2015 PERIODIC REVIEW REPORT
DELPHI HARRISON THERMAL SYSTEMS SITE
SITE NUMBER 932113
LOCKPORT, NEW YORK

PREPARED FOR:
New York State Department of Environmental Conservation
Division of Environmental Remediation
Mr. Glenn May

PREPARED BY:
GZA GeoEnvironmental of New York
Buffalo, New York

January 2016
Job No. 21.0056546.00

January 13, 2016
File No. 21.0056546.0

Mr. Glenn May
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203

Re: Periodic Review Report Number 5 – January 2016
Delphi Harrison Thermal Systems Site
Lockport, New York
Registry Site No. 932113

Dear Mr. May:

GZA GeoEnvironmental of New York (GZA) prepared this 2015 Periodic Review Report (PRR) for the Delphi Harrison Thermal Systems Site (Site) as required by the Site Management Plan[1] (SMP) that was approved by the New York State Department of Environmental Conservation (NYSDEC) on October 13, 2011. The implementation of the SMP is a requirement of the Remedial Program Order on Consent and Administrative Settlement (Index #B9-0553-99-06) between GM Components Holdings, LLC (GMCH) and NYSDEC dated November 8, 2011.

GMCH is the current owner and operator of an automotive components manufacturing facility at 200 Upper Mountain Road, Lockport, New York. The Site, as defined by the environmental easement (Instrument # 2011-17072) recorded in the Niagara County Clerk's Office in October 2011, comprises approximately 22.7 acres located in the eastern portion of the facility as shown on Figure 1. In 2014 a portion of the Site was conveyed to Delphi Properties Management LLC. On June 30, 2015 a portion of the Site was transferred from Delphi to MAHLE Manufacturing Management Inc.

REGULATORY HISTORY SUMMARY

The following is a summary of the regulatory actions at the Site.

- Building 8, located in the northern central portion of the facility, formerly housed degreasing operations that utilized trichloroethylene (TCE). An aboveground storage tank (AST) was formerly located outside the southeastern corner of Building 8 until it was decommissioned in May 1994. NYSDEC became involved in 1994 when Delphi Thermal Systems (Delphi) notified them of TCE detected in soil during an excavation to repair fire protection lines in the vicinity of the former TCE AST. NYSDEC assigned the incident Spill Number 9410972. Delphi removed the TCE-impacted soil from the excavation down to the top of bedrock and provided NYSDEC with a report of this removal action in a letter dated December 22, 1994.

- In March 1999, the Site was added to the NYSDEC Inactive Hazardous Waste Registry, Site Number 932113 as a Class 3 listing (does not present a significant threat to the public health

[1] "Delphi Harrison Thermal Systems Site, Niagara County, New York, Site Management Plan, NYSDEC Site Number: 9-32-113" dated October 13, 2011

or the environment – action may be deferred).

- Delphi entered into a Remedial Investigation/Feasibility Study Order on Consent, Index #B9-0553-99-06 (RI/FS Order) in 2001 to determine the extent of TCE contamination and complete a Focused Feasibility Study.

- In March 2005, NYSDEC, in consultation with the New York State Department of Health (NYSDOH), issued a Record of Decision (ROD) based on the results of the Focused Remedial Investigation (FRI) and Focused Feasibility Study (FFS). The components of the selected remedy, as defined in the ROD, are as follows.

    - Monitored natural attenuation (MNA) with groundwater monitoring and sampling to check the continued effectiveness of the remedy.

    - Development of a contingency plan for groundwater control/treatment if natural attenuation processes can no longer be demonstrated as effective or if significant off-site groundwater contamination is observed.

    - Development of a site management plan to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment, (b) evaluate the potential for vapor intrusion for all current site buildings and those developed on the site in the future, including provision for mitigation of impacts identified; (c) provide for the operation and maintenance of the components of the remedy; (d) monitor site groundwater; and (e) identify use restrictions on site development or groundwater use.

    - Imposition of an environmental easement to restrict groundwater use and check compliance with the approved site management plan.

    - Certification of the institutional and engineering controls.

