### RCRA FACILITY INVESTIGATION

# QUARTERLY PROGRESS REPORT #18 THIRD QUARTER 2005

GM POWERTRAIN - BEDFORD FACILITY 105 GM DRIVE BEDFORD, INDIANA

EPA ID# IND006036099

Prepared For: General Motors Corporation

OCTOBER 2005
REF. NO. 13968 (172)
This report is printed on recycled paper.

#### **TABLE OF CONTENTS**

		<u>Page</u>
1.0	INTRODUCTION	1
2.0	LIST OF COMPLETED ACTIVITIES	2
3.0	SUMMARIES OF ALL CHANGES MADE IN THE CORRECTIVE ACTION (CA) DURING THE REPORTING PERIOD	3
4.0	COMMUNITY RELATIONS	4
5.0	CHANGES IN PERSONNEL DURING THE REPORTING PERIOD	5
6.0	PROJECTED WORK FOR THE NEXT REPORTING PERIOD	6
7.0	COPIES OF DAILY REPORTS, INSPECTION REPORTS, LABORATORY/MONITORING DATA	8

#### **LIST OF FIGURES**

FIGURE 1 GROUNDWATER MONITORING LOCATIONS

#### **LIST OF TABLES**

TABLE 1 GROUNDWATER MONITORING ANALYTICAL RESULTS - MAY AND JUNE 2005

GM Powertrain Bedford Facility Date: October 14, 2005 Section: Quarterly Progress Report #18 Page: 2 of 12

### QUARTERLY PROGRESS REPORT DISTRIBUTION LIST

U.S. EPA - Waste, Pesticide and Toxins Division,

Project Manager Peter Ramanauskas (2 copies)

U.S. EPA - Emergency Response Branch,

On-Scene Coordinator Brad Stimple

Tetra Tech EM Inc., U.S. EPA Consultant Stacy DeLaReintrie

Earth Tech, U.S. EPA Consultant John Bassett

Indiana Department of Environmental Management Gerald O'Callaghan (5 copies)

U.S. Fish and Wildlife Service Dan Sparks

GM WFG Remediation Cheryl Hiatt/Ed Peterson

CRA Project Coordinator James McGuigan

Exponent Rick Bodishbaugh/Pieter Booth

ENVIRON C.Y. Jeng/Steve Song

GM Powertrain Bedford Facility Date: October 14, 2005 Section: Quarterly Progress Report #18 Page: 1 of 12

#### 1.0 <u>INTRODUCTION</u>

This Quarterly Progress Report is submitted in accordance with the Bedford Performance-Based Corrective Action Agreement (Agreement) between the United States Environmental Protection Agency (U.S. EPA) and General Motors Corporation (GM), executed on March 20, 2001, and modified on October 1, 2002. This report covers the period of the third calendar quarter of 2005 for the GM Powertrain – Bedford Facility (Facility), Bedford, Indiana. Some of the activities conducted as part of the overall Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) work are being addressed under the CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) Removal Action Program, pursuant to the Administrative Order on Consent (AOC) between the U.S. EPA and GM (effective July 31, 2003). These activities are described in more detail within the CERCLA Monthly Progress Reports referred to herein.

The next quarterly progress report, covering the Fourth Quarter 2005, will be submitted on or before January 15, 2006.

#### 2.0 <u>LIST OF COMPLETED ACTIVITIES</u>

The following documents were prepared and distributed during this quarter:

- Conference calls were held with the U.S. EPA, Indiana Department of Environmental Management (IDEM), the Agency for Toxic Substance and Disease Registry (ATSDR) and Indiana State Department of Health (ISDH) on July 13, 2005, August 2, 16, and 28, 2005, September 13, and 28, 2005, to discuss project progress (United States Fish and Wildlife Service (USFWS) was also invited to attend the update calls);
- On July 9, 2005, final approval for RFI Work Plan: Addendum No. 9 was received from the U.S. EPA.
- The U.S. EPA gave approval on the July 13, 2005, conference call to proceed with the removal of clay in the Area of Interest (AOI) 7 with the understanding that technical information on the vault leachate collection system, downhole geophysics/borehole logs, cross-sections of base of the vault relative to site stratigraphy and water table, and modified vault design incorporating gravel underdrain will be submitted. The AOI 7 area was excavated to bedrock during July, August, and September. On September 13, 2005, the U.S. EPA participated in a site walk of the East Plant Area.
- The seventeenth Quarterly Progress Report covering the second quarter 2005 was submitted July 14, 2005.
- GM submitted a letter to the U.S. EPA on July 22, 2005, regarding the change of the reinforced tarp material for the East Plant Area Grading Areas. On July 28, 2005, the U.S. EPA approved the change to the use of Griffolyn reinforced tarp material.
- Responses to U.S. EPA August 12, 2005, comments regarding RFI Work Plan: Addendum No. 11 was submitted August 16, 2005.
- Analytical results for 2 water samples collected from drilling water from the installation of CH-5 in the East Plant Area were submitted August 16, 2005.
- The U.S. EPA approved RFI Work Plan: Addendum No. 11 on August 16, 2005.
- Photographs of the AOI 7 excavation were submitted to the U.S. EPA on August 19 and 30, 2005.
- The U.S. EPA approved RFI Work Plan: Addendum No. 10 on August 17, 2005.
- The construction of the East Plant Area Grading Areas 1 and 2 were completed on June 13 and June 28, 2005, respectively. Filling of Grading Area 1 was completed on August 29, 2005; filling of Grading Area 2 began on August 29, 2005.

GM Powertrain Bedford Facility Date: October 14, 2005 Section: Quarterly Progress Report #18 Page: 3 of 12

- GM awarded the East Plant Area vault construction and greater than 50 ppm PCB soil excavation to Sevenson Environmental Services on August 30, 2005.
- The draft COLOG downhole geophysics results were submitted to the U.S. EPA and IDEM on August 31, 2005.
- The 2<sup>nd</sup> quarter high flow and both 3<sup>rd</sup> quarter low and high flow sampling occurred during this reporting period.
- Drilling activities associated with RFI Work Plan Addenda No. 10 and 11 began September 1, 2005.
- The final COLOG downhole geophysics results for the East Plant Area Vault were submitted to the U.S. EPA and IDEM on September 30, 2005.

GM continued to implement field activities described in the RFI Work Plan Addendum No. 9, in the East Plant Area during this reporting period.

GM also continued to evaluate specific sampling requests made by residents in this quarter and collected samples, where appropriate, based on knowledge and location of the property relative to the plant and/or contamination. These analytical results (once validated) have been included in the stream project data packages distributed to the residents, and to U.S. EPA and IDEM. GM will continue evaluating additional areas requested by residents, and sampling, as appropriate, on a case-by-case basis, during the next reporting period

The June 2005, July 2005, and August 2005 CERCLA Removal Action Monthly Progress Reports were submitted during the 3<sup>rd</sup> quarter of 2005.

### 3.0 SUMMARIES OF ALL CHANGES MADE IN THE CORRECTIVE ACTION (CA) DURING THE REPORTING PERIOD

The following changes were made to the CA during the reporting period:

- Submission of the seventeenth Quarterly Progress Report covering the second calendar quarter 2005;
- Submission of the letter for change in the reinforced tarp material for the East Plant Area Grading Areas and approval of change;
- Submission of the analytical results for 2 water samples collected from drilling water from drilling CH-5 in the East Plant Area;
- Submission of final RFI Work Plan: Addendum No. 11 and initiation of work;
- Submission of AOI 7 excavation photographs;
- Submission of final RFI Work Plan: Addendum No. 10 and initiation of work;
- GM awarded the East Plant Area vault construction and greater than 50 ppm PCB soil excavation to Sevenson Environmental Services;
- Submission of final COLOG downhole geophysics results for the East Plant Area Vault;
- Excavation to bedrock of AOI 7; and
- Construction of the East Plant Area Grading Areas 1 and 2 were completed on June 13 and June 28, 2005, respectively. Filling of Grading Area 1 was completed on August 29, 2005; filling of Grading Area 2 began on August 29, 2005.

GM Powertrain Bedford Facility Date: October 14, 2005 Section: Quarterly Progress Report #18 Page: 5 of 12

#### 4.0 <u>COMMUNITY RELATIONS</u>

GM continues to maintain the toll free information telephone number. Individual meetings continue to be arranged to discuss sampling results with individual residents as requested.

