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ExxonMobil Pipeline Company

Downstream Areas Surface Water Data Summary Report

Silvertip Pipeline Incident
Laurel, Montana

October 3, 2011

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Laurel, Montana

Paul Doody
Principal

Doug Weeks
Certified Project Manager

Jesse Starr
Project Geologist

Prepared for:
ExxonMobil Pipeline Company

Prepared by:
ARCADIS U.S.
11000 Regency Parkway
West Tower
Suite 205
Cary
North Carolina 27518-8518
Tel 919 469 1952
Fax 919 469 5676

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1. Introduction

This Downstream Areas Surface Water Data Summary Report describes the methods and results of surface water sampling activities conducted from July 23 to 25, 2011 to characterize the surface water quality in the Yellowstone River (the river) in areas upstream and downstream of the Silvertip Pipeline Incident near Laurel, Montana. This sampling effort addresses the surface water sampling objectives established in the Remediation Plan for Downstream Impacted Areas (CTEH 2011a), the Comprehensive Sampling and Analysis Plan (SAP; CTEH 2011b) and the Downstream Impacted Areas Surface Water Sampling Plan (the Surface Water Sampling Plan; ARCADIS 2011).

1.1 Purpose and Objectives

This report presents a summary of surface water sampling field activities completed by ARCADIS, Center for Toxicology and Environmental Health, L.L.C. (CTEH) and Incident Command Boat Operations, with oversight by representatives of United States Environmental Protection Agency (USEPA) and Montana Department of Environmental Quality (MDEQ) from July 23 to 25, 2011 as well as water quality and laboratory analytical data. Surface water samples were collected to generate quantitative water quality data and evaluate the need for further surface water characterization.

1.2 Site Setting and Conditions

The site is located along the Yellowstone River, which begins in northwest Wyoming and flows northeast through Montana to its confluence with the Missouri River near Buford, North Dakota (Figure 1). During the surface water sampling activities conducted from July 23 through 25, 2011, river flow at Billings (United States Geological Survey [USGS] gage 06214500) ranged from 20,799 to 23,400 cubic feet per second (cfs), corresponding to river stages between approximately 7.5 and 8.0 feet (gage datum, 3,080 feet National Geodetic Vertical Datum of 1929 [NGVD 29]). These river flow and stage conditions were well above the average river flow of 6,600 cfs, and stage of approximately 5 feet gage datum. The resulting swift and turbulent currents, large floating debris, poor visibility, and submerged features along the river required extra health and safety precautions and several modifications to the implementation of the sampling program relative to the protocols outlined in the USEPA- and MDEQ-approved Surface Water Sampling Plan (ARCADIS 2011), under which the sampling was conducted. These modifications are described in Section 2.2.1 below.

2. Surface Water Investigation

The surface water investigation activities were performed by ARCADIS, CTEH, and Incident Command Boat Operations on behalf of ExxonMobil Pipeline Company. The following sections present the scope of work completed and the field and laboratory data collected during these activities.

2.1 Sampling Methodology

Surface water samples were collected in accordance with the Surface Water Sampling Plan (ARCADIS 2011) and the Surface Water Sampling Standard Operating Procedure (SOP; CTEH 2011b), with deviations from the approved work plans described in Section 2.2.1.

Surface water samples were collected from boats and land (depending on field conditions at each target location) by dipping a dedicated jar into the river at the target sampling location and transferring water from the dipper jar into laboratory-supplied sample containers. A peristaltic pump was originally planned for sampling from bridges, however as all bridges were above 25 feet, the peristaltic pump was unable to be used. This deviation from the approved work plan is further discussed in Section 2.2.1. A Yellow Spring, Inc. (YSI) water quality meter was used with an aliquot of the surface water sample to measure field parameters (pH, conductivity, temperature, dissolved oxygen, and turbidity).

Surface water samples were submitted to Pace Analytical Services, Inc. of Billings, Montana, for the analyses listed in Table 3 of Appendix A.

2.2 Sample Location Selection

Surface water sampling locations were based on target coordinates identified in the Surface Water Sampling Plan (ARCADIS 2011) and modified in the field, as needed, in response to field conditions to ensure safe access and successful sample collection.

Samples collected from boats were collected from locations as close to the target coordinates as possible where the boat could be safely anchored to the shoreline. Whenever possible, the boat was anchored to the right bank (southern bank) shoreline of the river as this is where the heaviest oiling was observed (CTEH 2011a).

Samples collected from land were accessed by walking towards the target coordinates. Wherever physical obstructions prevented the sampling crews from accessing the

target location, the sampling location was modified based on accessibility, as described in Section 2.2.1.

The locations where surface water samples were collected are presented on the attached figures, and the coordinates are presented in Tables 1a and 1b of Appendix A.

2.2.1 Deviations from the Sampling Plan

The Surface Water Sampling Plan was implemented in accordance with the SAP (CTEH 2011b), the Quality Assurance Project Plan for Comprehensive Sampling and Analysis Plan (QAPP; CTEH 2011c), and the Surface Water Sampling Plan (CTEH 2011b, ARCADIS 2011), with the exception of the deviations noted below.

Samples collected from boats were originally designated to be collected from mid-river channel, however, due to fast currents which prevented the anchoring of the vessels in the middle of the river, samples were instead collected from locations as close to the target as possible while safely anchored to the shoreline. Additionally, where possible, samples were collected from the right bank of the river as this is where the heaviest oiling was observed (CTEH 2011a). Sample locations YRBG-04 and CFBG-01 were originally proposed for the left bank (northern bank), but were modified to the right bank in this way in the field.

Proposed sample locations from bridges over the river (B28, D16, E1, E2, F1, G1, G2, G3, and H1) were modified so that the sample was collected from land adjacent to the bridge locations. Bridge decks identified as sample locations were more than 25 feet above the river, which exceeds the lift achievable with the peristaltic pump, the device originally planned for collection of the samples from bridges. As such these target locations were instead accessed from land and sampled by dipping a dedicated dipper jar into the river, with the exception of B28, which was accessed by boat and sampled by dipping a dedicated jar into the river.

One sample location was moved as no public access near the proposed location was found. The sampling team searched 8 miles before and after the estimated access point but only private roads were found. Sample location H2 was adjusted to allow for sampling where the sampling team could safely approach the sampling location from a public access point and extend a sampling pole fitted with the dedicated dipper bottle into the river.

The SAP stated that a water depth should be measured at each sampling location, however, as most samples were collected using an extendable pole while standing on shore, a water depth was not able to be measured. Again, this method of sampling was

conducted as a safety pre-caution. Consequently, water depths are not presented in this report.

Lastly, sample location coordinates were recorded using handheld global positioning system (GPS) units in the field, however, some locations were modified based on visual observation, which was not a procedure outlined in the Surface Water Sampling Plan (ARCADIS 2011). Several cases of sample location coordinates indicating sampling outside of the river, far from the target location, or outside of the region, suggest that the accuracy of the GPS units used to record the sample locations was low and/or that error may have been introduced to the coordinates recorded during transcription into the field data collection devices. Future sampling activities will be implemented using handheld GPS units with sub-meter accuracy (e.g., Trimble GeoHX or similar) to improve the accuracy of the sample location coordinates. A review of the maps displaying the locations of YRBG-04, B28, C17, D4, F1, F2, F3, G1, G2, and H2 indicated that these sample location coordinates were incorrect. The coordinates recorded in the field were visually compared to the target location coordinates and field team members identified on aerial photos an estimate of where the sample was actually collected based on their visual memory from the sampling. The sample location coordinates for YRBG-04, B28, C17, D4, F1, F2, F3, G1, G2, and H2 were modified to reflect the best judgment of the sampling team members. The coordinates collected in the field for sample locations D27, E1, E2, E3, and G3 plotted on land as displayed on aerial photographs (NAIP 2009). It was inferred that this was likely due to the high river stage and a lack of updated aerial imagery, and that these locations may have been in the river at the time of the sampling. The coordinates of these sample locations were therefore not adjusted.

2.3 Quality Assurance/Quality Control

Field activities were completed in accordance with quality assurance and quality control procedures outlined in the QAPP (CTEH 2011c). Matrix spike (MS) and matrix spike duplicate (MSD) samples and blind duplicate (BD) samples were collected at a frequency of one per 20 field samples. A total of 37 primary surface water samples were collected. MS/MSD volumes were collected and analyzed in conjunction with two samples, and BD split samples were collected and analyzed in conjunction with two samples. Additionally, USEPA and MDEQ were present during the sampling event, and split samples were collected by both agencies from multiple locations.

All equipment used during the sampling program was dedicated and/or disposable, and therefore, no rinsate blanks were collected. A sample key correlating primary sample IDs, MS/MSD sample IDs, and BD sample IDs is presented in Table 2 of Appendix A.

Laboratory analysis of surface water samples was completed in accordance with the QAPP (CTEH 2011c) and SAP (CTEH 2011b). The analytical methods established in these project documents provide data quality suitable for comparison of analytical results to the screening levels identified in those documents for the site COCs. However, analysis by the analytical methods required in the QAPP and SAP cannot achieve reporting limits (RLs) below the screening level for a subset of COCs (silver, 1,1-Dichloroethene, 1,2-Dibromo-3-Chloropropane, 1,2-Dibromoethane, Hexachloro-1,3-Butadiene, Vinyl Chloride, 1,2-Diphenylhydrazine, 2,4-Dinitrotoluene, 3,3'-Dichlorobenzidine, 4,6-Dinitro-2-methylphenol, Bis(2-Chloroethyl)ether, N-Nitrosodimethylamine, N-Nitroso-di-n-propylamine, Pentachlorophenol, Benzo(a)Anthracene, Benzo(a)Pyrene, Benzo(b)fluoranthene, Benzo(k)Fluoranthene, Chrysene, Dibenzo(a,h)Anthracene, Indeno(1,2,3-cd)Pyrene) with existing commercially available analytical technology. As noted for comments 10 and 14 of the EMPCo Response to Agency Comments, received 7/25/2011 and 7/27/2011, and EPA Approval Letter dated 7/29/11 (EMPCo 2011), reporting of analytical results above the method detection limits (MDLs) may allow for screening of COC concentrations detected between the MDL and RL, however reporting of analytical results below the RL but above the MDL was not requested from the laboratory for samples analyzed during implementation of the surface water sampling program.

Validation of laboratory analytical data is currently being performed by a third party data validation firm, Gradient Data Solutions, Inc, of Miami, Florida, but has not yet been completed as of this report date. Third party data validation will be performed as required by the QAPP. The results of the third party data validation may result in changes to the analytical data presented in Appendix A. If the data validation substantively changes the analytical results this report may be reviewed and re-issued. If, however, the data validation does not substantively change the analytical results this report will not be revised to reflect the validated analytical results. Validated analytical results will be publicly available in the project database.

2.4 Laboratory Analyses

Surface water samples were analyzed for:

- Volatile organic compounds (VOCs) by USEPA Method 8260B
- Semivolatile organic compounds (SVOCs) by USEPA Method 8270
- Polycyclic aromatic hydrocarbon (PAHs) by USEPA Method 8270 SIM
- Volatile petroleum hydrocarbons (VPH) by VPH Massachusetts Method (MT Modified)

- Extractable petroleum hydrocarbon (EPH) Screen by EPH Massachusetts Method (MT Modified)
  - If the EPH screen produced a total extractable hydrocarbon (TEH) value greater than 1,000 parts per billion, the sample would be analyzed for EPH fractions

- Total metals (Arsenic, barium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and vanadium) by USEPA Method 6010/6020/7274
- Total suspended solids (TSS) by Standard Method 2540D

No samples were analyzed for EPH fractions, as no TEH results exceeded the 1,000 parts per billion. A sample analysis matrix illustrating the parameters analyzed for each sample is presented in Table 3 of Appendix A.

3. Results

The following sections describe the analyses performed, and a discussion of sample results. Where duplicate samples were collected, only the higher result of the parent-duplicate pair is discussed quantitatively. Statistical results are presented in Appendix B.

3.1 Screening Criteria

Surface water concentrations were compared to MDEQ's Circular DEQ-7 Montana Numeric Water Quality Human Health Standards (HHSs) and to the DEQ-7 Aquatic Life Standards (ALSs), both acute and chronic (MDEQ 2010). As discussed in Section 2.3, a subset of COCs were not detected, however the RL for the COCs exceeded the screening levels. Although the RL exceeds the screening levels for a subset of COCs which are not associated with crude oil (i.e., chlorinated VOCs), these COCs were not detected in any surface water sample and, are not associated with crude oil, and are therefore not of concern to potential water quality impacts from the Silvertip Pipeline Incident. For COCs that were not detected above RLs exceeding screening levels the following lines of evidence were used to evaluate whether the COC may be impacting surface water quality:

- Analytical results from downstream surface water samples were compared to analytical results from background samples.
- COCs associated with crude oil were compared to the list of COCs with RLs exceeding screening levels

3.2 Results from Background Locations

Nine surface water samples were collected from background locations, including sampling at a background location in the Clarks Fork River (CFBG-01) and the Yellowstone River upstream of the Silvertip Pipeline crossing in Laurel. The CFBG-01 and YRBG-01 locations were sampled during each day of the surface water sampling program. One split sample was collected by USEPA at the YRBG04 sample location.

Background surface water field data are presented in Table 4b of Appendix A and analytical data are presented in Table 1a.

Visual evidence of petroleum impacts in the surface water (e.g., sheen, odor) was not observed during sampling at the background surface water sample locations. Two petroleum compounds were detected in the background samples: a toluene concentration of 1.7 micrograms per liter (µg/L) and a naphthalene concentration of 0.073 µg/L were both reported in the sample from location YRBG03. Both concentrations are several orders of magnitude less than their respective surface water benchmark values. All other analytical results for VOCs, PAHs, SVOCs, EPH, and VPH were below detection limits in the background surface water samples.

Cadmium and silver were not detected in the background surface water samples. Selenium was detected in one background surface water sample (and was below all three screening criteria), and the remaining background sample results for selenium were below detection limits. Mercury, arsenic, barium, chromium, and nickel were detected in all background surface water samples; however, none of the reported concentrations exceeded respective benchmark screening criteria for these metals. Lead was detected below the HHS and acute ALS, however all background results were above the chronic ALS. Vanadium was also detected in all background samples, with concentrations ranging from 2.6 µg/L to 8.6 µg/L. There is no benchmark screening value for vanadium.

3.3 Results from Locations Downstream of the Silvertip Pipeline

Twenty-eight surface water samples, including three USEPA split samples and two MDEQ split samples, were collected from the river downstream of the Silvertip Pipeline crossing in Laurel. Downstream surface water field data are presented in Table 4a of Appendix A and analytical data are presented in Table 1b of this report. Visual evidence of petroleum impacts in the surface water (e.g., sheen) was not observed during sampling at any of the downstream surface water sample locations. In addition, no

VOCs, PAHs, SVOCs, EPH, or VPH were detected in any of the downstream surface water samples. The metals results for downstream samples are summarized below.

- Arsenic was detected in each downstream surface water sample analyzed. Arsenic concentrations were above the HHS benchmark screening value of 10 µg/L in five of the 28 downstream surface water samples. One sample was from Division A, three were from Division B, and one was from Division D.
- Silver results were below detection limits for the downstream surface water samples.
- Cadmium was detected at concentrations above the chronic ALS in three samples located in Divisions G and H, and no other samples had detected results.
- Selenium was detected in 14 of the 28 downstream surface water samples, which were from samples located in Divisions D through H. All selenium results were below the benchmark screening values.
- Lead results were all detected above the chronic ALS, however were below the acute ALS and HHS.
- All samples had nickel results below the screening criteria with the exception of two samples which had results above the chronic ALS (one in each Division G and H).
- Mercury, barium, and chromium, were detected in one or more downstream surface water samples, however all results were at concentrations below their respective benchmark screening values.
- Vanadium was detected in all downstream samples, with concentrations ranging from 3.4 µg/L to 26.4 µg/L. There is no benchmark screening value for vanadium.

3.4 Comparison of Results from Background and Downstream Locations

Constituents with reported concentrations in both upstream and downstream samples were further evaluated to assess if concentrations in downstream samples are higher than in background samples. Of the 37 background and downstream samples analyzed for VOCs, PAHs, SVOCs, EPH and VPH, no results were detected except a toluene detection and a naphthalene detection, both from the same background sample. Both detections were from a single background sample, and were below the screening criteria. In both background and downstream samples, metals were frequently detected;

however it should be noted that only lead (all samples), arsenic (five samples), cadmium (three samples), and nickel (one sample) exhibited results above the applicable screening levels. Further evaluation of constituents that did not exhibit results above benchmark screening values (i.e., VOCs, PAHs, SVOCs, EPH, VPH, barium, chromium, mercury, selenium, silver, and vanadium) is not warranted.

A statistical evaluation of the metals was performed to determine if metals concentrations from downstream locations are statistically different from background conditions. A comparison of downstream surface water sample arsenic concentrations to background indicates that concentrations of arsenic in downstream surface water samples are not statistically different than in background surface water samples. Although the average concentration of arsenic in downstream surface water samples is higher than the average background concentration (7.7 µg/L compared to 6.8 µg/L), the variance of the downstream average concentration is less than the variance of average background concentration, and the downstream median concentration is lower than the background median concentration (7.2 µg/L and 9.12 µg/L, respectively). Additionally, the background data are skewed by the three samples from the Clarks Fork River that each have arsenic concentrations below 1.1 µg/L. Excluding the background samples collected in Clarks Fork, the background concentrations for samples collected upstream in the Yellowstone River are at or below the benchmark screening value, and range from 9.0 µg/L to 10 µg/L, with an average concentration of 9.4 µg/L, higher than the average arsenic concentration in downstream samples.

Concentrations of barium, cadmium, lead, nickel, selenium, and vanadium in downstream surface water samples are higher than background concentrations. However, all of these metals are correlated to each other ($p<0.01$) and/or to TSS ($p<0.01$). TSS results were generally higher in samples collected further downstream and although the mean TSS is not significantly different between background and downstream surface water samples, in general, the results are higher downstream compared to background (196 milligrams per liter [mg/L] average in downstream samples compared to 98.7 mg/L average in background samples) and the majority of downstream TSS results are well over 100 mg/L, whereas the majority of background TSS result were less than 100 mg/L. These data indicate that the metals concentrations in surface water samples are correlated to TSS, consistent with a geologically derived constituent. This is supported by the strong correlations to each other and the lack of detectable petroleum-related constituents in any of the samples. Additionally there are no metals associated with crude oil constituents, so there is no known relationship between the metal results that are above the screening criteria and the Silvertip Pipeline Incident.

3.5 Summary

Based on the results of the surface water sampling program, there are no apparent impacts to surface water quality resulting from the Silvertip Pipeline Incident. Analytical VOC, PAH, SVOC, EPH, and VPH results for background and downstream surface water samples included only two individual detected concentrations (both in a background sample); no constituents were detected in any other samples.

Detected surface water sample results meet the DEQ-7 Surface Water Aquatic Life and Human Health Water Standards (MDEQ 2010), with the exception of the lead samples (background and downstream), five downstream arsenic samples, three downstream cadmium samples, and a single downstream nickel result.

The arsenic results above the screening levels are not considered incident-related because arsenic is naturally occurring. Concentrations of arsenic in downstream surface water samples are not significantly different than background surface water arsenic concentrations.

Several other metals were observed at higher concentrations in downstream samples than in background samples (barium, cadmium, lead, nickel, selenium, and vanadium). Results above screening levels were either very limited (1 to 3 of 37 samples), or were widespread among background and downstream samples. Additionally, they are not considered related to the Silvertip Pipeline Incident as they all appear to be naturally occurring and geologically derived (as indicated by their strong correlations to each other and to TSS, which increases downstream), and there were no crude oil constituents detected in the samples. This was the consensus of the USEPA and MDEQ as well, as recent decisions regarding the approval of the revised SAP (CTEH 2011d) include the omission of metals as constituents of potential concern to be investigated based on the finding that they are not present at significant levels in crude oil.

Surface water sample results indicate there were no apparent impacts to surface water quality resulting from the Silvertip Pipeline Incident at the time of sampling. Additional surface water sampling was conducted between September 14 to 17, 2011 at public water supply locations as requested by MDEQ. If results from that sampling event confirm the results from this initial sampling program, no further surface water sampling will be recommended.