- Annual MNA groundwater sampling was completed voluntarily at the Site from October 2006 through April 2011.

- In October 2011, an environmental easement (Instrument # 2011-17072) for the Site was recorded in the Niagara County Clerk's Office.

- In November 2011, a Remedial Program Order on Consent and Administrative Settlement (Index #B9-0553-99-06) was executed between GMCH and NYSDEC.

- In April 2012, the Site was reclassified on NYSDEC Inactive Hazardous Waste Registry, to a Class 4 listing (site has been properly closed but that requires continued site management consisting of operation, maintenance and/or monitoring).

- Annual MNA groundwater sampling completed at the Site since April 2012 has been in accordance with the Remedial Program Order on Consent and Administrative Settlement (Index #B9-0553-99-06).

- There were no new regulatory actions taken within the reporting period.

2015 PERIODIC REVIEW REPORTING PERIOD

In accordance with Section 5.3 of the SMP, the following constitutes the Calendar Year 2015 PRR.

1. Results of the required Site inspections and severe weather condition inspections, if applicable

(a) A Site inspection was completed on January 7, 2016 by Peter Nyznyk of GZA. The site inspection form was completed and a copy is included as Appendix A.

(b) No severe weather condition inspections occurred during the reporting period.

2. All applicable inspection forms and other records generated for the Site during the reporting period in electronic format

(a) A copy of the completed site inspection form from the January 7, 2016 site inspection is included in Appendix A and will be included as part of the electronic format of the PRR to be submitted to NYSDEC's Glenn May and Brian Sadowski (see page 40 of SMP). Also included as part of the electronic submittal is a copy of the Delphi Harrison Thermal Systems Site 2015-NYSDEC Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form. A copy of this Form is attached to the PRR as Appendix B.

No other pertinent records were generated for the Site during the reporting period

3. A summary of any monitoring data and/or information generated during the Reporting Period with comments and conclusions

The most recent MNA groundwater sampling was completed in May 2015. A copy of the GZA report is included with this PRR as Appendix C and the report provides the following pertinent conclusions.

Based on the results of the May 2015 sampling round within the framework of the historical results, natural attenuation of COCs is occurring via reductive dechlorination. GZA offers the following additional observations relative to the 2015 sampling round:

- The COC concentrations of the parent compounds are decreasing from the source area (MW-7) downgradient to the mid-point of the plume (MW-4 and MW-10), and from the mid-point and on to the downgradient portions of the Site (MW-11 through MW-13).
- There is an increase in daughter compound concentrations from the source area to the mid-point of the plume, with an overall decrease in total COC concentrations.
- The COCs were not detected above laboratory method detection limits near the down-gradient property line at MW-12 and MW-13.

- COCs of daughter compounds were detected above the method detection limits but below the groundwater quality standards in down-gradient well MW-11.

It should be noted that there is a temporal decreasing trend in TOC concentrations across the Site. TOC, as discussed previously, represents a surrogate measurement of the "fuel" driving reductive dechlorination and should continue to be monitored.

RECOMMENDATIONS:

Based on the results of the May 2015 and previous sampling events and supported by the findings of the 2014 treatability study, current conditions mid-plume show potential for complete reductive dechlorination of TCE to ethane. COCs were not detected or detected at concentrations below groundwater standards in groundwater collected from the downgradient Site boundary, providing additional confirmation of continued natural attenuation.
GZA recommended continued annual groundwater monitoring to confirm maintenance of natural attenuation parameters and continued spatial and temporal decrease in COCs.

Recommended groundwater monitoring will utilize the same eight monitoring wells (MW-4, -7, -10, -11, -12, -13, -14 and -15), as stated in the SMP, in the Spring of 2016. The natural attenuation analytical parameter list used during the 2015 sample round should also be used in the 2016 sample round.

4. Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends.

Data summary tables and graphs associated with the annual MNA groundwater sampling report are included in Appendix C.

5. Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format.

The electronic submission of the PRR will include the results of analyses, copies of laboratory data sheets, and the required laboratory data deliverables for samples collected during the reporting period for the 2015 MNA groundwater sampling event.

