Pier 69 ♦ 2711 Alaskan Way
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Letter of Transmittal

To: Ms Piper Peterson Lee – EPA, Region 10
1200 Sixth Avenue, Suite 900, ECL-111
Seattle, Washington 98101-3140

Date: October 27, 2009

From: Roy Kuroiwa – Port of Seattle

Project Reference: **Terminal 117 Early Action Area**

Hard Copy:	Electronic	Description:
2	X	**3Q09 Interim Groundwater Monitoring Report, dated October 27, 2009**

cc:

Hardcopy:	Electronic*	Name	Company:
1	X	Rick Thomas	Dept of Ecology
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	X	T-117 Technical Team	Windward, Integral, and AECOM

*Electronic version will be available online at http://www.windwardenv.com/t117docs/default.htm

Roy Kuroiwa
Project Coordinator

Port of Seattle

Pier 69 ♦ 2711 Alaskan Way
Seattle, WA 98121

October 27, 2009

Ms. Piper Peterson Lee
USEPA Region 10
1200 Sixth Avenue
Suite 900, ECL-111
Seattle, WA 98101-3140

Subject: Third Quarter 2009 Interim Groundwater Monitoring Data Results
Terminal 117 Early Action Area

Dear Ms. Peterson Lee:

The Port of Seattle together with the City of Seattle is pleased to provide to you the Third Quarter 2009 Interim Groundwater Monitoring Data Results report for the Terminal 117 Early Action Area. This report is provided per the Statement of Work (SOW), T-117 Early Action Area, Amendment No. 1 of Administrative Settlement Agreement and Order on Consent No. CERCLA 10-2006-0103.

To provide further information on dioxin and furan concentrations in groundwater, the Port of Seattle would like to propose groundwater sampling at select site wells for dioxin and furan congeners. Recommended site monitoring wells include the 3 monitoring wells sampled during the 4th Quarter 2008 groundwater sampling event (MW-05R, MW-08R, and MW-10) and MW-04R. Soil data collected in August and September of 2008 indicates that the highest concentrations of saturated residual soil dioxin and furan congeners are present adjacent to MW-04R. These four proposed monitoring wells represent upgradient and shoreline conditions as well as areas with varying dioxin furan soil concentrations. The groundwater data collected from these wells will provide additional information to further delineate groundwater at the T-117 Early Action Area. We would like to propose sampling these wells during the 4th Quarter 2009 groundwater sampling event.

We look forward to hearing from you. Please feel free to contact me at 206-728-3814 (Kuroiwa.R@portseattle.org) if you have any questions.

Sincerely,

Roy Kuroiwa
Project Coordinator

Distribution List:

Piper Peterson Lee, EPA (2 hard copies)
Kym Takasaki, USACE (1 hard copy)
Tom Meyer, City of Seattle (1 hard copy)
Rick Thomas, Dept of Ecology (1 hard copy)
(see enclosed Letter of Transmittal)

Lower Duwamish Waterway Superfund Site

Terminal 117 Early Action Area

Third Quarter 2009 Interim Groundwater Monitoring Data Results – Non-Time Critical Removal Action

PREPARED FOR:

The Port of Seattle
and
The City of Seattle

FOR SUBMITTAL TO:

US Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, WA 98101

OCTOBER 27, 2009

PREPARED BY: AECOM ENVIRONMENT

AECOM

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1 Introduction

The *Third Quarter 2009 Interim Groundwater Monitoring Data Results Report* (report) presents the objectives, methodologies, and results of the interim groundwater monitoring activities preceding the Non-Time Critical Removal Actions (NTCRA) at the Terminal 117 (T-117) Early Action Area (EAA) of the Lower Duwamish Waterway (LDW) Superfund Site in Seattle, Washington (Figure 1). This report was prepared on behalf of the Port of Seattle (Port) and the City of Seattle (City) for submittal to the U.S. Environmental Protection Agency (EPA), in accordance with the *Statement of Work* amendment (SOW, EPA 2007a), appended to the NTCRA Administrative Settlement Agreement and Order on Consent (Settlement Agreement) issued on December 22, 2005.

The investigation described herein was performed in accordance with the *Interim Groundwater Monitoring Plan* (Plan; ENSR 2008a) and the *Quality Assurance Project Plan-Non-Time Critical Removal Action – Preliminary Investigation and Interim Groundwater Monitoring Plan* (QAPP; ENSR 2008b) submitted on behalf of the Port and the City to EPA on March 4, 2008.

On May 28, 2009 a memorandum was sent to EPA to request a modification to the groundwater monitoring program at the T117-Uplands (AECOM 2009). EPA approved the request with a reduction in monitoring wells sampled and chemicals that are analyzed for. Monitoring well locations were selected to provide groundwater data on source migration, provide early detection of possible migration from offsite sources, and to represent the entire upland portion of the site. The following six site monitoring wells are included in the current groundwater monitoring sampling network:

- **MW-01 –** to monitor the Basin Oil Recontamination Assessment Area (RAA)
- **MW-02 –** to monitor shoreline groundwater quality along the southern portion of T-117 EAA
- **MW-05R –** to monitor shoreline groundwater quality along the central portion of the site
- **MW-07 –** to monitor the South Park Marina RAA and monitor the northeast portion of T-117 EAA
- **MW-08R –** to monitor shoreline groundwater quality along the northern portion of the site and monitor metal concentrations
- **MW-11 –** to monitor the Basin Oil RAA and the vicinity of monitoring wells MW-09 and MW-10.

In May of 2009, Ecology installed 2 monitoring wells near the Basin Oil RAA. These monitoring wells are also included in the current groundwater monitoring sampling network:

- **MW-12 –** to monitor the Basin Oil RAA and the vicinity of monitoring wells MW-09 and MW-10
- **MW-13 –** to monitor the Basin Oil RAA and the vicinity of monitoring wells MW-09 and MW-10.

The groundwater monitoring sampling network is sampled for the following chemicals:

- Polychlorinated biphenyls (PCBs) by Method EPA 8082 (changed to high volume PCB analysis to achieve a lower reporting limit)
- Total petroleum hydrocarbon (TPH-gasoline and TPH-diesel) by NWTPH-Gx and -Dx
- Total suspended solids (TSS) by Method EPA 160.2
- Bis(2-ethylhexyl)phthalate by Method 8270D and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by Method 8270D SIM
- Total and dissolved priority pollutant metals by Methods 6010B and 7470 from MW-05R and MW-08R
- Volatile Organic Compounds (VOCs) by Method SW8260C from MW-12 and MW-13.

1.1 PURPOSE AND OBJECTIVES

The objectives of the Interim Groundwater Monitoring Plan as stated in the SOW are as follows:

- Determine if groundwater migrating onto the T-117 Upland contains contaminants at levels that have the potential to recontaminate the T-117 Upland area.
- Determine if groundwater at the T-117 Upland contains contaminants at levels that have the potential to cause unacceptable human exposures or cause contaminants to migrate into the LDW sediments (including any bank or sediment areas created as part of the NTCRA) at levels exceeding the Washington State Sediment Management Standards or Washington State Water Quality Standards.

1.2 REPORT ORGANIZATION

This report is organized as follows:

- Section 1 describes the background and the purpose and objectives of the investigation
- Section 2 describes the methods and field procedures used to complete the investigation

- Section 3 provides details of the data quality assurance, management, and usability of the investigation
- Section 4 describes the results of the interim groundwater monitoring – seventh event investigation (Third Quarter 2009)
- Section 5 summarizes the groundwater analytical results
- Section 6 provides a summary of the next quarterly sampling event
- Section 7 provides references cited in the report
- The appendices provide the groundwater monitoring and other field forms, laboratory and data validation reports, corresponding lab and validation qualifier table, and historic groundwater detections table.

2 Sampling Process, Field Procedures, and Methods

The third quarter 2009 interim groundwater monitoring activities were performed August 17-18, 2009 and September 9, 2009. Groundwater monitoring activities were conducted in accordance with the Plan (ENSR 2008a) and the QAPP (ENSR 2008b).

