

RCRA FACILITY INVESTIGATION

QUARTERLY PROGRESS REPORT #3

**GM POWERTRAIN - BEDFORD PLANT
105 GM DRIVE
BEDFORD, INDIANA**

EPA ID# IND 006036099

**Prepared for:
GENERAL MOTORS CORPORATION**

**JANUARY 15, 2002
REF. NO. 013968 (13)**

This report is printed on recycled paper.

**Conestoga-Rovers
& Associates**

**8615 West Bryn Mawr
Chicago, Illinois 60631**

**Office: (773) 380-9933
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QUARTERLY PROGRESS REPORT

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GM Powertrain - Bedford Facility	Kim Dobosenski/ Bill Schoonmaker
GM Communications	Kathy Bommarito
CRA Project Director	Glenn Turchan
CRA Senior Engineer/Advisor	James McGuigan
CRA Project Manager	Bill Steinmann
Exponent	Pieter Booth/ Rick Bodishbaugh
ENVIRON International Corporation, Inc.	Stephen Song/ C.Y. Jeng

1.0 INTRODUCTION

This Quarterly Progress Report is submitted in accordance with the Bedford Voluntary Corrective Action Agreement (Agreement) between the U.S. EPA and GM, executed on March 20, 2001. This report covers the period of the fourth calendar quarter of 2001 for the GM-Powertrain - Bedford Plant (Facility).

The next quarterly progress report will be submitted on or before April 15, 2002.

2.0 LIST OF COMPLETED ACTIVITIES

Each of the submissions identified in the Agreement has been submitted on or before its due date. The following is a list of those submissions, their due date, and the date that they were submitted to the U.S. EPA.

<i>Submission</i>	<i>Due Date</i>	<i>Date Submitted</i>
Current Conditions Report (CCR)	July 18, 2001	May 21, 2001

The following is a list of additional documents not identified in the Agreement, which were submitted to the U.S. EPA, and their date:

- Project Fact Sheet #1 - May 24, 2001.
- Stream Investigation Work Plan - June 6, 2001
- Community Relations Plan (CRP) - June 6, 2001.
- Off-Site Well Survey and Sampling Work Plan - June 6, 2001.
- Draft RFI Sample Matrix - June 6, 2001.
- Health and Safety Plan (HASP) - July 12, 2001.
- Project Fact Sheet #2 - July 16, 2001.
- Quality Assurance Project Plan (QAPP) - July 18, 2001.
- Revised RFI Sample Matrix - August 28, 2001.
- Sample Summary and Rationale Document - August 28, 2001.
- Stream Field Sampling Plan - September 21, 2001.
- Amendments to the Field Sampling Plan - October 1, 2001.
- RCRA Facility Investigation (RFI) Work Plan - October 29, 2001
- Stream Sampling Results Summary Figure - December 14, 2001, via email.
- Preliminary Plan for Additional Stream Sampling Activities - December 14, 2001, via email.

Once these documents are finalized, they will be placed into the Public Repository.

Stream sampling activities were conducted from October 1 through 8, 2001. Analytical results from the stream sampling event were distributed to the applicable residents during this reporting period. These analytical results will be submitted to the U.S.EPA during the next reporting period. A summary figure of these results, along with a preliminary sampling plan for additional stream sampling was submitted via email to the U.S.EPA and IDEM on December 14, 2001.

Conference calls between representatives from GM, EPA and IDEM occurred this quarter on the following dates:

- October 12, 2001
- October 25, 2001
- November 8, 2001
- December 14, 2001
- December 20, 2001

Minutes from the October 12th and October 25th conference calls are included as **Attachment 1**.

Site investigation activities from the RFI Work Plan commenced on December 17, 2001. These activities will continue during the next reporting period.

All originally archived fish samples (held pending analysis of original samples) have been submitted for analysis during this reporting period.

3.0 SUMMARIES OF ALL FINDINGS

Summaries of any findings, which occur after submission of this progress report, will be included in subsequent quarterly progress reports.

4.0 SUMMARIES OF ALL CHANGES MADE IN THE RFI DURING THE REPORTING PERIOD

The final version of the GM Bedford Facility RFI Work Plan was submitted to the U.S. EPA during this reporting period. Any changes made to the Work Plan during the next reporting period will be included in the next Quarterly Progress Report.

5.0 COMMUNITY RELATIONS

Representatives from GM met with property owners to discuss the results of stream sampling activities on their property and to request access for additional soil sampling in January. Ongoing community relations are conducted by GM by maintaining the toll free information telephone number. Prior to contacting residents GM has been providing updates on the status of the project to its employees, and to local, state and federal officials. In addition, the local newspaper has published an article on the environmental activities being completed at the site on December 18, 2001.

