Table 1
NPDES Stormwater Analytical Results Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Date	Sample Location[1]	COCs (µg/L)																									pH	Total Suspended Solids (mg/L)	Oil and Grease (mg/L)
		Copper	Lead	Zinc	Cadmium	Nickel	Chromium	Iron	Aldrin	DDT	DDT Metabolite (DDE)	Dieldrin	Total PCBs	Pentachlorophenol	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene 3,4	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Pyrene			
11/27/1996	Valve #1	**2**	<1	**18.5**	<1	**5.4**	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.82	<10	<0.500
10/30/1997	PLT 1 Dock Drain	**28**	**35.7**	**368**	**1.7**	**5.3**	**8.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.39	**108**	**1.03**
9/18/1998	Plant 1	<20	<50	**150**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.09	**230**	<3
11/20/1998	N/A	<30	<100	**144**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.40	**152**	**7.3**
1/19/1999	Storm Drain Front Trucking Lot	<18	<45	**90**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.28	**120**	<3
3/1/1999	CB near Entrance & Loading Dock	**56**	<100	**290**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.70	**246**	**14.7**
5/17/1999	Plant #1 Truck Parking	<20	<50	**70**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.15	**19**	<3
10/27/1999	CB near Entrance & Loading Dock	<30	<100	**340**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.60	**98.8**	**23**
6/27/2000	Stormwater/Truck Parking	**52**	**90**	**900**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.72	**760**	**7**
11/29/2000	CB near Entrance & Loading Dock	<50	<200	**170**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.00	**55**	<5
11/29/2000	Parking Lot Drain Pl#1	<50	**16**	**150**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.52	**97**	<3
2/16/2001	Front Truck Parking Drain	<30	**11**	**200**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.78	**33**	<3
11/19/2001	CB-1	**28.9**	**419**	**392**	-	-	-	-	-	-	-	-	-	-	<0.0500	**0.07**	**0.18**	**0.62**	**0.59**	**0.16**	**0.2**	**0.12**	**0.34**	**0.13**	**0.59**	**0.95**	6.38	**402**	-
11/20/2001	CB near Entrance & Loading Dock	**162**	<200	**670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.50	**110**	**10**
2/21/2002	Truck Dock/ Plant #1	<30	**150**	**3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.32	**21**	<3
5/13/2002	CB	**35.6**	<20	**312**	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	6.59	**20**	-
12/23/2006	N/A	**1.42**	**1.44**	**158**	<0.10	**0.93**	<1.0	-	-	-	-	-	-	<0.029	<0.0031	<0.0039	<0.0039	0.0047	<0.0046	<0.0051	**0.0074**	<0.0036	**0.011**	<0.0036	**0.0049**	**0.017**	6.30	**14**	<5
3/7/2007	N/A	**6.31**	**5.58**	**177**	**0.315**	**1.65**	**1.76**	-	-	-	-	-	-	**0.064**	<0.0031	<0.0039	**0.013**	**0.013**	**0.023**	**0.01**	**0.029**	**0.0058**	**0.032**	<0.0036	**0.017**	**0.059**	-	-	-
4/7/2007	N/A	**7.01**	**3.46**	**125**	**0.332**	**1.31**	<0.129	-	-	-	-	-	-	**0.071**	**0.0059**	**0.011**	**0.0068**	**0.0072**	**0.01**	<0.0051	**0.015**	<0.0036	**0.027**	**0.0059**	**0.0087**	**0.032**	5.86	**22**	<5
6/9/2007	N/A	**9.62**	**4.73**	**98.6**	**0.278**	**1.36**	**1.09**	-	-	-	-	-	-	**0.14**	<0.0044	<0.0036	0.0068	0.0046	0.0091	<0.0025	**0.0093**	<0.0025	**0.021**	<0.0044	**0.0059**	**0.018**	6.11	**34**	<5
10/18/2007	Oil/Water Separator	<10	<20	**116**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.11	**34**	<5
11/19/2007	Oil/Water Separator	<10	<20	**130**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.25	**13**	<5
12/2/2007	Oil/Water Separator	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.78	-	-
1/2/2008	Oil/Water Separator	<10	<20	**173**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.99	**7**	<5
3/28/2008	Oil/Water Separator	<10	<20	**132**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.34	**23**	<5
11/5/2008	Oil/Water Separator	MW	MW	MW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.20	MW	MW
11/20/2008	Oil/Water Separator	MW	MW	MW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.60	MW	MW
NPDES Benchmark[2]		**100**	**400**	**600**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**5.5-9.0**	**130**	**10**
10/22/2012	Oil/Water Separator	<10	<20	**115**	**0.239**	**0.902**	**0.107**	**632**	<0.009	<0.009	<0.009	<0.009	<0.008	<1.92	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	6.50	<5.00	<3.30
11/11/2012	Oil/Water Separator	<10	<20	**183**	<1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.33	**12**	<4.95
2/22/2013	Oil/Water Separator	<10	<20	**217**	<1	<5	**9**	**3,220**	<0.00496	<0.0125	<0.00496	<0.00496	<0.00992	<2.00	<0.051	<0.051	**0.061**	**0.081**	**0.14**	<0.051	**0.071**	<0.051	**0.16**	<0.051	**0.1**	**0.19**	6.40	**76**	**7.58**
4/19/2013	Oil/Water Separator	<10	<20	**110**	<1	<5	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.10	**6**	<5.10
NPDES Benchmark[3]		**20**	**40**	**120**	**N/A**	**N/A**	**N/A**	**1,000**	**3**	**1.1**	**0.01**	**2.5**	**2**	**20**	**95**	**2,900**	**1**	**1**	**1**	**1**	**1**	**1**	**14**	**390**	**1**	**1**	**5.5-9.0**	**100**	**10**

Notes:
SLV = Screening Level Value
N/A = Not Available
NE= not established
- = Not Analyzed
µg/L = micrograms per liter
mg/l = milligrams per liter
MDL = Method Detection Limit
< = concentration was not detected at or above the laboratory MDL
Bold = concentration detected above the laboratory MDL
= concentration exceeds NPDES benchmark
[1] Stormwater sample collected by Wohlers Environmental Services, Inc.
[2] NPDES Benchmarks effective July 1, 2007
[3] NPDES Benchmarks effective July 1, 2012