2.1 GROUNDWATER SAMPLING

Between August 17-18, 2009 and on September 9, 2009, groundwater samples were collected from the T117-Upland monitoring well. All groundwater samples were collected in accordance with EPA-approved low-flow groundwater sampling techniques via peristaltic pump as described in the QAPP. All groundwater monitoring wells were purged until the aquifer stabilized according to the QAPP before groundwater samples were collected. See Section 4.2 for details of the well stabilization. Field notes detailing aquifer stabilization parameters can be found in Appendix A. All groundwater sample collection equipment was decontaminated between sample locations in accordance with the QAPP.

There were no deviations from the procedures outlined for collecting groundwater samples in the QAPP during this field activity.

2.2 ADDITIONAL FIELD PROCEDURES

Additional field procedures were conducted in accordance with all methods and procedures listed in the QAPP. These included:

- Instrument/equipment calibration and maintenance
- Decontamination
- Sample handling and custody
- Sample packing and labeling
- Sample log-in
- Inspection/acceptance of supplies and consumables.

2.3 GROUNDWATER ANALYTICAL METHODS

Groundwater samples were sent for analysis to Analytical Resources, Inc (ARI) in Tukwila, WA. A summary of requested groundwater analyses are listed below.

Table 1 Summary of Groundwater Analytical Methods

ANALYTE	METHOD	METHOD REPORTING LIMIT
PCBs	EPA 8082 High Volume	0.01 µg/L
Diesel Range Hydrocarbons	NWTPH-Dx	0.25 mg/L
Lube Oil Range Hydrocarbons	NWTPH-Dx	0.50 mg/L
Gasoline Range Hydrocarbons	NWTPH-Gx	0.25 mg/L
Total Suspended Solids	EPA 160.2	1 to 2.4 mg/L
Volatile Organic Compounds (VOCs)	SW8260C	1 to 10 µg/L (depending on analyte)
cPAHs and bis(2-ethylhexyl)phthalate	8270D SIM and 8270D	0.1 µg/L for cPAHs, 1 µg/L for other SVOCs
Metals	6010B – Ag, As, Be, Cd, Cr, Cu, Ni, Pb, Se, Sb, Ti, Zn; 7470 – Hg	0.0001 to 0.1 mg/L (depending on metal)

Notes:

PCB – Polychlorinated biphenyls

EPA – Environmental Protection Agency

NWTPH-Dx – Northwest analytical method for diesel and heavy oil range hydrocarbons

NWTPH-Gx – Northwest analytical method for gasoline range hydrocarbons

cPAHs – Carcinogenic polycyclic aromatic hydrocarbons

SVOCs – Semi-volatile organic carbons

µg/L – microgram per liter

mg/L – milligrams per liter

Ag – Silver; As – Arsenic; Be – Beryllium; Cd – Cadmium; Cr – Chromium; Cu-Copper; Ni – Nickel; Pb – Lead; Se – Selenium; Sb – Antimony; Ti – Thallium; Zn – Zinc; Hg – Mercury

3 Data Quality Assurance, Management, and Usability

All data validation followed the guidelines provided in US EPA's *Contract Laboratory Program (CLP) National Functional Guidelines for Organic/Inorganic Data Review,* document numbers EPA540/R-99/008 and EPA540/R-04/004 of October 1999 (Organic) and October 2004 (Inorganic), and the US EPA's *Contract Laboratory Program (CLP) National Functional Guidelines for Superfund Organic Methods Data Review*, document number USEPA-540-R-07-003, July 2007 (USEPA 2007b), as they applied to the reported methodology.

A Level 4 CLP-like fully validated data package (USEPA 1991) was generated and the data was validated and qualified using the control limits specified in Table 1-1 of the QAPP. The *Organic and Inorganic Data Validation Report* can be found in Appendix B. A table summarizing the laboratory-applied qualifiers and the validation-applied qualifiers is included in Appendix B. In this report, conclusions regarding data validation criteria (accuracy, precision, completeness, and method compliance) are provided.

3.1 GROUNDWATER DATA VALIDATION RESULTS

Precision, accuracy, method compliance, and completeness of the data set have been determined to be acceptable, based on the data submitted. Generally, all analytical data was within acceptable QA/QC standards with the exception of five analytes: 2-Chlorotoluene (Method 8260), Aroclor© 1254 (Method 8082), bromomethane (Method 8260), trichlorofluoromethane (Method 8260), and vinyl chloride (Method 8260).

Positive results for bromomethane that were grater than or equal to the reporting limit (RL), greater than the blank concentration, but less than or equal to 2 times the blank value require U qualifiers to indicate the analyte was determined to be non-detected due to evidence of laboratory contamination. The original sample concentration becomes the new RL for this result.

Vinyl chloride (39.3%), trichlorofluoromethane (21.7%), and 2-chlorotoluene (20.7%) exceeded the 0 to 20% QC limits in the continuing calibration verification check on samples analyzed from MW-13. These analytes require UJ qualifiers to indicate estimated reporting limits due to compromised system sensitivity.

The chromatogram for MW-13 shows a possible influence of Aroclor© 1260 on the reported Aroclor© 1254 result. For this reason, the reported Aroclor© 1254 result requires an AECOM-defined AJ qualifier to indicate that the reported concentration is estimated and likely a mixture of Aroclor© 1254 and Aroclor© 1260.

The QA Officer reviewed field notebooks, laboratory reports, and results of the data validation to determine if the Data Quality Objectives (DQO) had been met. The usability of the data depends on the magnitude of the DQO exceedance. All of the data collected for the Investigation Report are considered usable except where noted above.

4 Field Results

This section discusses the groundwater sampling times, how they were determined, and the results of the stabilized field parameters.

4.1 GROUNDWATER SAMPLING TIMES

A 48-hour tidal study was conducted March 4-6, 2008 (ENSR, 2008c). The primary purpose of this tidal study was to determine the effect of tidal variations from the LDW on groundwater and to determine the prevailing groundwater flow direction and gradient across the EAA. The results of the tidal study were used to determine the most accurate times to collect groundwater samples to: a) ensure samples are representative of the aquifer and not river water from the LDW; and b) provide consistency from sampling event to sampling event.

Table 2 (below) provides a summary of the recommended groundwater sample times for each well at the site based on the results of the tidal study conducted in March 2008. The sample times were chosen during the lowest tide, at the point of maximum drawdown in a given well, to allow for sampling when the groundwater gradient is toward the LDW. This approach is consistent with previous groundwater sampling events and designed to ensure the capture of water flowing from the surrounding aquifer to the LDW (Windward, DOF, Onsite 2003; Windward, DOF, Onsite 2005; RETEC 2006). The tidal study also indicated that the upgradient monitoring wells— MW-01, MW-11, MW-12, and MW-13—are not tidally influenced (ENSR, 2008c).

Table 2 Recommended Groundwater Sample Times for 3Q09

WELL ID	TIME OF LOWEST TIDE 8/17/2009	TIME OF LOWEST TIDE 8/18/2009	TIME OF LOWEST TIDE 9/09/2009	LAG TIME	SAMPLE TIME FOR 8/17/2009	SAMPLE TIME FOR 8/18/2009	SAMPLE TIME FOR 9/09/2009
MW-01	Sample Any Time						
MW-02	9:01 AM	9:55 AM	2:18 AM	3:00	12:01 PM	12:55 PM	5:18 AM
MW-05R	9:01 AM	9:55 AM	2:18 AM	2:25	11:36 PM	12:36 PM	4:43 AM
MW-07	9:01 AM	9:55 AM	2:18 AM	0:30	9:31 PM	10:25 PM	2:48 AM
MW-08R	9:01 AM	9:55 AM	2:18 AM	0:40	9:41 PM	10:35 PM	2:58 AM
MW-11	Sample Any Time						
MW-12	Sample Any Time						
MW-13	Sample Any Time						

4.2 GROUNDWATER MONITORING FIELD PARAMETERS

Stabilized field parameters measured during the third quarter 2009 groundwater sampling event are summarized below.