Quarterly meetings to review project status, are held both with the neighbors along the creek and around the plant, as well as with the general public. No quarterly meetings were held during this reporting period. The next set of quarterly meetings was scheduled for October 5 and 6, 2005, at the Facility. The subsequent set of quarterly meetings is scheduled to occur in January 2006. They will be a hybrid of the traditional presentation format and the availability session format. The October 5, 2005 meeting with residents along the creek was held from 6:30 PM to 8:00 PM at the Bedford Plant as a regular information session with presentation. The October 6, 2005, meeting took place outside on the Plant Parking Lot throughout the day with an information booth, food, activities for the children, and tours of the project. Presentations from the meetings are posted on the web site atwww.BedfordPowertrainCorrectiveAction.com.

Fact Sheet 12 was issued on September 30, 2005. The next Fact Sheet will be issued around December 2005. One meeting was also held with residents along trucking routes to discuss the potential truck traffic concerns on August 24, 2005.

A CLP meeting occurred in this quarter on September 30, 2005. The next regularly scheduled meeting with the Community Liaison Panel (CLP) is expected to be scheduled for early December 2005. The CLP was formed to provide additional communication avenues for the community and the meetings are currently being held at the GM Plant approximately every three months or more frequently if information on the project changes significantly. The CLP meeting minutes are posted on the GM website at <a href="https://www.BedfordPowertrainCorrectiveAction.com">www.BedfordPowertrainCorrectiveAction.com</a>.

The Information Center, located at the plant lobby, is available by appointment through Ms. Becki Akers, GM Communications, at the project toll free number 866-223-0856. The repository located at the Bedford Public Library remains open at normal business hours. All data in the repository are also located on the aforementioned web site.

GM Powertrain Bedford Facility Date: October 14, 2005 Section: Quarterly Progress Report #18 Page: 6 of 12

#### 5.0 CHANGES IN PERSONNEL DURING THE REPORTING PERIOD

There were no changes to project management personnel during this reporting period, although a number of field personnel have been rotated out of the field activities.

#### 6.0 PROJECTED WORK FOR THE NEXT REPORTING PERIOD

Work projected for the next reporting period includes:

- Conduct a neighborhood meeting in October 2005;
- Conduct a general public information session in October 2005;
- Conduct a Community Liaison Panel Meeting in December 2005;
- Prepare and distribute Fact Sheet 13 in December 2005;
- Continue with Removal Action activities in the upstream and downstream parcels;
- Continue monthly monitoring of groundwater elevation measurements;
- Continue the evaluation of RFI soil and groundwater data;
- Continue work on an IM Work Plan for the Plant property areas west of GM Drive;
- Continue work on the modified IM Work Plan for the Northern Tributary to the U.S. EPA for review;
- Submit the Ecological Risk Assessment to the U.S. EPA for review;
- Continue work outlined in RFI Work Plan: Addendum No. 8 for the additional dye trace studies in the AOI 4 and AOI 6 areas in support of the East Plant Area IM;
- Submit groundwater quality data from monitoring wells sampled along the east property line and along Bailey's Branch;
- Submit the report for RFI Work Plan: Addendum No. 9;
- Submit the report for RFI Work Plan: Addendum No. 10;
- Complete the drilling activities associated with RFI Work Plan: Addendum No. 11 and initiate the dye trace study in AOI 9;
- Complete Final (100%) East Plant Area Vault Design and submit for U.S. EPA review. Upon receipt of approval, construction of the vault liner will begin as soon as possible;
- Complete Final (100%) East Plant Area Excavation of Greater Than 50 PPM PCB
  Material Design and submit for U.S. EPA review. Upon receipt of approval,
  excavation of the ≥ 50 mg/kg PCB material from the East Plant Area will commence
  as soon as the construction of the vault is complete;
- Complete Pre-final (95%) East Plant Area Cover System Design and submit for U.S. EPA review;
- Complete Pre-final (95%) East Plant Area Trench Design and submit for U.S. EPA review; and

GM Powertrain Bedford Facility Date: October 14, 2005 Section: Quarterly Progress Report #18 Page: 8 of 12