6.0 CHANGES IN PERSONNEL DURING THE REPORTING PERIOD

A summary of key project personnel was included in the CRP submitted June 6, 2001. Any changes in personnel during the next reporting period will be presented in the next Quarterly Progress Report.

7.0 PROJECTED WORK FOR THE NEXT REPORTING PERIOD

Site investigation activities from the RFI Work Plan are expected to continue during the next reporting period. Additional stream field sampling activities are projected to begin on approximately January 7, 2002.

8.0 COPIES OF DAILY REPORTS, INSPECTION REPORTS, LABORATORY/MONITORING DATA

Attachment 2 presents laboratory reports from Severn Trent Laboratories containing analytical results from the resampling of three of the residential wells. Packages of analytical data from the stream sampling will be sent under separate cover. All data will be summarized in tables and sent to the agencies once completed.

Attachment 1
Conference Call Minutes - October 12th and 25th , 2001

MINUTES
GMPT – BEDFORD PLANT

DATE: October 12, 2001

TIME: 2:00 P.M. EDT

RECORDED BY: Debbie Runkle/Bill Steinmann

ATTENDEES: Cheryl Hiatt – General Motors
Jean Caufield – General Motors
Jim McGuigan – Conestoga-Rovers & Associates
Bill Steinmann – Conestoga-Rovers & Associates
Debbie Runkle – Conestoga-Rovers & Associates
Peter Ramanauskas – U.S. Environmental Protection Agency
Will Enriquez – U.S. Environmental Protection Agency
Priscilla Fonseca – U.S. Environmental Protection Agency (TSCA)
John Gunter – Indiana Department of Environmental Management
Scott Davis – Indiana Department of Environmental Management
Rick Bodishbaugh – Exponent
CY Jeng – Environ

1. OFF-SITE WELL SURVEY/SAMPLING STATUS

This discussion began at approximately 2:00 P.M. EDT. The following bulleted items were discussed:

- Jim McGuigan (CRA) relayed that the Third Quarter Progress Report was submitted on October 11, 2001. Three off-site residential wells were resampled due to data validation problems. The results from the resampling have not been received. The Stream Sampling Plan was implemented.

2. STREAM SAMPLING UPDATE

- Rick Bodishbaugh (Exponent) discussed the stream sampling observations. The sampling took eight full days to complete. The streams were characterized as having low-flow conditions during the sampling event.
- Rick B. (Exponent) discussed sediment sampling. Those areas discussed are as follows:
 - Gullets Creek: A sediment sample was not collected from station R-2 since this location was a scoured gravel bar and there was no sediment. The sediment was sampled at station R-2 to use as a chemical reference.

- Lower Pleasant Run: The stream configuration at ST-17 and ST-18 (T-5 and T-6) is different than depicted on the topo map. The topo map showed two channels in this area, however there is just one stream channel. Rick indicated that the channels might have been modified, as the land in this area is cultivated. Rick will update the maps. IDEM split samples at several locations. Two subsurface sediment samples (from 10 to 20 cm) were collected at ST-13 and ST-14. A subsurface sediment sample was attempted at ST-15, but sediment was not deep enough. The sediment deposits were patchy throughout the stream (some sample locations did not have 10 cm of sediment). Pleasant Run has a hard clay bottom and 20 cm appeared to be the approximate depth of the sediment overlying the native clay.
- John Gunter (IDEM) asked if the sediments were layered. Rick answered that the sediment was not layered consistently and that it was likely due to seasonal scouring and redeposition.
- John Gunter (IDEM) asked about grain size of the sediments. Rick answered that grain size analysis will be performed on all sediment samples. Ann Remek (IDEM) collected a split at ST-14.
- John Gunter (IDEM) asked about the quarry sample. Rick answered that the sediment was organic 'muck', silty and anaerobic with a sulfuric odor. The sediment was not deep and there was no sediment in the stream here, however flood bank samples were collected.
- Will Enriquez (U.S.EPA) asked if there were bugs in the quarry sediment. Rick answered that there were.
- Will Enriquez (U.S.EPA) asked about SP-5 through 8. Rick answered that at SP-5 the drainage was from a seep prior to the culvert. SP-7 was the furthest up into the drainage and was a dry sample.
- Will Enriquez (U.S.EPA) asked if there were any crayfish on the west side of the facility. Rick answered that crayfish were not observed.
- Rick B. (Exponent) then discussed the biota sampling.
 - The fish sampling objectives were met. At ST-1, fish were sampled, but crayfish were not observed. Sunfish were observed at all locations, however the sunfish were not of edible size. Creek chubs and stonerollers were common. The stonerollers were targeted, but creek chubs were retained for archive. At ST-19 there were no stonerollers and cryprinids; water levels were 2 to 2.5 feet higher than during the stream reconnaissance. Collected a red horse sucker and white crappie at ST-19. Crayfish were everywhere except ST-1 and ST-19, probably due to water depth.
 - Salt Creek: Suckers were most common. Retained samples of suckers from ST-21 and ST-23. Collected a spotted bass composite from ST-23 and channel catfish. Crayfish were not observed in Salt Creek.

