

**TABLE 1**  
**Summary of Historical Releases**  
 NWTC Pasco Terminal  
 Pasco, Washington

<i>Date</i>	<i>Description</i>
December 26, 1972	Failure to close 1/4" bleeder valve allowed 0.07 bbl of diesel to drip into river (0% recovered).
March 23, 1976	665 bbls of diesel released from Tank 8 (overfilled); estimated recovery 12% (80 bbls).
December 20, 1978	600 bbls of gasoline released from Tank 13 (overfilled); estimated recovery 33% (200 bbls).
August 19, 1982	25 bbls diesel released at proving meter near old truck rack after power surge (broke at coupler).
February 1, 1984	610 bbls of gasoline released from Tank 17 after roof drain line froze; estimated recovery 16% (100 bbls).
Spring 1984	<3 bbls of diesel released when barge compartment was overfilled; estimated recovery 8% (10 gallons).
May 18, 1984	3 bbls of diesel released from Tank 17; immediately cleaned up by excavation of affected soil from northeast side of tank.
August 27, 1985	1 bbl of diesel released when barge compartment was overfilled; estimated recovery 99%.
August 1986	Excavated area around pipelines near river; found leak in aviation fuel (Jet A) line. Soil removed and replaced with clean backfill. Subsequently, all buried pipelines at the terminal were replaced with above ground pipelines wherever physically possible.
January 2, 1991	0.48 bbl of gasoline released when line split due to freezing; location not identified.
June 25, 1992	2 bbl released when bleeder valve on prover (near scraper canopy) left open; recovered 100%.
July 2, 1994	2 bbls of diesel released when bleeder valve (located between Tanks 6 & 13) left open on oil booster pump; product captured by oil/water drain system.
July 3, 1995	1 bbl of gasoline released from defective weld on underground pipe near prover at old truck loading rack.
July 6, 1995	Small pinhole gasoline leak in piping at old truck loading rack northeast of Tank 1; quantity not indicated (could be same as July 3, 1995 leak).
August 7, 1997	10 bbls of diesel released when bleeder valve left open on barge manifold located near Tanks 15 & 16.
January 21, 2000	Sump overflow at the Barge Dock: Approximately 18 gallons of Transmix dripped onto rocks below the dock and entered the Snake River; a sheen was noted on the water. Boom and absorbent pads utilized to remove product from the water.
February 2, 2000	Truck Rack: Approximately 75 gallons of high sulfur diesel spilled onto the asphalt pavement and drained to the oil/water separator; all product recovered.
July 21, 2000	Gasoline leak identified by Tidewater from one of their transfer lines approx. 60 feet west of Chevron Tank 19. Loss was initially estimated to be 8,000 gallons (minimum), later updated to 35,000-41,000 gallons. Tidewater notified Ecology and initiated emergency response.
September 5, 2000	Barge Loading Area: Less than 4 ounces of Jet A leak from a drain gasket and entered the Snake River, which dissipated quickly. Ecology and the NRC were notified.
May 2, 2001	Approximately 2 gallons dripped from the 4" check valve fitting on the low sulfur diesel fuel rack line located a few feet west of Tank 12. Approximately 0.5 cy of soil was removed.
December 1, 2001	Less than 0.11 bbl (4-5 gallons) of Red Dye leaked from pressure safety valve vent during startup of the north line from Tidewater to the Mainline pumps. Leak was contained inside the skid and drained to the manifold pump near pump station building and warehouse.
December 27, 2001	Approximately 0.10 bbl (4-5 gallons) of Red Dye released onto gravel through an improperly installed valve while connecting the drain hose to the bulk tank at additive basins; removed affected gravel.
April 18, 2006	Truck Rack: Approximately 2 gallons of gasoline sprayed onto concrete truck pad when the prover was overfilled. Water used to flush the pad drained to the o/w separator.
April 1, 2008	Waste Water System: Test results from an effluent sample collected on 3/3/2008 were outside permit limits for BTEX and pH. An estimated 7 bbls (combination of water, diesel, gasoline, and jet fuel) were released to the facility's lined evaporation pond; no release to adjacent land or river.
April 22, 2008	An estimated 50 bbls of denatured ethanol (biofuel) leaked onto ground from 3/4 inch sampling port line on south side of Tank 5. Spill reported to Ecology in a letter dated April 30, 2008.
July 24, 2008	Truck Rack: 120 gallons (~3 bbls) of Jet A was released onto concrete when a tank compartment was overfilled; fuel entered oil/water separator.
January 28, 2009	Truck Rack: 29 gallons of high sulfur diesel leaked from a customer's tanker onto the concrete and entered the oil/water separator.

Note:

Accurate spill records for the Pasco Terminal were not kept before 1973 (Lewis, 1983).