4. References

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				Location	CFBG01	CFBG01	CFBG01	YRBG01	YRBG01	YRBG01	YRBG02	YRBG02	YRBG03	YRBG04	
				Sample	LAMT0723SW503	LAMT0724SW504	LAMT0725SW601	LAMT0723SW504	LAMT0724SW501	LAMT0725SW604	LAMT0723SW601	LAMT0723SW602	LAMT0723SW502	LAMT0723SW501	SPSW501_072311
				Collection Date	7/23/2011	7/24/2011	7/25/2011	7/23/2011	7/24/2011	7/25/2011	7/23/2011	7/23/2011	7/23/2011	7/23/2011	7/23/2011
Chemical	Units	SW DEQ-7 HHS SURFACE	SW DEQ-7 AQUATIC ACUTE	SW DEQ-7 AQUATIC CHRONIC											USEPA Split Sample
Metals															
Mercury	µg/l	0.05	1.7	0.91	0.00294	0.00322	0.00422	0.0085	0.00792	0.0087	0.015 J	0.0101 J	0.0121	0.00835	-
Arsenic	µg/l	10	340	150	1.1	0.72	0.67	10	9.2	9.4	9	9	9.4	9.8	-
Barium	µg/l	1000			73.2	50	39.4	50.6	41.8	36.3	40.7	41.3	39.4	46.8	-
Cadmium	µg/l	5	0.52	0.097	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	-
Calcium	µg/l	-	-	-	27700	24200	23800	15400	14700	14000	14400	14800	15700	14700	-
Chromium	µg/l	100	-	-	3.6	2.4	1.1	3	2.2	1.6	1.9	2.1	1.8	2.6	-
Lead	µg/l	15	13980	0.545	2.8	1.6	1.1	1.5	1.1	0.86	1.4 J	1 J	1.1	1.4	-
Magnesium	µg/l	-	-	-	8980	7360	7000	4870	4580	4440	4340	4390	4730	4650	-
Nickel	µg/l	100	145	16.1	6.7	3.5	2.5	3.3	2.4	2.1	2.3	2.4	2.4	3.3	-
Potassium	µg/l	-	-	-	1650	1340	1320	2000	1840	1920	1890	1910	1830	1860	-
Selenium	µg/l	50	20	5	0.51	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-
Silver	µg/l	100	0.374	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-
Sodium	µg/l	-	-	-	8760	8810	8820	8390	8140	-	7860	8100	8430	7920	-
Vanadium	µg/l	-	-	-	8.6	5.9	3.9	4.6	3.7	2.6	3.9	3.7	3.9	4.4	-
Volatile Organic Compounds															
1,1,1,2-Tetrachloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,1,1-Trichloroethane	µg/l	200	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,1,2,2-Tetrachloroethane	µg/l	1.7	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,1,2-Trichloroethane	µg/l	3	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,1,2-Trichlorotrifluoroethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,1-Dichloroethene	µg/l	0.57	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,1-Dichloropropene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,2,3-Trichlorobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,2,3-Trichloropropane	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,2,4-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,2-Dibromo-3-Chloropropane	µg/l	0.2	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2-Dibromoethane (EDB)	µg/l	0.004	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,2-Dichloroethane	µg/l	3.8	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,2-Dichloropropane	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,3,5-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,3-Dichloropropane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
2,2-Dichloropropane	µg/l	-	-	-	< 1 UJ-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ-	< 1 UJ-	< 1 U	< 4 U
2-Butanone (MEK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
2-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
4-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
4-Methyl-2-pentanone (MIBK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 UJ-	< 4 U	< 4 U	< 4 UJ-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Acetone	µg/l	-	-	-	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 UJ
Allyl chloride	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Bromobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Bromochloromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	µg/l	5.5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Bromomethane	µg/l	47	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 4 U
Carbon Tetrachloride	µg/l	2.3	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	µg/l	100	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	µg/l	4	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Chloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Chloroform	µg/l	57	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Chloromethane	µg/l	30	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 4 U
cis-1,2-Dichloroethene	µg/l	70	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
cis-1,3-Dichloropropene	µg/l	3.4	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U
Dibromomethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U
Dichlorodifluoromethane (CFC-12)	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Dichlorofluoromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Diethyl ether (Ethyl ether)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Isopropylbenzene (Cumene)	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 2 U
Methylene Chloride	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Naphthalene	µg/l	100	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 4 U
N-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
N-Propylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
p-Isopropyltoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
sec-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Styrene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Tert-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Tetrachloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Tetrahydrofuran	µg/l	-	-	-	< 10 U	< 10 U	< 10 UJ-	< 10 UJ-	< 10 U	< 10 UJ-	< 10 U	< 10 U	< 10 U	< 10 UJ-	< 10 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	1.7	< 0.5 U	< 1 U
trans-1,2-Dichloroethene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U
trans-1,3-Dichloropropene	µg/l	2	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U
Tribromomethane	µg/l	43	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Trichloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Trichlorofluoromethane (CFC-11)	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U
Vinyl Chloride	µg/l	0.25	-	-	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 3 U
Semivolatile Organic Compounds															
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
1,2-Diphenylhydrazine	µg/l	0.36	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
1-Methylnaphthalene	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2,4,5-Trichlorophenol	µg/l	1800	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
2,4,6-Trichlorophenol	µg/l	14	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2,4-Dichlorophenol	µg/l	77	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2,4-Dimethylphenol	µg/l	380	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2,4-Dinitrophenol	µg/l	69	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
2,4-Dinitrotoluene	µg/l	1.1	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2,6-Dinitrotoluene	µg/l	0.5	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2-Chloronaphthalene	µg/l	1000	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2-Chlorophenol	µg/l	81	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2-Methylnaphthalene	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2-Methylphenol(o-Cresol)	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
2-Nitroaniline	µg/l	-	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
2-Nitrophenol	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
3&4-Methylphenol	µg/l	-	-	-	< 22.7 U	< 23 U	< 20.6 U	< 21.2 U	< 21.7 U	< 20.8 U	< 21.1 U	< 20.4 U	< 20.4 U	< 20.6 U	< 20.3 U
3,3'-Dichlorobenzidine	µg/l	0.21	-	-	< 22.7 U	< 23 U	< 20.6 U	< 21.2 U	< 21.7 U	< 20.8 U	< 21.1 U	< 20.4 U	< 20.4 U	< 20.6 U	< 20.3 U
3-Nitroaniline	µg/l	-	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
4,6-Dinitro-2-methylphenol	µg/l	13	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
4-Chloro-3-Methylphenol	µg/l	3000			< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
4-Chloroaniline	µg/l	-	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
4-Nitroaniline	µg/l	-	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
4-Nitrophenol	µg/l	60	-	-	< 56.8 U	< 57.5 U	< 51.5 U	< 52.9 U	< 54.3 U	< 52.1 U	< 52.6 U	< 51 U	< 51 U	< 51.5 U	< 50.8 U
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Bis(2-Chloroethyl)ether	µg/l	0.3	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
bis(2-Chloroisopropyl) ether	µg/l	1400	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Bis(2-Ethylhexyl)phthalate	µg/l	6	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Butylbenzylphthalate	µg/l	1500	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Carbazole	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Dibenzofuran	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Diethyl Phthalate	µg/l	17000	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Dimethyl Phthalate	µg/l	270000	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Di-N-Butyl Phthalate	µg/l	2000	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Di-n-Octyl Phthalate	µg/l	-	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Hexachlorobenzene	µg/l	0.0028	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Hexachlorocyclopentadiene	µg/l	40	-	-											
Hexachloroethane	µg/l	14	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Isophorone	µg/l	350	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Nitrobenzene	µg/l	17	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
N-Nitrosodimethylamine	µg/l	0.0069	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
N-Nitroso-di-n-propylamine	µg/l	0.05	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
N-nitrosodiphenylamine	µg/l	33	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Pentachlorophenol	µg/l	1	5.3	4	< 26.1 U	< 26.4 U	< 23.7 U	< 24.3 U	< 25 U	< 24 U	< 24.2 U	< 23.5 U	< 23.5 U	< 23.7 U	< 23.4 U
Phenol	µg/l	300	-	-	< 11.4 U	< 11.5 U	< 10.3 U	< 10.6 U	< 10.9 U	< 10.4 U	< 10.5 U	< 10.2 U	< 10.2 U	< 10.3 U	< 10.2 U
Polyaromatic Hydrocarbons															
Acenaphthene	µg/l	670	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Acenaphthylene	µg/l	-	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Anthracene	µg/l	8300	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Benzo(a)Anthracene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Benzo(a)Pyrene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Benzo(b)fluoranthene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Benzo(g,h,i)Perylene	µg/l	-	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Benzo(k)Fluoranthene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Chrysene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Dibenzo(a,h)Anthracene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Fluoranthene	µg/l	130	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Fluorene	µg/l	1100	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Indeno(1,2,3-cd)Pyrene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Naphthalene	µg/l	100	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	0.073	< 0.042 U	-
Phenanthrene	µg/l	-	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
Pyrene	µg/l	830	-	-	< 0.042 U	< 0.043 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.041 U	< 0.042 U	-
MADEP EPH															
Total Extractable Hydrocarbons	µg/l	-	-	-	< 235 U	< 205 U	< 204 U	< 238 U	< 208 U	< 205 U	< 214 U	< 215 U	< 212 U	< 217 U	< 209 U
Volatile Petroleum Hydrocarbons															
Aliphatic (C05-C08), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C05-C08).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
C9-C10 Aromatics	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	1.7	< 0.5 U	< 0.5 U
Total Purgeable Hydrocarbons	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
SM 2540D															
Total Suspended Solids	µg/l	-	-	-	154000	133000	123000	96200	98700	88400	73300	66600	56500	94400	-

5 Exceedences of SW DEQ-7 HHS SURFACE WATER are underlined
1 Exceedences of SW DEQ-7 AQUATIC ACUTE are boldfaced
45 Exceedences of SW DEQ-7 AQUATIC CHRONIC are shaded gray

- = Not Applicable or Available

Table 1b
Downstream Analytical Results
Silvertip Pipeline Incident
Laurel, Montana

				Location	A04-01	A13		A18	A20	A23		A29	B12
				Sample	LAMT0723SW505	LAMT0724SW507	SPSW507_072411	LAMT0724SW510	LAMT0724SW513	LAMT0724SW516	SPSW516_072411	BIMT0725SW610	BIMT0725SW607
				Collection Date	7/23/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/25/2011	7/25/2011
Chemical	**Units**	**SW DEQ-7 HHS SURFACE**	**SW DEQ-7 AQUATIC ACUTE**	**SW DEQ-7 AQUATIC CHRONIC**			**USEPA Split Sample**				**USEPA Split Sample**		
Metals													
Mercury	µg/l	0.05	1.7	0.91	0.00911	0.00401	-	0.00435	0.00415	0.00639	-		0.0051
Arsenic	µg/l	10	340	150	10.4	0.7	-	3.4	3.8	5.2	-	7	16.3
Barium	µg/l	1000			52.4	50.8	-	57.6	55.7	57.6	-	45.5	76.5
Cadmium	µg/l	5	0.52	0.097	< 0.08 U	< 0.08 U	-	< 0.08 U	< 0.08 U	< 0.08 U	-	< 0.08 U	< 0.16 U
Calcium	µg/l	-	-	-	15400	25700	-	26500	23800	21500	-	18600	31600
Chromium	µg/l	100	-	-	3.1	2.1	-	2	2.8	3.1	-	1.7	2.1
Lead	µg/l	15	13980	0.545	1.6	1.6	-	2.3	1.8	1.9	-	1.4	1.9
Magnesium	µg/l	-	-	-	4940	7910	-	8340	7240	6840	-	6390	9910
Nickel	µg/l	100	145	16.1	3.8	3.6	-	4.8	4.1	4.2	-	2.9	3.6
Potassium	µg/l	-	-	-	2010	1380	-	1460	1640	1780	-	1860	3470
Selenium	µg/l	50	20	5	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 1 U
Silver	µg/l	100	0.374	-	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 1 U
Sodium	µg/l	-	-	-	8340	10400	-	9740	9560	9080	-	11400	17000
Vanadium	µg/l	-	-	-	4.9	5.8	-	5.7	6	6.2	-	3.7	4.5
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,1,1-Trichloroethane	µg/l	200	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,1,2,2-Tetrachloroethane	µg/l	1.7	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	µg/l	3	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,1,2-Trichlorotrifluoroethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,1-Dichloroethene	µg/l	0.57	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,1-Dichloropropene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,2,3-Trichlorobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,2,3-Trichloropropane	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,2,4-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,2-Dibromo-3-Chloropropane	µg/l	0.2	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2-Dibromoethane (EDB)	µg/l	0.004	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,2-Dichloroethane	µg/l	3.8	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,2-Dichloropropane	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,3,5-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,3-Dichloropropane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
2,2-Dichloropropane	µg/l	-	-	-	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U
2-Butanone (MEK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
2-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
4-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
4-Methyl-2-pentanone (MIBK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Acetone	µg/l	-	-	-	< 25 U	< 25 U	< 25 UJ	< 25 U	< 25 U	< 25 U	< 25 UJ	< 25 U	< 25 U
Allyl chloride	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Bromobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Bromochloromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	µg/l	5.5	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Bromomethane	µg/l	47	-	-	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U
Carbon Tetrachloride	µg/l	2.3	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	µg/l	100	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	µg/l	4	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Chloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Chloroform	µg/l	57	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Chloromethane	µg/l	30	-	-	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	µg/l	70	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
cis-1,3-Dichloropropene	µg/l	3.4	-	-	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U
Dibromomethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U
Dichlorodifluoromethane (CFC-12)	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Dichlorofluoromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Diethyl ether (Ethyl ether)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Isopropylbenzene (Cumene)	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U	< 1 U	< 2 U	< 1 U	< 1 U
Methylene Chloride	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U	< 1 U	< 4 U	< 1 U	< 1 U
N-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
N-Propylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
p-Isopropyltoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
sec-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Styrene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Tert-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Tetrachloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Tetrahydrofuran	µg/l	-	-	-	< 10 UJ-	< 10 UJ-	< 10 U	< 10 UJ-	< 10 UJ-	< 10 UJ-	< 10 U	< 10 U	< 10 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
trans-1,2-Dichloroethene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U
trans-1,3-Dichloropropene	µg/l	2	-	-	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U	< 0.5 U
Tribromomethane	µg/l	43	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Trichloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Trichlorofluoromethane (CFC-11)	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U	< 0.5 U
Vinyl Chloride	µg/l	0.25	-	-	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 3 U	< 1.5 U	< 1.5 U	< 1.5 U	< 3 U	< 1.5 U	< 1.5 U
Semivolatile Organic Compounds													
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
1,2-Diphenylhydrazine	µg/l	0.36	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
1-Methylnaphthalene	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2,4,5-Trichlorophenol	µg/l	1800	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
2,4,6-Trichlorophenol	µg/l	14	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2,4-Dichlorophenol	µg/l	77	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2,4-Dimethylphenol	µg/l	380	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2,4-Dinitrophenol	µg/l	69	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
2,4-Dinitrotoluene	µg/l	1.1	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2,6-Dinitrotoluene	µg/l	0.5	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2-Chloronaphthalene	µg/l	1000	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2-Chlorophenol	µg/l	81	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2-Methylnaphthalene	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2-Methylphenol(o-Cresol)	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
2-Nitroaniline	µg/l	-	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
2-Nitrophenol	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
3&4-Methylphenol	µg/l	-	-	-	< 20.6 U	< 20.6 U	< 20.3 U	< 20.4 U	< 21.1 U	< 20.6 U	< 20.4 U	< 20.5 U	< 20.5 U
3,3'-Dichlorobenzidine	µg/l	0.21	-	-	< 20.6 U	< 20.6 U	< 20.3 U	< 20.4 U	< 21.1 U	< 20.6 U	< 20.4 U	< 20.5 U	< 20.5 U
3-Nitroaniline	µg/l	-	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
4,6-Dinitro-2-methylphenol	µg/l	13	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
4-Chloro-3-Methylphenol	µg/l	3000			< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
4-Chloroaniline	µg/l	-	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
4-Nitroaniline	µg/l	-	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
4-Nitrophenol	µg/l	60	-	-	< 51.5 U	< 51.5 U	< 50.8 U	< 51 U	< 52.6 U	< 51.5 U	< 51 U	< 51.3 U	< 51.3 U
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Bis(2-Chloroethyl)ether	µg/l	0.3	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
bis(2-Chloroisopropyl) ether	µg/l	1400	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Bis(2-Ethylhexyl)phthalate	µg/l	6	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Butylbenzylphthalate	µg/l	1500	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Carbazole	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Dibenzofuran	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Diethyl Phthalate	µg/l	17000	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Dimethyl Phthalate	µg/l	270000	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Di-N-Butyl Phthalate	µg/l	2000	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Di-n-Octyl Phthalate	µg/l	-	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Hexachlorobenzene	µg/l	0.0028	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Hexachlorocyclopentadiene	µg/l	40	-	-									
Hexachloroethane	µg/l	14	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Isophorone	µg/l	350	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Nitrobenzene	µg/l	17	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
N-Nitrosodimethylamine	µg/l	0.0069	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
N-Nitroso-di-n-propylamine	µg/l	0.05	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
N-nitrosodiphenylamine	µg/l	33	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Pentachlorophenol	µg/l	1	5.3	4	< 23.7 U	< 23.7 U	< 23.4 U	< 23.5 U	< 24.2 U	< 23.7 U	< 23.5 U	< 23.6 U	< 23.6 U
Phenol	µg/l	300	-	-	< 10.3 U	< 10.3 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.3 U	< 10.2 U	< 10.3 U	< 10.3 U
Polyaromatic Hydrocarbons													
Acenaphthene	µg/l	670	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Acenaphthylene	µg/l	-	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Anthracene	µg/l	8300	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Benzo(a)Anthracene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Benzo(a)Pyrene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Benzo(b)fluoranthene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Benzo(g,h,i)Perylene	µg/l	-	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Benzo(k)Fluoranthene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Chrysene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Dibenzo(a,h)Anthracene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Fluoranthene	µg/l	130	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Fluorene	µg/l	1100	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Indeno(1,2,3-cd)Pyrene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Naphthalene	µg/l	100	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Phenanthrene	µg/l	-	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
Pyrene	µg/l	830	-	-	< 0.041 U	< 0.042 U	-	< 0.044 U	< 0.043 U	< 0.042 U	-	< 0.041 U	< 0.042 U
MADEP EPH													
Total Extractable Hydrocarbons	µg/l	-	-	-	< 211 U	< 237 U	< 208 U	< 232 U	< 215 U	< 210 U	< 209 U	< 206 U	< 205 U
Volatile Petroleum Hydrocarbons													
Aliphatic (C05-C08), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C05-C08).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
C9-C10 Aromatics	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Total Purgeable Hydrocarbons	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
SM 2540D													
Total Suspended Solids	µg/l	-	-	-	95000	134000	-	121000	96300	129000	-	105000	70600

5 Exceedences of SW DEQ-7 HHS SURFACE WATER are underlined
1 Exceedences of SW DEQ-7 AQUATIC ACUTE are boldfaced
45 Exceedences of SW DEQ-7 AQUATIC CHRONIC are shaded gray

- = Not Applicable or Available

Table 1b
Downstream Analytical Results
Silvertip Pipeline Incident
Laurel, Montana