- Gulleys Creek: Observed a different fish community and different fish habitat. Samples collected consisted of large mouth bass, crayfish and green sunfish. Small cryprinids were not observed. Gulleys Creek was determined to not be a good fish community reference for Pleasant Run Creek.
- Cheryl Hiatt (GM) indicated that the analytical samples were shipped via ground due to concern over shipping containers being opened as a result of the tighter security.
- Scott Davis (IDEM) asked what the turn around time was for the samples. Bill Steinmann (CRA) answered that the turn around with full data validation would be eight to ten weeks.
- Scott Davis (IDEM) asked which fish samples will be analyzed. Rick answered that crayfish, green sunfish, stonerollers and game fish (large mouth bass, white crappie, catfish and suckers) will be analyzed. Will archive creek chubs, dace and blunt nose minnows.
- Will Enriquez (U.S.EPA) asked about crayfish sampling at SP-5 per verbal agreement in the field trailer. Rick (Exponent) answered that there was no evidence of an aquatic community at SP-5 and that crayfish were not proposed to be sampled at these locations and that he did not believe that we had ever planned to sample biota at that location even if we had encountered it.
- Priscilla Fonseca (U.S.EPA) indicated that only water sampling was proposed for the Spring sampling.

3. RFI WORK PLAN

- Cheryl Hiatt (GM) indicated that the RFI Work Plan would be submitted within the next couple of weeks; GM is reviewing the second revision.
- John Gunter (IDEM) asked what was the proposed schedule of the fieldwork. Cheryl Hiatt (GM) answered the field work should start in November 2001, dependent on the weather. Field work will take approximately two months to complete. Jim McGuigan (CRA) indicated that we plan to do caliper logging and TV log the deep wells.

4. NEXT CONFERENCE CALL

The scheduled date for the next conference call is October 25, 2001, and the time was moved from 2:00 EDT to 4:00 EDT.

Call ended at 1:46 EDT.

**MINUTES
GMPT - BEDFORD PLANT**

DATE: October 25, 2001

TIME: 4:00 P.M. EDT

RECORDED BY: Bill Steinmann

ATTENDEES: Cheryl Hiatt - General Motors
Jean Caufield - General Motors
Jim McGuigan - Conestoga-Rovers & Associates
Bill Steinmann - Conestoga-Rovers & Associates
Peter Ramanauskas - U.S. Environmental Protection Agency
Will Enriquez - U.S. Environmental Protection Agency
Priscilla Fonseca - U.S. Environmental Protection Agency (TSCA)
John Gunter - Indiana Department of Environmental Management
Rick Bodishbaugh - Exponent
CY Jeng - Environ
Steve Song - Environ

This discussion began at approximately 4:10 P.M. EDT. The following bulleted items were discussed:

1. PROJECT STATUS

- Jim McGuigan (CRA) relayed that laboratory data from the stream sampling has not been completed. GM indicated that validated data will be submitted in batches (e.g., surface water, sediment, etc.).
- GM indicated that the RFI Work Plan is close to being completed and will be submitted to U.S. EPA on Monday or Tuesday of the following week. The Work Plan text will describe the contents of the Sampling Matrix, with the changes requested by the U.S. EPA (e.g., additional sampling locations in AOIs 1 and 4). GM pointed out that based on recent discussions with U.S. EPA and GM at another facility, GM understands that wipe samples are acceptable to evaluate concrete to be left in place at AOI 3 (former PCB storage area) and have put wipe samples in the work plan instead of the concrete cores previously discussed. Priscilla Fonseca (U.S. EPA) indicated that she would check with Tony Martig (U.S. EPA) to see if this is sufficient (she would rather see cores alone or both wipes and cores rather than just wipes).
-
- Cheryl Hiatt (GM) indicated that the QAPP to support the RFI Work Plan was still under review and will be submitted with the Work Plan, if completed in time. Cheryl pointed out that there was one obvious deviation from the Region 5 Model in that we would be proposing a 1:20 ratio for field blanks and duplicates, rather than the 1:10 ratio

in Region 5's Model. Cheryl indicated that this is consistent with Superfund and requested that RCRA be open to the change in frequency. Peter Ramanauskas indicated that he would talk to his validation person and get back to GM if this was a problem.