**Table 2**  
**Summary of CPL Investigations and Remedial Activities**  
 NWTC Pasco Terminal  
 Pasco, Washington

<i>Date</i>	<i>Description</i>
October 31 - November 3, 1983	MW-1 through MW-4 installed by Environmental Emergency Services Co. (no logs); investigation focused on areas downgradient of known spills or surface drainage.
July 14, 1986	Phase-separated hydrocarbon (PSH) detected in MW-2.
1986 (summer)	Sheen observed along river bank; deployed "sea curtain".
1986 (summer)	MW-5 installed by Chevron USA (no log).
August 1986	Excavated area around pipelines near river; found leak in aviation fuel (Jet A) line. Soil removed and replaced with clean backfill.
October 28, 1986	Product samples collected from MW-2 and sorbent pads in river; fingerprinting indicated PSH at MW-2 was unleaded gasoline; whereas the sheen on the river was aviation fuel.
November 17-25, 1986	MW-6 through MW-9 installed by GeoEngineers Incorporated.
January 1987	Pumping system (in MW-5), oil/water (o/w) separator, and water exfiltration gallery installed by Crowley Environmental Services.
February 11, 1987	Sample from river analyzed to determine product type; confirmed as Jet A.
January 9 - April 2, 1987	Attempted to reverse direction of groundwater flow by pumping from MW-5; unsuccessful (well yield too low) - sheen persisted.
May 5-15, 1987	Excavated ~1,900 cubic yards (cy) of soil from shoreline area. Source of sheen appeared to be located ~30 feet west of MW-5. MW-5 and MW-9 were destroyed during excavation. MW-5 replaced with a 48-inch diameter corrugated metal pipe, surrounded by pea gravel.
December 15, 1987	Product-only skimmer pump installed in MW-2; ineffective at reducing PSH thickness.
January 14, 1988	RZA conducted a 30-minute pumping test in MW-2; recommended (on January 25, 1988) installing a dual pump system.
May 10 - June 24, 1988	RZA conducted a longer pumping test at MW-2, pumping at 7-8 gpm in an attempt to create a cone of depression. Installed a product-only pump on June 7, 1988; operated as a dual-pump system through June 24, 1988.
June 29, 1988	RZA recommended installing a product-only pump in MW-2, based on recently concluded pumping test.
January 4-17, 1989	MW-10 through MW-14 and RW-1 installed by Rittenhouse-Zeman & Associates, Inc. (RZA). PID readings indicated hydrocarbon vapors in vadose zone at MW-11, MW-12 and MW-13 (screen in MW-13 did not extend to water table).
January 18-25, 1989	Conducted intermittent test pumping in RW-1 (dual pump system installed January 24, 1989); maximum pumping rate achieved was 43 gpm, with 0.07 foot of drawdown.
February 17, 1989	RZA recommended installing a groundwater depression pump and a skimmer pump in RW-1.
March 28-29, 1989	Conducted additional test pumping in RW-1; measured only 0.08 foot of drawdown after pumping more than 19 hours at 100 gpm. RZA proposed installation of a bioventing (aka soil vapor extraction, or SVE) system.
May 16, 1989	RZA recommended continued pumping from RW-1, using the dual-pump system with a separation of 10 feet between the pumps (to maintain good effluent quality).
May 16, 1989	Ecology approved abandonment of onsite water supply well WAS 173-160-560, located in NW part of site (plugged in 1993, after pump reset at shallower depth in 1982).
October 17-20, 1989	Two separate SVE systems installed by RZA: Upper, multi-well system in tank area included MW-2, MW-12, and MW-13; lower system, outside tank containment, included only MW-10.
April 12, 1990	MW-13 shut-off from upper SVE system.
August 6, 1990	PSH thickness in MW-2 = 0.15 foot. Calculated ~9.4 pounds per day (lb/day) of BTEX was removed by the upper SVE system from MW-2 and MW-12; ~1.87 lb/day removed from the MW-10 SVE system.
November 18-19, 1990	Calculated BTEX removals were ~15.9 lb/day for the upper SVE system (MW-2, MW-12 and MW-13), and ~1.02 lb/day for the MW-10 SVE system. PSH measured in MW-2 = 0.10 foot.
November 1990 - August 1991	Quarterly groundwater sampling performed after decline in PSH thickness.
February 13-14, 1991	Calculated BTEX removals were ~8.21 lb/day from the upper SVE system (MW-2, MW-12 and MW-13), and ~0.07 lb/day for the MW-10 SVE system. PSH measured in MW-2 = 0.39 foot.

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<i>Date</i>	<i>Description</i>
March 28, 1991	PSH measured in MW-3 for the first time.
May 6, 1991	PSH measured in MW-11 for the first time.
May 14-15, 1991	Calculated BTEX removals were ~2.052 lb/day from the upper SVE system for (MW-2, MW-12 and MW-13), and ~0.044 lb/ from the MW-10 SVE system. PSH in MW-2 = 0.56 foot. PSH was also measured in MW-3 and MW-11. PSH in all three wells determined from gas chromatographs to be similar to #1 diesel fuel.
August 7-8, 1991	Calculated BTEX removals were ~0.602 lb/day from the upper SVE system for (MW-2, MW-12, and MW-13), and ~0.091 lb/ from the MW-10 SVE system. PSH increased MW-2 = 3.35 feet. PSH also increased in MW-3 and MW-11. Fingerprint analyses identified the PSH as diesel #1 at MW-3, and diesel #2 at MW-2 and MW-11.
August 22, 1991	A bubbler (air sparge) hose was installed in MW-2 to help volatilize the gasoline portion of the PSH.
August 27, 1991	Skimmer pump is reinstalled on MW-2; ~4 gallons of PSH recovered
September 10, 1992	MW-10 SVE system dismantled. Air-sparging (AS) hoses added to MW-2 and MW-11 to supplement SVE system. Skimmer pump moved from MW-2 to MW-3.
September 16, 1992	Calculated removals from upper AS/SVE system (MW-2, MW-12, and MW-13) removed ~3.68 lb/day BTEX, and ~25.45 lb/day TPH.
December 8, 1992	No measurable PSH in any well (until July 1993 in MW-3). Upper AS/SVE system (MW-2, MW-12, and MW-13) removed ~2.89 lb/day BTEX, and ~16.45 lb/day TPH.
April 2, 1993	Upper AS/SVE system (MW-2, MW-12, and MW-13) removed ~0.006 lb/day BTEX, and ~0.03 lb/day TPH.
July 15, 1993	PSH measured in MW-3 = 1.26 feet. Upper AS/SVE system (MW-2, MW-12, and MW-13) removed ~0.00521 lb/day BTEX.
November 5, 1993	Skimmer pump removed from MW-3, AS hose installed, and well reconnected to upper AS/SVE system. Upper AS/SVE system (MW-2, MW-3, MW-12, and MW-13) removed ~0.00085 lb/day BTEX.
December 28, 1993	No measurable PSH observed in MW-3. Upper AS/SVE system (MW-2, MW-3, MW-12, and MW-13) removed ~0.00407 lb/day BTEX.
January 18, 1994	Date of final RZA report. Chevron took over measurement of groundwater levels, PSH thickness, and operation of the AS/SVE system.
January 26, 1994	Chevron letter to Charles Neuchterlein (Ecology) stating that "Chevron will continue to operate the remediation system and monitor the site on a semi-annual basis."
February 1, 1994	Last RZA monitoring event; limited to measurement of groundwater levels and PSH thicknesses.
July 19, 1994	Chevron letter to Charles Neuchterlein (Ecology) proposing that 1) the remediation system will be disconnected (not implemented), 2) all wells will be checked monthly for water level and signs of PSH, 3) the riverbank checked monthly for signs of hydrocarbon seepage, and 4) wells MW-2, MW-3, MW-12 and MW-13 will be sampled quarterly for BTEX and TPH.
January 1995 through February 1997	Monthly measurements indicated measureable PSH was sometimes present in RW-1, MW-2, MW-3, MW-6, MW-7, MW-8, and MW-12.
September 21, 1995	Chevron letter to Charles Neuchterlein (Ecology) clarifying that the AS/SVE system was not turned off, and continues to operate.
November 8, 1995	AS/SVE system adjusted to optimize vapor recovery from MW-3.
April 19, 1997 to Late June 1998	Quarterly measurements indicated no measurable PSH was present in the wells after February 27, 1997 (in MW-3).
June 24, 1998	Olympus Environmental, Inc. began to provide environmental services at the Pasco Terminal.
August 17, 1998	Chevron letter to Charles Neuchterlein (Ecology) proposing to continue AS/SVE system operations for another year, and conduct quarterly groundwater monitoring.
September 16, 1998	Olympus observed the AS/SVE system was turned off; notified Chevron.
November 27, 1998	MW-12 reconnected to the AS system.
December 9, 1998	Soil samples collected during tank removal project southeast of Tank 7.