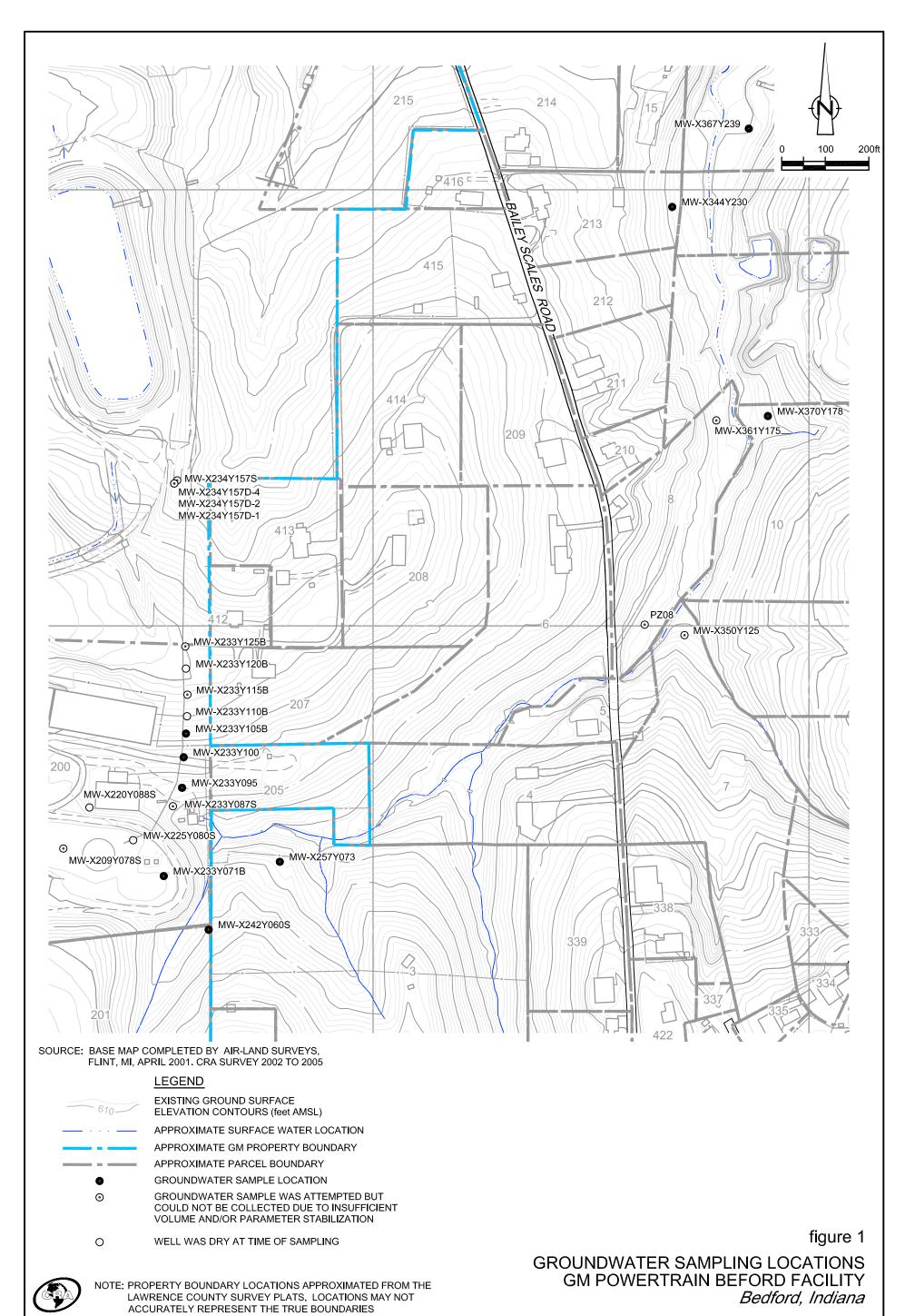
• Continuation of placement of the < 50 mg/kg PCB Removal Action soils in the East Plant Area both as grading fill and as fill-in for the > 50 mg/kg PCB soil excavations.

GM Powertrain Bedford Facility Date: October 14, 2005 Section: Quarterly Progress Report #18 Page: 9 of 12

## 7.0 COPIES OF DAILY REPORTS, INSPECTION REPORTS, LABORATORY/MONITORING DATA

Packages of analytical data from any sampling activity have been submitted as they become available, after validation, under separate cover, and will continue to be submitted during the next reporting period.

Table 1 presents data from the groundwater sampling activities conducted in May and June 2005. Figure 1 presents the sample locations.