2. QUESTIONS/COMMENTS

- John Gunter (IDEM) asked if there had been any new Fact Sheets developed based on the progress and completing the stream sampling. Cheryl Hiatt (GM) indicated that we have not discussed developing a new Fact Sheet and that one would be completed in the future. Cheryl also indicated that we did let all owners know when we were done sampling at their property.
- Will Enriquez (U.S. EPA) asked whether we received results from the laboratory on the re-sampling of private wells. Cheryl Hiatt (GM) indicated that the preliminary results indicated that the resample of the well that had contained 1.1 $\mu\text{g/L}$ (Aroclor 1242) was now reported as 0.95 $\mu\text{g/L}$ (Aroclor 1242). Preliminary results for the two other samples, where the surrogate recoveries were initially outside of the acceptable range, were "non-detect" for PCBs and the surrogate recovery for one of the samples was still outside of the acceptable range.
- Will Enriquez (U.S. EPA) also asked about the status of contacting the remaining properties within the $\frac{1}{2}$ mile radius. Cheryl Hiatt (GM) indicated that 22 letters were sent out last week to those properties.

3. NEXT CALL

- The next call is scheduled for November 8, 2001, at 2:00 p.m. EST.
- GM would like all to be prepared to discuss the RFI Work Plan at that time.
- The next scheduled call after November 8 would be November 22, 2001, in keeping with our two-week interval. Since this is Thanksgiving, this call will be re-scheduled during the November 8 call.

Attachment 2
Severn Trent Laboratory Reports

**SEVERN
TRENT
SERVICES**

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720-6961

Tel: 330 497 9396
Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 13968

GM-BEDFORD

Lot #: A1I210103

REC'D CBA
NOV 29
SDG 13

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

Project#: 13968 Lab#: A1I210103

SEVERN TRENT LABORATORIES, INC Name: GMPT - Bedford Plant

Description

Event: GW - Supply Well Survey

Samples: 1w (9/15)

Analysis: PCB

TAT: 2wk

Lab: STL/ATEL

Checked Against Preliminary Data:

Date: 12/10/01 Init.: hw

Date of Validation Memo: _____

Invoice Approval Date: _____

Comments: _____

Amy McCormick

Amy L. McCormick
Project Manager

November 28, 2001

CASE NARRATIVE

A1I210103

The following report contains the analytical results for one water sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Bedford Site, project number 13968. The sample was received September 18, 2001, according to documented sample acceptance procedures.

Analysis for Polychlorinated Biphenyls was performed at Aqua Tech Environmental Laboratories, Inc. A copy of their report has been provided.

Sample ID Cross Reference

CRA
GW-091501-620013-LM-001

STL
A1I210103-001

Aqua Tech
MEL01-11627



Amy McCormick
Project Manager

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I0467

Report Date: 10-Oct-01

STL North Canton

4101 Shuffel Dr NW

N Canton, OH 44720

Phone: (330) 497-9396 Ext:

FAX: (330) 497-0772

Attn:

Our Lab#: MEL01-11627

Your Sample ID: GW-091501-620013-LM-001

Date Logged In: 9/19/01

Sample Source: SDWA/WTP's

Sample Type: Water

Client Project #: CRA

Project #:

Date Submitted to Lab: 9/18/2001

PO#: 13968 GM-Bedford

- COLLECTION INFORMATION -

Date/Time/By: 9/15/2001 12:28 PM Lisa Meoli

EPA Method	Analyst	Prep Date	Analysis Date	Result	Typical Report Limit
508	SH	9/19/2001	9/25/2001		
	CAS Number	Parameter			
	12674-11-2	Aroclor 1016		<0.08 ug/l	0.08
	11104-28-2	Aroclor 1221		<0.10 ug/l	0.1
	11141-16-5	Aroclor 1232		<0.10 ug/l	0.1
	53469-21-9	Aroclor 1242		0.95 ug/l	0.1
	12672-29-6	Aroclor 1248		<0.10 ug/l	0.1
	11097-69-1	Aroclor 1254		<0.10 ug/l	0.1
	11096-82-5	Aroclor 1260		<0.10 ug/l	0.1

--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
MEL01-11627	508	Decachlorobiphenyl (Surr)	48 %R *	70	130
		Low surrogate recovery.			
MEL01-11627	508	Tetrachloro-m-xylene (Surr)	100 %R	70	130

These data have been reviewed and validated as directed by CRA's Senior Chemist,
Paul Wiseman, on November 12, 2001

End of Report

These data are reported as is without qualification
WKS 12/19/01

Report Approved By:

Wade T. DeLong
Wade T. DeLong

This report shall not be reproduced, except in its entirety, without the written approval of the laboratory. The results presented on this Certificate of Analysis only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s). The results relate only to the individual samples tested.