Table 2
Outfall #18 Sediment Data Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Contaminant	Units	Down-Stream SD140	Down-Stream SD142	Nearest Outfall #18 SD143	Nearest Outfall #18 SD143-A	Up-Stream SD144	Up-Stream SD146	Up-Stream SD147	Apparent Portland Harbor Sediment Baseline Maximum Value
Aluminum	ppm	41,000	10,300	28,900	31,900	42,100	41,000	39,300	42,800
Antimony	ppm	<5	<6	<5	<5	6	<5	6	<5
Arsenic	ppm	<5	<6	<5	9	<6	<5	<5	<5
Barium	ppm	186	177	148	274	183	189	191	195
Beryllium	ppm	0.6	0.7	0.48	0.44	0.6	0.7	0.7	0.7
Cadmium	ppm	0.6	0.5	0.5	5.3	0.5	0.4	0.5	0.6
Chromium	ppm	37.6	37.9	32.1	157	39.3	37.8	36.8	41
Cobalt	ppm	19	18.1	14.8	17.6	18.5	19.2	19.5	19.7
Copper	ppm	44	47.9	34.1	124	48.3	43.9	44.5	60
Iron	ppm	43,400	43,000	34,500	36,500	44,700	42,900	42,800	45,000
Lead	ppm	15	17	28	1,080	20	14	15	30
Manganese	ppm	694	632	512	483	635	691	713	810
Mercury	ppm	0.08	0.06	0.04	0.37	0.06	0.05	0.06	0.1
Nickel	ppm	30	29	23.2	30.7	30	30	31	32
Selenium	ppm	10	14	10	8	11	14	12	15
Silver	ppm	0.7	0.8	0.6	3.4	0.8	0.7	0.7	1.4
Thallium	ppm	11	10	<5	<5	12	8	14	13
Titanium	ppm	-	2,010	1,840	1,870	2,160	1,900	1,900	2,075
Vanadium	ppm	106	108	86.3	91.9	110	105	105	112
Zinc	ppm	102	113	109	583	120	100	102	118
2-Methylnaphthalene	ppb	<20	<19	36	2,000	<19	<19	<19	150
4-Methylphenol	ppb	730	950	290	<910	1,200	750	990	680
Benzoic Acid	ppb	<200	<190	<190	<9,100	<190	<190	<190	<200
Benzyl Alcohol	ppb	<20	<19	<19	<910	<19	<19	<19	<20
bis(2-Ethylhexyl)phthalate	ppb	190	300	640	5,000	440	170	170	390
Butylbenzylphthalate	ppb	<20	<19	30	<910	20	<19	<19	<20
Carbazole	ppb	<20	<19	<19	<910	<19	<19	<19	100
Di-N-Butylphthalate	ppb	<20	<19	<19	<910	<19	<19	<19	<20
Di-N-Octylphthalate	ppb	<20	<19	<19	<910	<19	<19	<19	<20
Dibenzofuran	ppb	<20	21	<19	<910	<19	<19	<19	100
Dimethylphthalate	ppb	<20	<19	<19	<910	<19	<19	<19	<20
Pentachlorophenol	ppb	<99	<95	<96	<4,500	<96	<95	<95	Detect
Phenol	ppb	<20	<19	<19	<910	<19	<19	<19	<20
LPAHs (total)	ppb	62	228	157	1,100	58	32	25	700
HPAHs (total)	ppb	524	703	542	<910	501	232	254	2,400
Organotins (total)	ppb	-	17	<22.8	<1,080	9.8	<22.8	230	300
TOC	%	1.6	1.8	1	5.6	1.7	1.4	1.5	2
Water Depth	ft	18	35	16	17	37	35	31	-
Sediment Sample Depth	cm	0-17	0-17	0-15	0-104	0-17	0-17	0-17	-
Off Shore Distance	ft	240	300	215	215	150	195	150	-

Notes:

ppm = parts per million

ppb = parts per billion

% = percentage

ft = feet

cm = centimeter

< = less than

The values presented on this table are from Table 2 of the DEQ Site Assessment Program - Strategy Recommendation, dated June 29, 2000.

Table 3
Pre-SCE Stormwater Analytical Results Summary: 2001
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

PAHs[1] (µg/l)	CB-1[2] (11/19/2001)
Naphthalene	0.27
2-Methylnaphthalene	-
Acenaphthylene	0.27
Acenaphthene	<0.0500
Fluorene	0.13
Phenanthrene	0.2
Anthracene	0.07
Fluoranthene	0.34
Pyrene	0.65
Benzo(a)anthracene	0.18
Chrysene	0.2
Benzo(b)fluoranthene	0.59
Benzo(k)fluoranthene	0.18
Benzo(a)pyrene	0.62
Indeno(1,2,3-cd)pyrene	0.59
Dibenz(a,h)anthracene	0.12
Benzo(g,h,i)perylene	1.02

NOTES:
PAHs = polycyclic aromatic hydrocarbons
µg/l = micrograms per liter
MDL = Method Detection Limit
< = concentration was not detected at or above the laboratory MDL
[1] Semivolatile organic compound analysis by EPA Method 8270D SIM.
[2] Stormwater sample collected by Wohlers Environmental Services, Inc.

Table 4
Catch Basin Sample Location Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Stormwater System Component IDs	Elevations (feet amsl[1])			Drainage Subbasin	Date of last Cleanout	Activities and Potential Sources Draining to the Catch Basin	Proposed for Sampling?	If not sampled, rationale for sample location exclusion?
	Grate	Top of Pipe/Culvert	IE of Structure					
CB-1 (Receiving/Loading Area)	35.82	NM	33.32 [2]	Primary Subbasin	3/8/2010	Product transfer, minor leaks/spills, industrial debris	Yes (filter and bottom)	NA
CB-2 (Adjacent to East Property Corner in City ROW)	36.41	34.56	33.56	NA	NA	Stormwater runoff from NW St. Helens Road	No	Not considered to be directly in Site stormwater pathway
CB-3 (Adjacent to North Property Corner in City ROW)	38.40	36.80	35.80	NA	NA	Stormwater runoff from NW St. Helens Road	No	Not considered to be directly in Site stormwater pathway
Drain Grate (Covered Loading Dock)	40.18	NM	NM	Primary Subbasin	NA	NA	NA	NA
27" Culvert (Adjacent to North Property Corner)	NA	36.61	34.09	NA	NA	NA	NA	NA
24" Culvert (Adjacent to North Property Corner)	NA	37.09	34.39	NA	NA	NA	NA	NA
12" Pipe (Adjacent to North Property Corner Outlet for Intermittent Stream)	NA	36.61	35.53	NA	NA	NA	NA	NA
Grate (Adjacent to West Property Corner)	79.36 - high end 78.18 - low end	77.93	74.81	NA	NA	NA	NA	NA
36" Culvert (Adjacent to Northwest Corner of Building)	NA	43.46	40.38	NA	NA	NA	NA	NA
Oil/Water Separator 5" Inlet (Adjacent to East Corner of Building)	NA	34.50	NM	Primary Subbasin	NA	NA	NA	NA

NOTES:
amsl = above mean sea level
City ROW = City of Portland Right-of-Way
NM = not measured
IE = invert elevation
NA = not applicable
AST = aboveground storage tank
[1]Unless otherwise indicated, elevations are based on City of Portland benchmark BM 3319, and surveyed by Heritage Surveying of Portland, Oregon, on February 3, 2009.
[2]Base of 12-inch pipe in catch basin CB-1 measured by Wohlers Environmental Services, Inc.