Page 1 of 3

## GROUNDWATER MONITORING ANALYTICAL RESULTS MAY AND JUNE 2005 GM BEDFORD POWERTRAIN FACILITY BEDFORD, INDIANA

Sample Area: Sample Location: Sample ID: Sample Date:		A008 MW-X233Y071B GW-052305-TP-007 5/23/2005	A008 P200 MW-X233Y095 GW-052305-TP-008 5/23/2005	A008 P200 MW-X233Y105B GW-052505-TP-010 5/25/2005	P200 Former South Lagoons and Outfall 002 - A008 MW-X242Y060S GW-030205-JK-077 3/2/2005	P200 Former South Lagoons and Outfall 002 - A008 MW-X242Y060S GW-051905-TP-006 5/19/2005	P003 Monitoring_Well MW-X257Y073 GW-051805-TP-005 5/18/2005	P213 Monitoring_Well MW-X344Y230 GW-050505-TP-001 5/5/2005	P013 Monitoring_Well MW-X367Y239 GW-050905-TP-002 5/9/2005	P010 Monitoring_Well MW-X370Y178 GW-051305-TP-003 5/13/2005	P010 Monitoring_Well MW-X370Y178 GW-051305-TP-004 5/13/2005 Duplicate
Parameters	Units										
PCBs											
Aroclor-1016 (PCB-1016) Aroclor-1221 (PCB-1221) Aroclor-1232 (PCB-1232) Aroclor-1242 (PCB-1242) Aroclor-1248 (PCB-1248) Aroclor-1254 (PCB-1254) Aroclor-1254 (PCB-1254)	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	0.20 U 0.20 U 0.20 U 0.085 J 0.20 U 0.20 U 0.20 U	2.0 U 2.0 U 2.0 U 19 2.0 U 2.0 U 2.0 U	1.0 U 1.0 U 1.0 U 7.5 1.0 U 1.0 U	0.20 U 0.20 U 0.40 U 0.20 U 0.20 U 0.20 U 0.20 U 0.44 J	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.57	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U
PCBs (Dissolved)											
Aroclor-1016 (PCB-1016) (Dissolved) Aroclor-1221 (PCB-1221) (Dissolved) Aroclor-1232 (PCB-1232) (Dissolved) Aroclor-1242 (PCB-1242) (Dissolved) Aroclor-1248 (PCB-1248) (Dissolved) Aroclor-1248 (PCB-1248) (Dissolved) Aroclor-1245 (PCB-1254) (Dissolved) Aroclor-1260 (PCB-1260) (Dissolved)	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	0.20 U 0.20 U 0.20 U 0.82 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.29 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.40 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.32 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U	0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U 0.20 U
Metals											
Aluminum Antimony Arsenic Barium Beryllium Cadmium Chromium Total Cobalt Copper Cyanide (amenable) Cyanide (total) Iron Lead Manganese Mercury Nickel Selenium Silver Thallium Vanadium Zinc	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.20 U 0.060 U 0.010 U 0.010 U 0.0050 J 0.0050 U 0.0050 U 0.0050 U 0.0026 J 0.010 U 0.0050 U 0.0050 U 0.0050 U 0.0010 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 J 0.0050 J 0.0050 U 0.010 U 0.010 U 0.010 U 0.010 U 0.010 U 0.011 U 0.011 U 0.021 0.00020 U 0.040 U 0.0050 U 0.010 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U 0.0050 U 0.0050 U	0.033 J 0.060 U 0.010 U 0.22 0.0050 U 0.010 U 0.0050 U 0.010 U 0.055 U 0.010 U 0.010 U 0.010 U 0.112 0.00020 U 0.040 U 0.010 U 0.010 U 0.010 U 0.010 U 0.010 U 0.012	0.033 J 0.060 U 0.010 U 0.039 J 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.025 U 0.010 U 0.0030 U 0.0050 J 0.0058 J 0.0050 U 0.010 U 0.0010 U 0.0010 U 0.0050 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.010 U 0.036 J 0.0050 U 0.0050 U 0.010 U 0.050 U 0.0030 J 0.010 U 0.010 U 0.0030 J 0.0030 U 0.0030 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0010 U 0.0010 U 0.0050 U	0.20 U 0.0046 J 0.010 U 0.084 J 