Your Sample ID: GW-091501-620013-LM-001

Lab Number MEL01-11627

6878 S. STATE ROUTE 100 • P.O. BOX 76 • MELMORE, OH 44845-9999
PHONE 419-397-2659 • 1-800-858-8869 • FAX 419-397-2229

CR

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

SHIPPED TO (Laboratory Name):

APEL C/O STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

13468

PROJECT NAME:

GM-BENFORD

SAMPLER'S SIGNATURE: *Lisa C. Meoli* PRINTED NAME: *Lisa Meoli*

No. OF CONTAINERS

PARAMETERS

REMARKS

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS	REMARKS
1	9/15/01	1228	GW-091501-620013-LM-001	WATER	2	<i>GW (P. 12B)</i>	<i>116.27 (A.B)</i>

**Ref. July 2001 CRAPP
*TAT = 2 wk final report
CRA Contact = Paul W. Seaman

TOTAL NUMBER OF CONTAINERS: *2*

RELINQUISHED BY: ① <i>[Signature]</i>	DATE: <i>9/17/01</i> TIME: <i>1533</i>	RECEIVED BY: ② <i>Walter D. [Signature]</i>	DATE: <i>9-18-01</i> TIME: <i>3:33</i>
RELINQUISHED BY: ② _____	DATE: _____ TIME: _____	RECEIVED BY: ③ _____	DATE: _____ TIME: _____
RELINQUISHED BY: ③ _____	DATE: _____ TIME: _____	RECEIVED BY: ④ _____	DATE: _____ TIME: _____

METHOD OF SHIPMENT: *FED EX* *9/13/01* AIR BILL No. *4410 4466 51847* *9/13/01*

White - Fully Executed Copy Yellow - Receiving Laboratory Copy Pink - Shipper Copy Goldenrod - Sampler Copy	SAMPLE TEAM: <i>Li Meoli</i>	RECEIVED FOR LABORATORY BY: <i>S. Roach</i> DATE: <i>9-18-01</i> TIME: <i>4:00</i>	08437
----------------------------------------------------------------------------------------------------------------------	---------------------------------	------------------------------------------------------------------------------------------	--------------

DC

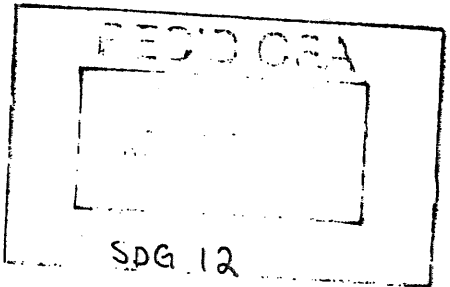


STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720-6961

Tel: 330 497 9396
Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 13968
GM-BEDFORD
Lot #: A1I210104



Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

SEVERN TRENT LABORATORIES, INC. Project#: 13968 Lab#: A1I210104
Name: Gmpt-Bedford Plant

Description

Event: GW-Supply Well Survey
Samples: 1W (9/14)
Analysis: PCB

Amy L. McCormick

Amy L. McCormick
Project Manager

TAT: 2WK
Lab: STL/ATEL

Checked Against Preliminary Data:

Date: 12/10/01 Init: MSC

November 28, 2001

Date of Validation Memo: _____

Invoice Approval Date: _____

Comments: _____

CASE NARRATIVE

A1I210104

The following report contains the analytical results for one water sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Bedford Site, project number 13968. The sample was received September 18, 2001, according to documented sample acceptance procedures.

Analysis for Polychlorinated Biphenyls was performed at Aqua Tech Environmental Laboratories, Inc. A copy of their report has been provided.

Sample ID Cross Reference

CRA	STL	Aqua Tech
GW-091401- 8809012 -LM-001	A1I210104-001	MEL01-11628
<i>B</i> <i>WKS</i> <i>12/15/01</i>		



Amy McCormick
Project Manager

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I0467

Report Date: 08-Nov-01

STL North Canton

4101 Shuffel Dr NW

N Canton, OH 44720

Phone: (330) 497-9396 Ext:

FAX: (330) 497-0772

Attn:

Our Lab#: MEL01-11628

Your Sample ID: GW-091401-^{new 12/10/01}8809012-LM-001

Date Logged In: 9/19/01

Sample Source: SDWA/WTP's

Sample Type: Water

Client Project #: CRA

Project #:

Date Submitted to Lab: 9/18/2001

PO#: 13968 GM-Bedford

- COLLECTION INFORMATION -

Date/Time/By: 9/14/2001 5:24 PM Lisa Meoli

EPA Method	Analyst	Prep Date	Analysis Date	Result	Typical Report Limit
508	SH	9/19/2001	9/25/2001		
	CAS Number	Parameter			
	Re-extraction performed out of hold time.				
	12674-11-2	Aroclor 1016		<0.08 ug/l	UJ 0.08
	11104-28-2	Aroclor 1221		<0.10 ug/l	UJ 0.1
	11141-16-5	Aroclor 1232		<0.10 ug/l	UJ 0.1
	53469-21-9	Aroclor 1242		<0.10 ug/l	UJ 0.1
	12672-29-6	Aroclor 1248		<0.10 ug/l	UJ 0.1
	11097-69-1	Aroclor 1254		<0.10 ug/l	UJ 0.1
	11096-82-5	Aroclor 1260		<0.10 ug/l	UJ 0.1

--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
MEL01-11628	508	Decachlorobiphenyl (Surr)	32 %R *	70	130
		Low surrogate recovery			
MEL01-11628	508	Tetrachloro-m-xylene (Surr)	55 %R *	70	130
		Low surrogate recovery			

These data have been reviewed and validated as directed by CRA's senior chemist,
Bill Wiseman, November 12, 2001

End of Report

"UJ" - The report limit identified is qualified as an
approximate value

Report Approved By: Wade J. Dwyer

This report shall not be reproduced, except in its entirety, without the written approval of the laboratory. The results presented on this Certificate of Analysis only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s). The results relate only to the individual samples tested.

Your Sample ID: GW-091401-^{13 WKS 12/19/01}8809012-LM-001

Lab Number MEL01-11628

6878 S. STATE ROUTE 100 • P.O. BOX 76 • MELMORE, OH 44845-9999
PHONE 419-397-2659 • 1-800-858-8869 • FAX 419-397-2229

CR

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

SHIPPED TO (Labatory Name):

ATEL C10 STL - North Canton

REFERENCE NUMBER:

13968

PROJECT NAME:

GM-BEDFORD

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: *Rita C. Meoli* PRINTED NAME: LISA C. MEOLI

No. OF CONTAINERS

PARAMETERS

REMARKS

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS	REMARKS
1	9/14/01	1924	GW-691401-BSDA/C12-LM-001	WATER	2	<i>(DW-691401/508)</i>	
TOTAL NUMBER OF CONTAINERS					2		

*Ref. July 2001 QAPP
*TRT = 2 wk final report
*CRA Contact = Paul Diener

RELINQUISHED BY: <i>Rita C. Meoli</i>	DATE: <i>9/14/01</i>	RECEIVED BY: <i>Walter D. [Signature]</i>	DATE: 9-18-01
① <i>Rita C. Meoli</i>	TIME: <i>1533</i>	②	TIME: 3:33
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
②	TIME:	③	TIME:
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
③	TIME:	④	TIME:

METHOD OF SHIPMENT: ~~FED EX~~ *9/13/01* AIR BILL No. *4410 4466 5184 9/13/01*

White - Fully Executed Copy	SAMPLE TEAM: <i>L. MEOLI</i>	RECEIVED FOR LABORATORY BY: <i>S. Roach</i>	08436
Yellow - Receiving Laboratory Copy			
Pink - Shipper Copy		DATE: 9-18-01 TIME: 4:00	
Goldenrod - Sampler Copy			

0.2

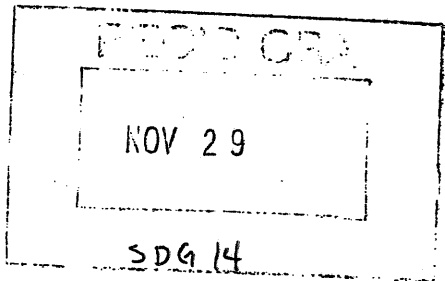


STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720-6961

Tel: 330 497 9396
Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 13968
GM-BEDFORD
Lot #: ALJ020104



Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

SEVERN TRENT LABORATORIES, INC
Project#: 13968 Lab#: A-15020104
Name: GMPT - Bedford plant

Description

Event: GW - Supply Well Survey
Samples: 1w (10/1)

Analysis: PCB

Amy L. McCormick

Amy L. McCormick
Project Manager

TAT: 2PK

Lab: STL/ATEL

Checked Against Preliminary Data:

Date: 12/10/01 Init: rw

Date of Validation Memo: _____

Invoice Approval Date: _____

Comments: _____

November 28, 2001

CASE NARRATIVE

A1J020104

The following report contains the analytical results for one water sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Bedford Site, project number 13968. The sample was received October 2, 2001, according to documented sample acceptance procedures.