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<i>Date</i>	<i>Description</i>
January 20, 1999	Soil samples collected by DWR Consultants, Inc. for a tank installation project southeast of Tank 7 identified a thin layer of petroleum product (diesel) about 23 feet bgs (~62 feet above groundwater).
March 29, 1999	AS/SVE system turned off 3 days prior to sampling event; reactivated on March 30, 1999. Broken wellhead connection observed at MW-13.
June 24, 1999	AS/SVE system turned off 3 days prior to sampling event; reactivated on June 25, 1999. Broken wellhead connection observed at MW-13. MW-3 observed to have a product sheen.
October 1999	Maxim Technologies began providing environmental services at the Pasco Terminal.
October 8, 1999	PSH measured in MW-3 = 0.77 foot; MW-12 had a sheen. SVE system observed to be off; restarted after sampling event, and maintenance was performed. Maxim recommended repairs to both the AS and SVE systems.
June 8, 2000	SVE system turned off; repairs needed. Maxim recommended termination of active remediation. Observed a hydrocarbon-absorbing sock in MW-3 (no information available on when it was originally installed).
July 2000	Operation of the "upper" bioventing system in MW-2, MW-12, and MW-13 ceased.
September 13, 2000	Product sample collected from CPL well MW-3; fingerprinting indicated PSH was 10% gasoline, 53% Jet A, and 37% diesel.
March 29, 2001	Chevron analyzed water samples from Tidewater wells MW-5, MW-7, MW-8, and AR-12. MW-5 contained both gasoline and diesel components, whereas the other samples contained only gasoline. Chromatograms for the MW-8 and AR-12 samples do not match well, suggesting two different fuel sources, or major differences in how the fuels have biodegraded. None of the samples matched the product sample from CPL well MW-3.
September 2001	Ended quarterly monitoring of CPL wells; began annual monitoring program.
2002-2008	Annual groundwater monitoring of CPL wells; reports submitted to Ecology.
September 11, 2003	No measurable PSH observed in any CPL well after this date.
June 22-24, 2010	Gauging, redevelopment and rehabilitation of CPL monitor wells in preparation for the site-wide groundwater monitoring event. MW-1 found to be filled with gravel above top of screen; old, partially disintegrated, absorbent sock removed from MW-3.
June 28-30, 2010	Site-wide groundwater monitoring event conducted by CPL and Tidewater for RI/FS.

**TABLE 3**  
**Monitor Well Construction Summary**  
 NWTC Pasco Terminal  
 Pasco, Washington

Monitor Well ID	Date Constructed	Well Diameter (inches)	Drilling Method	Drilling Contractor	Consultant	2010 Surveyed Location, feet		2010 Surveyed Elevation		Total Depth (feet bgs)	Screen Interval (feet bgs)	Screen Length (feet)	Well Casing (feet)	Casing Length (feet)	Stickup Height (feet)
						Northing	Easting	Top of Casing Elevation feet, MSL	Ground Surface Elevation feet, MSL						
<b>CPL Wells</b>															
MW-1 <sup>A</sup>	11/83	4	CT	NA	EES	325380.52	2013255.52	419.40	419.30	93.9	73.9 - 93.9	20	0 - 74	74.1	0.10
MW-2 <sup>A</sup>	11/83	4	CT	NA	EES	325074.59	2012938.19	417.28	414.49	83.3	63.3 - 83.3	20	0 - 66.1	68.9	2.79
MW-3 <sup>A</sup>	11/83	4	CT	NA	EES	324891.22	2012642.18	423.42	421.02	94.95	74.95 - 94.95	20	0 - 74.95	77.35	2.40
MW-4 <sup>A</sup>	11/83	4	CT	NA	EES	324524.21	2012589.67	412.09	409.64	76.75	56.75 - 76.75	20	0 - 56.75	59.2	2.45
MW-5 <sup>B,C</sup>	1986	NA	NA	NA	Chevron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	11/17/86	2	HSA	Soil Sampling Inc	Geo Engineers	324734.95	2013094.86	358.61	356.30	23.5	8.5 - 23.5	15	0-8.5	8.5	2.31
MW-7	11/18/86	2	HSA	Soil Sampling Inc	Geo Engineers	324957.76	2012915.65	411.40	408.94	79	57 - 77	20	0-57	57	2.46
MW-8	11/25/86	2	HSA	Soil Sampling Inc	Geo Engineers	324872.85	2012992.28	383.91	381.30	56	29 - 54	25	0-29	29	2.61
MW-9 <sup>B</sup>	11/20/86	2	HSA	Soil Sampling Inc	Geo Engineers	NA	NA	NA	NA	26	10 - 25	15	0-10	10	5.2
MW-10	1/6/89	4	AR	Staco	RZA	324989.14	2012960.95	407.91	404.97	78.25	55 - 78	23	0-55	55	2.94
MW-11	1/16/89	2	HSA	Associated	RZA	325029.83	2012835.10	423.48	421.34	84.5	84.5 - 74.5	10	0-74.5	74.5	2.14
MW-12	1/17/89	2	HSA	Associated	RZA	324978.49	2012732.74	423.65	421.48	85	33 - 60 75 - 85	37	0-38 60-75	53	2.17
MW-13	1/17/89	2	HSA	Associated	RZA	325031.26	2012831.28	424.07	421.94	48	18.5 - 47.5	29	0-18.5	18.5	2.13
MW-14	1/17/89	2	HSA	Associated	RZA	325200.39	2012982.56	421.97	421.11	82.5	27.5 - 53 72.5 - 82.5	35.5	0-27.5 53-72.5	47	0.86
RW-1	1/4/89	8	AR	Staco	RZA	325050.49	2012953.80	417.29	420.66	105	64 - 98	34	0-64	64	-3.37