				Location	B17	B28	B37	C17		C53	C78		D16
				Sample	BIMT0725SW604	BIMT0725SW613	BIMT0725SW601	HUMT0724SW501	ST-072511-C17-SW	CUMT0725SW501	CUMT0725SW504	SPSW504_072511	MYMT0724SW601
				Collection Date	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/24/2011
Chemical	**Units**	**SW DEQ-7 HHS SURFACE**	**SW DEQ-7 AQUATIC ACUTE**	**SW DEQ-7 AQUATIC CHRONIC**					**MDEQ Split Sample**			**USEAPA Split Sample**	
Metals													
Mercury	µg/l	0.05	1.7	0.91	0.00655		0.00635	0.00617	-	0.00606	0.00791	-	0.00702
Arsenic	µg/l	10	340	150	16.2	8.5	15.5	8.3	-	8.3	8.4	-	7.2
Barium	µg/l	1000			97.7	43.6	77.2	50.4	-	54.9	60.8	-	82.9
Cadmium	µg/l	5	0.52	0.097	< 0.16 U	< 0.08 U	< 0.16 U	< 0.08 U	-	< 0.08 U	< 0.08 U	-	< 0.08 U
Calcium	µg/l	-	-	-	34500	17400	34400	17500	-	18900	19100	-	35700
Chromium	µg/l	100	-	-	2.9	1.7	2.6	2.2	-	2.4	2.5	-	4.1
Lead	µg/l	15	13980	0.545	2.9	1.2	1.8	1.6	-	1.9	3.3	-	4.6
Magnesium	µg/l	-	-	-	11000	5740	11200	5860	-	6560	6740	-	11500
Nickel	µg/l	100	145	16.1	5.2	2.6	3.8	3.4	-	3.8	4	-	5.8
Potassium	µg/l	-	-	-	3600	2010	3540	2020	-	2140	2160	-	2680
Selenium	µg/l	50	20	5	< 1 U	< 0.5 U	< 1 U	< 0.5 U	-	< 0.5 U	< 0.5 U	-	0.74
Silver	µg/l	100	0.374	-	< 1 U	< 0.5 U	< 1 U	< 0.5 U	-	< 0.5 U	< 0.5 U	-	< 0.5 U
Sodium	µg/l	-	-	-	17900	9770	19400	9460	-	11000	11200	-	24300
Vanadium	µg/l	-	-	-	6.4	3.5	4.7	4.3	-	5	5.3	-	8.4
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1,1-Trichloroethane	µg/l	200	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1,2,2-Tetrachloroethane	µg/l	1.7	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1,2-Trichloroethane	µg/l	3	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1,2-Trichlorotrifluoroethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	-	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1-Dichloroethene	µg/l	0.57	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,1-Dichloropropene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2,3-Trichlorobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2,3-Trichloropropane	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2,4-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dibromo-3-Chloropropane	µg/l	0.2	-	-	< 4 U	< 4 U	< 4 U	< 4 U	-	< 4 U	< 4 U	< 4 U	< 4 U
1,2-Dibromoethane (EDB)	µg/l	0.004	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dichloroethane	µg/l	3.8	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,2-Dichloropropane	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U
1,3,5-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,3-Dichloropropane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
2,2-Dichloropropane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1	< 1 U	< 1 U	< 4 U	< 1 U
2-Butanone (MEK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 20	< 4 U	< 4 U	< 4 U	< 4 U
2-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
4-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
4-Methyl-2-pentanone (MIBK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 UJ-	-	< 4 UJ-	< 4 UJ-	< 4 U	< 4 U
Acetone	µg/l	-	-	-	< 25 U	< 25 U	< 25 U	< 25 U	-	< 25 U	< 25 U	< 25 UJ	< 25 U
Allyl chloride	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	-	< 4 U	< 4 U	< 4 U	< 4 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Bromobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Bromochloromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	µg/l	5.5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Bromomethane	µg/l	47	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1	< 1 U	< 1 U	< 4 U	< 1 U
Carbon Tetrachloride	µg/l	2.3	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	µg/l	100	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	µg/l	4	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Chloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Chloroform	µg/l	57	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Chloromethane	µg/l	30	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1	< 1 U	< 1 U	< 4 U	< 1 U
cis-1,2-Dichloroethene	µg/l	70	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
cis-1,3-Dichloropropene	µg/l	3.4	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U
Dibromomethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U
Dichlorodifluoromethane (CFC-12)	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Dichlorofluoromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	-	< 1 U	< 1 U	< 1 U	< 1 U
Diethyl ether (Ethyl ether)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	-	< 4 U	< 4 U	< 4 U	< 4 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 5 U	< 5 U	< 5 U	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U
Isopropylbenzene (Cumene)	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1	< 1 U	< 1 U	< 2 U	< 1 U
Methylene Chloride	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 1 U	< 1 U	< 1 U	< 1 U	-	< 1 U	< 1 U	< 4 U	< 1 U
N-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
N-Propylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
p-Isopropyltoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
sec-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Styrene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Tert-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	-	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Tetrachloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Tetrahydrofuran	µg/l	-	-	-	< 10 U	< 10 U	< 10 U	< 10 UJ-	-	< 10 UJ-	< 10 UJ-	< 10 U	< 10 UJ-
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
trans-1,2-Dichloroethene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U
trans-1,3-Dichloropropene	µg/l	2	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 4 U	< 0.5 U
Tribromomethane	µg/l	43	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U
Trichloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Trichlorofluoromethane (CFC-11)	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 1 U	< 0.5 U
Vinyl Chloride	µg/l	0.25	-	-	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 1	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1	< 1.5 U	< 1.5 U	< 3 U	< 1.5 U
Semivolatile Organic Compounds													
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
1,2-Diphenylhydrazine	µg/l	0.36	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	-	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
1-Methylnaphthalene	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2,4,5-Trichlorophenol	µg/l	1800	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	< 10	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
2,4,6-Trichlorophenol	µg/l	14	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2,4-Dichlorophenol	µg/l	77	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2,4-Dimethylphenol	µg/l	380	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2,4-Dinitrophenol	µg/l	69	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	< 50	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
2,4-Dinitrotoluene	µg/l	1.1	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2,6-Dinitrotoluene	µg/l	0.5	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2-Chloronaphthalene	µg/l	1000	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2-Chlorophenol	µg/l	81	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2-Methylnaphthalene	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2-Methylphenol(o-Cresol)	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
2-Nitroaniline	µg/l	-	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	-	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
2-Nitrophenol	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
3&4-Methylphenol	µg/l	-	-	-	< 20.4 U	< 20.6 U	< 22 U	< 21.3 U	< 10	< 20.8 U	< 21.7 U	< 20.7 U	< 20.1 U
3,3'-Dichlorobenzidine	µg/l	0.21	-	-	< 20.4 U	< 20.6 U	< 22 U	< 21.3 U	< 10	< 20.8 U	< 21.7 U	< 20.7 U	< 20.1 U
3-Nitroaniline	µg/l	-	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	-	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
4,6-Dinitro-2-methylphenol	µg/l	13	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	< 50	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
4-Chloro-3-Methylphenol	µg/l	3000			< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
4-Chloroaniline	µg/l	-	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	-	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
4-Nitroaniline	µg/l	-	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	-	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
4-Nitrophenol	µg/l	60	-	-	< 51 U	< 51.5 U	< 54.9 U	< 53.2 U	< 50	< 52.1 U	< 54.3 U	< 51.8 U	< 50.3 U
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Bis(2-Chloroethyl)ether	µg/l	0.3	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
bis(2-Chloroisopropyl) ether	µg/l	1400	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Bis(2-Ethylhexyl)phthalate	µg/l	6	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Butylbenzylphthalate	µg/l	1500	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Carbazole	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	-	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Dibenzofuran	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	-	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Diethyl Phthalate	µg/l	17000	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Dimethyl Phthalate	µg/l	270000	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Di-N-Butyl Phthalate	µg/l	2000	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Di-n-Octyl Phthalate	µg/l	-	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Hexachlorobenzene	µg/l	0.0028	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Hexachlorocyclopentadiene	µg/l	40	-	-					< 10				
Hexachloroethane	µg/l	14	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Isophorone	µg/l	350	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Nitrobenzene	µg/l	17	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
N-Nitrosodimethylamine	µg/l	0.0069	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
N-Nitroso-di-n-propylamine	µg/l	0.05	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
N-nitrosodiphenylamine	µg/l	33	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Pentachlorophenol	µg/l	1	5.3	4	< 23.5 U	< 23.7 U	< 25.3 U	< 24.5 U	< 50	< 24 U	< 25 U	< 23.8 U	< 23.1 U
Phenol	µg/l	300	-	-	< 10.2 U	< 10.3 U	< 11 U	< 10.6 U	< 10	< 10.4 U	< 10.9 U	< 10.4 U	< 10.1 U
Polyaromatic Hydrocarbons													
Acenaphthene	µg/l	670	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Acenaphthylene	µg/l	-	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Anthracene	µg/l	8300	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Benzo(a)Anthracene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Benzo(a)Pyrene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Benzo(b)fluoranthene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Benzo(g,h,i)Perylene	µg/l	-	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Benzo(k)Fluoranthene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Chrysene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Dibenzo(a,h)Anthracene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Fluoranthene	µg/l	130	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Fluorene	µg/l	1100	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Indeno(1,2,3-cd)Pyrene	µg/l	0.038	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Naphthalene	µg/l	100	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Phenanthrene	µg/l	-	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
Pyrene	µg/l	830	-	-	< 0.041 U	< 0.042 U	< 0.042 U	< 0.042 U	-	< 0.041 U	< 0.045 U	-	< 0.041 U
MADEP EPH													
Total Extractable Hydrocarbons	µg/l	-	-	-	< 216 U	< 205 U	< 204 U	< 206 U	< 337	< 218 U	< 215 U	< 208 U	< 224 U
Volatile Petroleum Hydrocarbons													
Aliphatic (C05-C08), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C05-C08).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
C9-C10 Aromatics	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20	< 20 U	< 20 U	< 20 U	< 20 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 0.5	< 1 U	< 1 U	< 1 U	< 1 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 1	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Total Purgeable Hydrocarbons	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20	< 20 U	< 20 U	< 20 U	< 20 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 0.5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
SM 2540D													
Total Suspended Solids	µg/l	-	-	-	72200	99700	91600	105000	-	127000	149000	-	140000

5 Exceedences of SW DEQ-7 HHS SURFACE WATER are underlined
1 Exceedences of SW DEQ-7 AQUATIC ACUTE are boldfaced
45 Exceedences of SW DEQ-7 AQUATIC CHRONIC are shaded gray

- = Not Applicable or Available

Table 1b
Downstream Analytical Results
Silvertip Pipeline Incident
Laurel, Montana

				Location	D27		D4	E1	E2	E3	F1	F2	F3
				Sample	HYMT0724SW601	ST-072411-D27-SW	BIMT0723SW601	FOMT0724SW601	FOMT0724SW604	RBMT0724SW701	MCMT0724SW701	CUMT0723SW703	BLMT0725SW701
				Collection Date	7/24/2011	7/24/2011	7/23/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011	7/23/2011	7/25/2011
Chemical	**Units**	**SW DEQ-7 HHS SURFACE**	**SW DEQ-7 AQUATIC ACUTE**	**SW DEQ-7 AQUATIC CHRONIC**		**MDEQ Split Sample**							
Metals													
Mercury	µg/l	0.05	1.7	0.91	0.0068	-	0.00682	0.0065	0.00584	0.00733	0.00789	0.00843	0.00648
Arsenic	µg/l	10	340	150	13.5	-	7.3	5.8	6.7	7.4	5.5	7.3	6.4
Barium	µg/l	1000			129	-	45.8	58	82.6	93.5	75.4	101	70.9
Cadmium	µg/l	5	0.52	0.097	< 0.16 U	-	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Calcium	µg/l	-	-	-	60200	-	19300	29000	33300	35200	33200	35200	30900
Chromium	µg/l	100	-	-	4.9	-	1.2	2.6	4.1	4.9	3.8	6.5	2.8
Lead	µg/l	15	13980	0.545	4	-	1.9	2.5	3	3.3	2.5	5.5	2.5
Magnesium	µg/l	-	-	-	20100	-	5840	9360	10700	11600	12400	12000	10900
Nickel	µg/l	100	145	16.1	8	-	2.4	3.5	5.3	6	4.9	11.2	4.5
Potassium	µg/l	-	-	-	4940	-	1720	2280	2480	2770	2600	3370	2740
Selenium	µg/l	50	20	5	1.4	-	< 0.5 U	0.52	0.72	0.84	0.63	0.81	0.64
Silver	µg/l	100	0.374	-	< 1 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Sodium	µg/l	-	-	-	45900	-	10800	22300	22900	24600	25800	31400	24600
Vanadium	µg/l	-	-	-	9.9	-	3.8	5.7	7.9	9	7.6	12.1	6.1
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,1-Trichloroethane	µg/l	200	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-Tetrachloroethane	µg/l	1.7	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	µg/l	3	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichlorotrifluoroethane	µg/l	-	-	-	< 1 U	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethene	µg/l	0.57	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloropropene	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,3-Trichlorobenzene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,3-Trichloropropane	µg/l	-	-	-	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromo-3-Chloropropane	µg/l	0.2	-	-	< 4 U	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2-Dibromoethane (EDB)	µg/l	0.004	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloroethane	µg/l	3.8	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloropropane	µg/l	5	-	-	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,3,5-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-Dichloropropane	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2,2-Dichloropropane	µg/l	-	-	-	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ-	< 1 U
2-Butanone (MEK)	µg/l	-	-	-	< 4 U	< 20	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
2-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
4-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
4-Methyl-2-pentanone (MIBK)	µg/l	-	-	-	< 4 U	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 UJ-
Acetone	µg/l	-	-	-	< 25 U	-	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
Allyl chloride	µg/l	-	-	-	< 4 U	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Benzene	µg/l	5	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromobenzene	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromochloromethane	µg/l	-	-	-	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	µg/l	5.5	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromomethane	µg/l	47	-	-	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Carbon Tetrachloride	µg/l	2.3	-	-	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	µg/l	100	-	-	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	µg/l	4	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroethane	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroform	µg/l	57	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloromethane	µg/l	30	-	-	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	µg/l	70	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,3-Dichloropropene	µg/l	3.4	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dibromomethane	µg/l	-	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dichlorodifluoromethane (CFC-12)	µg/l	1000	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dichlorofluoromethane	µg/l	-	-	-	< 1 U	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Diethyl ether (Ethyl ether)	µg/l	-	-	-	< 4 U	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 5 U	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Isopropylbenzene (Cumene)	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Methylene Chloride	µg/l	5	-	-	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 1 U	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
N-Butylbenzene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
N-Propylbenzene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
p-Isopropyltoluene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
sec-Butylbenzene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Styrene	µg/l	100	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tert-Butylbenzene	µg/l	-	-	-	< 0.5 U	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	µg/l	5	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrahydrofuran	µg/l	-	-	-	< 10 UJ	-	< 10 U	< 10 UJ-	< 10 UJ-	< 10 U	< 10 UJ-	< 10 U	< 10 UJ-
Toluene	µg/l	1000	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,2-Dichloroethene	µg/l	100	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,3-Dichloropropene	µg/l	2	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tribromomethane	µg/l	43	-	-	< 4 U	< 1	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Trichloroethene	µg/l	5	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Trichlorofluoromethane (CFC-11)	µg/l	10000	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl Chloride	µg/l	0.25	-	-	< 0.4 U	< 1	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
Semivolatile Organic Compounds													
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
1,2-Diphenylhydrazine	µg/l	0.36	-	-	< 10.3 U	-	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
1-Methylnaphthalene	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2,4,5-Trichlorophenol	µg/l	1800	-	-	< 51.5 U	< 10	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
2,4,6-Trichlorophenol	µg/l	14	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2,4-Dichlorophenol	µg/l	77	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2,4-Dimethylphenol	µg/l	380	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2,4-Dinitrophenol	µg/l	69	-	-	< 51.5 U	< 50	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
2,4-Dinitrotoluene	µg/l	1.1	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2,6-Dinitrotoluene	µg/l	0.5	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2-Chloronaphthalene	µg/l	1000	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2-Chlorophenol	µg/l	81	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2-Methylnaphthalene	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2-Methylphenol(o-Cresol)	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
2-Nitroaniline	µg/l	-	-	-	< 51.5 U	-	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
2-Nitrophenol	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
3&4-Methylphenol	µg/l	-	-	-	< 20.6 U	< 10	< 20.4 U	< 20.4 U	< 20.3 U	< 21.1 U	< 21.3 U	< 21.1 U	< 21.3 U
3,3'-Dichlorobenzidine	µg/l	0.21	-	-	< 20.6 U	< 10	< 20.4 U	< 20.4 U	< 20.3 U	< 21.1 U	< 21.3 U	< 21.1 U	< 21.3 U
3-Nitroaniline	µg/l	-	-	-	< 51.5 U	-	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
4,6-Dinitro-2-methylphenol	µg/l	13	-	-	< 51.5 U	< 50	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
4-Chloro-3-Methylphenol	µg/l	3000			< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
4-Chloroaniline	µg/l	-	-	-	< 51.5 U	-	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
4-Nitroaniline	µg/l	-	-	-	< 51.5 U	-	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
4-Nitrophenol	µg/l	60	-	-	< 51.5 U	< 50	< 51 U	< 51 U	< 50.8 U	< 52.6 U	< 53.2 U	< 52.6 U	< 53.2 U
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Bis(2-Chloroethyl)ether	µg/l	0.3	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
bis(2-Chloroisopropyl) ether	µg/l	1400	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Bis(2-Ethylhexyl)phthalate	µg/l	6	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Butylbenzylphthalate	µg/l	1500	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Carbazole	µg/l	-	-	-	< 10.3 U	-	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Dibenzofuran	µg/l	-	-	-	< 10.3 U	-	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Diethyl Phthalate	µg/l	17000	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Dimethyl Phthalate	µg/l	270000	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Di-N-Butyl Phthalate	µg/l	2000	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Di-n-Octyl Phthalate	µg/l	-	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Hexachlorobenzene	µg/l	0.0028	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Hexachlorocyclopentadiene	µg/l	40	-	-		< 10							
Hexachloroethane	µg/l	14	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Isophorone	µg/l	350	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Nitrobenzene	µg/l	17	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
N-Nitrosodimethylamine	µg/l	0.0069	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
N-Nitroso-di-n-propylamine	µg/l	0.05	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
N-nitrosodiphenylamine	µg/l	33	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Pentachlorophenol	µg/l	1	5.3	4	< 23.7 U	< 50	< 23.5 U	< 23.5 U	< 23.4 U	< 24.2 U	< 24.5 U	< 24.2 U	< 24.5 U
Phenol	µg/l	300	-	-	< 10.3 U	< 10	< 10.2 U	< 10.2 U	< 10.2 U	< 10.5 U	< 10.6 U	< 10.5 U	< 10.6 U
Polyaromatic Hydrocarbons													
Acenaphthene	µg/l	670	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Acenaphthylene	µg/l	-	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Anthracene	µg/l	8300	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Benzo(a)Anthracene	µg/l	0.038	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Benzo(a)Pyrene	µg/l	0.038	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Benzo(b)fluoranthene	µg/l	0.038	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Benzo(g,h,i)Perylene	µg/l	-	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Benzo(k)Fluoranthene	µg/l	0.038	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Chrysene	µg/l	0.038	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Dibenzo(a,h)Anthracene	µg/l	0.038	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Fluoranthene	µg/l	130	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Fluorene	µg/l	1100	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Indeno(1,2,3-cd)Pyrene	µg/l	0.038	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Naphthalene	µg/l	100	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Phenanthrene	µg/l	-	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
Pyrene	µg/l	830	-	-	< 0.041 U	-	< 0.041 U	< 0.041 U	< 0.041 U	< 0.043 U	< 0.041 U	< 0.044 U	< 0.041 U
MADEP EPH													
Total Extractable Hydrocarbons	µg/l	-	-	-	< 214 U	< 300	< 206 U	< 223 U	< 226 U	< 206 U	< 206 U	< 217 U	< 229 U
Volatile Petroleum Hydrocarbons													
Aliphatic (C05-C08), Adjusted	µg/l	-	-	-	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C05-C08).Unadjusted	µg/l	-	-	-	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12), Adjusted	µg/l	-	-	-	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12).Unadjusted	µg/l	-	-	-	< 20 U	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
C9-C10 Aromatics	µg/l	-	-	-	< 20 U	< 20	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 0.5	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 5 U	< 1	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Total Purgeable Hydrocarbons	µg/l	-	-	-	< 20 U	< 20	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 0.5	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
SM 2540D													
Total Suspended Solids	µg/l	-	-	-	129000	-	134000	154000	148000	200000	163000	220000	183000

5 Exceedences of SW DEQ-7 HHS SURFACE WATER are underlined
1 Exceedences of SW DEQ-7 AQUATIC ACUTE are boldfaced
45 Exceedences of SW DEQ-7 AQUATIC CHRONIC are shaded gray

- = Not Applicable or Available

Table 1b
Downstream Analytical Results
Silvertip Pipeline Incident
Laurel, Montana