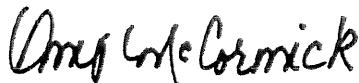
Analysis for Polychlorinated Biphenyls was performed at Aqua Tech Environmental Laboratories, Inc. A copy of their report has been provided.

Sample ID Cross Reference

CRA
GW-100101-330026-LM-001

STL
A1J020104-001

Aqua Tech
MEL01-12609



Amy McCormick
Project Manager

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I0467

Report Date: 22-Oct-01

STL North Canton

4101 Shuffel Dr NW

N Canton, OH 44720

Phone: (330) 497-9396 Ext:

FAX: (330) 497-0772

Attn:

Our Lab#: MEL01-12609

Your Sample ID: AIJ020104-1

Date Logged In: 10/8/01

Sample Source: SDWA/WTP's

Sample Type: Water

Client Project #:

Project #:

Date Submitted to Lab: 10/4/2001

PO#: SR033804

- COLLECTION INFORMATION -

Date/Time/By: 10/1/01

EPA Method	Analyst	Prep Date	Analysis Date	Result	Typical Report Limit
508	SH	10/8/01	10/11/01		
	CAS Number	Parameter			
	12674-11-2	Aroclor 1016		< 0.08 ug/l	0.08
	11104-28-2	Aroclor 1221		< 0.10 ug/l	0.1
	11141-16-5	Aroclor 1232		< 0.10 ug/l	0.1
	53469-21-9	Aroclor 1242		< 0.10 ug/l	0.1
	12672-29-6	Aroclor 1248		< 0.10 ug/l	0.1
	11097-69-1	Aroclor 1254		< 0.10 ug/l	0.1
	11096-82-5	Aroclor 1260		< 0.10 ug/l	0.1

--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
MEL01-12609	508	Decachlorobiphenyl (Surr)	30 %R *	70	130
		LOW SURROGATE RECOVERY			
MEL01-12609	508	Tetrachloro-m-xylene (Surr)	71 %R	70	130

*These data have been reviewed and validated as directed by CRA's Senior Chemist,
Paul Wiseman, November 12, 2001*

End of Report

*These data are reported as is without qualification
AMS 12/19/01*

Report Approved By:

Wade T. DeLong

This report shall not be reproduced, except in its entirety, without the written approval of the laboratory. The results presented on this Certificate of Analysis only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s). The results relate only to the individual samples tested.

Your Sample ID: AIJ020104-1

Lab Number MEL01-12609

CF 1

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

SHIPPED TO (Laboratory Name):

ATEL c/o STL-North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

13968

PROJECT NAME:

GM-Beetford

SAMPLER'S SIGNATURE:

[Signature]

PRINTED NAME:

Lisa Medli

No. OF CONTAINERS

PARAMETERS

[Diagonal lines with handwritten note]

REMARKS

SEQ. No.

DATE

TIME

SAMPLE No.

SAMPLE MATRIX

No. OF CONTAINERS

1

10/17/00

1430

GW-100101-330036 LH-001

Water

6

TOTAL NUMBER OF CONTAINERS

6

RELINQUISHED BY:

① *[Signature]*

DATE: 10/10/00

TIME: 2000

RECEIVED BY:

②

DATE:

TIME:

RELINQUISHED BY:

②

DATE:

TIME:

RECEIVED BY:

③

DATE:

TIME:

RELINQUISHED BY:

③

DATE:

TIME:

RECEIVED BY:

④

DATE:

TIME:

METHOD OF SHIPMENT: Fed Ex *[Signature]*

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM:

L. Medli

RECEIVED FOR LABORATORY BY:

[Signature]

DATE: 10-2-00 TIME: 0800

08423

*Ref. July 2001 OAF
*STAT = 2 wk. Final Report
*O&A Contact = Paul Wis...

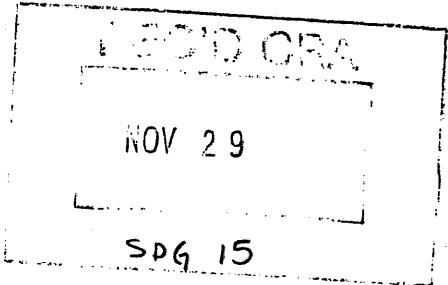


STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720-6961

Tel: 330 497 9396
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ANALYTICAL REPORT

PROJECT NO. 13968
GM-BEDFORD
Lot #: ALJ020103



Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

ORIGINAL ANALYTICAL REPORT

SEVERN TRENT LABORATORIES, INC. Project#: 13968 Lab#: ALJ020103
Name: GMPT - Bedford Plant

Description

Event: GW - Supply Well Survey
Samples: 1W (10/1)
Analysis: PCB

Amy L. McCormick
Amy L. McCormick
Project Manager

TAT: 2WK
Lab: STL/ATEL

Checked Against Preliminary Data:

Date: 12/10/01 Init.: hw

November 28, 2001

Date of Validation Memo: _____

Invoice Approval Date: _____

Comments: _____

CASE NARRATIVE

A1J020103

The following report contains the analytical results for one water sample submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the GM-Bedford Site, project number 13968. The sample was received October 2, 2001, according to documented sample acceptance procedures.