bgs = below ground surface  
 btoc = below top of casing  
 NA = Not Available

CT = Cable Tool  
 HSA = Hollow Stem Auger  
 AR = Air Rotary

**Notes:**

- <sup>A</sup> Boring logs are not available for MW-1 through MW-4. Well depths and screen intervals were estimated from information provided by Environmental Emergency Services Co. in a letter dated January 12, 1984, and are based on the assumption that the reported depth to water after development was the same as the depth to water measured during drilling. Casing stickup for these wells taken from Table 1 in Olympus Environmental, Inc. report dated January 8, 1999.
- <sup>B</sup> CPL wells MW-5 and MW-9 were destroyed during excavation activities, which occurred between May 5 and May 15, 1987.
- <sup>C</sup> CPL well MW-5 was replaced with a 48-inch corrugated metal culvert installed to below the water table. Slots were cut in the pipe with an abrasive power saw. Backfill around the pipe consisted of washed pea gravel. The well was developed by withdrawing approximately 8 gpm of water over a four-hour period with a 3-inch diaphragm pump.

**TABLE 3**  
**Monitor Well Construction Summary**  
 NWTTC Pasco Terminal  
 Pasco, Washington

Monitor Well ID	Date Constructed	Well Diameter (inches)	Drilling Method	Drilling Contractor	Consultant	2010 Surveyed Location, feet		2010 Surveyed Elevation		Total Depth (feet bgs)	Screen Interval (feet bgs)	Screen Length (feet)	Well Casing (feet)	Casing Length (feet)	Stickup Height (feet)
						Northing	Easting	Top of Casing Elevation feet, MSL	Ground Surface Elevation feet, MSL						
<b>Tidewater Wells</b>															
AR-1	8/2/2000	2	AR	Environmental West	TCM Northwest	325422.21	2012272.12	425.80	424.09	88	73 - 88	15	0 - 73	73	2
AR-2 <sup>D</sup>	8/3/2001	2	AR	Environmental West	TCM Northwest	NA	NA	NA	NA	88	73 - 88	15	0 - 73	73	2
AR-3 <sup>E</sup>	8/4/2001	2	AR	Environmental West	TCM Northwest	325377.56	2012245.24	428.01	424.30	88	73 - 88	15	0 - 73	73	2
AR-4	8/4/2001	2	AR	Environmental West	TCM Northwest	325346.11	2012267.84	426.47	423.70	88	73 - 88	15	0 - 73	73	2
AR-5	8/7/2001	2	AR	Environmental West	TCM Northwest	325298.64	2012283.32	423.08	422.80	88	73 - 88	15	0 - 73	73	2
AR-6	8/8/2001	2	AR	Environmental West	TCM Northwest	325301.42	2012208.08	425.17	423.40	88	73 - 88	15	0 - 73	73	2
AR-7	8/8/2001	2	AR	Environmental West	TCM Northwest	325302.37	2012361.04	425.41	423.00	88	73 - 88	15	0 - 73	73	2
AR-8	8/9/2001	2	AR	Environmental West	TCM Northwest	325252.13	2012289.28	423.02	422.90	88	73 - 88	15	0 - 73	73	2
AR-9	8/10/2001	2	AR	Environmental West	TCM Northwest	325230.96	2012239.63	423.05	423.18	88	73 - 88	15	0 - 73	73	2
AR-10	8/10/2001	2	AR	Environmental West	TCM Northwest	325265.14	2012191.62	422.59	422.72	88	73 - 88	15	0 - 73	73	2
AR-11	8/10/2000	2	AR	Environmental West	TCM Northwest	325577.52	2012292.09	422.62	422.87	88	73 - 88	15	0-73	73	2
AR-12	8/11/2001	2	AR	Environmental West	TCM Northwest	325461.16	2012314.20	425.50	423.40	88	73 - 88	15	0-73	73	2
MW-1	3/7/2001	2	AR	Environmental West	CH2M HILL	325419.68	2012174.31	421.82	422.09	90	74.8 - 89.8	15	0 - 74.8	74.8	0.2
MW-2	3/6/2001	2	AR	Environmental West	CH2M HILL	325187.91	2012281.78	422.95	423.28	90	74.8 - 89.8	15	0 - 74.8	74.8	0.2
MW-3	3/1/2001	2	AR	Environmental West	CH2M HILL	325221.69	2012192.04	422.37	422.66	90	74.9 - 89.9	15	0 - 74.9	74.9	0.1
MW-4	2/23/2001	2	AR	Environmental West	CH2M HILL	325241.53	2012346.83	422.29	422.70	90	74.7 - 89.7	15	0 - 74.7	74.7	0.3
MW-5	3/7/2001	2	AR	Environmental West	CH2M HILL	325294.11	2012422.17	425.02	422.38	90	74.5 - 89.5	15	0 - 74.5	74.5	0.5
MW-6	3/16/2001	2	AR	Environmental West	CH2M HILL	325284.83	2012166.48	422.50	422.81	90	75 - 90	15	0 - 75	75	0.5
MW-7	3/15/2001	2	AR	Environmental West	CH2M HILL	325485.95	2012369.50	427.25	423.22	90	74.8 - 89.8	15	0 - 74.8	74.8	0.2
MW-8	3/15/2001	2	AR	Environmental West	CH2M HILL	325504.88	2012391.90	427.15	423.20	90	75 - 90	15	0 - 75	73	0.5

bgs = below ground surface      CT = Cable Tool  
 btoc = below top of casing      HSA = Hollow Stem Auger  
 NA = Not Available                  AR = Air Rotary

**Notes:**

- <sup>D</sup> AR-2 could not be found during the November 2007 and October 2008 sampling events.
- <sup>E</sup> AR-3 was found to be filled with sand and gravel during the March 2006 sampling event.