				Location	G1	G2	G3	G3	H1	H2	H3
				Sample	TEMT0723SW702	TEMT0723SW701	TEMT0723SW803	TEMT0723SW804	GLMT0723SW802	GLMT0725SW701	GLMT0723SW801
				Collection Date	7/23/2011	7/23/2011	7/23/2011	7/23/2011	7/23/2011	7/25/2011	7/23/2011
Chemical	**Units**	**SW DEQ-7 HHS SURFACE**	**SW DEQ-7 AQUATIC ACUTE**	**SW DEQ-7 AQUATIC CHRONIC**							
Metals											
Mercury	µg/l	0.05	1.7	0.91	0.00561	0.027	0.016	0.0132	0.0377	0.00912	0.0291
Arsenic	µg/l	10	340	150	4.6	8.4	6.2	5.2	5.8	6.4	8.6
Barium	µg/l	1000			51.2	173	89.6	71.7	135	90.1	168
Cadmium	µg/l	5	0.52	0.097	< 0.08 U	0.16	< 0.08 U	< 0.08 U	0.2	< 0.08 U	0.16
Calcium	µg/l	-	-	-	30000	40800	33700	32900	46500	34600	41700
Chromium	µg/l	100	-	-	0.89	17.5	5.1 J	1.5 J	3	4.5	13.6
Lead	µg/l	15	13980	0.545	1.4	10.7	3.9	3.6	8.5	3.3 J+	10
Magnesium	µg/l	-	-	-	9230	15400	11200	10400	14900	12500	16400
Nickel	µg/l	100	145	16.1	2	17	6.1 J	3.6 J	10.4	6.3	16.4
Potassium	µg/l	-	-	-	2180	4670	2950 J	2280 J	2880	2800 J+	4190
Selenium	µg/l	50	20	5	< 0.5 U	1.4	0.75	0.62	1	0.55	1.3
Silver	µg/l	100	0.374	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Sodium	µg/l	-	-	-	24000	35300	26300	25800	38600	30600	36100
Vanadium	µg/l	-	-	-	3.4	26.4	9.9 J	4.9 J	9.7	8.6	22.3
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,1-Trichloroethane	µg/l	200	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-Tetrachloroethane	µg/l	1.7	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichloroethane	µg/l	3	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-Trichlorotrifluoroethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1,1-Dichloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloroethene	µg/l	0.57	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-Dichloropropene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,3-Trichlorobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,3-Trichloropropane	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromo-3-Chloropropane	µg/l	0.2	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,2-Dibromoethane (EDB)	µg/l	0.004	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloroethane	µg/l	3.8	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dichloropropane	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
1,3,5-Trimethylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-Dichloropropane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2,2-Dichloropropane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ-
2-Butanone (MEK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
2-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
4-Chlorotoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
4-Methyl-2-pentanone (MIBK)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Acetone	µg/l	-	-	-	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U	< 25 U
Allyl chloride	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromobenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromochloromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Bromodichloromethane	µg/l	5.5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Bromomethane	µg/l	47	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Carbon Tetrachloride	µg/l	2.3	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorobenzene	µg/l	100	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Chlorodibromomethane	µg/l	4	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloroform	µg/l	57	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Chloromethane	µg/l	30	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
cis-1,2-Dichloroethene	µg/l	70	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,3-Dichloropropene	µg/l	3.4	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dibromomethane	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dichlorodifluoromethane (CFC-12)	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Dichlorofluoromethane	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Diethyl ether (Ethyl ether)	µg/l	-	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
Isopropylbenzene (Cumene)	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Methylene Chloride	µg/l	5	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
N-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
N-Propylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
p-Isopropyltoluene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
sec-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Styrene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tert-Butylbenzene	µg/l	-	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrachloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tetrahydrofuran	µg/l	-	-	-	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,2-Dichloroethene	µg/l	100	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
trans-1,3-Dichloropropene	µg/l	2	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Tribromomethane	µg/l	43	-	-	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Trichloroethene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Trichlorofluoromethane (CFC-11)	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Vinyl Chloride	µg/l	0.25	-	-	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
Semivolatile Organic Compounds											
1,2,4-Trichlorobenzene	µg/l	35	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
1,2-Dichlorobenzene	µg/l	420	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
1,2-Diphenylhydrazine	µg/l	0.36	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
1,3-Dichlorobenzene	µg/l	320	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
1,4-Dichlorobenzene	µg/l	75	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
1-Methylnaphthalene	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2,4,5-Trichlorophenol	µg/l	1800	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
2,4,6-Trichlorophenol	µg/l	14	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2,4-Dichlorophenol	µg/l	77	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2,4-Dimethylphenol	µg/l	380	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2,4-Dinitrophenol	µg/l	69	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
2,4-Dinitrotoluene	µg/l	1.1	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2,6-Dinitrotoluene	µg/l	0.5	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2-Chloronaphthalene	µg/l	1000	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2-Chlorophenol	µg/l	81	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2-Methylnaphthalene	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2-Methylphenol(o-Cresol)	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
2-Nitroaniline	µg/l	-	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
2-Nitrophenol	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
3&4-Methylphenol	µg/l	-	-	-	< 20.7 U	< 20.7 U	< 20.2 U	< 21.6 U	< 20.4 U	< 20.6 U	< 20.1 U
3,3'-Dichlorobenzidine	µg/l	0.21	-	-	< 20.7 U	< 20.7 U	< 20.2 U	< 21.6 U	< 20.4 U	< 20.6 U	< 20.1 U
3-Nitroaniline	µg/l	-	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
4,6-Dinitro-2-methylphenol	µg/l	13	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
4-Bromophenyl Phenyl Ether	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
4-Chloro-3-Methylphenol	µg/l	3000			< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
4-Chloroaniline	µg/l	-	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
4-Chlorophenyl Phenyl Ether	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
4-Nitroaniline	µg/l	-	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
4-Nitrophenol	µg/l	60	-	-	< 51.8 U	< 51.8 U	< 50.5 U	< 54.1 U	< 51 U	< 51.5 U	< 50.3 U
Bis(2-Chloroethoxy)methane	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Bis(2-Chloroethyl)ether	µg/l	0.3	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
bis(2-Chloroisopropyl) ether	µg/l	1400	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Bis(2-Ethylhexyl)phthalate	µg/l	6	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Butylbenzylphthalate	µg/l	1500	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Carbazole	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Dibenzofuran	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Diethyl Phthalate	µg/l	17000	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Dimethyl Phthalate	µg/l	270000	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Di-N-Butyl Phthalate	µg/l	2000	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Di-n-Octyl Phthalate	µg/l	-	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Hexachloro-1,3-Butadiene	µg/l	4.4	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Hexachlorobenzene	µg/l	0.0028	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Hexachlorocyclopentadiene	µg/l	40	-	-							
Hexachloroethane	µg/l	14	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Isophorone	µg/l	350	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Nitrobenzene	µg/l	17	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
N-Nitrosodimethylamine	µg/l	0.0069	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
N-Nitroso-di-n-propylamine	µg/l	0.05	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
N-nitrosodiphenylamine	µg/l	33	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Pentachlorophenol	µg/l	1	5.3	4	< 23.8 U	< 23.8 U	< 23.2 U	< 24.9 U	< 23.5 U	< 23.7 U	< 23.1 U
Phenol	µg/l	300	-	-	< 10.4 U	< 10.4 U	< 10.1 U	< 10.8 U	< 10.2 U	< 10.3 U	< 10.1 U
Polyaromatic Hydrocarbons											
Acenaphthene	µg/l	670	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Acenaphthylene	µg/l	-	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Anthracene	µg/l	8300	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Benzo(a)Anthracene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Benzo(a)Pyrene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Benzo(b)fluoranthene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Benzo(g,h,i)Perylene	µg/l	-	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Benzo(k)Fluoranthene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Chrysene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Dibenzo(a,h)Anthracene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Fluoranthene	µg/l	130	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Fluorene	µg/l	1100	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Indeno(1,2,3-cd)Pyrene	µg/l	0.038	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Naphthalene	µg/l	100	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Phenanthrene	µg/l	-	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
Pyrene	µg/l	830	-	-	< 0.042 U	< 0.043 U	< 0.042 U	< 0.042 U	< 0.041 U	< 0.041 U	< 0.04 U
MADEP EPH											
Total Extractable Hydrocarbons	µg/l	-	-	-	< 225 U	< 234 U	< 218 U	< 211 U	< 219 U	< 228 U	< 233 U
Volatile Petroleum Hydrocarbons											
Aliphatic (C05-C08), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C05-C08).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12), Adjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Aliphatic (C09-C12).Unadjusted	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Benzene	µg/l	5	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
C9-C10 Aromatics	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Ethylbenzene	µg/l	530	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
m&p-Xylene	µg/l	-	-	-	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
Methyl-Tert-Butylether	µg/l	30	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Naphthalene	µg/l	100	-	-	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
o-Xylene	µg/l	10000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Toluene	µg/l	1000	-	-	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Total Purgeable Hydrocarbons	µg/l	-	-	-	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Xylenes, Total	µg/l	10000	-	-	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
SM 2540D											
Total Suspended Solids	µg/l	-	-	-	94500	540000	130000 J	206000 J	653000	275000	905000

5 Exceedences of SW DEQ-7 HHS SURFACE WATER are underlined
1 Exceedences of SW DEQ-7 AQUATIC ACUTE are boldfaced
45 Exceedences of SW DEQ-7 AQUATIC CHRONIC are shaded gray

- = Not Applicable or Available

Appendix A

Downstream Impacted Areas Surface Water Sampling Field and Laboratory Results

To: Tom Henson - ExxonMobil

Copy: Shannon Dunn – ARCADIS

Jesse Starr – ARCADIS

Re: Downstream Impacted Areas Surface Water Sampling Field and Laboratory Results

The attached tables present the field and laboratory results from surface water sampling conducted by CTEH and ARCADIS on July 23 through 25, 2011 in accordance with the Downstream Impacted Areas Surface Water Sampling Plan (ARCADIS 2011). Surface water field and laboratory data are managed in accordance with the Data Management Plan which is an appendix to the Quality Assurance Project Plan (CTEH, 2011) in CTEH's ExxonMobil project database. The data presented in the attached tables were queried from this database on August 31, 2011. Surface water field and laboratory data has been shared with Unified Command through EPA's SCRIBE database in accordance with the Data Management Plan (CTEH, 2011). Laboratory analytical results presented in these tables reflect data reported directly by the analytical laboratory (Pace Lab of Billings, Montana) and have not been validated by a third party data validator. These analytical results are therefore subject to change as determined through a third party data validation process which is currently in progress.

Tables:

Table 1a Affected Area Sample Information

Table 1b Background Sample Information

Table 2 QA/QC Sample Key

Table 3 Sample Analysis Matrix

Table 4a Field Water Quality Parameters – Affected Area Samples

Table 4b Field Water Quality Parameters – Background Samples

Table 5a Analytical Results Screened Against Surface Water Benchmark Values – Downstream Sample Locations

Table 5b Analytical Results Screened Against Surface Water Benchmark Values – Background Locations

Table 1a
Sample Information
Affected Area Samples

Location ID	Sample ID	Sample Date	Sample Time	Sample Location*	
				Latitude	Longitude
A04	LAMT0723SW505	7/23/2011	16:00	45.65328	-108.74270
A13	LAMT0724SW507	7/24/2011	13:50	45.65049	-108.71330
A18	LAMT0724SW510	7/24/2011	14:45	45.66181	-108.70353
A20	LAMT0724SW513	7/24/2011	15:30	45.66668	-108.69888
A23	LAMT0724SW516	7/24/2011	16:00	45.67436	-108.67692
A29	BIMT0725SW610	7/25/2011	13:00	45.68832	-108.64140
B12	BIMT0725SW607	7/25/2011	11:20	45.71384	-108.59851
B17	BIMT0725SW604	7/25/2011	10:40	45.72439	-108.57031
B28	BIMT0725SW613	7/25/2011	16:00	45.73830	-108.53480
B37	BIMT0725SW601	7/25/2011	09:00	45.75505	-108.48408
C17	HUMT0724SW501	7/25/2011	09:36	45.87188	-108.35465
C53	CUMT0725SW501	7/25/2011	14:15	45.99652	-108.00708
C78	CUMT0725SW504	7/25/2011	18:15	46.10801	-107.63756
D16	MYMT0724SW601	7/24/2011	10:30	46.25509	-107.34633
D27	HYMT0724SW601	7/24/2011	11:30	46.31330	-107.23918
D4	BIMT0723SW601	7/23/2011	17:23	46.17486	-107.44316
E1	FOMT0724SW601	7/24/2011	13:15	46.26340	-106.69529
E2	FOMT0724SW604	7/24/2011	14:00	46.27454	-106.67736
E3	RBMT0724SW701	7/24/2011	16:25	46.28208	-106.48678
F1	MCMT0724SW701	7/24/2011	10:15	46.42150	-105.85660
F2	CUMT0723SW703	7/23/2011	18:25	46.53279	-105.71289
F3	BLMT0725SW701	7/25/2011	15:45	46.63216	-105.56654
G1	TEMT0723SW702	7/23/2011	15:30	46.77990	-105.41000
G2	TEMT0723SW701	7/23/2011	12:30	46.80400	-105.29520
G3	TEMT0723SW803	7/23/2011	18:30	46.85643	-105.11479
G3	TEMT0723SW804	7/23/2011	18:30	46.85643	-105.11479
H1	GLMT0723SW802	7/23/2011	16:35	47.10572	-104.71859
H2	GLMT0725SW701	7/25/2011	12:50	47.10663	-104.71580
H3	GLMT0723SW801	7/23/2011	14:20	47.28096	-104.52660

* WGS84 Datum

Table 1b
Sample Information
Background Samples

Location ID	Sample ID	Sample Date	Sample Time	Sample Location*	
				Latitude	Longitude
CFBG01	LAMT0725SW601	7/25/2011	14:20	45.64792	-108.71707
CFBG01	LAMT0724SW504	7/24/2011	11:15	45.64792	-108.71707
CFBG01	LAMT0723SW503	7/23/2011	14:30	45.64792	-108.71707
YRBG01	LAMT0723SW504	7/23/2011	15:30	45.65380	-108.76015
YRBG01	LAMT0724SW501	7/24/2011	10:15	45.65380	-108.76015
YRBG01	LAMT0725SW604	7/25/2011	15:05	45.65380	-108.76015
YRBG02	LAMT0723SW601	7/23/2011	09:45	45.65393	-108.75832
YRBG02	LAMT0723SW602	7/23/2011	09:45	45.65393	-108.75832
YRBG03	LAMT0723SW502	7/23/2011	12:00	45.65236	-108.76092
YRBG04	LAMT0723SW501	7/23/2011	09:50	45.65017	-108.76978

* WGS84 Datum

Table 2
QA/QC Sample Key

Location ID	Sample ID	Sample Date	Sample Time	Duplicate	MS	MSD	Hg Blank	Trip Blank
D4	BIMT0723SW601	23-Jul-11	1723		BIMT0723SW601MS	BIMT0723SW601MSD	BIMT0723601, BIMT072302, BIMT0723603	723603, 723604, 723605
B37	BIMT0725SW601	25-Jul-11	900				BIMT0725SW602	BIMT0725SW603
B17	BIMT0725SW604	25-Jul-11	1040				BIMT0725SW605	BIMT0725SW606
B12	BIMT0725SW607	25-Jul-11	1120				BIMT0725SW608	BIMT0725SW609
A29	BIMT0725SW610	25-Jul-11	1300				BIMT0725SW611	BIMT0725SW612
B28	BIMT0725SW613	25-Jul-11	1600				BIMT0725SW614	BIMT0725SW615
F3	BLMT0725SW701	25-Jul-11	1545				BLMT0725SW703	BLMT0725SW702
F2	CUMT0723SW703	23-Jul-11	1825				CUMT0723703	723702
C53	CUMT0725SW501	25-Jul-11	1415				CUMT0725SW502	CUMT0725SW503
C78	CUMT0725SW504	25-Jul-11	1815				CUMT0725SW505	CUMT0725SW506
E1	FOMT0724SW601	24-Jul-11	1315				FOMT0724SW602	FOMT0724SW603
E2	FOMT0724SW604	24-Jul-11	1400				FOMT0724SW605	FOMT0724SW606
H3	GLMT0723SW801	23-Jul-11	1420				GLMT0723801	723801
H1	GLMT0723SW802	23-Jul-11	1635				GLMT0723802	723802
H2	GLMT0725SW701	25-Jul-11	1250				GLMT0725SW703	GLMT0725SW702
C17	HUMT0724SW501	25-Jul-11	936				HUMT0724SW502	HUMT0724SW503
D27	HYMT0724SW601	24-Jul-11	1130				HYMT0724SW602	HYMT0724SW603
YRBG04	LAMT0723SW501	23-Jul-11	950				LAMT0723501	723501
YRBG03	LAMT0723SW502	23-Jul-11	1200				LAMT0723502	723502
CFBG01	LAMT0723SW503	23-Jul-11	1430				LAMT0723503	723503
YRBG01	LAMT0723SW504	23-Jul-11	1530				LAMT0723504	723504
A04	LAMT0723SW505	23-Jul-11	1600				LAMT0723505	723505
YRBG02	LAMT0723SW601	23-Jul-11	945	LAMT0723SW602			LAMT0723601, LAMT0723602	723601, 723602
YRBG01	LAMT0724SW501	24-Jul-11	1015				LAMT0724SW502	LAMT0724SW503
CFBG01	LAMT0724SW504	24-Jul-11	1145				LAMT0724SW505	LAMT0724SW506
A13	LAMT0724SW507	24-Jul-11	1350				LAMT0724SW508	LAMT0724SW509
A18	LAMT0724SW510	24-Jul-11	1445				LAMT0724SW511	LAMT0724SW512
A20	LAMT0724SW513	24-Jul-11	1530				LAMT0724SW514	LAMT0724SW515
A23	LAMT0724SW516	24-Jul-11	1600				LAMT0724SW517	LAMT0724SW518
CFBG01	LAMT0725SW601	25-Jul-11	1420				LAMT0725SW602	LAMT0725SW603
YRBG01	LAMT0725SW604	25-Jul-11	930				LAMT0725SW605	LAMT0725SW606
F1	MCMT0724SW701	24-Jul-11	1015		MCMT0724SW701MS	MCMT0724SW701MSD	MCMT0724SW702, MCMT0724SW704, MCMT0724SW706	MCMT0724SW703, MCMT0724SW705, MCMT0724SW707
D16	MYMT0724SW601	24-Jul-11	1030				MYMT0724SW602	MYMT0724SW603
E3	RBMT0724SW701	24-Jul-11	1625				RBMT0724SW702	RBMT0724SW703
G2	TEMT0723SW701	23-Jul-11	1230				TEMT0723701	723701
G1	TEMT0723SW702	23-Jul-11	1530				TEMT0723702	723702
G3	TEMT0723SW803	23-Jul-11	1830	TEMT0723SW804			TEMT0723803, TEMT0723804	723803, 723804

Table 3
Sample Analysis Matrix

Location ID	Sample ID	Sample Date/Time	Sample Type	Analysis							
				VOCs (8260)	SVOCs (8270)	PAHs (8270 SIM)	EPH	VPH	Hg (1631)	Metals	TSS
	0723501 (Trip Blank)	072311/0950	Trip blank	X				X			
	0723502 (Trip Blank)	072311/1200	Trip blank	X				X			
	0723503 (Trip Blank)	072311/1430	Trip blank	X				X			
	0723504 (Trip Blank)	072311/1530	Trip blank	X				X			
	0723505 (Trip Blank)	072311/1600	Trip blank	X				X			
	0723601 (Trip Blank)	072311/0945	Trip blank	X				X			
	0723602 (Trip Blank)	072311/0945	Trip blank	X				X			
	0723603 (Trip Blank)	072311/1723	Trip blank	X				X			
	0723604 (Trip Blank)	072311/1723	Trip blank	X				X			
	0723605 (Trip Blank)	072311/1725	Trip blank	X				X			
	0723701 (Trip Blank)	072311/1230	Trip blank	X				X			
	0723702 (Trip Blank)	072311/1530	Trip blank	X				X			
	0723702 (Trip Blank)	072311/1825	Trip blank	X				X			
	0723801 (Trip Blank)	072311/1420	Trip blank	X				X			
	0723803 (Trip Blank)	072311/1830	Trip blank					X			
	0723804 (Trip Blank)	072311/1830	Trip blank					X			
	BIMT0723601	072311/1723	Hg blank						X		
	BIMT0723602	072311/1723	Hg blank						X		
	BIMT0723603	072311/1723	Hg blank						X		
D4	BIMT0723SW601	072311/1723	Field Sample	X	X	X	X	X	X	X	X
	BIMT0723SW601MS	072311/1723	MS	X	X	X	X	X	X	X	X
	BIMT0723SW601MSD	072311/1723	MSD	X	X	X	X	X	X	X	X
B37	BIMT0725SW601	072511/0900	Field Sample	X	X	X	X	X	X	X	X
	BIMT0725SW602	072511/0900	Hg blank						X		
	BIMT0725SW603	072511/0900	Trip blank	X				X			

