Chloromethane	0.005
Dibromochloromethane	0.005
Vinyl Chloride	0.050
Base/Neutral extractables	
1,2,4-Trichlorobenzene	0.005
1,2-Dichlorobenzene	0.005
1,2-Diphenylhydrazine	0.005
1,3-Dichlorobenzene	0.005
1,4-Dichlorobenzene	0.005
2,6-Dinitrotoluene	0.005
4-Bromophenyl-Phenyl Ether	0.005
Bis (2-Chloroethoxy)methane	0.010
Bis (2-Chloroisopropyl)ether	0.010
Hexachlorobenzene	0.005
Hexachlorobutadiene	0.005
Hexachlorocyclopentadiene	0.005
N-Nitroso-Di-N-Propylamine	0.005
Pesticides	
4,4-DDD (p,p-TDE)	0.001
4,4-DDE (p,p-DEX)	0.001
4,4-DDT	0.001
a-BHC (alpha)	0.001
b-BHC (beta)	0.001
d-BHC (delta)	0.001
Dieldrin	0.001
Endosulfan II (beta)	0.001

Endosulfan Sulfate	0.001
Endosulfan-I (alpha)	0.001
Endrin	0.001
Endrin Aldehyde	0.001
g-BHC (gamma) (Lindane)	0.001
Heptachlor	0.001
Heptachlor Epoxide	0.001
Toxaphene	0.001
Polychlorinated biphenyls (PCBs)	
PCB 1016	0.001
PCB 1221	0.001
PCB 1232	0.001
PCB 1242	0.001
PCB 1248	0.001
PCB 1254	0.001
PCB 1260	0.001

Permit Amendments

VOID

APPENDIX D

Compliance Quick Sheet: NPDES 1200-Z Permit

COMPLIANCE QUICK SHEET: NPDES 1200-Z Stormwater General Permit #90845

This Compliance Quick Sheet highlights the major 1200-Z permit requirements. Details of requirements are covered in the permit (Permit Xref) or SWPCP [Plan Xref] cross reference sections listed below.

Site Address: ConocoPhillips Portland Terminal, 5528 NW Doane Avenue Portland, OR 97210 (Site)
ConocoPhillips Contact: Tom Lyons, Facility Supervisor
1200-Z Permit Term: July 1, 2007 – June 30, 2012
Reporting To: City of Portland, acting as the agent for ODEQ; all reporting/submittals to City

Stormwater discharges from the site to the municipal storm system through one of three oil/water separators: Separators #001, #002, and #004. The final chamber of each of these three separators is a required monitoring and sampling outfall location.

Stormwater Pollution Control Plan (SWPCP)

- A current, updated, certified SWPCP must be followed and implemented. (Permit Sch A.1)
- SWPCP must include certain required elements. (Permit Sch A.3)
- SWPCP must be reviewed annually [Plan 7.2]; any SWPCP revision must be submitted in an Action Plan within 30 days of revision. (Permit Sch A.2)

Stormwater Grab Samples

- Collect 4 grab samples at each of the 3 stormwater outfalls per reporting year (July 1 - June 30); first 2 before Dec 31, final 2 after Jan 1; sampling must be 14 days apart; samples to be analyzed for 3 metals (Cu, Pb, Zn), pH, TSS, and total oil and grease. (Permit Sch B.2.a)
- Grab samples must be collected when stormwater is actively discharging to municipal storm system. (Permit Sch B.2.c) [Plan 8.2]
- Monitoring Waiver allowed for grab sample individual parameters if at least 4 consecutive sampling results meet the benchmarks. (Permit Sch B.3.b)

Stormwater Visual Monitoring

- Conduct monthly visual monitoring, while discharging, for floating solids (no visible discharge) and oil & grease (no visible sheen) at each of the 3 stormwater outfalls. (B.1-2)
- Record rain gauge data and determine stormwater discharge volume. [Plan 7.1.3]

Reporting

- Submit a Discharge Monitoring Report (DMR) before July 31st each year; DMR must include previous reporting year gab sample results, and visual monitoring results. (Permit Sch B)
- Any addition sampling most be reported. (Permit Sch B.1)
- All reporting to be sent to City of Portland, BES (an agent for DEQ), attention Timothy Dean.
- Any benchmark exceedance must be followed up with an investigation, a SWPCP review, and an Action Plan submittal within 30 days of receipt of sampling results. (Permit Sch A.9)
- By June 30th, 2011, the mean of the last 4 sampling results must be reported in a DMR. If a mean exceeds its benchmark, the general permit may be revoked. (Permit Sch A.10)

Record Keeping

- The SWPCP must be at the Site and available for regulatory review. (Permit Sch A.1.g)
- Keep these record but DO NOT report unless requested: inspection, maintenance, repairs, and training activities; spill/leak history (significant spills require reporting) (Permit Sch A.3.d)

Training

- Train employees within 30 days of hire and annually thereafter. (Permit Sch A.3.C.iv)

APPENDIX E

Compliance Quick Sheet: IWD Permit

COMPLIANCE QUICK SHEET: Industrial Wastewater Discharge Permit #400.181

This Compliance Quick Sheet is intended to summarize the major Industrial Waste Discharge (IWD) permit requirements. The IWD permit covers discharges to the City of Portland sanitary sewer system. Stormwater discharges to the municipal storm system at the site are covered under the separate NPDES 1200-Z stormwater permit. Details of requirements are covered in the IDW Permit (Permit Section Xref) or ASPP [Plan Xref] cross references listed below.

Site Address: ConocoPhillips Portland Terminal, 5528 NW Doane Avenue Portland, OR 97210 (Site)
ConocoPhillips Contact: Tom Lyons, Facility Supervisor
IWD Permit Term: April 4, 2008 - May 1, 2013
Reporting To: City of Portland Environmental Services, Industrial Wastewater Management Section, Gerald Baumgartner

Monitoring and Reporting Requirements

- Quarterly (Jan-Mar, Apr-Jun, Jul-Sep, and Oct-Dec) grab samples representative of the discharge water must be collected from the last chamber of the final box of the process stream oil/water separator (Separator #003); samples must be analyzed for total oil and grease and pH at a minimum. (Permit Sch B)
- Periodic Compliance Reports must be submitted by 15th of the month following the reporting quarter. (Permit Sch B)
- Any additional sampling must be reported. (Permit Sch B.II.9)
- If analytical results indicate a non-compliance condition, then notify City and repeat sampling within 24 hours. (Permit Sch E.14.e)

Accidental Spill Prevention Plan (ASPP)

- Within 90 days of the permit effective date (4/4/08), submit a new or revised ASPP. (Permit Sch E.1)
- The ASPP must include certain required elements. (Permit Sch E.1)
- Although not required specifically in the IDW permit, the ASPP calls for quarterly monitoring of flow and monthly monitoring for visual sheen and floating solids in Separator #003.

Posting Requirement

- At the employee notification bulletin board and at the process separator #003, post a notice that the City must be notified of any spills or uncontrolled discharges to the sanitary sewer system. (Permit Sch E.1.e)