Table 5
SCE Sediment Analytical Results Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Analyte	SLV[1]	CB-1 Filter Sample[2] (12/1/10)	CB-1 Bottom Sample[2] (12/1/10)	Oil Water Separator Sample[2] (9/20/12)
Total Petroleum Hydrocarbons[3] (mg/kg)				
Diesel	NE	**1,700**	**3,000**	**1,700**
Oil	NE	**12,000**	**16,000**	**9,000**
Gasoline	110[4]	<2	**35**	**6.8**
Semivolatile Organic Compounds[5] (mg/kg)				
1,2-Dichlorobenzene	1.7	<1.5	<1.5	NA
1,3-Dichlorobenzene	0.3	*<1.5*	*<1.5*	NA
1,4-Dichlorobenzene	0.3	*<1.5*	*<1.5*	NA
1,2,4-Trichlorobenzene	9.2	<1.5	<1.5	NA
Hexachlorobenzene	0.019	*<1.5*	*<1.5*	NA
2-Chloronaphthalene	NE	<1.5	<1.5	NA
Hexachloroethane	16[4]	<1.5	<1.5	NA
Hexachlorobutadiene	0.6	*<1.5*	*<1.5*	NA
Hexachlorocyclopentadiene	0.4	*<4.5*	*<4.5*	NA
Bis-(2-chloroethoxy)methane	NE	<1.5	<1.5	NA
Bis-(2-chloroethyl)ether	NE	<1.5	<1.5	NA
4-chlorophenyl-phenyl ether	NE	<1.5	<1.5	NA
4-bromophenyl-phenyl ether	NE	<1.5	<1.5	NA
3,3'-Dichlorobenzidine	0.2[4]	NA	NA	NA
4-Chloroaniline	NE	<150	<150	NA
Nitrobenzene	NE	<1.5	<1.5	NA
Aniline	NE	NA	NA	NA
2-Nitroanaline	NE	<1.5	<1.5	NA
3-Nitroanaline	NE	<45	<45	NA
4-Nitroanaline	NE	<45	<45	NA
N-Nitrosodimethylamine	NE	NA	NA	NA
N-Nitroso-di-n-propylamine	NE	<1.5	<1.5	NA
n-Nitrosodiphenylamine	NE	<1.5	<1.5	NA
2,4-Dinitrotoluene	NE	<1.5	<1.5	NA
2,6-Dinitrotoluene	NE	<1.5	<1.5	NA
Carbazole	1.6	<1.5	<1.5	NA
Benzoic Acid	NE	<1.5	<1.5	NA
Benzyl alcohol	NE	<1.5	<1.5	NA
Dibenzofuran	NE	<1.5	<1.5	NA
Isophorone	NE	<15	<15	NA
Phenol	0.5	*<15*	*<15*	NA
2-Methylphenol (o-Cresol)	NE	<15	<15	NA
3-Methylphenol+4-Methylphenol	NE	<30	<30	NA
2,4-Dimethylphenol	NE	<15	<15	NA
2-Chlorophenol	NE	<15	<15	NA

Table 5
SCE Sediment Analytical Results Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Analyte	SLV[1]	CB-1 Filter Sample[2] (12/1/10)	CB-1 Bottom Sample[2] (12/1/10)	Oil Water Separator Sample[2] (9/20/12)
2,4-Dichlorophenol	NE	<15	<15	NA
2,4,5-Trichlorophenol	NE	<15	<15	NA
2,4,6-Trichlorophenol	13[4]	<15	<15	NA
Pentachlorophenol	0.25	*<15*	*<15*	NA
4-Chloro-3methylphenol	NE	<15	<15	NA
2-Nitrophenol	NE	<15	<15	NA
4-Nitrophenol	NE	<15	<15	NA
2,4-Dinitrophenol	NE	<45	<45	NA
Methyl-4,6-Dinitrophenol 2-	NE	<45	<45	NA
Dimethyl phthalate	NE	<1.5	<1.5	NA
Diethyl phthalate	0.6	*<1.5*	*<1.5*	NA
Di-n-butyl phthalate	0.06	*<1.5*	*<1.5*	NA
Benz butyl phthalate	NE	<1.5	**3.3**	NA
Di-n-octyl phthalate	NE	<1.5	**2**	NA
Bis(2-ethylhexyl) phthalate	0.33	**32**	**38**	NA
Polycyclic Aromatic Hydrocarbons[6] (mg/kg)				
2-Methylnaphthalene	0.2	<1.5	<1.5	NA
Naphthalene	0.561	<0.1	<0.1	<0.2
Acenaphthylene	0.2	<0.1	<0.1	<0.2
Acenaphthene	0.3	<0.1	<0.1	<0.2
Fluorene	0.536	<0.1	<0.1	<0.2
Phenanthrene	1.17	**0.35**	**0.28**	**0.75**
Anthracene	0.845	<0.1	<0.1	<0.2
Fluoranthene	2.23	**0.39**	**0.52**	**1.1**
Pyrene	1.52	**0.93**	**0.51**	**1.1**
Benzo(a)anthracene	1.05	**0.19**	**0.26**	**0.37**
Chrysene	1.29	**0.49**	**0.45**	**0.59**
Benzo(b)fluoranthene	NE	**0.31**	**0.47**	**0.63**
Benzo(k)fluoranthene	13	<0.1	**0.13**	**0.22**
Benzo(a)pyrene	1.45	**0.17**	**0.28**	**0.43**
Indeno(1,2,3-cd)pyrene	0.1	**0.18**	**0.28**	**0.42**
Dibenz(a,h)anthracene	1.3	<0.1	<0.1	<0.2
Benzo(g,h,i)perylene	0.3	**0.25**	**0.37**	**0.43**
Polychlorinated Biphenyls[7](mg/kg)				
Aroclor #1016	0.53	<0.1	<0.1	<0.1
Aroclor #1221	NE	<0.1	<0.1	<0.1
Aroclor #1232	NE	<0.1	<0.1	<0.1
Aroclor #1242	NE	<0.1	<0.1	<0.1
Aroclor #1248	1.5	<0.1	<0.1	<0.1
Aroclor #1254	0.3	<0.1	<0.1	<0.1
Aroclor #1260	0.2	<0.1	<0.1	<0.1

Table 5
SCE Sediment Analytical Results Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Analyte	SLV[1]	CB-1 Filter Sample[2] (12/1/10)	CB-1 Bottom Sample[2] (12/1/10)	Oil Water Separator Sample[2] (9/20/12)
Total Metals[8] (mg/kg)				
Arsenic	7	**2.54**	**4.48**	<0.1
Barium	NE	**67.2**	**99.5**	<0.1
Cadmium	1	**1.56**	**2.87**	<0.1
Chromium	111	**36**	**70.3**	<0.1
Copper	149	**43.8**	**72.4**	<0.1
Lead	17	**50.2**	**84.6**	<0.1
Manganese	1,100	**179**	**243**	<0.1
Mercury[9]	0.07	*<0.2*	*<0.2*	*<0.1*
Nickel	48.6	**19.3**	**47.4**	**17.7**
Selenium	2	<1	<1	<1
Silver	5	<1	<1	<1
Zinc	459	**376**	**584**	**752**
Miscellaneous (%)				
Total Organic Carbon[10]	NE	5.8%	7.4%	13.8%
Total Solids[11]	NE	41.7%	42.6%	39.3%

NOTES:
CB-1 = Catch Basin 1
SLV = Screening Level Value
NE= not established
NA = not analyzed
mg/kg = milligrams per kilogram
MDL = Method Detection Limit
< = concentration was not detected at or above the laboratory MDL
Bold = concentration detected above the laboratory MDL
ITALICS = laboratory method detection limit is greater than the corresponding SLV
= concentration exceeds SLV

[1]Value from Oregon Department of Environmental Quality: Portland Harbor Joint Source Control Strategy for Initial Upland Source Control Screening Evaluations for Soil and Stormwater Sediment, December, 2005, unless otherwise noted.
[2]Sediment sample collected by Wohlers Environmental Services, Inc.
[3]TPH analysis by Northwest Method NWTPH-Dx for diesel- and oil-range organics and Northwest Method NWTPH-Gx for gasoline range organics.
[4]Oregon Department of Environmental Quality: Risk-Based Concentrations for Soil (Leaching to Groundwater) in an Occupational Setting, September 2009.
[5]Semivolatile organic compound analysis by EPA Method 8270D.
[6]Semivolatile organic compound analysis by EPA Method 8270D SIM.
[7]Polychlorinated biphenyl analysis by EPA Method 8082A.
[8]Total metals analysis by EPA Method 200.8 unless otherwise noted.
[9]Total mercury analysis by EPA Method 1631E.
[10]Total organic carbon analysis by SW-846 Method 9060.
[11]Total solids analysis by Method SM 2540G.