Table 3 Stabilized Field Parameters

Well	Sample Date	Field Parameters						
		Time	Temperature (°C)	pH pH units	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)
MW-01	8/17/09	14:49	15.78	6.15	0.504	0.15	69.0	2.2
MW-02	8/18/09	12:57	19.42	6.60	0.577	0.31	-107.5	8.3
MW-05R	8/17/09	11:37	18.68	6.76	15.09	3.54	192.5	0.60
MW-07	8/17/09	10:03	16.76	6.08	0.230	2.59	135.2	7.0
MW-08R	8/17/09	9:30	15.86	7.05	22.74	4.52	144.6	1.0
MW-11	8/17/09	14:29	17.61	6.44	0.644	0.18	93.2	0.40
MW-12	8/17/09	16:36	16.96	7.83	0.437	0.56	91.3	4.6
MW-13	9/9/09	12:37	20.33	7.16	1.118	0.65	-91.4	0.82
Sitewide Minimum			15.78	6.08	0.230	0.15	-107.5	0.40
Sitewide Maximum			20.33	7.83	22.74	4.52	192.5	8.3
Sitewide Mean			17.68	6.76	5.17	1.56	65.9	3.12

Notes:
Stabilized field parameters are the last measured values before collecting groundwater samples.
°C – degrees Celsius
µS/cm – microSiemens per centimeter
mg/L – milligrams per Liter
mV – millivolts
NTU – Nephelometric Turbidity Units

4.2.1 Temperature

The mean temperature (°C) of groundwater during the reporting period was 17.68 °C with a minimum value of 15.78 °C and a maximum value of 20.33 °C. The temperature fluctuation varies seasonally. The maximum value was detected in MW-13 and the minimum value was detected in MW-01.

4.2.2 pH

The mean pH of groundwater across the groundwater monitoring well network during the reporting period was 6.76, with a minimum value of 6.08, and a maximum value of 7.83. The minimum value was detected in MW-07 and the maximum value was detected in MW-12. These results are consistent with second quarter 2009 pH stabilized field parameters.

4.2.3 Conductivity

The mean conductivity of groundwater during the reporting period was 5.168 µS/cm, with a minimum value of 0.230 µS/cm and a maximum value of 22.74 µS/cm. The minimum value was detected in MW-07; the maximum value was detected in MW-08R. These results are consistent with second quarter 2009 conductivity stabilized field parameters.

4.2.4 Dissolved Oxygen

The typical dissolved oxygen (DO) concentration in groundwater is between 0 mg/L and 10 mg/L, which are equal to the saturation index of dissolved oxygen in water. The mean DO concentration in groundwater during the reporting period was 1.56 mg/L, with a minimum value of 0.15 mg/L detected in MW-01 and a maximum value of 4.52 mg/L detected in MW-08R. These results are lower than the second quarter 2009 stabilized field results for DO.

4.2.5 Oxidation-Reduction Potential

The mean oxidation-reduction potential (ORP) in groundwater during the reporting period was 65.9 mV, with a minimum value of –107.5 mV detected in MW-02 and a maximum value of 192.5 mV detected in MW-05R. Negative ORP values indicate reducing conditions. One well, MW-02, had a negative ORP value during aquifer stabilization prior to groundwater sampling. This well will continue to be monitored for negative ORP trends.

4.2.6 Turbidity

The mean turbidity in groundwater during the reporting period was 3.12 NTU, with a minimum value of 0.40 detected in MW-11 and a maximum value of 8.3 detected in MW-02. These results are consistent with historical turbidity results during aquifer stabilization.

5 Groundwater Analytical Results

This section presents the results from the third quarter 2009 groundwater sampling event conducted August 17-18, 2009 and September 9, 2009. Groundwater samples were collected from all eight groundwater monitoring wells and analyzed for PCBs, TPH, cPAHs, SVOCs, VOCs, TSS, and total and dissolved metals. Groundwater results were compared to the following screening levels:

- TPH/NWTPH screening levels obtained from the Model Toxics Control Act (MTCA) Method A Cleanup Level
- PCBs screening levels are obtained from the Surface Water ARAR – Aquatic Life – Marine/Chronic – National Toxics Rule, 40 CFR 131
- Cadmium, chromium, copper, lead, and silver screening levels are obtained from the WAC Chapter 173-201A-Aquatic Life – Marine/ Acute Water Quality Standards for Surface Waters of the State of Washington
- All other groundwater screening levels were obtained from the Surface Water ARAR – Human Health – Marine – Clean Water Act §304.

Table 4 presents the analytical results from the third quarter 2009 groundwater sampling event. Table 5 summarizes the detected constituents in groundwater samples collected since 2003. Appendix B contains the laboratory and data validation reports and corresponding qualifier summary table. Appendix C contains a table of historic data from 2003 to first quarter 2009 for all site monitoring wells.

5.1 POLYCHLORINATED BIPHENYLS (PCBS)

This quarter, Aroclor© 1254 was the only PCB detected. Aroclor© 1254 was detected in MW-13 at a concentration of 0.016 µg/L. This value is just above the reporting limit of 0.01 µg/L and below the PCB screening level of 0.03 µg/L. MW-13 was sampled in May 2009 and the results were below the reporting limit. The groundwater from this well will be sampled for PCBs during the fourth quarter 2009 groundwater sampling events. Sample results will be compared to previous sampling events to determine possible trends in MW-13.

PCBs were not detected in any other site monitoring well during the third quarter 2009 groundwater sampling event. Historically, Aroclor© 1254 has been detected, above the screening level of 0.03 µg/L, in monitoring wells MW-01, MW-05, MW-07, and MW-08R. A summary of historical detections is included in Table 5.

5.2 TOTAL PETROLEUM HYDROCARBONS (TPH)

During the third quarter 2009 groundwater sampling event two monitoring wells, MW-02 and MW-11, reported detections of diesel range hydrocarbons at a concentration of 0.95 mg/L and 0.27 mg/L, respectively. The detected concentration from MW-02

exceeds the screening level of 0.5 mg/L. Diesel range hydrocarbons have been detected at MW-02 in all of the previous quarterly sampling events, at similar concentrations.

Gasoline and motor oil range hydrocarbons were not detected in the groundwater in any of the eight monitoring wells sampled.

5.3 CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS (cPAHs) AND SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)

Of the cPAHs analyzed, there were no detections found in the groundwater from any of the eight monitoring wells.

The SVOC bis(2-ethylhexyl)phthalate, was detected in the groundwater from MW-01 at a concentration of 4 µg/L. The detected concentration exceeds the screening level of 2.2 µg/L. Bis(2-ethylhexyl)phthalate has been detected in the groundwater at a higher concentration (89 µg/L), from MW-01, during the second quarter 2009 sampling event.

5.4 PRIORITY POLLUTANT METALS

Total arsenic was detected in the duplicate taken at MW-08R at a concentration of 0.003 mg/L and is above the screening level of 0.00014 mg/L.

Total and dissolved copper were detected in the groundwater from MW-05R and MW-08R. Concentrations detected in the groundwater from MW-05R (total and dissolved concentration of 0.002 mg/L) are below the screening level of 0.0048 mg/L. Groundwater concentrations in MW-08R of total copper (0.005 mg/L and 0.006 mg/L in the duplicate sample) and dissolved copper (0.005 mg/L and 0.007 mg/L in the duplicate sample) are above the screening level of 0.0048 mg/L. This is the first time copper has been detected above the screening level in the groundwater sampled at MW-08R. Copper concentrations in MW-08R will be compared to the fourth quarter 2009 groundwater sampling event to evaluate possible trends.

Dissolved and total zinc were detected in the groundwater from MW-05R at the reporting limit of 0.01 mg/L. The detections were below the screening level of 26 mg/L.

5.5 SUMMARY OF GW ANALYTICAL RESULTS

During the third quarter 2009 sampling event, total and dissolved copper were detected above the screening level at MW-08R. Total and dissolved zinc were detected in MW-05R, for the first time, at concentrations below the screening level. Diesel range hydrocarbons were detected in MW-02 at a concentration above the screening level. The SVOC bis(2-ethylhexyl)phthalate was detected in the groundwater from MW-01 at a concentration above the screening level. Also, Aroclor© 1254 was also detected in MW-13 for the first time at a concentration below the screening level, but above the reporting limit. Concentrations in these wells, and the remaining site wells, will be compared to fourth quarter 2009 groundwater sampling event to evaluate possible trends.