Table 3
Sample Analysis Matrix

Location ID	Sample ID	Sample Date/Time	Sample Type	Analysis							
				VOCs (8260)	SVOCs (8270)	PAHs (8270 SIM)	EPH	VPH	Hg (1631)	Metals	TSS
B17	BIMT0725SW604	072511/1040	Field Sample	X	X	X	X	X	X	X	X
	BIMT0725SW605	072511/1040	Hg blank						X		
	BIMT0725SW606	072511/1040	Trip blank	X				X			
B12	BIMT0725SW607	072511/1120	Field Sample	X	X	X	X	X	X	X	X
	BIMT0725SW608	072511/1120	Hg blank						X		
	BIMT0725SW609	072511/1120	Trip blank	X				X			
A29	BIMT0725SW610	072511/1300	Field Sample	X	X	X	X	X		X	X
	BIMT0725SW611	072511/1300	Hg blank						X		
	BIMT0725SW612	072511/1300	Trip blank	X				X			
B28	BIMT0725SW613	072511/1600	Field Sample	X	X	X	X	X		X	X
	BIMT0725SW614	072511/1600	Hg blank						X		
	BIMT0725SW615	072511/1600	Trip blank	X				X			
F3	BLMT0725SW701	072511/1545	Field Sample	X	X	X	X	X	X	X	X
	BLMT0725SW702	072511/1545	Trip blank	X				X			
	BLMT0725SW703	072511/1545	Hg blank						X		
	CUMT0723703	072311/1825	Hg blank						X		
F2	CUMT0723SW703	072311/1825	Field Sample	X	X	X	X	X	X	X	X
C78	CUMT0725SW504	072511/1815	Field Sample	X	X	X	X	X	X	X	X
	CUMT0725SW505	072511/1815	Hg blank						X		
	CUMT0725SW506	072511/1815	Trip blank					X			
E1	FOMT0724SW601	072411/1315	Field Sample	X	X	X	X	X	X	X	X
	FOMT0724SW602	072411/1315	Hg blank						X		
	FOMT0724SW603	072411/1315	Trip blank	X				X			
E2	FOMT0724SW604	072411/1400	Field Sample	X	X	X	X	X	X	X	X
	FOMT0724SW605	072411/1400	Hg blank						X		

Table 3
Sample Analysis Matrix

Location ID	Sample ID	Sample Date/Time	Sample Type	Analysis							
				VOCs (8260)	SVOCs (8270)	PAHs (8270 SIM)	EPH	VPH	Hg (1631)	Metals	TSS
	FOMT0724SW606	072411/1400	Trip blank	X				X			
	GLMT0723801	072311/1420	Hg blank						X		
H3	GLMT0723SW801	072311/1420	Field Sample	X	X	X	X	X	X	X	X
H2	GLMT0725SW701	072511/1250	Field Sample	X	X	X	X	X	X	X	X
	GLMT0725SW702	072511/1250	Trip blank	X				X			
	GLMT0725SW703	072511/1250	Hg Blank						X		
C17	HUMT0724SW501	072511/0930	Field Sample	X	X	X	X	X	X	X	X
	HUMT0724SW502	072511/0930	Hg blank						X		
	HUMT0724SW503	072511/0930	Trip blank	X				X			
	LAMT0723501	072311/0950	Hg blank						X		
	LAMT0723502	072311/1200	Hg blank						X		
	LAMT0723503	072311/1430	Hg Blank						X		
	LAMT0723504	072311/1530	Hg blank						X		
	LAMT0723505	072311/1600	Hg blank						X		
	LAMT0723601	072311/0945	Hg blank						X		
	LAMT0723602	072311/0945	Hg blank						X		
YRBG04	LAMT0723SW501	072311/0950	Field Sample	X	X	X	X	X	X	X	X
YRBG03	LAMT0723SW502	072311/1200	Field Sample	X	X	X	X	X	X	X	X
CFBG01	LAMT0723SW503	072311/1430	Field Sample	X	X	X	X	X	X	X	X
YRBG01	LAMT0723SW504	072311/1530	Field Sample	X	X	X	X	X	X	X	X
A04	LAMT0723SW505	072311/1600	Field Sample	X	X	X	X	X	X	X	X
YRBG02	LAMT0723SW601	072311/0945	Field Sample	X	X	X	X	X	X	X	X
YRBG02	LAMT0723SW602	072311/0945	Field Duplicate	X	X	X	X	X	X	X	X
YRBG01	LAMT0724SW501	072411/1015	Field Sample	X	X	X	X	X	X	X	X
	LAMT0724SW502	072411/1015	Hg blank						X		

Table 3
Sample Analysis Matrix

Location ID	Sample ID	Sample Date/Time	Sample Type	Analysis							
				VOCs (8260)	SVOCs (8270)	PAHs (8270 SIM)	EPH	VPH	Hg (1631)	Metals	TSS
	LAMT0724SW503	072411/1015	Trip blank	X				X			
CFBG01	LAMT0724SW504	072411/1145	Field Sample	X	X	X	X	X	X	X	X
	LAMT0724SW505	072411/1145	Hg blank						X		
	LAMT0724SW506	072411/1145	Trip blank	X				X			
A13	LAMT0724SW507	072411/1350	Field Sample	X	X	X	X	X	X	X	X
	LAMT0724SW508	072411/1350	Hg blank						X		
	LAMT0724SW509	072411/1350	Trip blank	X				X			
A18	LAMT0724SW510	072411/1445	Field Sample	X	X	X	X	X	X	X	X
	LAMT0724SW511	072411/1445	Hg blank						X		
	LAMT0724SW512	072411/1445	Trip blank					X			
A20	LAMT0724SW513	072411/1530	Field Sample	X	X	X	X	X	X	X	
	LAMT0724SW514	072411/1530	Hg blank						X		
	LAMT0724SW515	072411/1530	Trip blank	X				X			
A23	LAMT0724SW516	072411/1600	Field Sample	X	X	X	X	X	X	X	X
	LAMT0724SW517	072411/1600	Hg blank						X		
	LAMT0724SW518	072411/1600	Trip blank	X				X			
	LAMT0724SWBKG201	072411/1355	Field Sample	X		X	X	X			
	LAMT0724SWBKG202	072411/1355	Trip blank	X							
CFBG01	LAMT0725SW601	072511/1420	Field Sample	X	X	X	X	X	X	X	X
	LAMT0725SW602	072511/1420	Hg blank						X		
	LAMT0725SW603	072511/1420	Trip blank	X				X			
YRBG-01	LAMT0725SW604	072511/0930	Field Sample	X	X	X	X	X	X	X	X
	LAMT0725SW605	072511/0930	Hg blank						X		
	LAMT0725SW606	072511/0930	Trip blank	X				X			
F1	MCMT0724SW701	072411/1015	Field Sample	X	X	X	X	X	X	X	X

Table 3
Sample Analysis Matrix

Location ID	Sample ID	Sample Date/Time	Sample Type	Analysis							
				VOCs (8260)	SVOCs (8270)	PAHs (8270 SIM)	EPH	VPH	Hg (1631)	Metals	TSS
F1	MCMT0724SW701	072411/1017	Field Sample	X	X	X	X	X	X	X	X
	MCMT0724SW701MS	072411/1015	MS	X	X	X	X	X	X	X	X
	D	072411/1015	MSD	X	X	X	X	X	X	X	X
	MCMT0724SW702	072411/1015	Hg blank						X		
	MCMT0724SW702	072411/1017	Hg blank						X		
	MCMT0724SW703	072411/1015	Trip blank	X				X			
	MCMT0724SW703	072411/1017	Trip blank	X				X			
	MCMT0724SW704	072411/1015	Hg blank						X		
	MCMT0724SW705	072411/1015	Trip blank	X				X			
	MCMT0724SW706	072411/1015	Hg blank						X		
	MCMT0724SW707	072411/1015	Trip blank	X				X			
E3	RBMT0724SW701	072411/1625	Field Sample	X	X	X	X	X	X	X	X
	RBMT0724SW702	072411/1625	Hg blank						X		
	RBMT0724SW703	072411/1625	Trip blank	X				X			
G3	TEMT0223SW803	072311/1830	Field Sample	X	X	X	X	X	X	X	X
	TEMT0723701	072311/1230	Hg blank						X		
	TEMT0723702	072311/1530	Hg blank						X		
	TEMT0723803	072311/1830	Hg blank						X		
	TEMT0723804	072311/1830	Hg blank						X		
G2	TEMT0723SW701	072311/1230	Field Sample	X	X	X	X	X	X	X	X
G1	TEMT0723SW702	072311/1530	Field Sample	X	X	X	X	X	X	X	X
G3	TEMT0723SW804	072311/1830	Field Duplicate	X	X	X	X	X	X	X	X

Table 4a
Field Parameters
Affected Area Samples

	Sample ID	LAMT0723SW505	LAMT0724SW507	LAMT0724SW510	LAMT0724SW513	LAMT0724SW516
	Location ID	A04	A13	A18	A20	A23
	Sample Date	7/23/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011
Field Parameters						
pH	Std	6.63	6.53	6.73	7.26	7.13
Conductivity	µS/cm	675.5	678.2	677.9	677.4	678.8
Turbidity	NTU	65.7	62.7	54.3	54.7	67.8
Temperature	^{o}C	19.6	21.5	22.5	21.0	21.6
Dissolved Oxygen	%	68.6	54.6	51.7	53.6	54.9

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 4a
Field Parameters
Affected Area Samples

	Sample ID	BIMT0725SW610	BIMT0725SW607	BIMT0725SW604	BIMT0725SW613	BIMT0725SW601
	Location ID	A29	B12	B17	B28	B37
	Sample Date	7/25/2011	7/25/2011	7/25/2011	7/25/2011	7/25/2011
Field Parameters						
pH	Std	7.96	8.02	7.82	8.15	7.70
Conductivity	µS/cm	152.0	123.0	128.0	133.0	138.0
Turbidity	NTU	45.4	45.9	50.9	40.6	47.1
Temperature	^{o}C	18.3	18.0	17.6	19.3	17.7
Dissolved Oxygen	%	84.5	84.6	83.8	85.2	81.2

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 4a
Field Parameters
Affected Area Samples

	Sample ID	HUMT0724SW501	CUMT0725SW501	CUMT0725SW504	MYMT0724SW601	HYMT0724SW601
	Location ID	C17	C53	C78	D16	D27
	Sample Date	7/25/2011	7/25/2011	7/25/2011	7/24/2011	7/24/2011
Field Parameters						
pH	Std	7.13	NA	8.05	8.08	8.20
Conductivity	µS/cm	680.6	NA	681.1	255.0	248.0
Turbidity	NTU	58.3	NA	78.5	70.7	83.8
Temperature	^{o}C	18.9	NA	24.7	19.0	19.3
Dissolved Oxygen	%	20.4	NA	12.2	80.5	80.8

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 4a
Field Parameters
Affected Area Samples

	Sample ID	BIMT0723SW601	FOMT0724SW601	FOMT0724SW604	RBMT0724SW701	MCMT0724SW701
	Location ID	D4	E1	E2	E3	F1
	Sample Date	7/23/2011	7/24/2011	7/24/2011	7/24/2011	7/24/2011
Field Parameters						
pH	Std	8.10	8.04	8.28	6.91	6.90
Conductivity	µS/cm	7750.0	249.0	248.0	316.5	356.1
Turbidity	NTU	85.6	86.4	200.0	123.0	105.0
Temperature	^{o}C	19.8	20.4	20.4	21.2	20.9
Dissolved Oxygen	%	84.5	81.0	84.5	72.1	71.6

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 4a
Field Parameters
Affected Area Samples

	Sample ID	CUMT0723SW703	BLMT0725SW701	TEMT0723SW702	TEMT0723SW701	TEMT0723SW803
	Location ID	F2	F3	G1	G2	G3
	Sample Date	7/23/2011	7/25/2011	7/23/2011	7/23/2011	7/23/2011
Field Parameters						
pH	Std	6.79	6.58	6.85	7.00	7.98
Conductivity	µS/cm	347.2	385.7	294.2	376.4	335.8
Turbidity	NTU	140.0	103.0	107.0	608.0	200.0
Temperature	^{o}C	21.6	22.7	26.2	21.3	24.2
Dissolved Oxygen	%	67.9	77.4	62.1	62.7	52.9

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 4a
Field Parameters
Affected Area Samples

	Sample ID	TEMT0723SW804	GLMT0723SW802	GLMT0725SW701	GLMT0723SW801
	Location ID	G3	H1	H2	H3
	Sample Date	7/23/2011	7/23/2011	7/25/2011	7/23/2011
Field Parameters					
pH	Std	7.98	6.48	6.59	6.67
Conductivity	µS/cm	335.8	707.1	385.7	381.9
Turbidity	NTU	200.0	969.0	158.0	745.0
Temperature	^{o}C	24.2	23.0	22.9	23.7
Dissolved Oxygen	%	52.9	52.8	77.4	58.8

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 4b
Field Parameters
Background Samples

	Sample ID	LAMT0723SW503	LAMT0724SW504	LAMT0725SW601	LAMT0723SW504	LAMT0724SW501
	Location ID	CFBG01	CFBG01	CFBG01	YRBG01	YRBG01
	Sample Date	7/23/2011	7/24/2011	7/25/2011	7/23/2011	7/24/2011
Field Parameters						
pH	Std	5.98	6.23	8.05	6.62	5.88
Conductivity	µS/cm	676.6	679.1	160.0	675.5	679.2
Turbidity	NTU	73.7	58.9	49.2	48.8	67.0
Temperature	^{o}C	17.7	19.8	19.0	21.2	18.2
Dissolved Oxygen	%	91.7	58.9	86.2	70.3	67.4

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 4b
Field Parameters
Background Samples

	Sample ID	LAMT0725SW604	LAMT0723SW601	LAMT0723SW602	LAMT0723SW502	LAMT0723SW501
	Location ID	YRBG01	YRBG02	YRBG02	YRBG03	YRBG04
	Sample Date	7/25/2011	7/23/2011	7/23/2011	7/23/2011	7/23/2011
Field Parameters						
pH	Std	8.17	8.18	8.15	7.59	7.37
Conductivity	µS/cm	115.0	7980.0	7990.0	570.0	440.0
Turbidity	NTU	37.3	39.2	40.4	94.8	56.3
Temperature	^{o}C	19.0	15.8	15.5	10.4	10.0
Dissolved Oxygen	%	84.6	80.2	79.9	NA	87.4

Notes:
^{o}C - degrees Centigrade
Std - Standard Units
NTU - Nephelometric Turbidity Units
mg/L - miligrams per liter
µS/cm - microSiemens per centimeter
NA - Not Available

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	LAMT0723SW505 A04 7/23/2011	LAMT0724SW507 A13 7/24/2011	LAMT0724SW510 A18 7/24/2011	LAMT0724SW513 A20 7/24/2011	LAMT0724SW516 A23 7/24/2011	BIMT0725SW610 A29 7/25/2011	BIMT0725SW607 B12 7/25/2011	BIMT0725SW604 B17 7/25/2011
Total Suspended Solids										
Total Suspended Solids	mg/L	NA	95	134	121	96.3	129	105	70.6	72.2
Metals										
Mercury	µg/L	0.05	0.00911	0.00401	0.00435	0.00415	0.00639	NA	0.0051	0.00655
Arsenic	µg/L	10	**10.4**	0.7	3.4	3.8	5.2	7	**16.3**	**16.2**
Barium	µg/L	1000	52.4	50.8	57.6	55.7	57.6	45.5	76.5	97.7
Cadmium	µg/L	5	0.08U	0.08U	0.08U	0.08U	0.08U	0.08U	0.16U	0.16U
Chromium	µg/L	100	3.1	2.1	2	2.8	3.1	1.7	2.1	2.9
Lead	µg/L	15	1.6	1.6	2.3	1.8	1.9	1.4	1.9	2.9
Nickel	µg/L	100	3.8	3.6	4.8	4.1	4.2	2.9	3.6	5.2
Selenium	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U
Silver	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U
Vanadium	µg/L	NA	4.9	5.8	5.7	6	6.2	3.7	4.5	6.4
Volatile Organic Compounds										
1,1,1,2-Tetrachloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	µg/L	200	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	µg/L	1.7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	µg/L	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
1,1-Dichloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloroethene	µg/L	0.57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloropropene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichlorobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichloropropane	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
1,2,4-Trichlorobenzene	µg/L	35	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dibromo-3-chloropropane	µg/L	0.2	4U	4U	4U	4U	4U	4U	4U	4U
1,2-Dibromoethane (EDB)	µg/L	0.004	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene	µg/L	420	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloroethane	µg/L	3.8	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
1,3,5-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	µg/L	320	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichloropropane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,4-Dichlorobenzene	µg/L	75	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,2-Dichloropropane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (MEK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
2-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Acetone	µg/L	NA	25U	25U	25U	25U	25U	25U	25U	25U
Allyl chloride	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromochloromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Bromodichloromethane	µg/L	5.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	µg/L	43	4U	4U	4U	4U	4U	4U	4U	4U
Bromomethane	µg/L	47	1U	1U	1U	1U	1U	1U	1U	1U
Carbon tetrachloride	µg/L	2.3	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
Chloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	µg/L	57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane	µg/L	30	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	µg/L	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	µg/L	3.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromochloromethane	µg/L	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromomethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorofluoromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Diethyl ether (Ethyl ether)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachloro-1,3-butadiene	µg/L	4.4	5U	5U	5U	5U	5U	5U	5U	5U
Isopropylbenzene (Cumene)	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methylene Chloride	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
n-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
n-Propylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Isopropyltoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
sec-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Styrene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
tert-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrachloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrahydrofuran	µg/L	NA	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	µg/L	2	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride	µg/L	0.25	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U
Polyaromatic Hydrocarbons										
Acenaphthene	µg/L	670	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Acenaphthylene	µg/L	NA	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Anthracene	µg/L	8300	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Benzo(a)anthracene	µg/L	0.038	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Benzo(a)pyrene	µg/L	0.038	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Benzo(b)fluoranthene	µg/L	0.038	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Benzo(g,h,i)perylene	µg/L	NA	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Benzo(k)fluoranthene	µg/L	0.038	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Chrysene	µg/L	0.038	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Dibenz(a,h)anthracene	µg/L	0.038	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Fluoranthene	µg/L	130	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Fluorene	µg/L	1100	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Naphthalene	µg/L	100	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Phenanthrene	µg/L	NA	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U
Pyrene	µg/L	830	0.041U	0.042U	0.044U	0.043U	0.042U	0.041U	0.042U	0.041U

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	LAMT0723SW505 A04 7/23/2011	LAMT0724SW507 A13 7/24/2011	LAMT0724SW510 A18 7/24/2011	LAMT0724SW513 A20 7/24/2011	LAMT0724SW516 A23 7/24/2011	BIMT0725SW610 A29 7/25/2011	BIMT0725SW607 B12 7/25/2011	BIMT0725SW604 B17 7/25/2011
Semi-Volatile Organic Compounds										
1,2,4-Trichlorobenzene	µg/L	35	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
1,2-Dichlorobenzene	µg/L	420	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
1,2-Diphenylhydrazine	µg/L	0.36	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
1,3-Dichlorobenzene	µg/L	320	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
1,4-Dichlorobenzene	µg/L	75	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
1-Methylnaphthalene	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2,4,5-Trichlorophenol	µg/L	1800	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
2,4,6-Trichlorophenol	µg/L	14	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2,4-Dichlorophenol	µg/L	77	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2,4-Dimethylphenol	µg/L	380	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2,4-Dinitrophenol	µg/L	69	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
2,4-Dinitrotoluene	µg/L	1.1	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2,6-Dinitrotoluene	µg/L	0.5	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2-Chloronaphthalene	µg/L	1000	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2-Chlorophenol	µg/L	81	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2-Methylnaphthalene	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2-Methylphenol(o-Cresol)	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
2-Nitroaniline	µg/L	NA	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
2-Nitrophenol	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
3&4-Methylphenol	µg/L	NA	20.6U	20.6U	20.4U	21.1U	20.6U	20.5U	20.5U	20.4U
3,3'-Dichlorobenzidine	µg/L	0.21	20.6U	20.6U	20.4U	21.1U	20.6U	20.5U	20.5U	20.4U
3-Nitroaniline	µg/L	NA	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
4,6-Dinitro-2-methylphenol	µg/L	13	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
4-Bromophenylphenyl ether	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
4-Chloro-3-methylphenol	µg/L	3000	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
4-Chloroaniline	µg/L	NA	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
4-Chlorophenylphenyl ether	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
4-Nitroaniline	µg/L	NA	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
4-Nitrophenol	µg/L	60	51.5U	51.5U	51U	52.6U	51.5U	51.3U	51.3U	51U
Acenaphthene	µg/L	670	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Acenaphthylene	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Anthracene	µg/L	8300	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Benzo(a)anthracene	µg/L	0.038	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Benzo(a)pyrene	µg/L	0.038	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Benzo(b)fluoranthene	µg/L	0.038	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Benzo(g,h,i)perylene	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Benzo(k)fluoranthene	µg/L	0.038	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
bis(2-Chloroethoxy)methane	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
bis(2-Chloroethyl) ether	µg/L	0.3	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
bis(2-Chloroisopropyl) ether	µg/L	1400	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
bis(2-Ethylhexyl)phthalate	µg/L	6	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Butylbenzylphthalate	µg/L	1500	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Carbazole	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Chrysene	µg/L	0.038	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Dibenz(a,h)anthracene	µg/L	0.038	20.6U	20.6U	20.4U	21.1U	20.6U	20.5U	20.5U	20.4U
Dibenzofuran	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Diethylphthalate	µg/L	17000	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Dimethylphthalate	µg/L	270000	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Di-n-butylphthalate	µg/L	2000	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Di-n-octylphthalate	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Fluoranthene	µg/L	130	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Fluorene	µg/L	1100	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Hexachloro-1,3-butadiene	µg/L	4.4	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Hexachlorobenzene	µg/L	0.0028	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Hexachloroethane	µg/L	14	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Isophorone	µg/L	350	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Naphthalene	µg/L	100	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Nitrobenzene	µg/L	17	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
N-Nitrosodimethylamine	µg/L	0.0069	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
N-Nitroso-di-n-propylamine	µg/L	0.05	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
N-Nitrosodiphenylamine	µg/L	33	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Pentachlorophenol	µg/L	1	23.7U	23.7U	23.5U	24.2U	23.7U	23.6U	23.6U	23.5U
Phenanthrene	µg/L	NA	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Phenol	µg/L	300	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Pyrene	µg/L	830	10.3U	10.3U	10.2U	10.5U	10.3U	10.3U	10.3U	10.2U
Extractable Petroleum Hydrocarbons										
Total Extractable Hydrocarbons	µg/L	1000	211U	237U	232U	215U	210U	206U	205U	216U
Volatile Petroleum Hydrocarbons										
Aliphatic (C05-C08), Adjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C05-C08).Unadjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12), Adjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12).Unadjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aromatic (C09-C10)	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	5U	5U	5U	5U	5U	5U	5U	5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Total Purgeable Hydro Carbons	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U