**TABLE 4**  
**Summary of Analytical Data and Groundwater Levels**  
 NWTC Pasco Terminal  
 Pasco, Washington

(Concentrations are reported in micrograms per liter)

Well No.	Date Sampled <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes	NWTPH-Gx	NWTPH-Dx <sup>4</sup>	NWTPH-Rx <sup>4</sup>	Ethanol	Top of Casing Elevation (feet NGVD)	Depth to Groundwater (feet)	Product Thickness (feet)	Groundwater Elevation (feet NGVD)
Ecology Criteria <sup>2</sup>		5	1000	700	1000	1000/800 <sup>3</sup>	500	500	N/A	---	---	---	---
<b>CPL WELLS</b>													
MW-1	06/30/10	NS	NS	NS	NS	NS	NS	NS	NS	419.40	74.99	0	344.41
	12/14/10	NS	NS	NS	NS	NS	NS	NS	NS	419.40	DRY	0	DRY
MW-2	06/30/10	<1.0	<1.0	<1.0	<2.0	<50	<b>3600</b>	<b>3300</b>	<10000	417.28	72.80	0	344.48
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<b>3100</b>	<b>2400</b>	<10000	417.28	73.21	0	344.07
MW-3	06/30/10	NS	NS	NS	NS	NS	NS	NS	NS	423.42	78.97	Trace	344.45
	12/14/10	NS	NS	NS	NS	NS	NS	NS	NS	423.42	79.38	0	344.04
MW-4	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	412.09	68.01	0	344.08
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	412.09	68.43	0	343.66
MW-6	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	358.61	15.84	0	342.77
	12/14/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	358.61	16.34	0	342.27
MW-7	06/30/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	411.4	66.96	0	344.44
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	411.4	67.37	0	344.03
MW-8	06/30/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	383.91	39.51	0	344.40
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	383.91	39.93	0	343.98
MW-10	06/30/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	407.91	63.42	0	344.49
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	407.91	63.84	0	344.07
MW-11	06/30/10	<1.0	<1.0	<1.0	<2.0	<50	<b>1100</b>	450	<10000	423.48	79.06	0	344.42
	12/16/10	<1.0	<1.0	<1.0	<2.0	<50	200	<240	<10000	423.48	79.46	0	344.02
MW-12	06/30/10	1.1	<1.0	<1.0	<2.0	<50	<b>950</b>	<b>700</b>	<10000	423.65	79.22	0	344.43
	12/16/10	<1.0	<1.0	<1.0	<2.0	<50	490	430	<10000	423.65	79.62	0	344.03
MW-22	06/30/10	1.0	<1.0	<1.0	<2.0	<50	<b>950</b>	<b>650</b>	<10000	(duplicate sample of MW-12)			
	12/16/10	<1.0	<1.0	<1.0	<2.0	<50	<b>520</b>	450	<10000	(duplicate sample of MW-12)			
MW-14	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	160	<240	<10000	421.97	77.52	0	344.45
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	421.97	77.94	0	344.03
RW-1	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	417.29	72.89	0	344.40
	12/16/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	<10000	417.29	73.28	0	344.01

**TABLE 4**  
**Summary of Analytical Data and Groundwater Levels**  
 NWTC Pasco Terminal  
 Pasco, Washington

(Concentrations are reported in micrograms per liter)

Well No.	Date Sampled <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes	NWTPH-Gx	NWTPH-Dx <sup>4</sup>	NWTPH-Rx <sup>4</sup>	Ethanol	Top of Casing Elevation (feet NGVD)	Depth to Groundwater (feet)	Product Thickness (feet)	Groundwater Elevation (feet NGVD)
Ecology Criteria <sup>2</sup>		5	1000	700	1000	1000/800 <sup>3</sup>	500	500	N/A	---	---	---	---
<b>TIDEWATER WELLS</b>													
MW-1	06/28/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	NA	421.82	77.23	0	344.59
	12/14/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	N/A	421.82	77.72	0	344.10
MW-2	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<250	NA	422.95	78.37	0	344.58
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<130	<260	N/A	422.95	78.86	0	344.09
MW-3	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<140	<270	NA	422.37	77.84	0	344.53
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<250	N/A	422.37	78.33	0	344.04
MW-4	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<250	NA	422.29	77.72	0	344.57
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<140	<280	N/A	422.29	78.22	0	344.07
MW-5	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<130	<260	NA	425.02	80.48	0	344.54
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<130	<260	N/A	425.02	80.95	0	344.07
MW-6	06/28/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	NA	422.50	77.92	0	344.58
	12/14/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	N/A	422.50	78.41	0	344.09
MW-7	06/29/10	NS	NS	NS	NS	NS	NS	NS	NA	427.25	82.74	0	344.51
	12/16/10	<1.0	4.1	<1.0	27	350	<120	<240	N/A	427.25	83.19	0	344.06
MW-8	06/29/10	NS	NS	NS	NS	NS	NS	NS	NA	427.15	82.62	0	344.53
	12/16/10	2.4	500	210	<b>2000</b>	<b>9900</b>	<b>2500</b>	<260	N/A	427.15	83.09	0	344.06
AR-1	06/29/10	NS	NS	NS	NS	NS	NS	NS	NA	425.80	81.28	0.01	344.52
	12/16/10	NS	NS	NS	NS	NS	NS	NS	N/A	425.80	81.70	sheen	344.10
AR-2	06/29/10	NS	NS	NS	NS	NS	NS	NS	NA	N/A	N/A	N/A	N/A
	12/16/10	NS	NS	NS	NS	NS	NS	NS	N/A	N/A	NA	NA	NA
AR-3	06/29/10	NS	NS	NS	NS	NS	NS	NS	NA	428.01	DRY	0	N/A
	12/15/10	NS	NS	NS	NS	NS	NS	NS	N/A	428.01	NA	NA	NA
AR-4	06/29/10	<b>380</b>	<b>1900</b>	270	<b>4400</b>	<b>21000</b>	<b>5300</b>	<b>650</b>	NA	426.47	81.90	0	344.57
MW-11	06/29/10	<b>370</b>	<b>1800</b>	250	<b>4000</b>	<b>20000</b>	<b>3700</b>	<b>440</b>	NA	(duplicate sample of AR-4)			
AR-4	12/15/10	<b>350</b>	<b>1400</b>	230	<b>3600</b>	<b>17000</b>	<b>2900</b>	<260	N/A	426.47	82.38	0	344.09
AR-5	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<250	NA	423.08	78.52	0	344.56
	12/15/10	<1.0	<1.0	<1.0	<2.0	260	<b>730</b>	<270	N/A	423.08	79.00	0	344.08