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0036 J 0.010 U 0.010 U 0.025 0.0028 J 0.0079 J 0.00020 U 0.0086 J 0.0050 U 0.010 U 0.0010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0010 U 0.0050 U 0.0050 U	0.050 J 0.060 U 0.010 U 0.065 J 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.010 U 0.0055 J 0.00020 U 0.040 U 0.0050 U 0.010 U 0.010 U 0.0050 U 0.010 U 0.0010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.010 U 0.114 J 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0010 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.010 U 0.0010 U 0.010 U 0.0050 U 0.010 U 0.0050 U 0.010 U 0.0050 U 0.010 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.010 U 0.025 U 0.010 U 0.038 0.0030 U 0.0091 J 0.00020 U 0.000 U 0.0000 U 0.0000 U 0.0000 U 0.0000 U 0.0000 U 0.0000 U 0.0010 U 0.0010 U 0.0010 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U
Metals (Dissolved)											
Aluminum (Dissolved) Antimony (Dissolved) Arsenic (Dissolved) Barium (Dissolved) Beryllium (Dissolved) Cadmium (Dissolved) Cadmium (Dissolved) Chromium Total (Dissolved) Copper (Dissolved) Iron (Dissolved) Iron (Dissolved) Iron (Dissolved) Manganese (Dissolved) Mercury (Dissolved) Nickel (Dissolved) Selenium (Dissolved) Silver (Dissolved) Thallium (Dissolved) Vanadium (Dissolved) Zinc (Dissolved)	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.20 U 0.060 U 0.010 U 0.013 J 0.0050 U 0.0050 U 0.010 U 0.055 U 0.025 U 2.2 0.0030 U 0.036 0.00020 U 0.040 U 0.0550 U 0.0550 U 0.0050 U 0.0050 U 0.010 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U	0.20 U 0.060 U 0.010 U 0.081 J 0.0050 U 0.0050 U 0.010 U 0.0049 J 0.0027 J 0.23 0.0030 U 0.0020 U 0.0040 U 0.0050 U 0.0010 U 0.0050 U 0.010 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U 0.014 J	0.33 0.0043 J 0.010 U 0.21 0.0050 U 0.010 U 0.055 U 0.010 U 0.055 U 0.025 U 0.76 0.0030 U 0.12 0.0020 U 0.040 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.010 U 0.0050 U	0.040 J 0.060 U 0.010 U 0.035 J 0.0050 U 0.0050 U 0.050 U 0.055 U 0.025 U 0.0030 U 0.0034 U 0.00040 J 0.040 U 0.0050 U 0.010 U	0.20 U 0.060 U 0.010 U 0.039 J 0.0050 U 0.0050 U 0.010 U 0.0550 U 0.0025 J 0.060 J 0.0030 U 0.043 0.00020 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U 0.0036	0.20 U 0.011 J 0.010 U 0.078 J 0.0050 U 0.0050 U 0.010 U 0.050 U 0.025 U 0.078 J 0.0030 U 0.0069 J 0.0020 U 0.0050 U 0.0050 U 0.0050 U 0.011 U 0.0550 U 0.011 U 0.0550 U	0.20 U 0.060 U 0.010 U 0.064 J 0.0050 U 0.0050 U 0.010 U 0.050 U 0.025 U 0.025 U 0.0030 U 0.0030 J 0.0033 J 0.00020 U 0.0050 U 0.010 U 0.0050 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U 0.0050 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.113 J 0.0050 U 0.0050 U 0.010 U 0.050 U 0.025 U 0.88 0.0030 U 0.059 0.00020 U 0.040 U 0.0050 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.061 J 0.0050 U 0.0050 U 0.010 U 0.050 U 0.055 J 0.0030 U 0.0087 J 0.00020 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U 0.0010 U 0.0050 U	0.20 U 0.060 U 0.010 U 0.062 J 0.0050 U 0.0050 U 0.010 U 0.050 U 0.055 U 0.051 J 0.0030 U 0.011 J 0.00020 U 0.041 U 0.055 U 0.051 J 0.00050 U 0.041 J 0.00050 U 0.041 U 0.0050 U 0.041 U 0.0050 U 0.041 U 0.050 U 0.041
Volatile Organic Compounds											
1,1,1-Trichloroethane	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