NA - Not Available/Not Analyzed
Not Detected
Detected
Detected Above Screening Level

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	BIMT0725SW613 B28 7/25/2011	BIMT0725SW601 B37 7/25/2011	HUMT0724SW501 C17 7/25/2011	CUMT0725SW501 C53 7/25/2011	CUMT0725SW504 C78 7/25/2011	BIMT0723SW601 D4 7/23/2011	MYMT0724SW601 D16 7/24/2011	HYMT0724SW601 D27 7/24/2011
Total Suspended Solids										
Total Suspended Solids	mg/L	NA	99.7	91.6	105	127	149	134	140	129
Metals										
Mercury	µg/L	0.05	NA	0.00635	0.00617	0.00606	0.00791	0.00682	0.00702	0.0068
Arsenic	µg/L	10	8.5	**15.5**	8.3	8.3	8.4	7.3	7.2	**13.5**
Barium	µg/L	1000	43.6	77.2	50.4	54.9	60.8	45.8	82.9	129
Cadmium	µg/L	5	0.08U	0.16U	0.08U	0.08U	0.08U	0.08U	0.08U	0.16U
Chromium	µg/L	100	1.7	2.6	2.2	2.4	2.5	1.2	4.1	4.9
Lead	µg/L	15	1.2	1.8	1.6	1.9	3.3	1.9	4.6	4
Nickel	µg/L	100	2.6	3.8	3.4	3.8	4	2.4	5.8	8
Selenium	µg/L	5	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.74	1.4
Silver	µg/L	100	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U
Vanadium	µg/L	NA	3.5	4.7	4.3	5	5.3	3.8	8.4	9.9
Volatile Organic Compounds										
1,1,1,2-Tetrachloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	µg/L	200	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	µg/L	1.7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	µg/L	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
1,1-Dichloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloroethene	µg/L	0.57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloropropene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichlorobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichloropropane	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
1,2,4-Trichlorobenzene	µg/L	35	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dibromo-3-chloropropane	µg/L	0.2	4U	4U	4U	4U	4U	4U	4U	4U
1,2-Dibromoethane (EDB)	µg/L	0.004	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene	µg/L	420	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloroethane	µg/L	3.8	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
1,3,5-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	µg/L	320	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichloropropane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,4-Dichlorobenzene	µg/L	75	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,2-Dichloropropane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (MEK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
2-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Acetone	µg/L	NA	25U	25U	25U	25U	25U	25U	25U	25U
Allyl chloride	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromochloromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Bromodichloromethane	µg/L	5.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	µg/L	43	4U	4U	4U	4U	4U	4U	4U	4U
Bromomethane	µg/L	47	1U	1U	1U	1U	1U	1U	1U	1U
Carbon tetrachloride	µg/L	2.3	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
Chloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	µg/L	57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane	µg/L	30	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	µg/L	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	µg/L	3.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromochloromethane	µg/L	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromomethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorofluoromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Diethyl ether (Ethyl ether)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachloro-1,3-butadiene	µg/L	4.4	5U	5U	5U	5U	5U	5U	5U	5U
Isopropylbenzene (Cumene)	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methylene Chloride	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
n-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
n-Propylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Isopropyltoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
sec-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Styrene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
tert-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrachloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrahydrofuran	µg/L	NA	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	µg/L	2	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride	µg/L	0.25	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U
Polyaromatic Hydrocarbons										
Acenaphthene	µg/L	670	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Acenaphthylene	µg/L	NA	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Anthracene	µg/L	8300	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Benzo(a)anthracene	µg/L	0.038	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Benzo(a)pyrene	µg/L	0.038	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Benzo(b)fluoranthene	µg/L	0.038	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Benzo(g,h,i)perylene	µg/L	NA	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Benzo(k)fluoranthene	µg/L	0.038	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Chrysene	µg/L	0.038	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Dibenz(a,h)anthracene	µg/L	0.038	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Fluoranthene	µg/L	130	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Fluorene	µg/L	1100	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Naphthalene	µg/L	100	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Phenanthrene	µg/L	NA	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U
Pyrene	µg/L	830	0.042U	0.042U	0.042U	0.041U	0.045U	0.041U	0.041U	0.041U

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	BIMT0725SW613 B28 7/25/2011	BIMT0725SW601 B37 7/25/2011	HUMT0724SW501 C17 7/25/2011	CUMT0725SW501 C53 7/25/2011	CUMT0725SW504 C78 7/25/2011	BIMT0723SW601 D4 7/23/2011	MYMT0724SW601 D16 7/24/2011	HYMT0724SW601 D27 7/24/2011
Semi-Volatile Organic Compounds										
1,2,4-Trichlorobenzene	µg/L	35	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
1,2-Dichlorobenzene	µg/L	420	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
1,2-Diphenylhydrazine	µg/L	0.36	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
1,3-Dichlorobenzene	µg/L	320	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
1,4-Dichlorobenzene	µg/L	75	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
1-Methylnaphthalene	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2,4,5-Trichlorophenol	µg/L	1800	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
2,4,6-Trichlorophenol	µg/L	14	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2,4-Dichlorophenol	µg/L	77	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2,4-Dimethylphenol	µg/L	380	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2,4-Dinitrophenol	µg/L	69	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
2,4-Dinitrotoluene	µg/L	1.1	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2,6-Dinitrotoluene	µg/L	0.5	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2-Chloronaphthalene	µg/L	1000	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2-Chlorophenol	µg/L	81	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2-Methylnaphthalene	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2-Methylphenol(o-Cresol)	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
2-Nitroaniline	µg/L	NA	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
2-Nitrophenol	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
3&4-Methylphenol	µg/L	NA	20.6U	22U	21.3U	20.8U	21.7U	20.4U	20.1U	20.6U
3,3'-Dichlorobenzidine	µg/L	0.21	20.6U	22U	21.3U	20.8U	21.7U	20.4U	20.1U	20.6U
3-Nitroaniline	µg/L	NA	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
4,6-Dinitro-2-methylphenol	µg/L	13	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
4-Bromophenylphenyl ether	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
4-Chloro-3-methylphenol	µg/L	3000	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
4-Chloroaniline	µg/L	NA	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
4-Chlorophenylphenyl ether	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
4-Nitroaniline	µg/L	NA	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
4-Nitrophenol	µg/L	60	51.5U	54.9U	53.2U	52.1U	54.3U	51U	50.3U	51.5U
Acenaphthene	µg/L	670	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Acenaphthylene	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Anthracene	µg/L	8300	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Benzo(a)anthracene	µg/L	0.038	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Benzo(a)pyrene	µg/L	0.038	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Benzo(b)fluoranthene	µg/L	0.038	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Benzo(g,h,i)perylene	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Benzo(k)fluoranthene	µg/L	0.038	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
bis(2-Chloroethoxy)methane	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
bis(2-Chloroethyl) ether	µg/L	0.3	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
bis(2-Chloroisopropyl) ether	µg/L	1400	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
bis(2-Ethylhexyl)phthalate	µg/L	6	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Butylbenzylphthalate	µg/L	1500	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Carbazole	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Chrysene	µg/L	0.038	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Dibenz(a,h)anthracene	µg/L	0.038	20.6U	22U	21.3U	20.8U	21.7U	20.4U	20.1U	20.6U
Dibenzofuran	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Diethylphthalate	µg/L	17000	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Dimethylphthalate	µg/L	270000	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Di-n-butylphthalate	µg/L	2000	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Di-n-octylphthalate	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Fluoranthene	µg/L	130	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Fluorene	µg/L	1100	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Hexachloro-1,3-butadiene	µg/L	4.4	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Hexachlorobenzene	µg/L	0.0028	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Hexachloroethane	µg/L	14	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Isophorone	µg/L	350	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Naphthalene	µg/L	100	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Nitrobenzene	µg/L	17	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
N-Nitrosodimethylamine	µg/L	0.0069	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
N-Nitroso-di-n-propylamine	µg/L	0.05	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
N-Nitrosodiphenylamine	µg/L	33	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Pentachlorophenol	µg/L	1	23.7U	25.3U	24.5U	24U	25U	23.5U	23.1U	23.7U
Phenanthrene	µg/L	NA	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Phenol	µg/L	300	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Pyrene	µg/L	830	10.3U	11U	10.6U	10.4U	10.9U	10.2U	10.1U	10.3U
Extractable Petroleum Hydrocarbons										
Total Extractable Hydrocarbons	µg/L	1000	205U	204U	206U	218U	215U	206U	224U	214U
Volatile Petroleum Hydrocarbons										
Aliphatic (C05-C08), Adjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C05-C08).Unadjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12), Adjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12).Unadjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aromatic (C09-C10)	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	5U	5U	5U	5U	5U	5U	5U	5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Total Purgeable Hydro Carbons	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U

NA - Not Available/Not Analyzed
Not Detected
Detected
Detected Above Screening Level

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	FOMT0724SW601 E1 7/24/2011	FOMT0724SW604 E2 7/24/2011	RBMT0724SW701 E3 7/24/2011	MCMT0724SW701 F1 7/24/2011	CUMT0723SW703 F2 7/23/2011	BLMT0725SW701 F3 7/25/2011	TEMT0723SW702 G1 7/23/2011	TEMT0723SW701 G2 7/23/2011
Total Suspended Solids										
Total Suspended Solids	mg/L	NA	154	148	200	163	220	183	94.5	540
Metals										
Mercury	µg/L	0.05	0.0065	0.00584	0.00733	0.00789	0.00843	0.00648	0.00561	0.027
Arsenic	µg/L	10	5.8	6.7	7.4	5.5	7.3	6.4	4.6	8.4
Barium	µg/L	1000	58	82.6	93.5	75.4	101	70.9	51.2	173
Cadmium	µg/L	5	0.08U	0.08U	0.08U	0.08U	0.08U	0.08U	0.08U	0.16
Chromium	µg/L	100	2.6	4.1	4.9	3.8	6.5	2.8	0.89	17.5
Lead	µg/L	15	2.5	3	3.3	2.5	5.5	2.5	1.4	10.7
Nickel	µg/L	100	3.5	5.3	6	4.9	11.2	4.5	2	17
Selenium	µg/L	5	0.52	0.72	0.84	0.63	0.81	0.64	0.5U	1.4
Silver	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vanadium	µg/L	NA	5.7	7.9	9	7.6	12.1	6.1	3.4	26.4
Volatile Organic Compounds										
1,1,1,2-Tetrachloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	µg/L	200	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	µg/L	1.7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	µg/L	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
1,1-Dichloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloroethene	µg/L	0.57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloropropene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichlorobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichloropropane	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
1,2,4-Trichlorobenzene	µg/L	35	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dibromo-3-chloropropane	µg/L	0.2	4U	4U	4U	4U	4U	4U	4U	4U
1,2-Dibromoethane (EDB)	µg/L	0.004	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene	µg/L	420	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloroethane	µg/L	3.8	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
1,3,5-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	µg/L	320	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichloropropane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,4-Dichlorobenzene	µg/L	75	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,2-Dichloropropane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (MEK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
2-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Acetone	µg/L	NA	25U	25U	25U	25U	25U	25U	25U	25U
Allyl chloride	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromochloromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Bromodichloromethane	µg/L	5.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	µg/L	43	4U	4U	4U	4U	4U	4U	4U	4U
Bromomethane	µg/L	47	1U	1U	1U	1U	1U	1U	1U	1U
Carbon tetrachloride	µg/L	2.3	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
Chloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	µg/L	57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane	µg/L	30	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	µg/L	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	µg/L	3.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromochloromethane	µg/L	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromomethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorofluoromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Diethyl ether (Ethyl ether)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachloro-1,3-butadiene	µg/L	4.4	5U	5U	5U	5U	5U	5U	5U	5U
Isopropylbenzene (Cumene)	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methylene Chloride	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
n-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
n-Propylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Isopropyltoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
sec-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Styrene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
tert-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrachloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrahydrofuran	µg/L	NA	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	µg/L	2	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride	µg/L	0.25	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U
Polyaromatic Hydrocarbons										
Acenaphthene	µg/L	670	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Acenaphthylene	µg/L	NA	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Anthracene	µg/L	8300	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Benzo(a)anthracene	µg/L	0.038	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Benzo(a)pyrene	µg/L	0.038	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Benzo(b)fluoranthene	µg/L	0.038	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Benzo(g,h,i)perylene	µg/L	NA	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Benzo(k)fluoranthene	µg/L	0.038	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Chrysene	µg/L	0.038	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Dibenz(a,h)anthracene	µg/L	0.038	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Fluoranthene	µg/L	130	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Fluorene	µg/L	1100	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Naphthalene	µg/L	100	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Phenanthrene	µg/L	NA	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U
Pyrene	µg/L	830	0.041U	0.041U	0.043U	0.041U	0.044U	0.041U	0.042U	0.043U

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	FOMT0724SW601 E1 7/24/2011	FOMT0724SW604 E2 7/24/2011	RBMT0724SW701 E3 7/24/2011	MCMT0724SW701 F1 7/24/2011	CUMT0723SW703 F2 7/23/2011	BLMT0725SW701 F3 7/25/2011	TEMT0723SW702 G1 7/23/2011	TEMT0723SW701 G2 7/23/2011
Semi-Volatile Organic Compounds										
1,2,4-Trichlorobenzene	µg/L	35	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
1,2-Dichlorobenzene	µg/L	420	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
1,2-Diphenylhydrazine	µg/L	0.36	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
1,3-Dichlorobenzene	µg/L	320	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
1,4-Dichlorobenzene	µg/L	75	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
1-Methylnaphthalene	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2,4,5-Trichlorophenol	µg/L	1800	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
2,4,6-Trichlorophenol	µg/L	14	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2,4-Dichlorophenol	µg/L	77	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2,4-Dimethylphenol	µg/L	380	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2,4-Dinitrophenol	µg/L	69	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
2,4-Dinitrotoluene	µg/L	1.1	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2,6-Dinitrotoluene	µg/L	0.5	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2-Chloronaphthalene	µg/L	1000	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2-Chlorophenol	µg/L	81	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2-Methylnaphthalene	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2-Methylphenol(o-Cresol)	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
2-Nitroaniline	µg/L	NA	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
2-Nitrophenol	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
3&4-Methylphenol	µg/L	NA	20.4U	20.3U	21.1U	21.3U	21.1U	21.3U	20.7U	20.7U
3,3'-Dichlorobenzidine	µg/L	0.21	20.4U	20.3U	21.1U	21.3U	21.1U	21.3U	20.7U	20.7U
3-Nitroaniline	µg/L	NA	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
4,6-Dinitro-2-methylphenol	µg/L	13	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
4-Bromophenylphenyl ether	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
4-Chloro-3-methylphenol	µg/L	3000	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
4-Chloroaniline	µg/L	NA	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
4-Chlorophenylphenyl ether	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
4-Nitroaniline	µg/L	NA	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
4-Nitrophenol	µg/L	60	51U	50.8U	52.6U	53.2U	52.6U	53.2U	51.8U	51.8U
Acenaphthene	µg/L	670	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Acenaphthylene	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Anthracene	µg/L	8300	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Benzo(a)anthracene	µg/L	0.038	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Benzo(a)pyrene	µg/L	0.038	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Benzo(b)fluoranthene	µg/L	0.038	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Benzo(g,h,i)perylene	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Benzo(k)fluoranthene	µg/L	0.038	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
bis(2-Chloroethoxy)methane	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
bis(2-Chloroethyl) ether	µg/L	0.3	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
bis(2-Chloroisopropyl) ether	µg/L	1400	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
bis(2-Ethylhexyl)phthalate	µg/L	6	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Butylbenzylphthalate	µg/L	1500	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Carbazole	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Chrysene	µg/L	0.038	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Dibenz(a,h)anthracene	µg/L	0.038	20.4U	20.3U	21.1U	21.3U	21.1U	21.3U	20.7U	20.7U
Dibenzofuran	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Diethylphthalate	µg/L	17000	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Dimethylphthalate	µg/L	270000	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Di-n-butylphthalate	µg/L	2000	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Di-n-octylphthalate	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Fluoranthene	µg/L	130	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Fluorene	µg/L	1100	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Hexachloro-1,3-butadiene	µg/L	4.4	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Hexachlorobenzene	µg/L	0.0028	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Hexachloroethane	µg/L	14	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Isophorone	µg/L	350	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Naphthalene	µg/L	100	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Nitrobenzene	µg/L	17	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
N-Nitrosodimethylamine	µg/L	0.0069	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
N-Nitroso-di-n-propylamine	µg/L	0.05	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
N-Nitrosodiphenylamine	µg/L	33	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Pentachlorophenol	µg/L	1	23.5U	23.4U	24.2U	24.5U	24.2U	24.5U	23.8U	23.8U
Phenanthrene	µg/L	NA	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Phenol	µg/L	300	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Pyrene	µg/L	830	10.2U	10.2U	10.5U	10.6U	10.5U	10.6U	10.4U	10.4U
Extractable Petroleum Hydrocarbons										
Total Extractable Hydrocarbons	µg/L	1000	223U	226U	206U	206U	217U	229U	225U	234U
Volatile Petroleum Hydrocarbons										
Aliphatic (C05-C08), Adjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C05-C08).Unadjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12), Adjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12).Unadjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aromatic (C09-C10)	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	5U	5U	5U	5U	5U	5U	5U	5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Total Purgeable Hydro Carbons	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U

NA - Not Available/Not Analyzed
Not Detected
Detected
Detected Above Screening Level