Table 4 T-117 Third Quarter 2009 GW Results

Chemical Name	Total/ Dissolved	Unit	Action Level	Location ID	MW-01	MW-02	MW-05R	MW-07	MW-08R	MW-08R	MW-11	MW-12	MW-13	MW-13	FieldQC	FieldQC	FieldQC
				Sample ID	MW-01-0809	MW-02-0809	MW-05R-0817	MW-07-0817	DUP-1-0809	MW-08R-0809	MW-11-0817	MW-12-0809	DUP-2-0909	MW-13-0909	Tripblank	Tripblank	Tripblank
				Sample Date	8/17/2009	8/18/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	9/9/2009	9/9/2009	8/17/2009	8/18/2009	9/9/2009
				Sample Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WQ
				Sample Type	N	N	N	N	FD	N	N	N	FD	N	TB	TB	TB
NWTPH																	
Diesel Range Hydrocarbons	N	mg/L	0.5		< 0.25	**0.95**	< 0.25	< 0.25	NA	< 0.25	**0.27**	< 0.25	< 0.25	< 0.25	NA	NA	NA
Gasoline Range Hydrocarbons	N	mg/L	1.0		< 0.25	< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA
Motor Oil Range Hydrocarbons	N	mg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	NA
PCB																	
Aroclor 1016	N	µg/L	0.03		< 0.01	< 0.011	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
Aroclor 1221	N	µg/L	NV		< 0.01	< 0.011	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
Aroclor 1232	N	µg/L	NV		< 0.01	< 0.011	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
Aroclor 1254	N	µg/L	0.03		< 0.01	< 0.011	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	**0.016 AJ**	NA	NA	NA
Aroclor 1260	N	µg/L	0.03		< 0.01	< 0.011	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
Aroclor-1242	N	µg/L	NV		< 0.01	< 0.011	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
Aroclor-1248	N	µg/L	NV		< 0.01	< 0.011	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
SVOCs																	
bis(2-Ethylhexyl)phthalate	N	µg/L	2.2		**4**	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	NA	NA	NA
cPAHs																	
Benzo(a)anthracene	N	µg/L	0.018		**< 0.1**	**< 0.1**	**< 0.1**	**< 0.1**	NA	**< 0.1**	**< 0.1**	**< 0.1**	**< 0.12**	**< 0.1**	NA	NA	NA
Benzo(a)pyrene	N	µg/L	0.018		**< 0.1**	**< 0.1**	**< 0.1**	**< 0.1**	NA	**< 0.1**	**< 0.1**	**< 0.1**	**< 0.12**	**< 0.1**	NA	NA	NA
Benzo(b)fluoranthene	N	µg/L	0.018		**< 0.1**	**< 0.1**	**< 0.1**	**< 0.1**	NA	**< 0.1**	**< 0.1**	**< 0.1**	**< 0.12**	**< 0.1**	NA	NA	NA
Benzo(k)fluoranthene	N	µg/L	0.018		**< 0.1**	**< 0.1**	**< 0.1**	**< 0.1**	NA	**< 0.1**	**< 0.1**	**< 0.1**	**< 0.12**	**< 0.1**	NA	NA	NA
Chrysene	N	µg/L	0.018		**< 0.1**	**< 0.1**	**< 0.1**	**< 0.1**	NA	**< 0.1**	**< 0.1**	**< 0.1**	**< 0.12**	**< 0.1**	NA	NA	NA
Dibenzo(a,h)anthracene	N	µg/L	0.018		**< 0.1**	**< 0.1**	**< 0.1**	**< 0.1**	NA	**< 0.1**	**< 0.1**	**< 0.1**	**< 0.12**	**< 0.1**	NA	NA	NA
Indeno(1,2,3-cd)pyrene	N	µg/L	0.018		**< 0.1**	**< 0.1**	**< 0.1**	**< 0.1**	NA	**< 0.1**	**< 0.1**	**< 0.1**	**< 0.12**	**< 0.1**	NA	NA	NA
Conventionals																	
Total Suspended Solids	N	mg/L	NV		**1.1**	**86.4**	< 1.1	< 1.1	NA	**3**	< 1.1	< 1.1	< 1	< 2.4	NA	NA	NA
Metals																	
Antimony	D	mg/L	0.64		NA	NA	< 0.05	NA	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA
Antimony	T	mg/L	0.64		NA	NA	< 0.05	NA	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA
Arsenic	D	mg/L	0.00014		NA	NA	**< 0.0008**	NA	**< 0.004**	**< 0.004**	NA	NA	NA	NA	NA	NA	NA
Arsenic	T	mg/L	0.00014		NA	NA	**< 0.002**	NA	**0.003**	**< 0.004**	NA	NA	NA	NA	NA	NA	NA
Beryllium	D	mg/L	NV		NA	NA	< 0.001	NA	< 0.002	< 0.002	NA	NA	NA	NA	NA	NA	NA
Beryllium	T	mg/L	NV		NA	NA	< 0.001	NA	< 0.002	< 0.002	NA	NA	NA	NA	NA	NA	NA
Cadmium	D	mg/L	0.42		NA	NA	< 0.002	NA	< 0.004	< 0.004	NA	NA	NA	NA	NA	NA	NA
Cadmium	T	mg/L	0.42		NA	NA	< 0.002	NA	< 0.004	< 0.004	NA	NA	NA	NA	NA	NA	NA
Chromium	D	mg/L	1.1		NA	NA	< 0.005	NA	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA
Chromium	T	mg/L	1.1		NA	NA	< 0.005	NA	< 0.01	< 0.01	NA	NA	NA	NA	NA	NA	NA
Copper	D	mg/L	0.0048		NA	NA	**0.002**	NA	**0.007**	**0.005**	NA	NA	NA	NA	NA	NA	NA
Copper	T	mg/L	0.0048		NA	NA	**0.002**	NA	**0.006**	**0.005**	NA	NA	NA	NA	NA	NA	NA
Lead	D	mg/L	0.21		NA	NA	< 0.02	NA	< 0.04	< 0.04	NA	NA	NA	NA	NA	NA	NA
Lead	T	mg/L	0.21		NA	NA	< 0.02	NA	< 0.04	< 0.04	NA	NA	NA	NA	NA	NA	NA
Mercury	D	mg/L	0.0003		NA	NA	< 0.0001	NA	< 0.0001	< 0.0001	NA	NA	NA	NA	NA	NA	NA
Mercury	T	mg/L	0.0003		NA	NA	< 0.0001	NA	< 0.0001	< 0.0001	NA	NA	NA	NA	NA	NA	NA
Nickel	D	mg/L	4.6		NA	NA	< 0.01	NA	< 0.02	< 0.02	NA	NA	NA	NA	NA	NA	NA
Nickel	T	mg/L	4.6		NA	NA	< 0.01	NA	< 0.02	< 0.02	NA	NA	NA	NA	NA	NA	NA
Selenium	D	mg/L	4.2		NA	NA	< 0.05	NA	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA
Selenium	T	mg/L	4.2		NA	NA	< 0.05	NA	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA
Silver	D	mg/L	0.0019		NA	NA	**< 0.003**	NA	**< 0.006**	**< 0.006**	NA	NA	NA	NA	NA	NA	NA
Silver	T	mg/L	0.0019		NA	NA	**< 0.003**	NA	**< 0.006**	**< 0.006**	NA	NA	NA	NA	NA	NA	NA
Thallium	D	mg/L	0.00047		NA	NA	**< 0.05**	NA	**< 0.1**	**< 0.1**	NA	NA	NA	NA	NA	NA	NA
Thallium	T	mg/L	0.00047		NA	NA	**< 0.05**	NA	**< 0.1**	**< 0.1**	NA	NA	NA	NA	NA	NA	NA
Zinc	D	mg/L	26		NA	NA	**0.01**	NA	< 0.02	< 0.02	NA	NA	NA	NA	NA	NA	NA
Zinc	T	mg/L	26		NA	NA	**0.01**	NA	< 0.02	< 0.02	NA	NA	NA	NA	NA	NA	NA

