Table 1. T-108 Groundwater and Shoreline Soil Investigation Monitoring Well Construction and Water Level Summary

	PGG-1	PGG-2	PGG-3	PGG-4	PGG-5	PGG-6	PGG-7
General							
Ecology Unique ID	APQ 005	APQ 002	APQ 004	APQ 006	APQ 007	APQ 003	APQ 001
Installation Dates	6/6/2006	6/5/2006	6/5/2006	6/6/2006	6/6/2006	6/5/2006	6/5/2006
Development Volume, gallons (approx.)	1.75	6.25	35	< 0.5	15	25	20
Bailed Dry at, gallons (approx.)	1	3.75	NA	< 0.5	NA	NA	NA
Coordinates [1]							
Northing	209009.53	208857.20	208484.34	208550.85	208967.95	208572.89	208171.87
Easting	1267978.45	1267450.88	1267594.69	1268179.67	1267349.68	1267423.01	1267534.03
Elevations [2]							
Monument Elevation (north rim)	15.40	19.25	13.68	15.59	23.45	15.53	12.59
Measuring Point (PVC) Elevation	15.04	18.82	13.26	15.21	22.81	15.03	12.24
Top of Screen Elevation	11.9	15.8	10.2	12.1	12.6	12.0	8.6
Bottom of Screen Elevation	5.4	8.8	2.7	5.6	2.6	3.0	2.1
Depths, Below Ground Surface							
Top of Screen, feet bgs	3.5	3.5	3.5	3.5	8	3.5	4
Bottom of Screen, feet bgs	10	10.5	11	10	18	12.5	10.5
Depth of Borehole, feet bgs	10.5	14	13.5	10.5	20	13	14
Round 3 Water Level Snapshot - 2/19/07							
Time of measurement	9:19 AM	10:12 AM	NA	9:33 AM	10:22 AM	10:04 AM	9:45 AM
Depth to water	8.84	7.39	NM	8.34	17.9	9.17	5.99
Groundwater elevation [2]	6.20	11.43	NM	6.87	4.91	5.86	6.25
Time of tide observation [3]	9:18 AM	10:12 AM	NA	9:30 AM	10:24 AM	10:06 AM	9:42 AM
Tide elevation [2]	8.29	6.19	NA	7.83	5.73	6.41	7.34

Table 1. T-108 Groundwater and Shoreline Soil Investigation Monitoring Well Construction and Water Level Summary

	PGG-1	PGG-2	PGG-3	PGG-4	PGG-5	PGG-6	PGG-7
Round 4 Water Level Snapshot - 5/29/07							
Time of measurement	8:54 AM	9:35 AM	NA	9:08 AM	9:25 AM	9:45 AM	10:01 AM
Depth to water	9.13	9.22	NM	8.96	18.93	9.69	6.74
Groundwater elevation [2]	5.91	9.6	NM	6.25	3.88	5.34	5.50
Time of tide observation [3]	8:54 AM	9:36 AM	NA	9:06 AM	9:24 AM	9:42 AM	10:00 AM
Tide elevation [2]	0.33	-0.46	NA	0.04	-0.31	-0.54	-0.68

bgs = below ground surface

[1] *Horizontal datum: NAD 83/(91), Washington Coordinate System, North Zone, based on the published coordinate values of WSDOT Monument No. 3295 and WSDOT No. 3294 as published on the WSDOT Website during September 2006.*

[2] *Vertical Datum: MLLW. Elevations (monument, measuring point, top of screen, bottom of screen) presented in this table are correctly reported to MLLW and should replace elevations incorrectly presented in the Interim Report (PGG, 2006)*

[3] *Observed tide at Seattle Station ID 9447130 (ferry terminal) as reported by NOAA*

NM = not measured, PGG-3 wellhead damaged before Round 3

Table 2. T-108 Analytical Summary of Groundwater Sampling Round 3; February 19 and 20, 2007