## GROUNDWATER MONITORING ANALYTICAL RESULTS MAY AND JUNE 2005 GM BEDFORD POWERTRAIN FACILITY BEDFORD, INDIANA

Sample Area: Sample Location: Sample ID: Sample Date:		A008 MW-X233Y071B GW-052305-TP-007 5/23/2005	A008 P200 MW-X233Y095 GW-052305-TP-008 5/23/2005	A008 P200 MW-X233Y105B GW-052505-TP-010 5/25/2005	P200 Former South Lagoons and Outfall 002 - A008 MW-X242Y060S GW-030205-JK-077 3/2/2005	P200 Former South Lagoons and Outfall 002 - A008 MW-X242Y0605 GW-051905-TP-006 5/19/2005	P003 Monitoring_Well MW-X257V073 GW-051805-TP-005 5/18/2005	P213 Monitoring_Well MW-X344Y230 GW-050505-TP-001 5/5/2005	P013 Monitoring_Well MW-X367Y239 GW-050905-TP-002 5/9/2005	P010 Monitoring_Well MW-X370y178 GW-051305-TP-003 5/13/2005	P010 Monitoring_Well MW-X3707178 GW-051305-TP-004 5/13/2005 Duplicate
Parameters	Units										
1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-4-Trichlorobenzene 1,2-Dibromo-3-chloropropane (DBCP) 1,2-Dibromoethane (Ethylene Dibromide)	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 UJ 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 UJ 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 2.0 U 1.0 U
1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Butanone (Methyl Ethyl Ketone) 2-Hexanone	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 U 10 U 10 U	1.0 U 1.0 U 1.0 U 0.26 J 0.41 J 10 U 10 U 10 U	0.40 J 1.0 U 1.0 U 2.2 6.2 10 U 10 U 10 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 U 10 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 U 10 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 U 10 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 U 10 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 UJ 10 UJ	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 U 10 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 10 U 10 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone) Acetone Benzene Bromodichloromethane Bromoform Bromomethane (Methyl Bromide) Carbon disulfide Carbon tetrachloride	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 U 10 UJ 0.31 J 1.0 U 1.0 U 1.0 U 1.0 U	10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 U 10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 U 10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 UJ 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	10 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U
Chlorobenzene Chloroethane Chloroform (Irichloromethane) Chloromethane (Methyl Chloride) cis-1,2-Dichloroethene cis-1,3-Dichloropropene Cyclohexane	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.0 U 1.0 U 0.32J 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	0.93 J 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 UJ 1.0 U 1.0 U 0.50 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 0.16 J 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 0.20 J 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U
Dibromochloromethane Dichlorodifluoromethane (CFC-12) Ethylbenzene Isopropylbenzene Methyl acetate Methyl acetate Methyl Tert Butyl Ether	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 10 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 10 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 UJ	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 5.0 U
Methylene chloride Styrene Tetrachloroethene Toluene trans-1,2-Dichloroethene trans-1,3-Dichloropropene Trichloroethene Trichlorofluoromethane (CFC-11)	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.0 U 1.0 U 1.0 U 0.21 J 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 0.30 J 0.50 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 0.31 J 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 0.19 J 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 0.19 J 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U 1.0 U
Trifluorotrichloroethane (Freon 113) Vinyl chloride Xylene (total) Semi-Volatile Organic Compounds	ug/L ug/L ug/L	1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 1.0 U	1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 2.0 U	1.0 U 1.0 U 2.0 U
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether) 2,4,5-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinit	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	10 U 10 U 10 U 10 U 10 U 10 U 50 U 10 U 1	10 U 10 U 10 U 10 U 10 U 10 U 50 U 10 U 1	10 U 10 U 10 U 10 U 10 U 1.1 J 50 U 10 U 50 U 50 U	14 U 14 U 14 U 14 U 14 U 14 U 70 UJ 14 U	10 U 10 U 10 U 10 U 10 U 50 U 10 U 1	10 U 10 U 10 U 10 U 10 U 50 U 10 U 1	10 U 10 U 10 U 10 U 10 U 50 U 10 U 1	10 U 10 U 10 U 10 U 10 U 50 U 10 U 1	10 U 10 U 10 U 10 U 10 U 50 U 10 U 1	10 U 10 U 10 U 10 U 10 U 10 U 50 U 10 U 1
3-Nitroaniline 4,6-Dinitro-2-methylphenol 4-Bromophenyl phenyl ether	ug/L ug/L ug/L	50 U 50 U 10 U	50 U 50 U 10 U	50 U 50 U 10 U	70 U 70 U 14 U	50 U 50 U 10 U	50 U 50 U 10 U	50 U 50 U 10 U	50 U 50 U 10 U	50 U 50 U 10 U	50 U 50 U 10 U