Table 4 T-117 Third Quarter 2009 GW Results

Chemical Name	Total/ Dissolved	Unit	Action Level	Location ID: MW-01	MW-02	MW-05R	MW-07	MW-08R	MW-08R	MW-11	MW-12	MW-13	MW-13	FieldQC	FieldQC	FieldQC
Sample ID:				MW-01-0809	MW-02-0809	MW-05R-0817	MW-07-0817	DUP-1-0809	MW-08R-0809	MW-11-0817	MW-12-0809	DUP-2-0909	MW-13-0909	Tripblank 8/17/2009	Tripblank 8/18/2009	Tripblank 9/9/2009
Sample Date:				8/17/2009	8/18/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	9/9/2009	9/9/2009			
Sample Matrix:				WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WQ
Sample Type:				N	N	N	N	FD	N	N	N	FD	N	TB	TB	TB
VOCs																
1,1,1,2-Tetrachloroethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,1,1-Trichloroethane	N	µg/L	200	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,1,2,2-Tetrachloroethane	N	µg/L	4.0	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,1,2-Trichloroethane	N	µg/L	16	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,1,2-Trichlorotrifluoroethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 2	< 2	< 2	< 2	NA	< 2
1,1-Dichloroethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,1-Dichloroethene	N	µg/L	7100	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,1-Dichloropropene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,2,3-Trichlorobenzene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
1,2,3-Trichloropropane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 2	< 2	< 2	< 2	NA	< 2
1,2,4-Trichlorobenzene	N	µg/L	70	NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
1,2,4-Trimethylbenzene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,2-Dibromo-3-chloropropane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
1,2-Dibromoethane (EDB)	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,2-Dichlorobenzene	N	µg/L	1300	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,2-Dichloroethane	N	µg/L	37	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,2-Dichloropropane	N	µg/L	15	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,3,5-Trimethylbenzene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,3-Dichlorobenzene	N	µg/L	960	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
1,3-Dichloropropane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
1,4-Dichlorobenzene	N	µg/L	190	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
2,2-Dichloropropane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
2-Chloroethylvinylether	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
2-Chlorotoluene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1 J	< 1 J	< 1	NA	< 1 J
2-Hexanone	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
4-Chlorotoluene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
4-Isopropyltoluene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Acetone	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 10	< 10	< 10	< 10	NA	< 10
Acrolein	N	µg/L	290	NA	NA	NA	NA	NA	NA	NA	< 10	< 10	< 10	< 10	NA	< 10
Acrylonitrile	N	µg/L	0.25	NA	NA	NA	NA	NA	NA	NA	**< 5**	**< 5**	**< 5**	**< 5**	NA	**< 5**
Benzene	N	µg/L	51	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Bromobenzene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Bromochloromethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Bromodichloromethane	N	µg/L	17	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Bromoethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 2	< 2	< 2	< 2	NA	< 2
Bromoform	N	µg/L	140	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Bromomethane	N	µg/L	1500	NA	NA	NA	NA	NA	NA	NA	< 1.1	< 1	< 1	< 1.2	NA	< 1
Carbon Disulfide	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Carbon Tetrachloride	N	µg/L	1.6	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Chlorobenzene	N	µg/L	1600	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Chloroethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Chloroform	N	µg/L	470	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Chloromethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
cis-1,2-Dichloroethene	N	µg/L	5.0	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
cis-1,3-Dichloropropene	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Dibromochloromethane	N	µg/L	13	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Dibromomethane	N	µg/L	NV	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Dichloromethane	N	µg/L	590	NA	NA	NA	NA	NA	NA	NA	< 2	< 2	< 2	< 2	NA	< 2
Ethylbenzene	N	µg/L	2100	NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1

Table 4 T-117 Third Quarter 2009 GW Results

Chemical Name	Total/ Dissolved	Unit	Action Level	Location ID	MW-01	MW-02	MW-05R	MW-07	MW-08R	MW-08R	MW-11	MW-12	MW-13	MW-13	FieldQC	FieldQC	FieldQC
				Sample ID	MW-01-0809	MW-02-0809	MW-05R-0817	MW-07-0817	DUP-1-0809	MW-08R-0809	MW-11-0817	MW-12-0809	DUP-2-0909	MW-13-0909	Tripblank 8/17/2009	Tripblank 8/18/2009	Tripblank 9/9/2009
				Sample Date	8/17/2009	8/18/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	8/17/2009	9/9/2009	9/9/2009	WG	WG	WQ
				Sample Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WQ
				Sample Type	N	N	N	N	FD	N	N	N	FD	N	TB	TB	TB
Hexachlorobutadiene	N	µg/L	18		NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
Iodomethane	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Isopropylbenzene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Methyl ethyl ketone	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
Methyl isobutyl ketone	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
Naphthalene	N	µg/L	160		NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
n-Butylbenzene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
n-Propylbenzene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
o-Xylene	N	µg/L	1000		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
sec-Butylbenzene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Styrene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
tert-Butylbenzene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Tetrachloroethene	N	µg/L	3.3		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Toluene	N	µg/L	15000		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
trans-1,2-Dichloroethene	N	µg/L	10000		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
trans-1,3-Dichloropropene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
trans-1,4-Dichloro-2-butene	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
Trichloroethene	N	µg/L	30		NA	NA	NA	NA	NA	NA	NA	< 1	< 1	< 1	< 1	NA	< 1
Trichlorofluoromethane	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 1	< 1 J	< 1 J	< 1	NA	< 1 J
Vinyl Acetate	N	µg/L	NV		NA	NA	NA	NA	NA	NA	NA	< 5	< 5	< 5	< 5	NA	< 5
Vinyl Chloride	N	µg/L	2.4		NA	NA	NA	NA	NA	NA	NA	< 1	< 1 J	< 1 J	< 1	NA	< 1 J
Xylene (meta & para)	N	µg/L	1000		NA	NA	NA	NA	NA	NA	NA	< 2	< 2	< 2	< 2	NA	< 2

Notes

Red Detected value that exceeds screening level

Bold Detected result

Blue Non-detected value that exceeds the screening level

< Non-detect at the reporting limit shown

A Reported result is likely a combination of Aroclor 1254/1260; accurate identification of Aroclor 1254 cannot be achieved (AECOM qualifier)

FD Field Duplicate

J Estimated concentration

J- Estimated concentration, biased low

Y Reporting limit was raised due to the presence of interference (AECOM qualifier)

NA Not Analyzed

NV No established value

Screening Levels are proposed levels only, for delineation of the groundwater monitoring well network

TPH/NWTPH screening levels obtained from the MTCA Method A Cleanup Level for groundwater

PCB screening levels are obtained from the Surface Water ARAR - Aquatic Life - Marine/Chronic - National Toxics Rule, 40 CFR 131

Cadmium, chromium, copper, lead, and silver screening levels obtained from the WAC Chapter 173-201A-Aquatic Life - Marine/Acute Water Quality Standards for Surface Waters of the State of Washington

All other groundwater screening levels were obtained from the Surface Water ARAR - Human Health – Marine – Clean Water Act §304

Table 5 T-117 Groundwater Detections 2003 – Present
Current Groundwater Sampling Well Network[a]