	Analytical Method	Units	PGG-5	PGG-6	PGG-7	SAIC Groundwater Screening Levels [1] Based on CSL	Based on SQS
Groundwater and Tide Elevation							
Static Groundwater Measurements							
Time of Static Measurement			2/19/07 12:15 [2]	2/19/07 13:44	2/20/07 12:43		
Groundwater Elevation - Static		ft MLLW	4.5 [2]	5.88	6.33		
Time of Tide Measurement			2/19/07 12:18	2/19/07 13:48	2/20/07 12:48		
Tide Elevation (NOAA Station 9447130 [3])		ft MLLW	3.61	5.11	2.59		
Pumping/Sampling Measurements							
Time of Sample Collection			2/19/07 12:35	2/19/07 14:30	2/20/07 13:35		
Groundwater Elevation - Sampling		ft MLLW	4.42	5.80	6.10		
Time of Tide Measurement			2/19/07 12:36	2/19/07 14:30	2/20/07 13:36		
Tide Elevation (NOAA Station 9447130 [3])		ft MLLW	3.67	6.31	2.70		
Field Parameters							
pH		Stnd. Units	6.44	6.43	6.24	---	---
Electrical Conductivity		mS/cm	3.486	1.505	0.646	---	---
Oxidation Reduction Potential		mV	-130.6	-177	-90.6	---	---
Dissolved Oxygen		mg/L	0.55	0.66	0.56	---	---
Temperature		^{o}C	12.33	11.76	10.78	---	---
Analytical Results							
Petroleum Hydrocarbons							
Gasoline Range	NWTPH-Gx/8021B	ug/L	50.0 U	50.0 U	50.0 U	---	---
Benzene	NWTPH-Gx/8021B	ug/L	0.500 U	0.500 U	0.500 U	---	---
Toluene	NWTPH-Gx/8021B	ug/L	0.500 U	0.500 U	0.500 U	---	---
Ethylbenzene	NWTPH-Gx/8021B	ug/L	0.500 U	0.500 U	0.500 U	---	---
Xylenes (total)	NWTPH-Gx/8021B	ug/L	1.00 U	1.00 U	1.00 U	---	---
Diesel Range	NWTPH-Dx	mg/L	0.236 U	0.248 U	0.243 U	---	---
Lube Oil Range	NWTPH-Dx	mg/L	0.472 U	0.495 U	0.485 U	---	---

Table 2. T-108 Analytical Summary of Groundwater Sampling Round 3; February 19 and 20, 2007