Table 6
SCE Stormwater Analytical Results Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Analyte	SLV[1]	SW-OWS-EF-111611[2] (11/16/11)	SW-OWS-EF-012912[2] (01/29/12)	SW-OWS-EF-030512[2] (03/05/12)	SW-OWS-EF-052112[2] (05/21/12)
Total Petroleum Hydrocarbons[3] (µg/l)					
Diesel	NE[4]	**190[###]**	**53[###]**	<50	**100[###]**
Oil	NE[4]	<50	<250	<250	**490**
Gasoline	110,000[5]	<100	<100	<100	<100
Semivolatile Organic Compounds[6] (µg/l)					
1,2-Dichlorobenzene	49	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	14	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	2.8	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	8.2	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene	0.00029	*<0.2*	*<0.2**	*<0.2**	*<1**
2-Chloronaphthalene	490	<0.5	<0.5	<0.5	<0.5
Hexachloroethane	3.3	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	0.86	<0.5	<0.5	<0.5	<0.5
Hexachlorocyclopentadiene	5.2	<1.5	<1.5[#]	<1.5	<1.5
Bis-(2-chloroethoxy)methane	NE	<0.5	<0.5	<0.5	<0.5
Bis-(2-chloroethyl)ether	0.06	*<5**	*<5*	*<5*	*<5*
4-chlorophenyl-phenyl ether	0.06	*<0.2*	*<0.2**	*<0.2**	*<0.2**
4-bromophenyl-phenyl ether	NE	<0.5	<0.5	<0.5	<0.5
3,3'-Dichlorobenzidine	0.028	*<5*	*<2*[#]*	*<2**	*<2**
4-Chloroaniline	150	<1.5	<1.5	<1.5	<1.5
Nitrobenzene	3.4	<0.5	<0.5	<0.5	<0.5
2-Nitroanaline	110	<0.5	<0.5	<0.5	<1.5
3-Nitroanaline	3.2	<1.5	<1.5	<1.5	<1.5
4-Nitroanaline	3.2	*<5*	*<5*	*<5*	*<5*
N-Nitrosodimethylamine	0.00042	*<0.2*[#]*	*<5*[##]*	*<5*[#]*	*<0.5*
N-Nitroso-di-n-propylamine	0.0096	*<5*	*<5*	*<5*	*<5*
N-Nitrosodipenylamine	6	<0.5*[#]	<0.5	<0.5	<5[##]
2,4-Dinitrotoluene	3.4	<0.5	<0.5	<0.5	<0.5
2,6-Dinitrotoluene	37	<0.1	<0.1*	<0.1*	<0.1*
Carbazole	3.4	<0.5	<0.5	<0.5	<0.5
Benzoic Acid	42	<15*	<15*	<15*	<15*
Benzyl alcohol	8.6	<5	<5	<5	<5
Dibenzofuran	3.7	<0.5	<0.5	<0.5	<0.5
Isophorone	71	<0.5	<0.5	<0.5	<0.5
Phenol	2,560	<5	<5	<5	<5
2-Methylphenol (o-cresol)	13	<1*	<1*	<1*	<1*
4-Methylphenol (p-cresol)	180	<1	<1*	<1*	<1*
2,4-Dimethylphenol	730	<5	<5[#]	<5	<5
2-Chlorophenol	30	<1*	<1*	<1*	<1*
2,4-Dichlorophenol	110	<1*	<1*	<1*	<1*
2,4,5-Trichlorophenol	3,600	<1	<1*	<1*	<1*
2,4,6-Trichlorophenol	2.4	<1	<1*	<1*	<1*
Pentachlorophenol	0.56	*<1*	*<1**	*<1**	*<1**
4-Chloro-3methylphenol	NE	<1*	<1*	<1*	<1*
2-Nitrophenol	150	<1*	<1*	<1*	<1*
4-Nitrophenol	150	<1	<1*	<1*	<5
2,4-Dinitrophenol	73	<1	<1*	<1*	<15
Methyl-4,6-Dinitrophenol 2-	150	<1	<1*	<1*	<1*
Dimethyl phthalate	3	<0.5	<0.5	<0.5	**0.76**
Diethyl phthalate	3	<0.5	<0.5	**0.53****	<0.5
Di-n-butyl phthalate	3	<0.5	<0.5	<0.5	<0.5
Benz butyl phthalate	3	<0.5	<0.5	<0.5	<0.5
Di-n-octyl phthalate	3	<0.5	<0.5	<0.5	<0.5
Bis(2-ethylhexyl) phthalate	2.2	*<5*	*<5*	*<5*	*<5*
Polycyclic Aromatic Hydrocarbons[7] (µg/l)					
Naphthalene	0.2	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	0.2	*<0.5*	*<0.5*	*<0.5*	*<0.5*
Acenaphthylene	0.2	<0.05	<0.05	<0.05	<0.05
Acenaphthene	0.2	<0.05	<0.05	<0.05	<0.05
Fluorene	0.2	<0.05***[#]	<0.05	<0.05	<0.05
Phenanthrene	0.2	<0.05	<0.05	<0.05	<0.05

Table 6
SCE Stormwater Analytical Results Summary
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Analyte	SLV[1]	SW-OWS-EF-111611[2] (11/16/11)	SW-OWS-EF-012912[2] (01/29/12)	SW-OWS-EF-030512[2] (03/05/12)	SW-OWS-EF-052112[2] (05/21/12)
Anthracene	0.2	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.2	<0.05	<0.05	**0.055**	<0.05
Pyrene	0.2	<0.05	<0.05	**0.084**	<0.05
Benzo(a)anthracene	0.018	<0.018	<0.018	**0.021**	<0.018
Chrysene	0.018	<0.018	<0.018	**0.030**[#]	<0.018
Benzo(b)fluoranthene	0.018	<0.018	<0.018	**0.033**	<0.018
Benzo(k)fluoranthene	0.018	<0.018	<0.018	<0.018	<0.018
Benzo(a)pyrene	0.018	<0.018	<0.018	**0.025**	<0.018
Indeno(1,2,3-cd)pyrene	0.018	<0.018	<0.018	**0.033**	<0.018
Dibenz(a,h)anthracene	0.018	<0.018	<0.018	<0.018	<0.018
Benzo(g,h,i)perylene	0.2	<0.05	<0.05	<0.05	<0.05
Polychlorinated Biphenyls[8] (µg/l)					
Aroclor #1016	0.96	<0.05	<0.05	<0.25	<0.025
Aroclor #1221	0.034	*<0.05*	*<0.05*	*<0.25*	<0.025
Aroclor #1232	0.034	*<0.05*	*<0.05*	*<0.25*	<0.025
Aroclor #1242	0.034	*<0.05*	*<0.05*	*<0.25*	<0.025
Aroclor #1248	0.034	*<0.05*	*<0.05*	*<0.25*	<0.025
Aroclor #1254	0.033	*<0.05*	*<0.05*	*<0.25*	<0.025
Aroclor #1260	0.034	*<0.05*	*<0.05*	*<0.25*	<0.025
Total Metals[9] (µg/l)					
Arsenic	0.045	*<0.5**	*<0.5**	*<0.5**	**0.763***
Barium	NE	**14.3**	**15.2**	**27**	**52.9**
Cadmium	0.094	**0.194***	**0.213***	**0.159***	**0.649***
Chromium	100	<1	**1.20**	**1.33**	<1
Copper	2.7	**5.04**	**3.28**	**4.12**	**12.7**
Lead	0.54	**3.70**	**2.29**	**2.36**	**2.45**
Manganese	50	**20.1**	**18.9**	**22.8**	**230**
Mercury[9]	0.77	<0.1	<0.1	<0.1	<0.1
Nickel	0.0028	**1.28**	<1	<1	**3.08**
Selenium	5	<1	<1	<1	<1
Silver	0.12	<0.1*	<0.1*	-	<0.1*
Zinc	36	**116**	**121**	**111**	**291**
Miscellaneous (mg/l)					
Total Organic Carbon[11]	NE	**3.5**	**1.27**	**5.1**	**27**
Total Suspended Solids[12]	NE	**14**	<10	<10	<25