**TABLE 4**  
**Summary of Analytical Data and Groundwater Levels**  
 NWTC Pasco Terminal  
 Pasco, Washington

(Concentrations are reported in micrograms per liter)

Well No.	Date Sampled <sup>1</sup>	Benzene	Toluene	Ethylbenzene	Total Xylenes	NWTPH-Gx	NWTPH-Dx <sup>4</sup>	NWTPH-Rx <sup>4</sup>	Ethanol	Top of Casing Elevation (feet NGVD)	Depth to Groundwater (feet)	Product Thickness (feet)	Groundwater Elevation (feet NGVD)
Ecology Criteria <sup>2</sup>		5	1000	700	1000	1000/800 <sup>3</sup>	500	500	N/A	---	---	---	---
AR-6	06/29/10	<1.0	<1.0	<1.0	2.4	<50	<120	<250	NA	425.17	80.61	0	344.56
	12/15/10	<1.0	<1.0	<1.0	8.6	81	<120	<240	N/A	425.17	81.11	0	344.06
AR-7	06/29/10	NS	NS	NS	NS	NS	NS	NS	NA	425.41	80.82	0	344.59
	12/16/10	NS	NS	NS	NS	NS	NS	NS	N/A	425.41	81.33	sheen	344.08
AR-8	06/29/10	2	15	99	420	<b>2000</b>	<b>3300</b>	250	NA	423.02	78.43	0	344.59
	12/15/10	1.7	26	100	460	<b>3700</b>	<b>1500</b>	<260	N/A	423.02	78.94	0	344.08
FD-1	12/15/10	1.7	36	100	590	<b>3500</b>	<b>1500</b>	<280	N/A	(duplicate sample of AR-8)			
AR-9	06/29/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	NA	423.05	78.46	0	344.59
	12/15/10	<1.0	<1.0	<1.0	<2.0	<50	<130	<270	N/A	423.05	78.95	0	344.1
AR-10	6/29/2010	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	NA	422.59	78.01	0	344.58
	12/14/2010	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	N/A	422.59	78.50	0	344.09
AR-11	06/28/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	NA	422.62	78.00	0	344.62
	12/14/10	<1.0	<1.0	<1.0	<2.0	<50	<120	<240	N/A	422.62	78.49	0	344.13
AR-12	06/29/10	NS	NS	NS	NS	NS	NS	NS	NA	425.50	80.96	0	344.54
	12/15/10	NS	NS	NS	NS	NS	NS	NS	N/A	425.50	DRY	0	DRY

NGVD = National Geodetic Vertical Datum of 1929

NS = Not Sampled for one of the following reasons: insufficient water in well, presence of liquid hydrocarbons, inaccessibility, or well no longer in sampling program.

N/A = Not applicable or not available

NA = Not analyzed for this parameter.

Concentrations in **bold** exceed Washington Department of Ecology cleanup levels.

<sup>1</sup> The CPL wells were gauged and sampled by URS Corporation, whereas the Tidewater wells were gauged and sampled by CH2M HILL.

All groundwater samples were sent to TestAmerica Laboratories, Inc. in Tacoma, WA for analysis.

<sup>2</sup> Washington Department of Ecology Method A cleanup levels as listed in Table 720-1 of the Model Toxics Control Act, revised October 12, 2007.

<sup>3</sup> The lower value applies if there is any detectable benzene in the sample.

<sup>4</sup> The diesel fraction of the NWTPH analysis is reported as NWTPH-Dx, and the heavy oil fraction is reported as NWTPH-Rx.