	Analytical Method	Units	PGG-5	PGG-6	PGG-7	SAIC Groundwater Screening Levels [1] Based on CSL	Based on SQS
Total Metals							
Arsenic	EPA 6020	mg/L	0.00172	0.00100 U	0.00115	0.370	0.227
Barium	EPA 6020	mg/L	0.0490	0.0100 U	0.0100 U	---	---
Cadmium	EPA 6020	mg/L	0.00100 U	0.00100 U	0.00100 U	0.0034	0.0026
Chromium	EPA 6020	mg/L	0.00884	0.00100 U	0.00149	0.318	0.306
Copper	EPA 6020	mg/L	0.00158	0.00322	0.00100 U	0.123	0.123
Iron	EPA 6010B	mg/L	105 J	9.37 J	10.6 J	---	---
Lead	EPA 6020	mg/L	0.00100 U	0.00100 U	0.00100 U	0.013	0.011
Manganese	EPA 6020	mg/L	4.21 J	0.408 J	0.291 J	---	---
Nickel	EPA 6020	mg/L	0.00100 U	0.00324	0.00133	---	---
Zinc	EPA 6020	mg/L	0.0100 U	0.0111	0.0100 U	0.076	0.033
Mercury	EPA 7470A	mg/L	0.000200 U	0.000200 U	0.000200 U	0.0000074	0.0000052
Dissolved Metals							
Arsenic	EPA 6020-Diss	mg/L	0.00157	0.00100	0.00118	0.370	0.227
Barium	EPA 6020-Diss	mg/L	0.0400	0.0100 U	0.0100 U	---	---
Cadmium	EPA 6020-Diss	mg/L	0.00100 U	0.00100 U	0.00100 U	0.0034	0.0026
Chromium	EPA 6020-Diss	mg/L	0.0105	0.00215	0.00177	0.318	0.306
Copper	EPA 6020-Diss	mg/L	0.00100 U	0.00209	0.00100 U	0.123	0.123
Iron	EPA 6010B-Diss	mg/L	37.8 J	9.07 J	11.8 J	---	---
Lead	EPA 6020-Diss	mg/L	0.00100 U	0.00100 U	0.00100 U	0.013	0.011
Manganese	EPA 6020-Diss	mg/L	4.01	0.430	0.272	---	---
Nickel	EPA 6020-Diss	mg/L	0.00100 U	0.00304	0.00119	---	---
Zinc	EPA 6020-Diss	mg/L	0.0100 U	0.0100 U	0.0100 U	0.076	0.033
Mercury	EPA 7470A-Diss	mg/L	0.000200 U	0.000200 U	0.000200 U	0.0000074	0.0000052
Polychlorinated Biphenyls							
Aroclor 1016	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	2.4	0.44
Aroclor 1221	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1232	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1242	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1248	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	1.5	0.27
Aroclor 1254	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	0.86	0.16
Aroclor 1260	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	0.31	0.058

Table 2. T-108 Analytical Summary of Groundwater Sampling Round 3; February 19 and 20, 2007

	Analytical Method	Units	PGG-5	PGG-6	PGG-7	SAIC Groundwater Screening Levels [1] Based on CSL	Based on SQS
Aroclor 1262	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1268	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Polynuclear Aromatic Compounds							
Acenaphthene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	9.3	2.6
Acenaphthylene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	11	11
Anthracene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	59	11
Benzo(a)anthracene	EPA 8270C-HVI	ug/L	0.00990 U	0.00980 U	0.00990 U	0.63	0.26
Benzo(a)pyrene	EPA 8270C-HVI	ug/L	0.00990 U	0.00980 U	0.00990 U	0.27	0.13
Benzo(b)fluoranthene	EPA 8270C-HVI	ug/L	0.00990 U	0.00980 U	0.00990 U	0.56	0.29
Benzo(k)fluoranthene	EPA 8270C-HVI	ug/L	0.00990 U	0.00980 U	0.00990 U	0.57	0.29
Benzo(ghi)perylene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	0.029	0.012
Chrysene	EPA 8270C-HVI	ug/L	0.00990 U	0.00980 U	0.00990 U	1.9	0.47
Dibenz(a,h)anthracene	EPA 8270C-HVI	ug/L	0.00990 U	0.00980 U	0.00990 U	0.013	0.0046
Fluoranthene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	17	2.3
Fluorene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	7.0	2.0
Indeno(1,2,3-cd)pyrene	EPA 8270C-HVI	ug/L	0.00990 U	0.00980 U	0.00990 U	0.033	0.013
1-Methylnaphthalene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	---	---
2-Methylnaphthalene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	31	18
Naphthalene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	92	54
Phenanthrene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	23	4.8
Pyrene	EPA 8270C-HVI	ug/L	0.0990 U	0.0980 U	0.0990 U	20	14

[1] Draft Groundwater Screening Levels provided by R. Thomas. Source: Quick Reference Chart -- Groundwater and Soil Screening Levels Protective of Sediment Recontamination

[2] Approximate time and groundwater elevation taken at beginning of well purging. A careful static measurement was made at 2/19/07 10:22, water level: elevation 4.91 ft MLLW. Tide elevation at NOAA Station 9447130 2/19/07 10:24 5.73 ft MLLW