NOTES:
SLV = Screening Level Value
NE= not established
NA = not analyzed
µg/l = micrograms per liter
mg/l = milligrams per liter
MDL = Method Detection Limit
< = concentration was not detected at or above the laboratory MDL
Bold = concentration detected above the laboratory MDL
ITALICS = laboratory method detection limit is greater than the corresponding SLV
= concentration exceeds SLV

[1] Value from Oregon Department of Environmental Quality: Portland Harbor Joint Source Control Strategy for Initial Upland Source Control Screening Evaluations for Water, December, 2005, unless otherwise noted.
[2] Stormwater sample collected by Wohlers Environmental Services, Inc.
[3] TPH analysis by Northwest Method NWTPH-Dx for diesel- and oil-range organics and Northwest Method NWTPH-Gx for gasoline range organics.
[4] Oregon Department of Environmental Quality: Risk Based Concentrations for Soil (Leaching to Groundwater) in an Occupational Setting, September 2009.
[5] The constituent Risk Based Concentration for this pathway is greater than 100,000 mg/kg or 100,000 mg/L. DEQ believes it is highly unlikely that such concentrations will ever be encountered.
[6] Semivolatile organic compound analysis by EPA Method 8270D.
[7] Semivolatile organic compound analysis by EPA Method 8270D SIM.
[8] Polychlorinated biphenyl analysis by EPA Method 8082A.
[9] Total metals analysis by EPA Method 200.8 unless otherwise noted.
[10] Total mercury analysis by EPA Method 1631E.
[11] Total organic carbon analysis by EPA Method SM 5310B.
[12] Total suspended solids analysis by EPA Method 2540D.
* The result is below normal reporting limits. The value reported is an estimate.
** The compound is a common laboratory and field contaminant.
*** The calibration results from this range fell outside of acceptance criteria. The value reported is an estimate.
[#] The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
[##] The reported concentration was generated from a library search.
[###] The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 7
Pre-SCE Sediment Analytical Data Summary: 2006
Christenson Oil
3821 NW St. Helens Rd, Portland Oregon
Pacific Crest PN 123-001

Analyte	Applicable Target Concentration[1]	CB-1 Sample (10/24/2006)[3]
Total Petroleum Hydrocarbons[4] (µg/kg)		
Diesel	NA	<25,000
Oil	NA	**10,300,000**
Gasoline	110,000[2]	<20,000
Volatile Organic Compounds[5] (µg/kg)		
1,1,1,-2 Tetrachloroethane	NA	<100
1,1,1-Trichloroethane (TCA)	NA	<100
1,1,2,3-Tetrachloroethane	NA	NA
1,1,2-Trichloroethane	25[2]	<100
1,1-Dichloroethane	200[2]	<100
1,2,3-Trichloropropane	NA	<200
1,2-Diclororethane (EDC)	NA	<100
Cis-1,2-Dichloroethylene	NA	<200
1,2-Dichloropropane	NA	<100
1,2-Dibromoethane (EDB)	NA	<100
2-Butane (MEK)	NA	<500
2-Hexanone	NA	<500
4-Methyl-2-Pentanone (MIBK)	NA	<500
Acetone	NA	<1,100
Acrylonitrile	1.7[2]	NA
Bromochloromethane	NA	<100
Bromodichloromethane	13[2]	<100
Bromoform	1,600[2]	<100
Bromomethane	410[2]	<200
Carbon Tetrachloride	73[2]	<100
Chlorobenzene	27,000[2]	<100
Chlorodibromomethane	110[2]	<100
Chloroethane	1,400,000[2]	<300
Chloroform	17[2]	<100
Chloromethane	9,400[2]	<100
Cis-1,3-dichloropropene	NA	<100
Dibromomethane	NA	<100
Dichlorodifluoromethane	NA	<200
Isopropylbenzene	NA	<100
Methylene chloride	NA	<700
Styrene	NA	<100
Trichlorofluoromethane	300,000[2]	<200
Benzene	53[2]	<30
Ethylbenzene	900[2]	<100
m,p-Xylene	NA	NA
o-Xylene	NA	NA
Xylenes (total)	100,000[2]	<100

Table 7
Pre-SCE Sediment Analytical Data Summary: 2006
Christenson Oil
3821 NW St. Helens Rd, Portland Oregon
Pacific Crest PN 123-001

Analyte	Applicable Target Concentration[1]	CB-1 Sample (10/24/2006)[3]
Methyl-tert-butyl ether	520[2]	<200
Tetrachloroethene (PCE)	500	<100
Toluene	NA	**1,200**
p-Isopropyltoluene	NA	100
Trans-1,2-Dichloroethene	10,000[2]	<100
Trans-1,3-Dichloropropene	NA	<100
Trichloroethene (TCE)	2,100	<100
Vinyl Chloride	10[2]	<200
Semivolatile Organic Compounds[6] (µg/kg)		
Halogenated Compounds		
1,2-Dichlorobenzene	1,700	<167
1,3-Dichlorobenzene	300	<167
1,4-Dichlorobenzene	300	<167
1,2,4-Trichlorobenzene	9,200	<167
Hexachlorobenzene	19	<167
2-Chloronaphthalene	NA	<167
Hexachloroethane	16,000[2]	<167
Hexachlorobutadiene	600	<167
Hexachlorocyclopentadiene	400	<167
Bis-(2-chloroethoxy)methane	NA	<167
Bis-(2-chloroethyl)ether	NA	<167
4-chlorophenyl-phenyl ether	NA	<167
4-bromophenyl-phenyl ether	NA	<167
3,3'-Dichlorobenzidine	200[2]	<835
4-Chloroaniline	NA	<167
Organonitrogen Compounds		
Nitrobenzene	NA	<167
Aniline	NA	NA
2-Nitroanaline	NA	<167
3-Nitroanaline	NA	<167
4-Nitroanaline	NA	<167
N-Nitrosodimethylamine	NA	<167
N-Nitroso-di-n-propylamine	NA	<167
n-Nitrosodiphenylamine	NA	<167
2,4-Dinitrotoluene	NA	<167
2,6-Dinitrotoluene	NA	<167
Carbazole	1,600	**560**
Oxygen-Containing Compounds		
Benzoic Acid	NA	<3,340
Benzyl alcohol	NA	<167
Dibenzofuran	NA	**183**
Isophorone	NA	<167