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	TEMT0723SW803 G3 7/23/2011	TEMT0723SW804 G3 7/23/2011	GLMT0723SW802 H1 7/23/2011	GLMT0725SW701 H2 7/25/2011	GLMT0723SW801 H3 7/23/2011
Total Suspended Solids							
Total Suspended Solids	mg/L	NA	130	206	653	275	905
Metals							
Mercury	µg/L	0.05	0.016	0.0132	0.0377	0.00912	0.0291
Arsenic	µg/L	10	6.2	5.2	5.8	6.4	8.6
Barium	µg/L	1000	89.6	71.7	135	90.1	168
Cadmium	µg/L	5	0.08U	0.08U	0.2	0.08U	0.16
Chromium	µg/L	100	5.1	1.5	3	4.5	13.6
Lead	µg/L	15	3.9	3.6	8.5	3.3	10
Nickel	µg/L	100	6.1	3.6	10.4	6.3	16.4
Selenium	µg/L	5	0.75	0.62	1	0.55	1.3
Silver	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U
Vanadium	µg/L	NA	9.9	4.9	9.7	8.6	22.3
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	µg/L	200	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	µg/L	1.7	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	µg/L	3	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1U	1U	1U	1U	1U
1,1-Dichloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloroethene	µg/L	0.57	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloropropene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichlorobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichloropropane	µg/L	NA	4U	4U	4U	4U	4U
1,2,4-Trichlorobenzene	µg/L	35	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dibromo-3-chloropropane	µg/L	0.2	4U	4U	4U	4U	4U
1,2-Dibromoethane (EDB)	µg/L	0.004	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene	µg/L	420	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloroethane	µg/L	3.8	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	µg/L	5	4U	4U	4U	4U	4U
1,3,5-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	µg/L	320	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichloropropane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
1,4-Dichlorobenzene	µg/L	75	0.5U	0.5U	0.5U	0.5U	0.5U
2,2-Dichloropropane	µg/L	NA	1U	1U	1U	1U	1U
2-Butanone (MEK)	µg/L	NA	4U	4U	4U	4U	4U
2-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	4U	4U	4U	4U	4U
Acetone	µg/L	NA	25U	25U	25U	25U	25U
Allyl chloride	µg/L	NA	4U	4U	4U	4U	4U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U
Bromobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
Bromochloromethane	µg/L	NA	1U	1U	1U	1U	1U
Bromodichloromethane	µg/L	5.5	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	µg/L	43	4U	4U	4U	4U	4U
Bromomethane	µg/L	47	1U	1U	1U	1U	1U
Carbon tetrachloride	µg/L	2.3	1U	1U	1U	1U	1U
Chlorobenzene	µg/L	100	1U	1U	1U	1U	1U
Chloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	µg/L	57	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane	µg/L	30	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	µg/L	70	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	µg/L	3.4	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromochloromethane	µg/L	4	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromomethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorofluoromethane	µg/L	NA	1U	1U	1U	1U	1U
Diethyl ether (Ethyl ether)	µg/L	NA	4U	4U	4U	4U	4U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachloro-1,3-butadiene	µg/L	4.4	5U	5U	5U	5U	5U
Isopropylbenzene (Cumene)	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U
Methylene Chloride	µg/L	5	4U	4U	4U	4U	4U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	1U	1U	1U	1U	1U
n-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
n-Propylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U
p-Isopropyltoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
sec-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
Styrene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U
tert-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrachloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrahydrofuran	µg/L	NA	10U	10U	10U	10U	10U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	µg/L	2	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride	µg/L	0.25	0.4U	0.4U	0.4U	0.4U	0.4U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U
Polyaromatic Hydrocarbons							
Acenaphthene	µg/L	670	0.042U	0.042U	0.041U	0.041U	0.04U
Acenaphthylene	µg/L	NA	0.042U	0.042U	0.041U	0.041U	0.04U
Anthracene	µg/L	8300	0.042U	0.042U	0.041U	0.041U	0.04U
Benzo(a)anthracene	µg/L	0.038	0.042U	0.042U	0.041U	0.041U	0.04U
Benzo(a)pyrene	µg/L	0.038	0.042U	0.042U	0.041U	0.041U	0.04U
Benzo(b)fluoranthene	µg/L	0.038	0.042U	0.042U	0.041U	0.041U	0.04U
Benzo(g,h,i)perylene	µg/L	NA	0.042U	0.042U	0.041U	0.041U	0.04U
Benzo(k)fluoranthene	µg/L	0.038	0.042U	0.042U	0.041U	0.041U	0.04U
Chrysene	µg/L	0.038	0.042U	0.042U	0.041U	0.041U	0.04U
Dibenz(a,h)anthracene	µg/L	0.038	0.042U	0.042U	0.041U	0.041U	0.04U
Fluoranthene	µg/L	130	0.042U	0.042U	0.041U	0.041U	0.04U
Fluorene	µg/L	1100	0.042U	0.042U	0.041U	0.041U	0.04U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	0.042U	0.042U	0.041U	0.041U	0.04U
Naphthalene	µg/L	100	0.042U	0.042U	0.041U	0.041U	0.04U
Phenanthrene	µg/L	NA	0.042U	0.042U	0.041U	0.041U	0.04U
Pyrene	µg/L	830	0.042U	0.042U	0.041U	0.041U	0.04U

Table 5a
Analytical Results
Affected Area Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	TEMT0723SW803 G3 7/23/2011	TEMT0723SW804 G3 7/23/2011	GLMT0723SW802 H1 7/23/2011	GLMT0725SW701 H2 7/25/2011	GLMT0723SW801 H3 7/23/2011
Semi-Volatile Organic Compounds							
1,2,4-Trichlorobenzene	µg/L	35	10.1U	10.8U	10.2U	10.3U	10.1U
1,2-Dichlorobenzene	µg/L	420	10.1U	10.8U	10.2U	10.3U	10.1U
1,2-Diphenylhydrazine	µg/L	0.36	10.1U	10.8U	10.2U	10.3U	10.1U
1,3-Dichlorobenzene	µg/L	320	10.1U	10.8U	10.2U	10.3U	10.1U
1,4-Dichlorobenzene	µg/L	75	10.1U	10.8U	10.2U	10.3U	10.1U
1-Methylnaphthalene	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
2,4,5-Trichlorophenol	µg/L	1800	50.5U	54.1U	51U	51.5U	50.3U
2,4,6-Trichlorophenol	µg/L	14	10.1U	10.8U	10.2U	10.3U	10.1U
2,4-Dichlorophenol	µg/L	77	10.1U	10.8U	10.2U	10.3U	10.1U
2,4-Dimethylphenol	µg/L	380	10.1U	10.8U	10.2U	10.3U	10.1U
2,4-Dinitrophenol	µg/L	69	50.5U	54.1U	51U	51.5U	50.3U
2,4-Dinitrotoluene	µg/L	1.1	10.1U	10.8U	10.2U	10.3U	10.1U
2,6-Dinitrotoluene	µg/L	0.5	10.1U	10.8U	10.2U	10.3U	10.1U
2-Chloronaphthalene	µg/L	1000	10.1U	10.8U	10.2U	10.3U	10.1U
2-Chlorophenol	µg/L	81	10.1U	10.8U	10.2U	10.3U	10.1U
2-Methylnaphthalene	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
2-Methylphenol(o-Cresol)	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
2-Nitroaniline	µg/L	NA	50.5U	54.1U	51U	51.5U	50.3U
2-Nitrophenol	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
3&4-Methylphenol	µg/L	NA	20.2U	21.6U	20.4U	20.6U	20.1U
3,3'-Dichlorobenzidine	µg/L	0.21	20.2U	21.6U	20.4U	20.6U	20.1U
3-Nitroaniline	µg/L	NA	50.5U	54.1U	51U	51.5U	50.3U
4,6-Dinitro-2-methylphenol	µg/L	13	50.5U	54.1U	51U	51.5U	50.3U
4-Bromophenylphenyl ether	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
4-Chloro-3-methylphenol	µg/L	3000	10.1U	10.8U	10.2U	10.3U	10.1U
4-Chloroaniline	µg/L	NA	50.5U	54.1U	51U	51.5U	50.3U
4-Chlorophenylphenyl ether	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
4-Nitroaniline	µg/L	NA	50.5U	54.1U	51U	51.5U	50.3U
4-Nitrophenol	µg/L	60	50.5U	54.1U	51U	51.5U	50.3U
Acenaphthene	µg/L	670	10.1U	10.8U	10.2U	10.3U	10.1U
Acenaphthylene	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
Anthracene	µg/L	8300	10.1U	10.8U	10.2U	10.3U	10.1U
Benzo(a)anthracene	µg/L	0.038	10.1U	10.8U	10.2U	10.3U	10.1U
Benzo(a)pyrene	µg/L	0.038	10.1U	10.8U	10.2U	10.3U	10.1U
Benzo(b)fluoranthene	µg/L	0.038	10.1U	10.8U	10.2U	10.3U	10.1U
Benzo(g,h,i)perylene	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
Benzo(k)fluoranthene	µg/L	0.038	10.1U	10.8U	10.2U	10.3U	10.1U
bis(2-Chloroethoxy)methane	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
bis(2-Chloroethyl) ether	µg/L	0.3	10.1U	10.8U	10.2U	10.3U	10.1U
bis(2-Chloroisopropyl) ether	µg/L	1400	10.1U	10.8U	10.2U	10.3U	10.1U
bis(2-Ethylhexyl)phthalate	µg/L	6	10.1U	10.8U	10.2U	10.3U	10.1U
Butylbenzylphthalate	µg/L	1500	10.1U	10.8U	10.2U	10.3U	10.1U
Carbazole	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
Chrysene	µg/L	0.038	10.1U	10.8U	10.2U	10.3U	10.1U
Dibenz(a,h)anthracene	µg/L	0.038	20.2U	21.6U	20.4U	20.6U	20.1U
Dibenzofuran	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
Diethylphthalate	µg/L	17000	10.1U	10.8U	10.2U	10.3U	10.1U
Dimethylphthalate	µg/L	270000	10.1U	10.8U	10.2U	10.3U	10.1U
Di-n-butylphthalate	µg/L	2000	10.1U	10.8U	10.2U	10.3U	10.1U
Di-n-octylphthalate	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
Fluoranthene	µg/L	130	10.1U	10.8U	10.2U	10.3U	10.1U
Fluorene	µg/L	1100	10.1U	10.8U	10.2U	10.3U	10.1U
Hexachloro-1,3-butadiene	µg/L	4.4	10.1U	10.8U	10.2U	10.3U	10.1U
Hexachlorobenzene	µg/L	0.0028	10.1U	10.8U	10.2U	10.3U	10.1U
Hexachloroethane	µg/L	14	10.1U	10.8U	10.2U	10.3U	10.1U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	10.1U	10.8U	10.2U	10.3U	10.1U
Isophorone	µg/L	350	10.1U	10.8U	10.2U	10.3U	10.1U
Naphthalene	µg/L	100	10.1U	10.8U	10.2U	10.3U	10.1U
Nitrobenzene	µg/L	17	10.1U	10.8U	10.2U	10.3U	10.1U
N-Nitrosodimethylamine	µg/L	0.0069	10.1U	10.8U	10.2U	10.3U	10.1U
N-Nitroso-di-n-propylamine	µg/L	0.05	10.1U	10.8U	10.2U	10.3U	10.1U
N-Nitrosodiphenylamine	µg/L	33	10.1U	10.8U	10.2U	10.3U	10.1U
Pentachlorophenol	µg/L	1	23.2U	24.9U	23.5U	23.7U	23.1U
Phenanthrene	µg/L	NA	10.1U	10.8U	10.2U	10.3U	10.1U
Phenol	µg/L	300	10.1U	10.8U	10.2U	10.3U	10.1U
Pyrene	µg/L	830	10.1U	10.8U	10.2U	10.3U	10.1U
Extractable Petroleum Hydrocarbons							
Total Extractable Hydrocarbons	µg/L	1000	218U	211U	219U	228U	233U
Volatile Petroleum Hydrocarbons							
Aliphatic (C05-C08), Adjusted	µg/L	700	20U	20U	20U	20U	20U
Aliphatic (C05-C08).Unadjusted	µg/L	700	20U	20U	20U	20U	20U
Aliphatic (C09-C12), Adjusted	µg/L	1000	20U	20U	20U	20U	20U
Aliphatic (C09-C12).Unadjusted	µg/L	1000	20U	20U	20U	20U	20U
Aromatic (C09-C10)	µg/L	1000	20U	20U	20U	20U	20U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	5U	5U	5U	5U	5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U
Total Purgeable Hydro Carbons	µg/L	1000	20U	20U	20U	20U	20U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U

NA - Not Available/Not Analyzed
Not Detected
Detected
Detected Above Screening Level

Table 5b
Analytical Results
Background Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	LAMT0723SW504 YRBG01 7/23/2011	LAMT0724SW501 YRBG01 7/24/2011	LAMT0725SW604 YRBG01 7/25/2011	LAMT0723SW601 YRBG02 7/23/2011	LAMT0723SW602 YRBG02 7/23/2011	LAMT0723SW502 YRBG03 7/23/2011	LAMT0723SW501 YRBG04 7/23/2011	LAMT0723SW503 CFBG01 7/23/2011
Total Suspended Solids										
Total Suspended Solids	mg/L	NA	96.2	98.7	88.4	73.3	66.6	56.5	94.4	154
Metals										
Mercury	µg/L	0.05	0.0085	0.00792	0.0087	0.015	0.0101	0.0121	0.00835	0.00294
Arsenic	µg/L	10	10	9.2	9.4	9	9	9.4	9.8	1.1
Barium	µg/L	1000	50.6	41.8	36.3	40.7	41.3	39.4	46.8	73.2
Cadmium	µg/L	5	0.08U	0.08U	0.08U	0.08U	0.08U	0.08U	0.08U	0.08U
Chromium	µg/L	100	3	2.2	1.6	1.9	2.1	1.8	2.6	3.6
Lead	µg/L	15	1.5	1.1	0.86	1.4	1	1.1	1.4	2.8
Nickel	µg/L	100	3.3	2.4	2.1	2.3	2.4	2.4	3.3	6.7
Selenium	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51
Silver	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vanadium	µg/L	NA	4.6	3.7	2.6	3.9	3.7	3.9	4.4	8.6
Volatile Organic Compounds										
1,1,1,2-Tetrachloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	µg/L	200	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	µg/L	1.7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	µg/L	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
1,1-Dichloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloroethene	µg/L	0.57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1-Dichloropropene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichlorobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,3-Trichloropropane	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
1,2,4-Trichlorobenzene	µg/L	35	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dibromo-3-chloropropane	µg/L	0.2	4U	4U	4U	4U	4U	4U	4U	4U
1,2-Dibromoethane (EDB)	µg/L	0.004	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene	µg/L	420	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloroethane	µg/L	3.8	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
1,3,5-Trimethylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	µg/L	320	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichloropropane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,4-Dichlorobenzene	µg/L	75	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,2-Dichloropropane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (MEK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
2-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chlorotoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Acetone	µg/L	NA	25U	25U	25U	25U	25U	25U	25U	25U
Allyl chloride	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromobenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromochloromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Bromodichloromethane	µg/L	5.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	µg/L	43	4U	4U	4U	4U	4U	4U	4U	4U
Bromomethane	µg/L	47	1U	1U	1U	1U	1U	1U	1U	1U
Carbon tetrachloride	µg/L	2.3	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
Chloroethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	µg/L	57	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane	µg/L	30	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	µg/L	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	µg/L	3.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromochloromethane	µg/L	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dibromomethane	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorofluoromethane	µg/L	NA	1U	1U	1U	1U	1U	1U	1U	1U
Diethyl ether (Ethyl ether)	µg/L	NA	4U	4U	4U	4U	4U	4U	4U	4U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachloro-1,3-butadiene	µg/L	4.4	5U	5U	5U	5U	5U	5U	5U	5U
Isopropylbenzene (Cumene)	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methylene Chloride	µg/L	5	4U	4U	4U	4U	4U	4U	4U	4U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	1U	1U	1U	1U	1U	1U	1U	1U
n-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
n-Propylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Isopropyltoluene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
sec-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Styrene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
tert-Butylbenzene	µg/L	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrachloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Tetrahydrofuran	µg/L	NA	10U	10U	10U	10U	10U	10U	10U	10U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	1.7	0.5U	0.5U
trans-1,2-Dichloroethene	µg/L	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	µg/L	2	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride	µg/L	0.25	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U
Polyaromatic Hydrocarbons										
Acenaphthene	µg/L	670	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Acenaphthylene	µg/L	NA	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Anthracene	µg/L	8300	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Benzo(a)anthracene	µg/L	0.038	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Benzo(a)pyrene	µg/L	0.038	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Benzo(b)fluoranthene	µg/L	0.038	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Benzo(g,h,i)perylene	µg/L	NA	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Benzo(k)fluoranthene	µg/L	0.038	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Chrysene	µg/L	0.038	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Dibenz(a,h)anthracene	µg/L	0.038	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Fluoranthene	µg/L	130	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Fluorene	µg/L	1100	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Naphthalene	µg/L	100	0.043U	0.041U	0.041U	0.041U	0.041U	0.073	0.042U	0.042U
Phenanthrene	µg/L	NA	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U
Pyrene	µg/L	830	0.043U	0.041U	0.041U	0.041U	0.041U	0.041U	0.042U	0.042U

Table 5b
Analytical Results
Background Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	LAMT0723SW504 YRBG01 7/23/2011	LAMT0724SW501 YRBG01 7/24/2011	LAMT0725SW604 YRBG01 7/25/2011	LAMT0723SW601 YRBG02 7/23/2011	LAMT0723SW602 YRBG02 7/23/2011	LAMT0723SW502 YRBG03 7/23/2011	LAMT0723SW501 YRBG04 7/23/2011	LAMT0723SW503 CFBG01 7/23/2011
Semi-Volatile Organic Compounds										
1,2,4-Trichlorobenzene	µg/L	35	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
1,2-Dichlorobenzene	µg/L	420	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
1,2-Diphenylhydrazine	µg/L	0.36	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
1,3-Dichlorobenzene	µg/L	320	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
1,4-Dichlorobenzene	µg/L	75	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
1-Methylnaphthalene	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2,4,5-Trichlorophenol	µg/L	1800	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
2,4,6-Trichlorophenol	µg/L	14	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2,4-Dichlorophenol	µg/L	77	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2,4-Dimethylphenol	µg/L	380	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2,4-Dinitrophenol	µg/L	69	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
2,4-Dinitrotoluene	µg/L	1.1	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2,6-Dinitrotoluene	µg/L	0.5	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2-Chloronaphthalene	µg/L	1000	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2-Chlorophenol	µg/L	81	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2-Methylnaphthalene	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2-Methylphenol(o-Cresol)	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
2-Nitroaniline	µg/L	NA	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
2-Nitrophenol	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
3&4-Methylphenol	µg/L	NA	21.2U	21.7U	20.8U	21.1U	20.4U	20.4U	20.6U	22.7U
3,3'-Dichlorobenzidine	µg/L	0.21	21.2U	21.7U	20.8U	21.1U	20.4U	20.4U	20.6U	22.7U
3-Nitroaniline	µg/L	NA	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
4,6-Dinitro-2-methylphenol	µg/L	13	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
4-Bromophenylphenyl ether	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
4-Chloro-3-methylphenol	µg/L	3000	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
4-Chloroaniline	µg/L	NA	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
4-Chlorophenylphenyl ether	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
4-Nitroaniline	µg/L	NA	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
4-Nitrophenol	µg/L	60	52.9U	54.3U	52.1U	52.6U	51U	51U	51.5U	56.8U
Acenaphthene	µg/L	670	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Acenaphthylene	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Anthracene	µg/L	8300	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Benzo(a)anthracene	µg/L	0.038	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Benzo(a)pyrene	µg/L	0.038	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Benzo(b)fluoranthene	µg/L	0.038	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Benzo(g,h,i)perylene	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Benzo(k)fluoranthene	µg/L	0.038	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
bis(2-Chloroethoxy)methane	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
bis(2-Chloroethyl) ether	µg/L	0.3	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
bis(2-Chloroisopropyl) ether	µg/L	1400	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
bis(2-Ethylhexyl)phthalate	µg/L	6	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Butylbenzylphthalate	µg/L	1500	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Carbazole	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Chrysene	µg/L	0.038	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Dibenz(a,h)anthracene	µg/L	0.038	21.2U	21.7U	20.8U	21.1U	20.4U	20.4U	20.6U	22.7U
Dibenzofuran	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Diethylphthalate	µg/L	17000	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Dimethylphthalate	µg/L	270000	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Di-n-butylphthalate	µg/L	2000	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Di-n-octylphthalate	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Fluoranthene	µg/L	130	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Fluorene	µg/L	1100	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Hexachloro-1,3-butadiene	µg/L	4.4	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Hexachlorobenzene	µg/L	0.0028	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Hexachloroethane	µg/L	14	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Isophorone	µg/L	350	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Naphthalene	µg/L	100	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Nitrobenzene	µg/L	17	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
N-Nitrosodimethylamine	µg/L	0.0069	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
N-Nitroso-di-n-propylamine	µg/L	0.05	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
N-Nitrosodiphenylamine	µg/L	33	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Pentachlorophenol	µg/L	1	24.3U	25U	24U	24.2U	23.5U	23.5U	23.7U	26.1U
Phenanthrene	µg/L	NA	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Phenol	µg/L	300	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Pyrene	µg/L	830	10.6U	10.9U	10.4U	10.5U	10.2U	10.2U	10.3U	11.4U
Extractable Petroleum Hydrocarbons										
Total Extractable Hydrocarbons	µg/L	1000	238U	208U	205U	214U	215U	212U	217U	235U
Volatile Petroleum Hydrocarbons										
Aliphatic (C05-C08), Adjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C05-C08).Unadjusted	µg/L	700	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12), Adjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aliphatic (C09-C12).Unadjusted	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Aromatic (C09-C10)	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Benzene	µg/L	5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	µg/L	530	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	µg/L	100	5U	5U	5U	5U	5U	5U	5U	5U
o-Xylene	µg/L	10000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	µg/L	1000	0.5U	0.5U	0.5U	0.5U	0.5U	1.7	0.5U	0.5U
Total Purgeable Hydro Carbons	µg/L	1000	20U	20U	20U	20U	20U	20U	20U	20U
Xylene (Total)	µg/L	10000	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U

NA - Not Available/Not Analyzed
Not Detected
Detected
Detected Above Screening Level