**TABLE 5**  
**Summary of Water Quality and Field Parameter Data**  
 NWTC Pasco Terminal  
 Pasco, Washington

Monitor Well	Sampling Date	Field Measurements						Additional Water Quality Parameters					
		pH (Standard Units)	Specific Conductance (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Ferrous Iron (ppm)	Manganese (mg/L)	Nitrate/Nitrite as N (mg/L)	Sulfate (mg/L)	Methane (mg/L)	Alkalinity (mg/L)
<b>CPL WELLS</b>													
MW-1	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/14/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	6/30/2010	6.96	1.610	21.49	0.16	48	7.0	0.45	0.085	25	100	<0.026	550
	12/15/2010	7.11	0.928	20.50	2.40	15	1.0	0.41	0.11	46	120	<0.026	650
MW-3	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/14/2010	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	6/29/2010	7.62	0.877	22.88	6.28	117	11.5	0.24	<0.020	49	110	<0.026	180
	12/15/2010	7.73	0.515	18.64	6.76	87	0.0	0.00	<0.020	26	110	<0.026	170
MW-6	6/29/2010	7.52	0.905	17.78	7.56	161	56.2	0.37	0.026	38	110	<0.026	170
	12/14/2010	7.64	0.512	17.95	7.06	94	0.7	0.00	<0.020	26	110	<0.026	170
MW-7	6/30/2010	7.46	0.922	19.65	5.03	88	84.5	0.53	0.071	44	110	<0.026	190
	12/15/2010	7.59	0.516	17.69	6.96	89	6.2	0.00	<0.020	27	110	<0.026	170
MW-8	6/30/2010	7.54	0.931	17.57	5.11	99	0.0	0.01	<0.020	45	110	<0.026	180
	12/15/2010	7.52	0.525	16.94	6.94	94	0.0	0.00	<0.020	27	110	<0.026	170
MW-10	6/30/2010	7.56	0.929	18.12	5.53	80	0.0	0.00	<0.020	48	110	<0.026	180
	12/15/2010	7.68	0.524	18.19	6.30	99	0.0	0.00	<0.020	27	110	<0.026	170
MW-11	6/30/2010	7.20	1.100	18.86	2.08	83	0.0	0.05	0.079	35	88	<0.026	310
	12/16/2010	7.04	0.565	18.49	6.22	84	0.0	0.00	0.14	23	100	<0.026	230
MW-12	6/30/2010	7.19	1.230	18.87	0.32	-74	2.3	1.09	0.49	32	120	0.0861	320
	12/16/2010	7.22	0.621	19.50	3.86	-30	0.0	0.50	0.49	18	120	0.0609	290
MW-22	6/30/2010	(duplicate sample of MW-12)							0.47	26	120	0.0802	330
	12/16/2010	(duplicate sample of MW-12)							0.48	19	120	0.0675	290
MW-14	6/29/2010	7.36	0.988	20.08	3.94	98	24.1	0.34	<0.020	43	120	<0.026	220
	12/15/2010	7.33	0.518	17.81	5.77	85	1.7	0.00	<0.020	26	110	<0.026	180
RW-1	6/29/2010	7.36	0.923	19.06	6.35	97	3.0	0.29	<0.020	41	120	<0.026	180
	12/16/2010	7.56	0.508	17.78	6.88	96	0.0	0.00	<0.020	27	110	<0.026	180

**TABLE 5**  
**Summary of Water Quality and Field Parameter Data**  
 NWTC Pasco Terminal  
 Pasco, Washington

Monitor Well	Sampling Date	Field Measurements						Additional Water Quality Parameters					
		pH (Standard Units)	Specific Conductance (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Ferrous Iron (ppm)	Manganese (mg/L)	Nitrate/Nitrite as N (mg/L)	Sulfate (mg/L)	Methane (mg/L)	Alkalinity (mg/L)
<b>TIDEWATER WELLS</b>													
MW-1	6/28/2010	6.96	0.984	24.0	4.68	149	42	0.2	0.041	20	120	<0.026	200
	12/14/2010	8.26	0.904	19.17	6.72	146	3	0.2	0.14	26	110	<0.026	170
MW-2	6/29/2010	7.64	0.809	21.3	3.61	123	99	0.4	<0.020	23	110	<0.026	200
	12/15/2010	6.86	0.965	17.45	5.62	176	188	0.1	<0.020	20	96	<0.026	270
MW-3	6/29/2010	7.05	0.806	20.1	5.44	165	229	0.2	<0.020	26	110	<0.026	190
	12/15/2010	7.34	0.881	18.62	9.44	235	87	0.2	<0.020	25	110	<0.026	180
MW-4	6/29/2010	7.62	0.806	21.3	6.57	126	44	0.1	<0.020	24	110	<0.026	180
	12/15/2010	7.36	0.885	15.96	8.85	244	56	0.1	<0.020	26	110	<0.026	170
MW-5	6/29/2010	7.92	0.784	22.3	6.93	144	68	0.5	<0.020	24	110	<0.026	170
	12/15/2010	7.42	0.873	18.63	9.48	267	79	1.0	<0.020	26	110	<0.026	160
MW-6	6/28/2010	7.17	0.881	19.9	8.86	101	18	0.2	<0.020	26	110	<0.026	170
	12/14/2010	8.47	0.866	18.36	9.11	136	45	0.1	<0.020	27	110	<0.026	160
MW-7	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2010	7.75	0.879	17.4	6.48	140	13	0.2	<0.020	26	110	<0.026	160
MW-8	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2010	7.55	0.829	18.6	3.66	-56	135	1	0.41	19	85	<0.026	200
AR-1	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2010	--	--	--	--	--	--	--	--	--	--	--	--
AR-2	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2010	--	--	--	--	--	--	--	--	--	--	--	--
AR-3	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2010	--	--	--	--	--	--	--	--	--	--	--	--
AR-4	6/29/2010	7.60	0.808	22.9	0.00	-136	25	1.6	1.4	5.4	49	0.077	290
	6/29/2010	(MW-11 - duplicate sample of AR-4)							1.4	6.0	52	0.078	340
	12/15/2010	7.11	0.894	19.06	1.26	-118	4	2.2	1.5	8.9	62	0.133	310
AR-5	6/29/2010	7.96	0.784	23.2	6.30	75	216	0.2	<0.020	25	110	<0.026	170
	12/15/2010	7.46	0.880	17.4	7.54	144	672	0.1	0.11	25	110	<0.026	170