Table 7
Pre-SCE Sediment Analytical Data Summary: 2006
Christenson Oil
3821 NW St. Helens Rd, Portland Oregon
Pacific Crest PN 123-001

Analyte	Applicable Target Concentration[1]	CB-1 Sample (10/24/2006)[3]
Phenols and Substituted Phenols		
Phenol	50	**330**
2-Methylphenol (o-Cresol)	NA	<167
4-Methylphenol (p-cresol)	NA	**4,540**
2,4-Dimethylphenol	NA	<167
2-Chlorophenol	NA	<167
2,4-Dichlorophenol	NA	<167
2,4,5-Trichlorophenol	NA	<167
2,4,6-Trichlorophenol	13,000[2]	<167
Pentachlorophenol	250	<250
4-Chloro-3methylphenol	NA	<167
2-Nitrophenol	NA	<835
4-Nitrophenol	NA	<835
2,4-Dinitrophenol	NA	<1670
Methyl-4,6-Dinitrophenol 2-	NA	<835
Phthalate Esters		
Dimethylphthalate	NA	<167
Diethylphthalate	600	<167
Di-n-butylphthalate	60	<167
Butylbenzylphthalate	NA	NA
Di-n-octylphthalate	NA	**1,870**
bis(2-ethylhexyl)phthalate	330	**11,900**
Polycyclic Aromatic Hydrocarbons		
Napthalene	561	<167
2-Methylnaphthalene	200	<167
Acenaphthylene	200	<167
Acenaphthene	300	**398**
Fluorene	536	**313**
Phenanthrene	1,170	**3,750**
Anthracene	845	**792**
Fluoranthene	2,230	**4,560**
Pyrene	1,520	**3,870**
Benzo(a)anthracene	1,050	**1,690**
Chrysene	1,290	**1,820**
Benzo(b)fluoranthene	NA	**3,250**
Benzo(k)fluoranthene	13,000	**1,360**
Benzo(a)pyrene	1,450	**2,250**
Indeno(1,2,3-cd)-pyrene	100	**543**
Dibenz(a,h)anthracene	1,300	**353**
Benzo(g,h,i)perylene	300	**603**

Table 7
Pre-SCE Sediment Analytical Data Summary: 2006
Christenson Oil
3821 NW St. Helens Rd, Portland Oregon
Pacific Crest PN 123-001

Analyte	Applicable Target Concentration[1]	CB-1 Sample (10/24/2006)[3]
Polychlorinated Biphenyls[7] (µg/kg)		
Arochlor #1016	530	<10
Arochlor #1221	NA	<10
Arochlor #1232	NA	<10
Arochlor #1242	NA	<10
Arochlor #1248	1,500	<10
Arochlor #1254	300	<10
Arochlor #1260	200	**20**
Organochlorine Pesticides[8] (µg/kg)		
Aldrin	40	<67
α-BHC	NA	<67
β-BHC	NA	<67
δ-BHC	NA	<67
γ-BHC (Lindane)	4.99	<67
Chlorodane	0.37	<330
p,p'-DDD	0.33	<67
p,p'-DDE	0.33	<67
p,p'-DDT	0.33	<67
Dieldrin	0.0081	<67
Endosulfan I(Thiodan)	NA	<67
Endosulfan II	NA	<67
Endosulfan Sulfate	NA	<67
Endrin	207	<67
Endrin aldehyde	NA	<67
Endrin ketone	NA	<67
Heptachlor	10	<67
Heptachlor epoxide	16	<67
Methoxychlor	NA	<130
Toxaphene	NA	<670

Table 7
Pre-SCE Sediment Analytical Data Summary: 2006
Christenson Oil
3821 NW St. Helens Rd, Portland Oregon
Pacific Crest PN 123-001

Analyte	Applicable Target Concentration[1]	CB-1 Sample (10/24/2006)[3]
Total Metals[9] (µg/kg)		
Antimony	64,000	<1,000
Arsenic	7,000	<1,000
Barium	NA	NA
Cadmium	1,000	<1,000
Chromium	111,000	**7,000**
Copper	149,000	**73,000**
Lead	17,000	**44,000**
Manganese	1,100,000	**125,000**
Mercury	70	<500
Nickel	48,600	**6,000**
Selenium	2,000	<1,000
Silver	5,000	<1,000
Zinc	459,000	**444,000**
Total Organic Carbon[10] (µg/kg)		
Total Organic Carbon	NA	**32,400,000**

NOTES:
CB-1 = Catch Basin 1
NA= Not Available
µg/kg = micrograms per kilogram
< denotes concentration was not detected at or above the laboratory Method Reporting Limit.
Bold = denotes concentration detected above the laboratory Method Reporting Limit.
= concentration exceeds applicable target concentration

[1]Value from Oregon Department of Environmental Quality: Portland Harbor Joint Source Control Strategy for Initial Upland Source Control Screening Evaluations for Soil and Stormwater Sediment, December, 2005, unless otherwise noted (see note 2).

[2] Oregon Department of Environmental Quality: Risk-Based Concentrations for Soil (Leaching to Groundwater) in an Occupational Setting, September 2009.

[3] Catch Basin Sediment Sample collected by Wohlers Environmental Services, Inc.

[4] TPH analysis by Method NWTPH-Dx for diesel- and oil-range organics, and Method NWTPH-Gx for gasoline range organics.

[5] Volatile Organic Compound analysis by EPA Method 8260.

[6] Semi-volatile organic compound analysis by EPA Method SW8270D.

[7] Polychlorinated biphenyl analysis by EPA Method 8082.

[8] Organochlorine pesticides analysis by EPA Method 8081A (GC-ECD).

[9] Total metals analysis by EPA Method 200.8 ICP/MS.

[10] Total organic carbon analysis by Method SW9060.

Table 8
Pre-SCE Stormwater Analytical Data Summary: 2006 - 2010
Christenson Oil
3821 NW St. Helens Rd, Portland, Oregon
Pacific Crest PN 123-001