Table 5b
Analytical Results
Background Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	LAMT0724SW504 CFBG01 7/24/2011	LAMT0725SW601 CFBG01 7/25/2011
Total Suspended Solids				
Total Suspended Solids	mg/L	NA	133	123
Metals				
Mercury	µg/L	0.05	0.00322	0.00422
Arsenic	µg/L	10	0.72	0.67
Barium	µg/L	1000	50	39.4
Cadmium	µg/L	5	0.08U	0.08U
Chromium	µg/L	100	2.4	1.1
Lead	µg/L	15	1.6	1.1
Nickel	µg/L	100	3.5	2.5
Selenium	µg/L	5	0.5U	0.5U
Silver	µg/L	100	0.5U	0.5U
Vanadium	µg/L	NA	5.9	3.9
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	µg/L	NA	0.5U	0.5U
1,1,1-Trichloroethane	µg/L	200	0.5U	0.5U
1,1,2,2-Tetrachloroethane	µg/L	1.7	0.5U	0.5U
1,1,2-Trichloroethane	µg/L	3	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane	µg/L	NA	1U	1U
1,1-Dichloroethane	µg/L	NA	0.5U	0.5U
1,1-Dichloroethene	µg/L	0.57	0.5U	0.5U
1,1-Dichloropropene	µg/L	NA	0.5U	0.5U
1,2,3-Trichlorobenzene	µg/L	NA	0.5U	0.5U
1,2,3-Trichloropropane	µg/L	NA	4U	4U
1,2,4-Trichlorobenzene	µg/L	35	0.5U	0.5U
1,2,4-Trimethylbenzene	µg/L	NA	0.5U	0.5U
1,2-Dibromo-3-chloropropane	µg/L	0.2	4U	4U
1,2-Dibromoethane (EDB)	µg/L	0.004	0.5U	0.5U
1,2-Dichlorobenzene	µg/L	420	0.5U	0.5U
1,2-Dichloroethane	µg/L	3.8	0.5U	0.5U
1,2-Dichloropropane	µg/L	5	4U	4U
1,3,5-Trimethylbenzene	µg/L	NA	0.5U	0.5U
1,3-Dichlorobenzene	µg/L	320	0.5U	0.5U
1,3-Dichloropropane	µg/L	NA	0.5U	0.5U
1,4-Dichlorobenzene	µg/L	75	0.5U	0.5U
2,2-Dichloropropane	µg/L	NA	1U	1U
2-Butanone (MEK)	µg/L	NA	4U	4U
2-Chlorotoluene	µg/L	NA	0.5U	0.5U
4-Chlorotoluene	µg/L	NA	0.5U	0.5U
4-Methyl-2-pentanone (MIBK)	µg/L	NA	4U	4U
Acetone	µg/L	NA	25U	25U
Allyl chloride	µg/L	NA	4U	4U
Benzene	µg/L	5	0.5U	0.5U
Bromobenzene	µg/L	NA	0.5U	0.5U
Bromochloromethane	µg/L	NA	1U	1U
Bromodichloromethane	µg/L	5.5	0.5U	0.5U
Bromoform	µg/L	43	4U	4U
Bromomethane	µg/L	47	1U	1U
Carbon tetrachloride	µg/L	2.3	1U	1U
Chlorobenzene	µg/L	100	1U	1U
Chloroethane	µg/L	NA	0.5U	0.5U
Chloroform	µg/L	57	0.5U	0.5U
Chloromethane	µg/L	30	1U	1U
cis-1,2-Dichloroethene	µg/L	70	0.5U	0.5U
cis-1,3-Dichloropropene	µg/L	3.4	0.5U	0.5U
Dibromochloromethane	µg/L	4	0.5U	0.5U
Dibromomethane	µg/L	NA	0.5U	0.5U
Dichlorodifluoromethane	µg/L	1000	0.5U	0.5U
Dichlorofluoromethane	µg/L	NA	1U	1U
Diethyl ether (Ethyl ether)	µg/L	NA	4U	4U
Ethylbenzene	µg/L	530	0.5U	0.5U
Hexachloro-1,3-butadiene	µg/L	4.4	5U	5U
Isopropylbenzene (Cumene)	µg/L	NA	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U
Methylene Chloride	µg/L	5	4U	4U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U
Naphthalene	µg/L	100	1U	1U
n-Butylbenzene	µg/L	NA	0.5U	0.5U
n-Propylbenzene	µg/L	NA	0.5U	0.5U
o-Xylene	µg/L	10000	0.5U	0.5U
p-Isopropyltoluene	µg/L	NA	0.5U	0.5U
sec-Butylbenzene	µg/L	NA	0.5U	0.5U
Styrene	µg/L	100	0.5U	0.5U
tert-Butylbenzene	µg/L	NA	0.5U	0.5U
Tetrachloroethene	µg/L	5	0.5U	0.5U
Tetrahydrofuran	µg/L	NA	10U	10U
Toluene	µg/L	1000	0.5U	0.5U
trans-1,2-Dichloroethene	µg/L	100	0.5U	0.5U
trans-1,3-Dichloropropene	µg/L	2	0.5U	0.5U
Trichloroethene	µg/L	5	0.5U	0.5U
Trichlorofluoromethane	µg/L	10000	0.5U	0.5U
Vinyl chloride	µg/L	0.25	0.4U	0.4U
Xylene (Total)	µg/L	10000	1.5U	1.5U
Polyaromatic Hydrocarbons				
Acenaphthene	µg/L	670	0.043U	0.041U
Acenaphthylene	µg/L	NA	0.043U	0.041U
Anthracene	µg/L	8300	0.043U	0.041U
Benzo(a)anthracene	µg/L	0.038	0.043U	0.041U
Benzo(a)pyrene	µg/L	0.038	0.043U	0.041U
Benzo(b)fluoranthene	µg/L	0.038	0.043U	0.041U
Benzo(g,h,i)perylene	µg/L	NA	0.043U	0.041U
Benzo(k)fluoranthene	µg/L	0.038	0.043U	0.041U
Chrysene	µg/L	0.038	0.043U	0.041U
Dibenz(a,h)anthracene	µg/L	0.038	0.043U	0.041U
Fluoranthene	µg/L	130	0.043U	0.041U
Fluorene	µg/L	1100	0.043U	0.041U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	0.043U	0.041U
Naphthalene	µg/L	100	0.043U	0.041U
Phenanthrene	µg/L	NA	0.043U	0.041U
Pyrene	µg/L	830	0.043U	0.041U

CTEH

Table 5b
Analytical Results
Background Samples

Sample ID Location ID Sample Date		Surface Water Benchmark Value	LAMT0724SW504 CFBG01 7/24/2011	LAMT0725SW601 CFBG01 7/25/2011
Semi-Volatile Organic Compounds				
1,2,4-Trichlorobenzene	µg/L	35	11.5U	10.3U
1,2-Dichlorobenzene	µg/L	420	11.5U	10.3U
1,2-Diphenylhydrazine	µg/L	0.36	11.5U	10.3U
1,3-Dichlorobenzene	µg/L	320	11.5U	10.3U
1,4-Dichlorobenzene	µg/L	75	11.5U	10.3U
1-Methylnaphthalene	µg/L	NA	11.5U	10.3U
2,4,5-Trichlorophenol	µg/L	1800	57.5U	51.5U
2,4,6-Trichlorophenol	µg/L	14	11.5U	10.3U
2,4-Dichlorophenol	µg/L	77	11.5U	10.3U
2,4-Dimethylphenol	µg/L	380	11.5U	10.3U
2,4-Dinitrophenol	µg/L	69	57.5U	51.5U
2,4-Dinitrotoluene	µg/L	1.1	11.5U	10.3U
2,6-Dinitrotoluene	µg/L	0.5	11.5U	10.3U
2-Chloronaphthalene	µg/L	1000	11.5U	10.3U
2-Chlorophenol	µg/L	81	11.5U	10.3U
2-Methylnaphthalene	µg/L	NA	11.5U	10.3U
2-Methylphenol(o-Cresol)	µg/L	NA	11.5U	10.3U
2-Nitroaniline	µg/L	NA	57.5U	51.5U
2-Nitrophenol	µg/L	NA	11.5U	10.3U
3&4-Methylphenol	µg/L	NA	23U	20.6U
3,3'-Dichlorobenzidine	µg/L	0.21	23U	20.6U
3-Nitroaniline	µg/L	NA	57.5U	51.5U
4,6-Dinitro-2-methylphenol	µg/L	13	57.5U	51.5U
4-Bromophenylphenyl ether	µg/L	NA	11.5U	10.3U
4-Chloro-3-methylphenol	µg/L	3000	11.5U	10.3U
4-Chloroaniline	µg/L	NA	57.5U	51.5U
4-Chlorophenylphenyl ether	µg/L	NA	11.5U	10.3U
4-Nitroaniline	µg/L	NA	57.5U	51.5U
4-Nitrophenol	µg/L	60	57.5U	51.5U
Acenaphthene	µg/L	670	11.5U	10.3U
Acenaphthylene	µg/L	NA	11.5U	10.3U
Anthracene	µg/L	8300	11.5U	10.3U
Benzo(a)anthracene	µg/L	0.038	11.5U	10.3U
Benzo(a)pyrene	µg/L	0.038	11.5U	10.3U
Benzo(b)fluoranthene	µg/L	0.038	11.5U	10.3U
Benzo(g,h,i)perylene	µg/L	NA	11.5U	10.3U
Benzo(k)fluoranthene	µg/L	0.038	11.5U	10.3U
bis(2-Chloroethoxy)methane	µg/L	NA	11.5U	10.3U
bis(2-Chloroethyl) ether	µg/L	0.3	11.5U	10.3U
bis(2-Chloroisopropyl) ether	µg/L	1400	11.5U	10.3U
bis(2-Ethylhexyl)phthalate	µg/L	6	11.5U	10.3U
Butylbenzylphthalate	µg/L	1500	11.5U	10.3U
Carbazole	µg/L	NA	11.5U	10.3U
Chrysene	µg/L	0.038	11.5U	10.3U
Dibenz(a,h)anthracene	µg/L	0.038	23U	20.6U
Dibenzofuran	µg/L	NA	11.5U	10.3U
Diethylphthalate	µg/L	17000	11.5U	10.3U
Dimethylphthalate	µg/L	270000	11.5U	10.3U
Di-n-butylphthalate	µg/L	2000	11.5U	10.3U
Di-n-octylphthalate	µg/L	NA	11.5U	10.3U
Fluoranthene	µg/L	130	11.5U	10.3U
Fluorene	µg/L	1100	11.5U	10.3U
Hexachloro-1,3-butadiene	µg/L	4.4	11.5U	10.3U
Hexachlorobenzene	µg/L	0.0028	11.5U	10.3U
Hexachloroethane	µg/L	14	11.5U	10.3U
Indeno(1,2,3-cd)pyrene	µg/L	0.038	11.5U	10.3U
Isophorone	µg/L	350	11.5U	10.3U
Naphthalene	µg/L	100	11.5U	10.3U
Nitrobenzene	µg/L	17	11.5U	10.3U
N-Nitrosodimethylamine	µg/L	0.0069	11.5U	10.3U
N-Nitroso-di-n-propylamine	µg/L	0.05	11.5U	10.3U
N-Nitrosodiphenylamine	µg/L	33	11.5U	10.3U
Pentachlorophenol	µg/L	1	26.4U	23.7U
Phenanthrene	µg/L	NA	11.5U	10.3U
Phenol	µg/L	300	11.5U	10.3U
Pyrene	µg/L	830	11.5U	10.3U
Extractable Petroleum Hydrocarbons				
Total Extractable Hydrocarbons	µg/L	1000	205U	204U
Volatile Petroleum Hydrocarbons				
Aliphatic (C05-C08), Adjusted	µg/L	700	20U	20U
Aliphatic (C05-C08).Unadjusted	µg/L	700	20U	20U
Aliphatic (C09-C12), Adjusted	µg/L	1000	20U	20U
Aliphatic (C09-C12).Unadjusted	µg/L	1000	20U	20U
Aromatic (C09-C10)	µg/L	1000	20U	20U
Benzene	µg/L	5	0.5U	0.5U
Ethylbenzene	µg/L	530	0.5U	0.5U
m&p-Xylene	µg/L	10000	1U	1U
Methyl-tert-butyl ether	µg/L	30	0.5U	0.5U
Naphthalene	µg/L	100	5U	5U
o-Xylene	µg/L	10000	0.5U	0.5U
Toluene	µg/L	1000	0.5U	0.5U
Total Purgeable Hydro Carbons	µg/L	1000	20U	20U
Xylene (Total)	µg/L	10000	1.5U	1.5U

NA - Not Available/Not Analyzed
Not Detected
Detected
Detected Above Screening Level

Analytical Data Qualifiers

U.S. E.P.A. Data Qualifiers by Category

*For completeness, the entire document is presented. Please note not all parameter groups and data qualifiers are applicable to the data in preceding tables.

Analytical Data Qualifiers

PCB Congeners, Dioxins and Furans

Qualifier (flag)	Definition
U	Indicates compound was analyzed for, but not detected. The "CONCENTRATION" column is left blank in this instance, and an Estimated Detection Limit (EDL) must be calculated based on the signal-to-noise (S/N) ratio, as described in Exhibit D. This calculation takes into account the sample weight/volume extracted, the volume of the most concentrated extract, the injection volume, and dilution of the most concentrated extract prior to analysis.
J	Indicates an estimated value. This flag is used when the mass spectral data indicate the presence of an analyte meeting all the identification criteria in Exhibit D, but the result is less than the Contract Required Quantitation Limit (CRQL), as listed in Exhibit C, but greater than zero.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
E	This flag identifies analytes whose concentrations exceed the calibration range of the HRGC/HRMS instrument for that specific analysis. If one or more compounds have a response greater than fullscale, except as noted in Exhibit D, a smaller sample size must be extracted and analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged "E" on the Form I for the original analysis. If the dilution causes any compounds identified in the first analysis to be below the calibration range in the second analysis, the results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have the"DL" suffix appended to the EPA Sample Number.
D	This flag indicates all compounds identified in an analysis at a secondary dilution factor. If a smaller sample size is analyzed, as in the "E" flag above, the "DL" suffix is appended to the EPA Sample Number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the concentrations reported may be due to dilution of the sample extract.
H	This flag indicates that the analyte in question was quantitated using peak heights rather than peak areas for both the analyte and its internal standard.
X	Other specific flags may be required to properly define the results. If used, they must be fully described, and such description must be attached to the Sample Data Package and the SDG Narrative. Begin using "X". If more than one flag is needed, use "Y" and "Z" as needed. The laboratory-defined flags are limited to the letters "X", "Y", and "Z".

Inorganics

	Qualifier (flag)	Definition
"C" Concentration qualifier	J	The reported value was obtained from a reading that was less than the CRQL but greater than or equal to the MDL (Method Detection Limit).
	U	If the reading was less than the MDL.
"Q" qualifier	E	The reported value is estimated due to the presence of interference. An explanatory note shall be included under “Comments” on the Cover Page (if the problem applies to all samples), or on the specific Form IA-IN or Form IB-IN (if it is an isolated problem).
	N	Spiked sample recovery not within control limits.
	*	Duplicate analysis not within control limits.
	D	The reported value is from a dilution.
"M" (Analysis Method) qualifier	P	ICP-AES
	MS	ICP-MS
	CV	Manual Cold Vapor Atomic Absorption (AA)
	AV	Automated Cold Vapor AA
	AS	Semi-Automated Spectrophotometric
	C	Manual Spectrophotometric
	" ":	Where no data have been entered
	NR	The analyte is Not Required to be analyzed

Analytical Data Qualifiers

Organics

Qualifier (flag)	Definition
U	This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL) shall be adjusted according to the equation listed in Exhibit D. CRQLs are listed in Exhibit C.
J	This flag indicates an estimated value. This flag is used when: 1. estimating a concentration for Tentatively Identified Compounds (TICs) where a 1:1 response is assumed; 2. the mass spectral and Retention Time (RT) data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL but greater than zero 3. the RT data indicate the presence of a compound that meets the pesticide and/or Aroclor identification criteria, and the result is less than the adjusted CRQL but greater than zero. For example, if the sample's adjusted CRQL is 5.0 µg/L, but a concentration of 3.0 µg/L is calculated, report it as 3.0J.
N	This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used in combination with the J flag. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, or for an "unknown" (no matches $ 85%), the "N" flag is not used.
P	This flag is used for pesticide and Aroclor target compounds when there is greater than 25% difference for detected concentrations between the two GC columns (see Form X). The lower of the two values is reported on Form I and flagged with a "P". The "P" flag is not used unless a compound is identified on both columns.
C	This flag applies to pesticide and Aroclor results when the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, do not apply this flag; use a laboratory-defined flag instead (see the X qualifier).
B	This flag is used when the analyte is found in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag shall be used for a TIC as well as for a positively identified target compound.
E	This flag identifies compounds whose response exceed the response of the highest standard in the initial calibration range of the instrument for that specific analysis. If one or more compounds have a response greater than the response of the highest standard in the initial calibration, the sample or extract shall be diluted and reanalyzed according to the specifications in Exhibit D. Exceptions are also noted in Exhibit D. All such compounds with responses greater than the response of the highest standard in the initial calibration shall have the result flagged with an "E"on Form I for the original analysis. The results of both analyses shall be reported on separate copies of Form I. The Form I for the diluted sample shall have "DL" suffix appended to the Sample Number.
D	If a sample or extract is reanalyzed at a DF greater than 1 (e.g., when the response of an analyte exceeds the response of the highest standard in the initial calibration), the DL suffix is appended to the Sample Number on Form I for the more diluted sample, and all reported concentrations on that Form I are flagged with the "D" flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

Other Abbreviations

Symbol	Definition
MDL	Method Detection Limit
DL	Dilution
CRQL	Contract Required Quantitation Limit
TIC	Tentatively Identified Compounds
RT	Retention Time
GC/MS	Gas chromatograph / mass spectrometer

Appendix B

Statistical Results

Arsenic

Descriptive Statistics: Wednesday, September 21, 2011, 10:04:34 AM

Data source: Data 1 in Notebook1

Column	Size	Missing	Mean	Std Dev	Std. Error	C.I. of Mean
arsenic downstream	29	0	7.734	3.663	0.680	1.393
arsenic background	10	0	6.829	4.153	1.313	2.971

Column	Range	Max	Min	Median	25%	75%
arsenic downstream	15.600	16.300	0.700	7.200	5.725	8.425
arsenic background	9.330	10.000	0.670	9.100	1.100	9.400

Column	Skewness	Kurtosis	K-S Dist.	K-S Prob.	SWilk W	SWilk Prob
arsenic downstream	1.035	1.221	0.234	<0.001	0.882	0.004
arsenic background	-1.016	-1.220	0.399	<0.001	0.667	<0.001

t-test Wednesday, September 21, 2011, 9:38:34 AM

Data source: Data 1 in Notebook1

Normality Test: Passed (P = 0.201)

Equal Variance Test: Passed (P = 0.817)

Group Name	N	Missing	Mean	Std Dev	SEM
arsenic downstream	29	0	7.734	3.663	0.680
arsenic background	10	0	6.829	4.153	1.313

Difference 0.905

t = 0.652 with 37 degrees of freedom. (P = 0.519)

95 percent confidence interval for difference of means: -1.909 to 3.720

The difference in the mean values of the two groups is not great enough to reject the possibility that the difference is due to random sampling variability. There is not a statistically significant difference between the input groups (P = 0.519).

Power of performed test with alpha = 0.050: 0.050

The power of the performed test (0.050) is below the desired power of 0.800.
Less than desired power indicates you are less likely to detect a difference when one actually exists.
Negative results should be interpreted cautiously.

Metals and TSS Correlation

Pearson Product Moment Correlation Tuesday, September 20, 2011, 4:47:01 PM

Data source: Data 1 in Notebook1

Cell Contents:
Correlation Coefficient
P Value
Number of Samples

	Cadmium	Lead	Nickel	Barium	Selenium	Vanadium
TSS	0.563	0.896	0.851	0.801	0.598	0.803
	0.000193	1.23E-14	6.92E-12	8.96E-10	0.0000577	7.68E-10
	39	39	39	39	39	39
Cadmium		0.618	0.582	0.732	0.853	0.494
		0.0000274	0.000103	1.21E-07	5.18E-12	0.0014
		39	39	39	39	39
Lead			0.957	0.935	0.762	0.921
			2.01E-21	3.04E-18	1.75E-08	1.05E-16
			39	39	39	39
Nickel				0.939	0.779	0.968
				9.22E-19	5.38E-09	8.51E-24
				39	39	39
Barium					0.906	0.902
					2.35E-15	4.20E-15
					39	39
Selenium						0.748
						4.5E-08
						39
Vanadium						

The pair(s) of variables with positive correlation coefficients and P values below 0.050 tend to increase together. For the pairs with negative correlation coefficients and P values below 0.050, one variable tends to decrease while the other increases. For pairs with P values greater than 0.050, there is no significant relationship between the two variables.