[3] NOAA Tide Station 9447130 located near the Colman Dock. A source for published values of observed tides in the Duwamish has not been identified. NOAA Data source: http://tidesandcurrents.noaa.gov/data_menu.shtml?stn=9447130%20Seattle,%20WA&type=Historic%20Tide%20Data

Parameter detected

U Parameter not detected, # is the lab reporting limit

J Parameter detected at the reported concentration; result qualified as "estimated" due to unacceptable QA results

Table 3. T-108 Analytical Summary of Groundwater Sampling Round 4; May 29 and 30, 2007

	Analytical Method	Units	PGG-5	PGG-6	PGG-7	SAIC Groundwater Screening Levels [1] Based on CSL	Based on SQS
Groundwater and Tide Elevation							
Static Groundwater Measurements							
Time of Static Measurement			5/29/07 9:25	5/29/07 9:45	5/29/07 10:01		
Groundwater Elevation - Static		ft MLLW	3.88	5.34	5.50		
Time of Tide Measurement			5/29/07 9:24	5/29/07 9:42	5/29/07 10:00		
Tide Elevation (NOAA Station 9447130 [2])		ft MLLW	-0.31	-0.54	-0.68		
Pumping/Sampling Measurements							
Time of Sample Collection			5/30/07 11:00	5/30/07 12:20	5/29/07 11:00		
Groundwater Elevation - Sampling		ft MLLW	3.64	5.25	5.20		
Time of Tide Measurement			5/30/07 11:00	5/30/07 12:18	5/29/07 11:00		
Tide Elevation (NOAA Station 9447130 [2])		ft MLLW	-1.22	0.31	-0.23		
Field Parameters							
pH		Stnd. Units	6.14	6.13	6.0	---	---
Electrical Conductivity		mS/cm	2.352	0.700	0.318	---	---
Oxidation Reduction Potential		mV	-151.9	-52.2	-77.6	---	---
Dissolved Oxygen		mg/L	1.73	1.22	1.13	---	---
Temperature		^{o}C	12.94	13.33	14.15	---	---
Analytical Results							
Petroleum Hydrocarbons							
Gasoline Range	NWTPH-Gx/8021B	ug/L	50.0 U	50.0 U	50.0 U	---	---
Benzene	NWTPH-Gx/8021B	ug/L	0.500 U	0.500 U	0.500 U	---	---
Toluene	NWTPH-Gx/8021B	ug/L	0.500 U	0.500 U	0.500 U	---	---
Ethylbenzene	NWTPH-Gx/8021B	ug/L	0.500 U	0.500 U	0.500 U	---	---
Xylenes (total)	NWTPH-Gx/8021B	ug/L	1.00 U	1.00 U	1.00 U	---	---
Diesel Range	NWTPH-Dx	mg/L	0.236 U	0.236 U	0.236 U	---	---
Lube Oil Range	NWTPH-Dx	mg/L	0.472 U	0.472 U	0.472 U	---	---

Table 3. T-108 Analytical Summary of Groundwater Sampling Round 4; May 29 and 30, 2007