Analyte	Applicable Target Concentration[1]	OWS Sample (12/23/2006)[3]	OWS Sample (3/7/2007)[3]	OWS Sample (4/7/2007)[3]	SW-1 Creek Sample (4/2/2010)[3]	SW-2 Creek Sample (4/2/2010)[3]
Total Petroleum Hydrocarbons[4] (µg/l)						
Diesel	360[2]	<250	<250	<250	<50	<50
Oil	1,100[2]	<500	<500	<500	<250	<250
Gasoline	420[2]	<40	<40	<250	<100	<100
Volatile Organic Compounds[5] (µg/l)						
1,1,1,-2 Tetrachloroethane	2.5	<2	<2	<2	<1	<1
1,1,1-Trichloroethane (TCA)	11	<2	<2	<2	<1	<1
1,1,2,3-Tetrachloroethane	0.33	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	1.2	<2	<2	<2	<1	<1
1,1-Dichloroethane	47	<2	<2	<2	<1	<1
1,2,3-Trichloropropane	0.0095	<3	<3	<3	<1	<1
1,2-Diclororethane (EDC)	0.73	<2	<2	<2	<1	<1
Cis-1,2-Dichloroethylene	61	<3	<3	<3	<1	<1
1,2-Dichloropropane	0.97	<2	<2	<2	<1	<1
1,2-Dibromoethane (EDB)	0.033	<2	<2	<2	<1	<1
2-Butane (MEK)	7,100	<8	<8	<8	<10	<10
2-Hexanone	99	<8	<8	<8	<10	<10
4-Methyl-2-Pentanone (MIBK)	170	<8	<8	<8	<10	<10
Acetone	1,500	<15	<15	<15	<10	**11**
Acrylonitrile	0.12	NA	NA	NA	NA	NA
Bromochloromethane	NA	<2	<2	<2	NA	NA
Bromodichloromethane	1.1	<2	<2	<2	<1	<1
Bromoform	8.5	<2	<2	<2	<1	<1
Bromomethane	8.7	<3	<3	<3	<1	<1
Carbon Disulfide	0.92	NA	NA	NA	NA	NA
Carbon Tetrachloride	0.51	<2	<2	<2	<1	<1
Chlorobenzene	50	<2	<2	<2	<1	<1
Chlorodibromomethane	0.79	NA	NA	NA	NA	NA
Chloroethane	23	<6	<6	<6	<1	<1
Chloroform	0.17	<2	<2	<2	<1	<1
Chloromethane	2.1	<2	<2	<2	<10	<10
Cis-1,2-Dichloroethylene	590	<3	<3	<3	<1	<1
Cis-1,3-dichloropropene	0.055	<2	<2	<2	<1	<1
Dibromomethane	61	<2	<2	<2	<1	<1
Dichlorodifluoromethane	390	<4	<4	<4	<1	<1
Isopropylbenzene	660	<2	<2	<2	<1	<1
Methylene chloride	8.9	<2	**6****	**7****	<5	<5
Styrene	100	<2	<2	<2	<1	<1
Trichlorofluoromethane	1,300	<3	<3	<3	<1	<1
Benzene	1.2	<0.3	<0.3	<0.3	<0.35	<0.35
Ethylbenzene	7.3	<1	<1	<1	<1	<1
m,p-Xylene	1.8	NA	NA	NA	<2	<2
o-Xylene	13	NA	NA	NA	<1	<1
Xylenes (total)	200	<1	<1	**2**	NA	NA
Methyltert-butyl ether	37	<4	<4	<4	<1	<1
Tetrachloroethene (PCE)	0.12	<2	<2	<2	<0.5	<0.5
Toluene	9.8	<1	<1	<1	<1	<1
Trans-1,2-Dichloroethene	110	<2	<2	<2	<1	<1
Trans-1,3-Dichloropropene	0.055	<2	<2	<2	<0.5	<0.5
Trichloroethene (TCE)	0.17	<2	<2	<2	<0.5	<0.5
Vinyl Chloride	0.015	<4	<4	<4	<0.2	<0.2

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Semivolatile Organic Compounds[6] (µg/l)						
Halogenated Compounds						
1,2-Dichlorobenzene	49	<0.2	<0.2	<0.2	<0.5	<0.5
1,3-Dichlorobenzene	14	<0.2	<0.2	<0.2	<0.5	<0.5
1,4-Dichlorobenzene	2.8	<0.2	<0.2	<0.2	<0.5	<0.5
1,2,4-Trichlorobenzene	8.2	<0.2	<0.2	<0.2	<0.5	<0.5
Hexachlorobenzene	0.00029	<0.2	<0.2	<0.2	<0.2*	<0.2*
2-Chloronaphthalene	490	<0.2	<0.2	<0.2	<0.5	<0.5
Hexachloroethane	3.3	<0.2	<0.2	<0.2	<0.5	<0.5
Hexachlorobutadiene	0.86	<0.2	<0.2	<0.2	<0.5	<0.5
Hexachlorocyclopentadiene	5.2	<0.96	<0.96	<0.2	<1.5	<1.5
Bis-(2-chloroethoxy)methane	NA	<0.2	<0.2	<0.2	<0.5	<0.5
Bis-(2-chloroethyl)ether	0.06	<0.2	<0.2	<0.2	<0.5	<0.5
4-chlorophenyl-phenyl ether	0.06	<0.2	<0.2	<0.2	<0.2*	<0.2*
4-bromophenyl-phenyl ether	NA	<0.2	<0.2	<0.2	<0.5	<0.5
3,3'-Dichlorobenzidine	0.028	<2	<2	<2	<2	<2
4-Chloroaniline	150	<0.2	<0.2	<0.2	<1.5	<1.5
Organonitrogen Compounds						
Nitrobenzene	3.4	<0.2	<0.2	<0.2	<0.5	<0.5
Aniline	12	<0.96	<0.96	<0.96	NA	NA
2-Nitroanaline	110.0	<0.2	<0.2	<0.2	<0.5	<0.5
3-Nitroanaline	3.2	<0.96	<0.96	<0.96	<1.5	<1.5
4-Nitroanaline	3.2	<0.96	<0.96	<0.96	<5	<5
N-Nitrosodimethylamine	0.00042	<2	<2	<2	<0.2*	<0.2*
N-Nitroso-di-n-propylamine	0.0096	<0.2	<0.2	<0.2	<0.2	<0.2
n-Nitrosodiphenylamine	6	<0.2	<0.2	<0.2	<0.5	<0.5
2,4-Dinitrotoluene	3.4	<0.2	<0.2	<0.2	<0.5	<0.5
Carbazole	3.4	<0.2	**0.015***	<0.2	<0.5	<0.5
Oxygen-Containing Compounds						
Benzoic Acid	42	**2.6***	<4.8	<4.8	<15*	<15*
Benzyl alcohol	8.6	<4.8	<4.8	<4.8	<0.5	<0.5
Dibenzofuran	3.7	<0.2	<0.2	<0.2	<0.5	<0.5
Isophorone	71	<0.2	<0.2	<0.2	<0.5	<0.5
Phenols and Substituted Phenols						
Phenol	2,560	<0.48	<0.48	<0.48	<5	<5
2-Methylphenol (o-Cresol)	13	<0.48	<0.48	**0.11***	<1	<1
4-Methylphenol (p-cresol)	180	<0.48	<0.48	**0.16***	NA	NA
2,4-Dimethylphenol	730	<2	<2	<2	<1	<1
2-Chlorophenol	30	<0.48	<0.48	<0.48	<1	<1
2,4-Dichlorophenol	110	<0.48	<0.48	<0.48	<1*	<1*
2,4,5-Trichlorophenol	3,600	<0.48	<0.48	<0.48	<1*	<1*
2,4,6-Trichlorophenol	2.4	<0.48	<0.48	<0.48	<1*	<1*
2,3,4,6-Tetrachlorophenol	1,100	<1	<1	<1	<50	<50
Pentachlorophenol	0.56	<0.96	**0.064***	**0.071***	<1*	<1*
4-Chloro-3methylphenol	NA	<0.48	<0.48	<0.48	<1*	<1*
2-Nitrophenol	150	<0.48	<0.48	<0.48	<1	<1
4-Nitrophenol	150	<2	<2	<2	<1	<1
2,4-Dinitrophenol	73	<3.9	<3.9	<3.9	<1	<1
Methyl-4,6-Dinitrophenol 2-	150	<2	<2	<2	<1*	<1*