			Location ID	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-02
			Sample ID	SP-MW5	SP-MW1	MW-1-0308	MW-01-0608	MW-01-0908	DUP 1	MW-01-1208	MW-01-0309	MW-01-0509	MW-01-0809	SP-MW2
			Sample Date	5/8/2003	5/8/2003	3/11/2008	6/3/2008	9/11/2008	12/10/2008	12/10/2008	3/30/2009	5/27/2009	8/17/2009	5/8/2003
			Sample Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
			Sample Type	FD	N	N	N	N	FD	N	N	N	N	N
Chemical Name	**Total/Dissolved**	**Unit**	**Action Level**											
Metals														
Arsenic	D	mg/L	0.00014	NA	NA	< 0.05	0.002	< 0.05	< 0.05	< 0.05	0.003	NA	NA	NA
Arsenic	T	mg/L	0.00014	NA	NA	< 0.05	0.002	< 0.05	< 0.05	< 0.05	0.002	NA	NA	NA
Cadmium	T	mg/L	0.42	NA	NA	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	NA	NA	NA
Chromium	D	mg/L	1.1	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA
Chromium	T	mg/L	1.1	NA	NA	< 0.005	< 0.005	< 0.005	**0.005**	**0.01**	< 0.005	NA	NA	NA
Copper	D	mg/L	0.0048	NA	NA	< 0.002	< 0.002	**0.002**	< 0.002	< 0.002	< 0.002	NA	NA	NA
Copper	T	mg/L	0.0048	NA	NA	**0.002**	< 0.002	**0.002**	**0.004 J**	0.011 J	< 0.002	NA	NA	NA
Lead	T	mg/L	0.21	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	NA	NA	NA
Nickel	D	mg/L	4.6	NA	NA	< 0.01	< 0.01 J	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
Nickel	T	mg/L	4.6	NA	NA	< 0.01	< 0.01 J	< 0.01	< 0.01	**0.01**	< 0.01 J	NA	NA	NA
Selenium	D	mg/L	4.2	NA	NA	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NA	NA	NA
Silver	D	mg/L	0.0019	NA	NA	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	NA	NA	NA
Silver	T	mg/L	0.0019	NA	NA	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	NA	NA	NA
Zinc	D	mg/L	26	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA
Zinc	T	mg/L	26	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01	**0.02**	< 0.01	NA	NA	NA
TPH														
Diesel Range Hydrocarbons	T	mg/L	0.5	NA	< 0.26	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.26
Gasoline Range Hydrocarbons	T	mg/L	1.0	< 0.1	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1
Motor Oil Range Hydrocarbons	T	mg/L	NV	< 0.41	< 0.42	NA	NA	NA	NA	NA	NA	NA	NA	< 0.42
PCBs														
Aroclor 1254	T	µg/L	0.03	< 0.049	< 0.051	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05
Aroclor 1260	T	µg/L	0.03	< 0.049	< 0.051	< 0.01	< 0.01 J	0.088 AJ	**0.017 AJ**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05
PCBs (total calc'd)	T	µg/L	0.03	< 0.049	< 0.051	NA	NA	NA	NA	NA	NA	NA	NA	< 0.05
VOCs														
Chlorobenzene	T	µg/L	1600	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA
Chloromethane	T	µg/L	NV	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA
cis-1,2-Dichloroethene	T	µg/L	5.0	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA
Dichloromethane	T	µg/L	590	NA	NA	< 0.5	< 0.5	< 0.5 J	< 0.5	< 0.5	< 0.5	NA	NA	NA
Tetrachloroethene	T	µg/L	3.3	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA
Trichloroethene	T	µg/L	30	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA
SVOCs														
bis(2-Ethylhexyl)phthalate	T	µg/L	2.2	NA	NA	**1.4**	< 1	< 1	< 1	< 1	< 1	89	4	NA
Phenol	T	µg/L	10000	NA	NA	< 1	< 1	< 1	< 1	< 1	< 1	NA	NA	NA
PAHs by SW8270D SIM														
1-Methylnaphthalene	T	µg/L	160	< 0.097	< 0.099	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.096
Acenaphthene	T	µg/L	990	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA
Anthracene	T	µg/L	40000	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA
Benzo(a)anthracene	T	µg/L	0.018	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA
Benzo(a)pyrene	T	µg/L	0.018	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA
Benzo(b)fluoranthene	T	µg/L	0.018	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA
Benzo(k)fluoranthene	T	µg/L	0.018	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA
Chrysene	T	µg/L	0.018	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA
Fluoranthene	T	µg/L	140	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA
Fluorene	T	µg/L	5300	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA
Phenanthrene	T	µg/L	0.1	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA
Pyrene	T	µg/L	4000	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA
Dioxins														
OCDD	T	pg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conventionals														
Total Organic Carbon (TOC)	T	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Organic Carbon	D	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	D	mg/L	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	T	mg/L	NV	NA	NA	**1.2**	**1.1**	< 1	**537 J**	**235 J**	< 1	< 1	**1.1**	NA

Table 5 T-117 Groundwater Detections 2003 – Present
Current Groundwater Sampling Well Network[a]

MW-02 T117-MW2 1/13/2004 WG N	MW-02 T117-MW-2 6/22/2005 WG N	MW-02 MW-2-0806 8/10/2006 WG N	MW-02 MW-2-0308 3/11/2008 WG N	MW-02 MW-02-0608 6/3/2008 WG N	MW-02 MW-102-0908 9/10/2008 WG FD	MW-02 MW-02-0908 9/10/2008 WG N	MW-02 MW-02-1208 12/9/2008 WG N	MW-02 MW-02-0309 3/31/2009 WG N	MW-02 MW-020-0509 5/26/2009 WG FD	MW-02 MW-02-0509 5/26/2009 WG N	MW-02 MW-02-0809 8/18/2009 WG N	MW-05R MW-5-0308 3/11/2008 WG N	MW-05R MW-05R-0608 6/3/2008 WG N	MW-05R MW-05R-0908 9/10/2008 WG N	MW-05R MW-05R-1208 12/9/2008 WG N
NA	NA	0.082	< 0.05	0.008	0.11	0.09	0.06	0.055	NA	NA	NA	< 0.05	0.004	< 0.05	< 0.05
NA	NA	0.0903	< 0.05	0.07	0.1	0.1	0.06	0.047	NA	NA	NA	< 0.05	0.005	< 0.05	< 0.05
NA	NA	**0.000123**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	NA	NA	NA	< 0.002	< 0.002	< 0.002	< 0.002
NA	NA	**0.00304**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005
NA	NA	**0.00393**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005 J	NA	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005
NA	NA	NA	**0.002**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	NA	NA	NA	< 0.002	< 0.002	**0.004**	< 0.002
NA	NA	NA	**0.004**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	NA	NA	NA	< 0.002	< 0.002	**0.004**	**0.002**
NA	NA	**0.000027**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	NA	NA	NA	< 0.02	< 0.02	< 0.02	< 0.02
NA	NA	NA	< 0.01	< 0.01 J	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA	< 0.01	< 0.01 J	< 0.01	< 0.01
NA	NA	NA	< 0.01	< 0.01 J	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA	< 0.01	< 0.01 J	< 0.01	< 0.01
NA	NA	NA	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	NA	NA	NA	< 0.05	< 0.05	< 0.05	< 0.05
NA	NA	NA	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	NA	NA	NA	< 0.003	< 0.003	0.004	< 0.003
NA	NA	NA	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	NA	NA	NA	< 0.003	< 0.003	0.005	< 0.003
NA	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01
NA	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	NA	< 0.01	< 0.01	< 0.01	< 0.01
NA	**0.5**	0.94	0.7	0.74	0.67 J	0.79	0.84	0.69	0.79	0.82	0.95	< 0.25	< 0.25	< 0.25	< 0.25
NA	NA	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
NA	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 1	< 0.04	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	< 0.01	0.017 J	< 0.01	< 0.01
< 1	< 0.04	0.01 J	< 0.01	0.012 AJ	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.011	0.057	0.039 J	0.014 AJ	0.01 AJ
< 1	< 0.16	0.01 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 1	NA	NA	**0.4**	**0.5**	0.6 J	**0.5**	**0.4**	**0.3**	NA	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2
< 1	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2
< 1	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2
< 2	NA	NA	< 0.5	< 0.5	< 0.5 J	< 0.5 J	< 0.5	< 0.5	NA	NA	NA	< 0.5	< 0.5	< 0.5 J	< 0.5
< 1	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2
< 1	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	NA	< 0.2	< 0.2	< 0.2	< 0.2
NA	NA	< 1	< 1	< 1	< 1 J	**2.1 J**	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**4.8 J**	< 1
NA	NA	**5.8**	< 1	**12**	**9.6 J**	**20 J**	**12**	**11**	NA	NA	NA	< 1	< 1	< 1	< 1
NA	NA	NA	**0.19**	**0.14**	**0.1**	**0.1**	**0.2**	**0.3**	NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	**0.18**	NA	NA	NA	**0.31**	< 0.1	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA	< 0.1	**0.13**	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.19	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.14	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.13	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.13	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.19	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA	< 0.1	**0.44**	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA	**0.1**	< 0.1	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA	< 0.1	0.5	< 0.1	< 0.1
NA	NA	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	NA	< 0.1	**0.44**	< 0.1	< 0.1
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 6.85
18	**22.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	**28.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	**15,500**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
52	**124**	**21**	**9**	**150**	**113**	**122**	**95.6**	**28**	**34**	**38**	**86.4**	**72.6**	**7.1**	**3.3**	**3.3**