**TABLE 5**  
**Summary of Water Quality and Field Parameter Data**  
 NWTC Pasco Terminal  
 Pasco, Washington

Monitor Well	Sampling Date	Field Measurements						Additional Water Quality Parameters					
		pH (Standard Units)	Specific Conductance (mS/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Ferrous Iron (ppm)	Manganese (mg/L)	Nitrate/Nitrite as N (mg/L)	Sulfate (mg/L)	Methane (mg/L)	Alkalinity (mg/L)
AR-6	6/29/2010	7.96	0.799	24.9	3.96	105	36	0.2	0.042	22	110	<0.026	190
	12/15/2010	7.23	0.880	20.06	5.37	207	2	0.1	0.045	22	100	<0.026	190
AR-7	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/15/2010	--	--	--	--	--	--	--	--	--	--	--	--
AR-8	6/29/2010	7.71	1.06	21.9	0.60	-96	60	0.9	1.4	3.6	43	<0.026	410
	12/15/2010	7.05	1.08	19.3	1.31	-78	5	2.2	1.8	6.6	62	<0.026	350
	12/15/2010	(FD-1 - duplicate sample of AR-8)							1.7	7.2	64	<0.026	340
AR-9	6/29/2010	7.70	0.811	21.1	4.77	110	188	0.3	<0.020	24	110	<0.026	180
	12/15/2010	7.24	0.880	21.8	5.85	219	164	0.1	<0.020	23	100	<0.026	180
AR-10	6/29/2010	7.57	0.763	24.2	3.41	173	145	0.2	<0.020	10	98	<0.026	250
	12/14/2010	8.68	0.853	18.7	6.39	121	5	0.1	<0.020	22	100	<0.026	180
AR-11	6/28/2010	7.06	0.855	20.1	9.68	110	109	0.6	<0.020	25	110	<0.026	170
	12/14/2010	8.17	0.863	19.43	8.81	264	11	0.9	<0.020	24	110	<0.026	170
AR-12	6/29/2010	--	--	--	--	--	--	--	--	--	--	--	--
	12/15/2010	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

Measurements collected with a Horiba U-52 water quality meter.

mS/cm - millisiemen per centimeter

-- = Not Measured; well was not sampled

**TABLE 6**

**ARARs and Applicable Concentrations**  
 NWTC Pasco Terminal  
 Pasco, Washington

ARAR	Regulatory Citation	Description	Applicable Concentration in micrograms per Liter (µg/L)						
			Benzene	Toluene	Ethylbenzene	Total Xylenes	NWTPH-Gx	NWTPH-Dx	NWTPH-Rx
Washington Model Toxics Control Act Method A Groundwater Cleanup Levels – Human Receptors (see NOTE)	WAC 173-340-700(5)(a), Table 720-1	Requires that cleanup actions protect human health and the environment, comply with cleanup standards in WAC 173-340-700 through 760, comply with applicable state and federal laws, and provide for compliance monitoring	5	1000	700	1000	1000 / 800 (lower value applies if benzene is detected)	500	500
Drinking Water									
Federal Safe Drinking Water Act: National Primary Drinking Water Standards	40 CFR 141.61 (MCLs) 40 CFR 141.50 (MCLGs)	Maximum contaminant levels (MCLs) and MCL goals (MCLGs) applicable for public water drinking supply systems. MCLs are relevant and appropriate because the groundwater at the Site is usable as a potential drinking water supply.	MCL = 5 MCLG = 0	MCL = 1000 No MCLG	MCL = 700 MCLG = 700	MCL = 10000 No MCLG	No MCL No MCLG	No MCL No MCLG	No MCL No MCLG
Washington State Drinking Water Act and Regulations	WAC 246-290-310(7)	MCLs for Group A public water drinking supply systems. Volatile organic compound MCLs are the same as listed in 40 CFR 141.61.	MCL = 5	MCL = 1000	MCL = 700	MCL = 10000	No MCL	No MCL	No MCL
Risk-based Criteria									
Washington Surface Water Quality Standards for Toxic Substances (Site-Specific Uses and Criteria)	WAC 173-201A-240(5)	Water quality standards for the Lower Snake River; references U.S. Water Quality Criteria (1986, as amended) for chemicals not listed in WAC 173-201A-240(3).	Not Listed	Not Listed	Not Listed	Not Listed	Not Applicable	Not Applicable	Not Applicable
Federal Water Pollution Control Act (Clean Water Act): U.S. Quality Criteria for Water (1986, as amended)	40 CFR 131.36	National surface water quality standards authorized by Sections 303(c) and 304(a)(1).	See Next Row	See Next Row	See Next Row	See Next Row	See Next Row	See Next Row	See Next Row
National Recommended Water Quality Criteria	40 CFR 131.36	Replaced the 1986 U.S. Quality Criteria for Water; serves as ARAR to the extent that affected groundwater may discharge to surface water:  For consumption of water and organisms For consumption of organisms only	1.2 71	68 200000	3100 29000	Not Listed Not Listed	Not Applicable Not Applicable	Not Applicable Not Applicable	Not Applicable Not Applicable

ARAR – Applicable or Relevant and Appropriate Requirements

CFR – Code of Federal Regulations

WAC – Washington Administrative Code

NWTPH-Rx represents the heavy oil fraction of NWTPH.

MCL - Maximum contaminant level

MCLG - MCL goal

NOTE: Although the Model Toxic Control Act is not an ARAR, MTCA Method A Groundwater Cleanup Levels are included in the table for comparison.

**Table 7**  
**Performance Monitor Wells and Sampling Frequency**  
 NWTTC Pasco Terminal  
 Pasco, Washington

Well Owner	Monitor Well Number	Performance Monitor Well	Gauging Well	Well Location
Tidewater	MW-1		X	Upgradient
	MW-2		X	Sentinel
	MW-3		X	Sidegradient
	MW-4	X	X	Sentinel
	MW-5	X	X	Sentinel
	MW-6		X	Sidegradient
	MW-7		X	Sentinel
	MW-8	X	X	Sentinel
	AR-1		X	Source
	AR-2			Missing
	AR-3			Obstructed
	AR-4	X	X	Source Area
	AR-5		X	Source Area
	AR-6		X	Sentinel
	AR-7		X	Downgradient
	AR-8	X	X	Downgradient
	AR-9			Sidegradient
	AR-10			Sidegradient
AR-11	X	X	Upgradient	
AR-12		X	Source Area	
CPL	MW-1			Obstructed
	MW-2	X	X	Source Area
	MW-3			Unusable
	MW-4	X	X	Sidegradient
	MW-6	X	X	Downgradient
	MW-7	X	X	Downgradient
	MW-8	X	X	Downgradient
	MW-10	X	X	Downgradient
	MW-11	X	X	Sentinel
	MW-12	X	X	Source Area
	MW-13			Unusable
	MW-14	X	X	Sidegradient
	RW-1		X	Downgradient

**Notes:**

1. All performance monitor wells will be sampled semiannually for one year, then annually thereafter until the cleanup levels have been reached, followed by one year of semiannual confirmation sampling.
2. Other monitor wells may be sampled intermittently, based on evaluation of the analytical results from the performance monitor wells.