	Analytical Method	Units	PGG-5	PGG-6	PGG-7	SAIC Groundwater Screening Levels [1] Based on CSL	Based on SQS
Total Metals							
Arsenic	EPA 6020	mg/L	0.00164	0.00120	0.00150	0.370	0.227
Cadmium	EPA 6020	mg/L	0.00100 U	0.00100 U	0.00100 U	0.0034	0.0026
Chromium	EPA 6020	mg/L	0.0120	0.00100 U	0.00100 U	0.318	0.306
Copper	EPA 6020	mg/L	0.00136	0.00122	0.00100 U	0.123	0.123
Lead	EPA 6020	mg/L	0.00100 U	0.00100 U	0.00100 U	0.013	0.011
Nickel	EPA 6020	mg/L	0.00119	0.00159	0.00100 U	---	---
Zinc	EPA 6020	mg/L	0.0100 U	0.0100 U	0.0100 U	0.076	0.033
Mercury	EPA 7470A	ug/L	0.00500 U	0.00500 U	0.00500 U	0.0074	0.0052
Dissolved Metals							
Arsenic	EPA 6020-Diss	mg/L	0.00161	0.00132	0.00107	0.370	0.227
Cadmium	EPA 6020-Diss	mg/L	0.00100 U	0.00100 U	0.00100 U	0.0034	0.0026
Chromium	EPA 6020-Diss	mg/L	0.0118	0.00161	0.00138	0.318	0.306
Copper	EPA 6020-Diss	mg/L	0.00100	0.00100 U	0.00100 U	0.123	0.123
Lead	EPA 6020-Diss	mg/L	0.00100 U	0.00100 U	0.00100 U	0.013	0.011
Nickel	EPA 6020-Diss	mg/L	0.00100 U	0.00136	0.00100 U	---	---
Zinc	EPA 6020-Diss	mg/L	0.0100 U	0.0100 U	0.0100 U	0.076	0.033
Mercury	EPA 7470A-Diss	ug/L	0.00500 U	0.00500 U	0.00500 U	0.0074	0.0052
Polychlorinated Biphenyls							
Aroclor 1016	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	2.4	0.44
Aroclor 1221	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1232	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1242	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1248	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	1.5	0.27
Aroclor 1254	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	0.86	0.16
Aroclor 1260	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	0.31	0.058
Aroclor 1262	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---
Aroclor 1268	EPA 8082 Mod	ug/L	0.100 U	0.100 U	0.100 U	---	---

Table 3. T-108 Analytical Summary of Groundwater Sampling Round 4; May 29 and 30, 2007

	Analytical Method	Units	PGG-5	PGG-6	PGG-7	SAIC Groundwater Screening Levels [1] Based on CSL	Based on SQS
Polynuclear Aromatic Compounds							
Acenaphthene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	9.3	2.6
Acenaphthylene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	11	11
Anthracene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	59	11
Benzo(a)anthracene	EPA 8270C-HVI	ug/L	0.0472 U	0.00943 U	0.00943 U	0.63	0.26
Benzo(a)pyrene	EPA 8270C-HVI	ug/L	0.0472 U	0.00943 U	0.00943 U	0.27	0.13
Benzo(b)fluoranthene	EPA 8270C-HVI	ug/L	0.0472 U	0.00943 U	0.00943 U	0.56	0.29
Benzo(k)fluoranthene	EPA 8270C-HVI	ug/L	0.0472 U	0.00943 U	0.00943 U	0.57	0.29
Benzo(ghi)perylene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	0.029	0.012
Chrysene	EPA 8270C-HVI	ug/L	0.0472 U	0.00943 U	0.00943 U	1.9	0.47
Dibenz(a,h)anthracene	EPA 8270C-HVI	ug/L	0.0472 U	0.00943 U	0.00943 U	0.013	0.0046
Fluoranthene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	17	2.3
Fluorene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	7.0	2.0
Indeno(1,2,3-cd)pyrene	EPA 8270C-HVI	ug/L	0.0472 U	0.00943 U	0.00943 U	0.033	0.013
1-Methylnaphthalene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	---	---
2-Methylnaphthalene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	31	18
Naphthalene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	92	54
Phenanthrene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	23	4.8
Pyrene	EPA 8270C-HVI	ug/L	0.472 U	0.0943 U	0.0943 U	20	14

[1] Draft Groundwater Screening Levels provided by R. Thomas. Source: Quick Reference Chart - Groundwater and Soil Screening Levels Protective of Sediment Recontamination

[2] NOAA Tide Station 9447130 located near the Colman Dock. A source for published values of observed tides in the Duwamish has not been identified. NOAA Data source: http://tidesandcurrents.noaa.gov/data_menu.shtml?stn=9447130%20Seattle,%20WA&type=Historic%20Tide%20Data

Parameter detected

U Parameter not detected, # is the lab reporting limit