#### GROUNDWATER MONITORING ANALYTICAL RESULTS MAY AND JUNE 2005 GM BEDFORD POWERTRAIN FACILITY BEDFORD, INDIANA

Sample Area: Sample Location: Sample ID: Sample Date:		A008 MW-X233Y071B GW-052305-TP-007 5/23/2005	A008 P200 MW-X233Y095 GW-052305-TP-008 5/23/2005	A008 P200 MW-X233Y105B GW-052505-TP-010 5/25/2005	P200 Former South Lagoons and Outfall 002 - A008 MW-X242Y060S GW-030205-JK-077 3/2/2005	P200 Former South Lagoons and Outfall 002 - A008 MW-X242Y060S GW-051905-TP-006 5/19/2005	P003 Monitoring_Well MW-X257Y073 GW-051805-TP-005 5/18/2005	P213 Monitoring_Well MW-X344Y230 GW-050505-TP-001 5/5/2005	P013 Monitoring_Well MW-X367Y239 GW-050905-TP-002 5/9/2005	P010 Monitoring_Well MW-X370Y178 GW-051305-TP-003 5/13/2005	P010 Monitoriug_Well MW-X370Y178 GW-051305-TP-004 5/13/2005 Duplicate
Parameters	Units										
4-Chloro-3-methylphenol	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	ug/L	50 U	50 U	50 U	70 U	50 U	50 U	50 U	50 U	50 U	50 U
4-Nitrophenol	ug/L	50 U	50 U	50 U	70 U	50 U	50 U	50 U	50 U	50 U	50 U
Acenaphthene Acenaphthylene	ug/L	10 U 10 U	10 U 10 U	10 U 10 U	14 U 14 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U
Acetophenone	ug/L ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Atrazine	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Biphenyl	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	ug/L	10 U 10 U	10 U 10 U	10 U 10 U	14 U 14 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U
bis(2-Ethylhexyl)phthalate Butyl benzylphthalate	ug/L ug/L	10 U	2.0 J	3.4 J	14 U	0.61 J	0.51 J	10 U	10 U	10 U	10 U
Caprolactam	ug/L ug/L	620	1.3 [	0.91 J	2.6 [	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Diethyl phthalate	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	ug/L	0.73 J	10 U	10 UJ	14 UJ	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	1.4 J	1.5 J
Fluoranthene Fluorene	ug/L	10 U 10 U	10 U 10 U	10 U 10 U	14 U 14 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U
Hexachlorobenzene	ug/L ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	ug/L ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	ug/L	50 UI	50 U	50 U	70 U	50 U	50 U	50 U	50 UJ	50 U	50 U
Hexachloroethane	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodi-n-propylamine	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol Phenanthrene	ug/L	10 U 10 U	10 U 10 U	10 U 10 U	14 U 14 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U
Phenol	ug/L ug/L	10 U	10 U	120	0.58 [	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	ug/L ug/L	10 U	10 U	10 U	14 U	10 U	10 U	10 U	10 U	10 U	10 U
Field Parameters	-6/ -										
Conductivity Field	mS/cm	0.528	0.775	0.787	0.901	0.889	0.523	0.616	0.494	0.477	0.477
Dissolved Oxygen	mg/L	2.29	0.74	1.69	7.69	8.39	2.15	2.65	0.13	3.03	3.03
ORP, Field	millivolts	-159.8	298.5	-189.5	221	369.5	324.1	133.7	-15.9	185.4	185.4
pH Field	s.u.	6.7	6.68	8.08	6.9	6.87	7.36	6.84	6.59	7.07	7.07
Temperature	Deg C	16.25	15.69	13.25	9.7	16.11	12.81	11.43	12.57	13.1	13.1
Turbidity (Field)	NTU	1.3	0.64	4.69	3	4.54	2.81	3.3	2.96	3.79	3.79

Notes:
U - Not present at or above the associated value.
J - Estimated concentration.
UJ - Estimated reporting limit.
R - Rejected.