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Phthalate Esters						
Dimethylphthalate	3	<0.2	**0.35**	**0.2***	<0.5	<0.5
Diethylphthalate	3	**0.06***	**0.18***	**0.23**	<0.5	<0.5
Di-n-butylphthalate	3	**0.084***	**0.26**	**0.37**	<0.5	<0.5
Butylbenzylphthalate	3	<0.2	**0.41**	**0.47**	<0.5	<0.5
Di-n-octylphthalate	3	<0.2	<0.2	<0.2	<0.5	<0.5
bis(2-Ethylhexyl)phthalate	2.2	**1.4***	**2.2**	**2.2**	<5	<5
Polycyclic Aromatic Hydrocarbons						
Napthalene	0.2	**0.027**	**0.0086***	**0.021**	<0.05	<0.05
2-Methylnaphthalene	0.2	<0.02	**0.0085***	**0.012***	NA	NA
Acenaphthylene	0.2	**0.0028***	**0.02**	**0.0047***	<0.05	<0.05
Acenaphthene	0.2	<0.02	<0.02	**0.0059***	<0.05	<0.05
Fluorene	0.2	<0.02	<0.02	**0.0084***	<0.05	<0.05
Phenanthrene	0.2	**0.0077***	**0.021**	**0.046**	<0.05	<0.05
Anthracene	0.2	<0.02	<0.02	**0.011***	<0.05	<0.05
Fluoranthene	0.2	**0.011***	**0.032**	**0.027**	<0.05	<0.05
Pyrene	0.2	**0.017***	**0.059**	**0.032**	<0.05	<0.05
Benzo(a)anthracene	0.018	<0.02	**0.013***	**0.0068***	<0.018	<0.018
Chrysene	0.018	**0.0074***	**0.029**	**0.015***	<0.018	<0.018
Benzo(b)fluoranthene	0.018	<0.02	**0.023**	**0.01***	<0.018	<0.018
Benzo(k)fluoranthene	0.018	<0.02	**0.01***	<0.02	<0.018	<0.018
Benzo(a)pyrene	0.018	**0.0047***	**0.013***	**0.0072***	<0.018	<0.018
Indeno(1,2,3-cd)-pyrene	0.018	**0.0049***	**0.017***	**0.0087***	<0.018	<0.018
Dibenz(a,h)anthracene	0.018	<0.02	**0.0058***	<0.02	<0.018	<0.018
Benzo(g,h,i)perylene	0.2	**0.0067***	**0.025**	**0.012***	<0.05	<0.05
Polychlorinated Biphenyls[7] (µg/l)						
Aroclor 1016	0.96	<0.00946	<0.101	**1.4**	<0.01	<0.01
Aroclor 1221	0.034	<0.00946	<0.101	<0.0221	<0.01	<0.01
Aroclor 1232	0.034	<0.00946	<0.101	<0.0221	<0.01	<0.01
Aroclor 1242	0.034	<0.00946	<0.101	<0.0221	<0.01	<0.01
Aroclor 1248	0.034	<0.00946	<0.101	<0.0221	<0.01	<0.01
Aroclor 1254	0.033	<0.00946	<0.101	<0.0221	<0.01	<0.01
Aroclor 1260	0.034	<0.00946	<0.101	<0.0221	<0.01	<0.01
Total PCBs	0.000064	-	-	-	-	-
PCB Congeners	NA	-	-	-	-	-
Organochlorine Pesticides (µg/l)						
Aldrin	0.00005	-	-	-	-	-
α-BHC	0.0049	-	-	-	-	-
β-BHC	0.017	-	-	-	-	-
δ-BHC	0.037	-	-	-	-	-
γ-BHC (Lindane)	0.052	-	-	-	-	-
Chlorodane	0.00081	-	-	-	-	-
p,p'-DDD	0.00031	-	-	-	-	-
p,p'-DDE	0.00022	-	-	-	-	-
p,p'-DDT	0.00022	-	-	-	-	-
Dieldrin	0.000054	-	-	-	-	-
Endosulfan I(Thiodan)	0.051	-	-	-	-	-
Endosulfan II	0.051	-	-	-	-	-
Endosulfan Sulfate	89	-	-	-	-	-
Endrin	0.036	-	-	-	-	-
Endrin aldehyde	NA	-	-	-	-	-
Endrin ketone	NA	-	-	-	-	-
Heptachlor	0.000079	-	-	-	-	-
Heptachlor epoxide	0.000039	-	-	-	-	-
Methoxychlor	0.03	-	-	-	-	-
Toxaphene	0.0002	-	-	-	-	-

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Total Metals[8] (µg/l)						
Antimony	6	<0.5	<0.5	<0.099	-	-
Arsenic	0.045	<1	<1	<0.028	**0.673**	**0.548**
Barium	29,000[2]	-	-	-	**41.7**	**34.5**
Cadmium	0.094	<0.1	**0.315**	**0.332**	**0.195**	<0.1
Chromium	100	<1	**1.76**	<0.129	**4.44**	**3.07**
Copper	2.7	**1.42**	**6.31**	**7.01**	**3.46**	**2.58**
Lead	0.54	**1.44**	**5.58**	**3.46**	**1.87**	**1.72**
Manganese	50	**342**	**257**	**42.4**	**61.6**	**57.5**
Mercury	0.77	<0.05	<0.05	<0.004	<0.1	<0.1
Nickel	16	**0.93**	**1.65**	**1.31**	**3.07**	**1.9**
Selenium	5	<1	<1	<0.0250	<1	<1
Silver	0.12	<0.1	<0.1	<0.016	<0.1	<0.1
Zinc	36	**158**	**177**	**125**	**9.72**	**12.3**
Miscellaneous						
pH[9]	5.5 - 9.0[13]	**6.3**	-	**5.86**	-	-
Polar/non-Polar Oil and Grease[10] (µg/l)	10,000[13]	<5,000	-	<5,000	-	-
Total Suspended Solids[11] (µg/l)	130,000[13]	**14,000**	-	**22,000**	**77,000**	**77,000**
Total Organic Carbon[12] (µg/l)	-	-	-	-	**2,700**	**2,780**

NOTES:
NA= Not Available
OWS = Oil/Water Separator
SW = Surface Water
µg/l = micrograms per liter
- = compound not analyzed
< =concentration was not detected at or above the indicated laboratory Method Reporting Limit.
***** = a value flagged by the laboratory as an estimated concentration that is less than the method reporting limit but greater than or equal to the method detection limit
****** = a value flagged by the laboratory as a concentration likely due to the analytical instrument
Bold = the concentration was detected at or above the laboratory Method Reporting Limit.
= denotes concentration exceeds applicable target concentration

[1] Value from Oregon Department of Environmental Quality: Portland Harbor Joint Source Control Strategy for Initial Upland Source Control Screening Evaluations for Soil and Stormwater Sediment, December, 2005, unless otherwise noted (see Note #2)
[2] Oregon Department of Environmental Quality: Risk-Based Concentrations for Soil (Leaching to Groundwater) in an Occupational Setting, September 2009.
[3] Stormwater samples collected by Wohlers Environmental Services, Inc. on the Christenson Oil property.
[4] TPH analysis by Method NWTPH-Dx for diesel- and oil-range organics, and Method NWTPH-Gx for gasoline range organics.
[5] Volatile organic compound analysis by EPA Method 8260B/C.
[6] Semi-volatile organic compound analysis by EPA Method SW8270C/D.
[7] Polychlorinated biphenyl analysis by EPA Method E8082.
[8] Total metals analysis by EPA Method SW6020/200.8.
[9] pH analysis by Method E150.1.
[10] Oil and grease analysis by Method E1664.
[11] Total suspended solids analysis by Method E160.2/2540D.
[12] Total organic carbon analysis by EPA Method 415.1.
[13] Source: National Pollutant Discharge Elimination System Storm Water Discharge Permit 1200-Z benchmark values.