Table 5 T-117 Groundwater Detections 2003 – Present
Current Groundwater Sampling Well Network[a]

MW-05R MW-05R-0309 3/31/2009 WG N	MW-05R MW-05R-0509 5/26/2009 WG N	MW-05R MW-05R-0817 8/17/2009 WG N	MW-07 T117-MW-7 6/20/2005 WG N	MW-07 MW-7-0806 8/11/2006 WG N	MW-07 MW-7-0308 3/12/2008 WG N	MW-07 MW-7-041808 4/18/2008 WG N	MW-07 MW-07-0608 6/4/2008 WG N	MW-07 MW-07-0908 9/10/2008 WG N	MW-07 MW-07-1208 12/11/2008 WG N	MW-07 MW-07-0309 3/30/2009 WG N	MW-07 MW-07-0509 5/26/2009 WG N	MW-07 MW-07-0817 8/17/2009 WG N	MW-08R MW-8-0308 3/12/2008 WG N	MW-08R MW-08R-0608 6/4/2008 WG N	MW-08R MW-08R-0908 9/10/2008 WG N
0.002	< 0.05	< 0.0008	NA	0.00072	< 0.05	NA	< 0.001	< 0.05	< 0.05	< 0.001	NA	NA	< 0.05	0.002	< 0.2
0.002	< 0.05	< 0.002	NA	< 0.00068	< 0.05	NA	< 0.001	< 0.05	< 0.05	< 0.001	NA	NA	< 0.05	0.002	< 0.2
< 0.002	< 0.002	< 0.002	NA	0.000086	< 0.002	NA	< 0.002	< 0.002	< 0.002	< 0.002	NA	NA	< 0.002	< 0.002	< 0.01
< 0.005 J	< 0.005	< 0.005	NA	< 0.00026	< 0.005	NA	< 0.005	< 0.005	< 0.005	< 0.005 J	NA	NA	< 0.005	< 0.005	< 0.02
< 0.005	< 0.005	< 0.005	NA	< 0.00034	< 0.005	NA	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	< 0.005	< 0.005	< 0.02
< 0.002	< 0.002	0.002	NA	NA	< 0.002	NA	< 0.002	0.002	< 0.002	< 0.002	NA	NA	0.002	< 0.002	< 0.01
< 0.002	< 0.002	0.002	NA	NA	< 0.002	NA	< 0.002	0.002	< 0.002	< 0.002	NA	NA	0.004	< 0.002	< 0.01
< 0.02	< 0.02	< 0.02	NA	0.000043 J	< 0.02	NA	< 0.02	< 0.02	< 0.02	< 0.02	NA	NA	< 0.02	< 0.02	< 0.1
< 0.01	< 0.01	< 0.01	NA	NA	< 0.01	NA	< 0.01 J	< 0.01	< 0.01	< 0.01	NA	NA	< 0.01	< 0.01 J	< 0.05
< 0.01 J	< 0.01	< 0.01	NA	NA	< 0.01	NA	< 0.01 J	< 0.01	< 0.01	< 0.01 J	NA	NA	< 0.01	< 0.01 J	< 0.05
< 0.05	< 0.05	< 0.05	NA	NA	< 0.05	NA	< 0.05	< 0.05	< 0.05	< 0.05	NA	NA	< 0.05	< 0.05	< 0.2
< 0.003	< 0.003	< 0.003	NA	NA	< 0.003	NA	< 0.003	< 0.003	< 0.003 J	< 0.003	NA	NA	0.003	< 0.003	0.03
< 0.003	< 0.003	< 0.003	NA	NA	< 0.003	NA	< 0.003	< 0.003	< 0.003 J	< 0.003	NA	NA	0.005	< 0.003	0.02
< 0.01	< 0.01	0.01	NA	NA	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	< 0.01	< 0.01	< 0.05
< 0.01	< 0.01	0.01	NA	NA	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	NA	NA	< 0.01	< 0.01	< 0.05
< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
< 0.25	< 0.25	< 0.25	NA	NA	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
NA	NA	NA	NA	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 0.01	< 0.01	< 0.01	< 0.06	< 0.01	< 0.01	< 0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.029	< 0.01
< 0.01	0.028 AJ	< 0.01	< 0.06	< 0.01 J	0.036	< 0.010	< 0.01 J	< 0.01	< 0.01	< 0.01	0.016 AJ	< 0.01	< 0.01	0.049 J	< 0.01
NA	NA	NA	< 0.08	< 0.01 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 0.2	NA	NA	NA	NA	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	< 0.2	< 0.2	< 0.2
< 0.2	NA	NA	NA	NA	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	< 0.2	< 0.2	< 0.2
< 0.2	NA	NA	NA	NA	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	< 0.2	< 0.2	< 0.2
< 0.5	NA	NA	NA	NA	< 0.5	NA	< 0.5	< 0.5 J	< 0.5	< 0.5	NA	NA	< 0.5	< 0.5	< 0.5 J
< 0.2	NA	NA	NA	NA	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	< 0.2	< 0.2	< 0.2
< 0.2	NA	NA	NA	NA	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	NA	NA	< 0.2	< 0.2	< 0.2
< 1	< 1	< 1	NA	< 1	< 1	NA	< 1	< 1	< 1	< 1	1.2	< 1	1.1	1.2	1.8 J
< 1	NA	NA	NA	< 1	< 1	NA	< 1	< 1	< 1	< 1	NA	NA	< 1	< 1	< 1
< 0.1	NA	NA	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	< 0.1	< 0.1
< 0.1	NA	NA	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	< 0.1	< 0.1
< 0.1	NA	NA	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	< 0.1	< 0.1
< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
< 0.1	NA	NA	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	< 0.1	< 0.1
< 0.1	NA	NA	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	< 0.1	< 0.1
< 0.1	NA	NA	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	< 0.1	< 0.1
< 0.1	NA	NA	NA	NA	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	< 0.1	< 0.1
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	3.28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	3.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	216	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 1	14.5	< 1.1	< 2.2	< 1	< 1.1	< 2.2	< 1.1	< 1.1	< 1	< 1	4.4	< 1.1	5.5	100	2.2

Table 5 T-117 Groundwater Detections 2003 – Present

Current Groundwater Sampling Well Network[a]