Analysis for Polychlorinated Biphenyls was performed at Aqua Tech Environmental Laboratories, Inc. A copy of their report has been provided.

Sample ID Cross Reference

CRA
GW-100101-330026-LM-002

STL
A1J020103-001

Aqua Tech
MEL01-12608



Amy McCormick
Project Manager

ATEL

Aqua Tech Environmental Laboratories, Inc.

- CERTIFICATE OF ANALYSIS -

Client #: I0467

Report Date: 22-Oct-01

STL North Canton

4101 Shuffel Dr NW

N Canton, OH 44720

Phone: (330) 497-9396 Ext:

FAX: (330) 497-0772

Attn:

Our Lab#: MEL01-12608

Your Sample ID: A1J020103-1

Date Logged In: 10/8/01

Sample Source: SDWA/WTP's

Sample Type: Water

Client Project #:

Project #:

Date Submitted to Lab: 10/4/2001

PO#: SR033804

- COLLECTION INFORMATION -

Date/Time/By: 10/1/01

EPA Method	Analyst	Prep Date	Analysis Date		
508	SH	10/8/01	10/11/01		
	CAS Number	Parameter	Result	Typical Report Limit	
	Low surrogate	confirmed by re-extracted sample. Re-extraction performed 10/15/2001.			
	12674-11-2	Aroclor 1016	<0.08 ug/l	0.08 UJ	0.08
	11104-28-2	Aroclor 1221	<0.10 ug/l	UJ	0.1
	11141-16-5	Aroclor 1232	<0.10 ug/l	UJ	0.1
	53469-21-9	Aroclor 1242	<0.10 ug/l	UJ	0.1
	12672-29-6	Aroclor 1248	<0.10 ug/l	UJ	0.1
	11097-69-1	Aroclor 1254	<0.10 ug/l	UJ	0.1
	11096-82-5	Aroclor 1260	<0.10 ug/l	UJ	0.1

--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
MEL01-12608	508	Decachlorobiphenyl (Surr)	17 %R *	70	130
		Low surrogate recovery			
MEL01-12608	508	Tetrachloro-m-xylene (Surr)	47 %R *	70	130
		Low surrogate recovery			

THESE DATA HAVE BEEN REVIEWED AND VALIDATED AS DIRECTED BY CRA'S SENIOR CHEMIST,
PAUL WISEMAN, NOVEMBER 12, 2001

End of Report

"UJ". The report limit identified is qualified as an
APPROXIMATE VALUE
WKS 12/19/01

Report Approved By:

Wade T. DeLong
Wade T. DeLong

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Your Sample ID: A1J020103-1

Lab Number MEL01-12608

CF

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

SHIPPED TO (Laboratory Name):

ATEL C/O STL - North Canton

CHAIN OF CUSTODY RECORD

REFERENCE NUMBER:

13968

PROJECT NAME:

GM-Bradford

SAMPLER'S SIGNATURE:

[Signature]

PRINTED NAME:

LISA MEDLI

PARAMETERS

[Diagonal line with text: DW-PRO (508)]

REMARKS

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS	REMARKS
1	10/10/01	07:30	GW-100101-330026-LM-OD2	Water	2		

*Ref. July 2001 GARC
*JAT = Zink Final Report
*CRA Contact = Paul Wisser

TOTAL NUMBER OF CONTAINERS 2

RELINQUISHED BY: ① <i>[Signature]</i>	DATE: 10/10 TIME: 2000	RECEIVED BY: ② _____	DATE: TIME:
RELINQUISHED BY: ② _____	DATE: TIME:	RECEIVED BY: ③ _____	DATE: TIME:
RELINQUISHED BY: ③ _____	DATE: TIME:	RECEIVED BY: ④ _____	DATE: TIME:

METHOD OF SHIPMENT: *Fed Ex A* AIR BILL No. _____

<p>White -Fully Executed Copy</p> <p>Yellow -Receiving Laboratory Copy</p> <p>Pink -Shipper Copy</p> <p>Goldenrod -Sampler Copy</p>	<p>SAMPLE TEAM: <i>L. MEDLI</i></p>	<p>RECEIVED FOR LABORATORY BY: <i>[Signature]</i></p>
		<p>DATE: 10-24 TIME: 08.00</p> <p>08424</p>