MW-08R MW-08R-1208 12/9/2008 WG N	MW-08R MW-08R-0309 3/31/2009 WG N	MW-08R MW-08R-0509 5/26/2009 WG N	MW-08R DUP-1-0809 8/17/2009 WG FD	MW-08R MW-08R-0809 8/17/2009 WG N	MW-11 MW-11-0908 9/11/2008 WG N	MW-11 MW-11-1208 12/11/2008 WG N	MW-11 MW-11-0309 3/31/2009 WG N	MW-11 MW-11-0509 5/27/2009 WG N	MW-11 MW-11-0817 8/17/2009 WG N	MW-12 GW-052609-FD 5/26/2009 WG FD	MW-12 GW-12-052609 5/26/2009 WG N	MW-12 MW-12-0809 8/17/2009 WG N	MW-13 GW-13-052609 5/26/2009 WG N	MW-13 DUP-2-0909 9/9/2009 WG FD	MW-13 MW-13-0909 9/9/2009 WG N
< 0.1	< 0.002	< 0.05	< 0.004	< 0.004	< 0.05	< 0.05	< 0.001	NA	NA	0.0204	0.0177	NA	0.0094	NA	NA
< 0.05	< 0.002	< 0.05	0.003	< 0.004	< 0.05	< 0.05	< 0.001	NA	NA	0.0186	0.0178	NA	0.0107	NA	NA
< 0.002	< 0.002	< 0.002	< 0.004	< 0.004	< 0.002	< 0.002	< 0.002	NA	NA	< 0.002	< 0.002	NA	< 0.002	NA	NA
< 0.01	< 0.005	< 0.005	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	NA	NA	< 0.005	< 0.005	NA	< 0.005	NA	NA
< 0.005	< 0.005	< 0.005	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	NA	NA	< 0.005	< 0.005	NA	< 0.005	NA	NA
< 0.004	< 0.002	< 0.002	0.007	0.005	0.002	< 0.002	< 0.002	NA	NA	< 0.002	< 0.002	NA	< 0.002	NA	NA
0.003	< 0.002	0.003	0.006	0.005	0.004	< 0.002	< 0.002	NA	NA	< 0.002	< 0.002	NA	< 0.002	NA	NA
< 0.02	< 0.02	< 0.02	< 0.04	< 0.04	< 0.02	< 0.02	< 0.02	NA	NA	< 0.02	< 0.02	NA	< 0.02	NA	NA
< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	0.01	< 0.01	< 0.01	NA	NA	< 0.01	< 0.01	NA	< 0.01	NA	NA
< 0.01	< 0.01 J	< 0.01	< 0.02	< 0.02	0.01	0.01	0.01 J-	NA	NA	< 0.01	< 0.01	NA	< 0.01	NA	NA
< 0.1	< 0.05	< 0.05	< 0.1	< 0.1	< 0.05	< 0.05	< 0.05	NA	NA	< 0.0005	< 0.0005	NA	0.0017	NA	NA
< 0.006	< 0.003	< 0.003	< 0.006	< 0.006	< 0.003	< 0.003 J	< 0.003	NA	NA	< 0.003	< 0.003	NA	< 0.003	NA	NA
0.004	< 0.003	< 0.003	< 0.006	< 0.006	< 0.003	< 0.003 J	< 0.003	NA	NA	< 0.003	< 0.003	NA	< 0.003	NA	NA
< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	NA	NA	< 0.01	< 0.01	NA	< 0.01	NA	NA
< 0.01	< 0.01	< 0.01	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	NA	NA	< 0.01	< 0.01	NA	< 0.01	NA	NA
< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	0.27	< 0.25	< 0.25	0.27	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
< 0.25	< 0.25	< 0.25	NA	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 0.01	< 0.01	< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.016 AJ
< 0.01	< 0.01	0.03 AJ	NA	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 0.2	< 0.2	NA	NA	NA	< 0.2	< 0.2	< 0.2	NA	NA	< 0.2	< 0.2	< 1	< 0.2	< 1	< 1
< 0.2	< 0.2	NA	NA	NA	< 0.2	< 0.2	< 0.3	NA	NA	0.4	< 0.2	< 1	< 0.2	< 1	< 1
< 0.2	< 0.2	NA	NA	NA	2.9	3.5	1.3	NA	NA	< 0.2	< 0.2	< 1	< 0.2	< 1	< 1
< 0.5	< 0.5	NA	NA	NA	< 0.5 J	< 0.5	< 0.5	NA	NA	< 0.5	< 0.5	< 2	< 0.5	< 2	< 2
< 0.2	< 0.2	NA	NA	NA	< 0.2	< 0.2	1.4	NA	NA	< 0.2	< 0.2	< 1	< 0.2	< 1	< 1
< 0.2	< 0.2	NA	NA	NA	< 0.2	0.2	0.6	NA	NA	< 0.2	< 0.2	< 1	< 0.2	< 1	< 1
< 1	< 1	30	NA	< 1	19 J	< 1	1.2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
< 1	< 1	NA	NA	NA	< 1	< 1	< 1	NA	NA	< 1	< 1	NA	< 1	NA	NA
< 0.1	< 0.1	NA	NA	NA	< 0.1	< 0.1	< 0.1	NA	NA	< 1	< 1	NA	NA	NA	NA
< 0.1	< 0.1	NA	NA	NA	< 0.1	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA
< 0.1	< 0.1	NA	NA	NA	< 0.1	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA
< 0.1	< 0.1	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.12	< 0.1
< 0.1	< 0.1	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.12	< 0.1
< 0.1	< 0.1	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.12	< 0.1
< 0.1	< 0.1	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.12	< 0.1
< 0.1	< 0.1	< 0.1	NA	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NA	NA	< 0.1	NA	< 0.12	< 0.1
< 0.1	< 0.1	NA	NA	NA	< 0.1	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA
< 0.1	< 0.1	NA	NA	NA	< 0.1	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA
< 0.1	< 0.1	NA	NA	NA	< 0.1	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA
< 0.1	< 0.1	NA	NA	NA	< 0.1	< 0.1	< 0.1	NA	NA	NA	NA	NA	NA	NA	NA
11.1 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
< 1.1	< 1	25.1	NA	3	2.1	< 1	< 1	< 1	< 1.1	< 1	< 2	< 1.1	1.2	< 1	< 2.4

Table 5 T-117 Groundwater Detections 2003 – Present
Current Groundwater Sampling Well Network[a]

Notes:

[a]	See Appendix C for site-wide historic groundwater detections
Red	Detected value that exceeds screening level
Bold	Detected result
Blue	Non-detected value that exceeds the screening level
<	Non-detect at the reporting limit shown
A	Reported result is likely a combination of Aroclor 1254/1260; accurate identification of Aroclor 1254 cannot be achieved (AECOM qualifier)
FD	Field Duplicate
J	Estimated concentration
J-	Estimated concentration, biased low
Y	Reporting limit was raised due to the presence of interference (AECOM qualifier)
NA	Not Analyzed
NV	No established value

Screening levels are proposed levels only, for delineation of the groundwater monitoring well network

TPH/NWTPH screening levels obtained from the MTCA Method A Cleanup Level for groundwater

PCB screening levels are obtained from the Surface Water ARAR - Aquatic Life - Marine/Chronic - National Toxics Rule, 40 CFR 131

Cadmium, chromium, copper, lead, and silver screening levels obtained from the WAC Chapter 173-201A- Aquatic Life - Marine/Acute Water Quality Standards for Surface Waters of the State of Washington

All other groundwater screening levels were obtained from the Surface Water ARAR - Human Health – Marine – Clean Water Act §304

6 Upcoming Sampling Event – Fourth Quarter 2009

The fourth quarter 2009 sampling event is scheduled for November 2-3, 2009. The sampling times coincide with a minimum negative tide of –1.41 feet (on November 2) to a maximum negative tide of –2.05 feet (on November 3). This event will include the following monitoring well network:

- MW-01
- MW-02
- MW-05R
- MW-07
- MW-08R
- MW-11
- MW-12
- MW-13.

These wells will be monitored for the following groundwater analyses:

- PCBs by Method EPA 8082 High Volume
- TPH (gasoline and diesel) by NWTPH-G and NWTPH-Dx
- TSS by Method EPA 106.2
- cPAHs and bis(2-ethylhexyl)phthalate by 8270D SIM and 8270D, respectively
- Total and dissolved priority pollutant metals bye 6010B and 7470 from MW-05R and MW-08R only
- VOCs by Method SW8260C from MW-12 and MW-13 only.

The fourth quarter 2009 groundwater report will be submitted to EPA within 60 days of the sampling event.

7 References

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Figures

Appendix A

Field Forms

Appendix B

Third Quarter 2009 Laboratory and Data Validation Reports and Qualifier Summary Table

Appendix C

Table C-1 T-117 Historic Groundwater Detections – 2003 to First Quarter 2009