6. A Site evaluation, which includes the following:

- **Compliance with the requirements of the ROD Site-selected remedy;**
- **Any new conclusions or observations regarding site contamination based on inspections or data generated by the Site Monitoring Plan for the media being**

monitored;

- **Recommendations regarding any necessary changes to the remedy and/or Site Monitoring Plan; and**
- **The overall performance and effectiveness of the remedy.**

As discussed in 3 above, there appears to be a decreasing temporal trend in TOC concentrations, and the indicator parameters provide evidence that anaerobic biodegradation of the COCs is controlling migration of impacted groundwater downgradient.

At this time, there are no recommendations to change the Site remedy or the Site Monitoring Plan. The Site is in compliance with the ROD, and MNA is still an effective remedy.

7. Identification, assessment and certification of all ECs/ICs [Engineering Controls/Institutional Controls[2]] required by the Record of Decision Site-selected remedy

There are no Engineering Controls (ECs) required under the ROD and the Institutional Controls (ICs) that apply to the Site are set forth in the recorded Environmental Easement. The ICs for the Site restrict the use of groundwater and require compliance with the SMP. There have been no changes to the SMP since it was approved by NYSDEC on October 13, 2011.

Certification of the Institutional and Engineering Controls[3]

For each institutional or engineering control identified for the Site, I certify[4] the following statements are true:

- The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;

- The institutional control and/or engineering controls employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;

- Nothing has occurred that would impair the ability of the control to protect the public health and environment;

- Nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this control;

- Access to the Site will continue to be provided to the Department (with valid Safety Protocol Program Card) to evaluate the remedy, including access to evaluate the

[2] See definition for *Engineering Control* at 6 NYCRR § 375-1.2 (o) and for *Institutional Control* at 6 NYCRR § 375-1.2 (aa).

[3] The required Certification of the Institutional and Engineering Controls is set forth in Section 5.2 of the NYSDEC-approved SMP. It is to be used for the Periodic Review Report in lieu of the certifications noted in DER-10 at section 6.3 (d).

[4] Certify is defined as a statement or declaration of a professional opinion based on the information, data and/or facts known at the time such certification is made.

continued maintenance of this control;

- If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document[5];
- Use of the Site is compliant with the Environmental Easement;
- Engineering control systems that have been installed as part of the remedial programs for the Site are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the ROD Site's selected remedy and generally accepted engineering practices; and
- The information presented in this report is accurate and complete.
- I certify that the information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Bart A. Klettke, P.E. of GZA GeoEnvironmental of New York, am certifying as Owner's Designated Site Representative for the Site.

Bart A. Klettke, P.E.
Principal
GZA GeoEnvironmental of New York

Date: January 8, 2016

[5] Note that no financial assurance mechanism is in place for the Site remedial program.

Figure 1: Site Plan
Figure 2: Photograph Orientation Map
Appendix A: 2015 - Site Inspection Form/Photographs
Appendix B: Delphi 2015 – NYSDEC Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form
Notification of Site Change of Use, Transfer of Certificate of Completion, and/or Ownership Form
Notification of Completion of Property Transfer/Sale
Appendix C: May 2015 MNA Groundwater Sampling Report

cc: Brian Sadowski (NYSDEC, electronic copy only)
Jim Hartnett (GM, electronic copy only)
Roy Knapp (GMCH, electronic copy only)
Jim Hunt (MAHLE, electronic copy only)

FIGURES

DRAWN BY: DEW

DATE: DECEMBER 2011

GZA GeoEnvironmental of New York

NOTE:

BASE MAP ADAPTED FROM U.S.G.S. TOPOGRAPHIC MAPS DOWNLOADED FROM TERRASERVER.MICROSOFT.COM

GM COMPONENTS HOLDINGS, LLC

PERIODIC REVIEW REPORT

DELPHI HARRISON THERMAL SYSTEMS SITE

200 UPPER MOUNTAIN ROAD

LOCKPORT, NEW YORK

SITE NUMBER 9-32-113

SITE PLAN

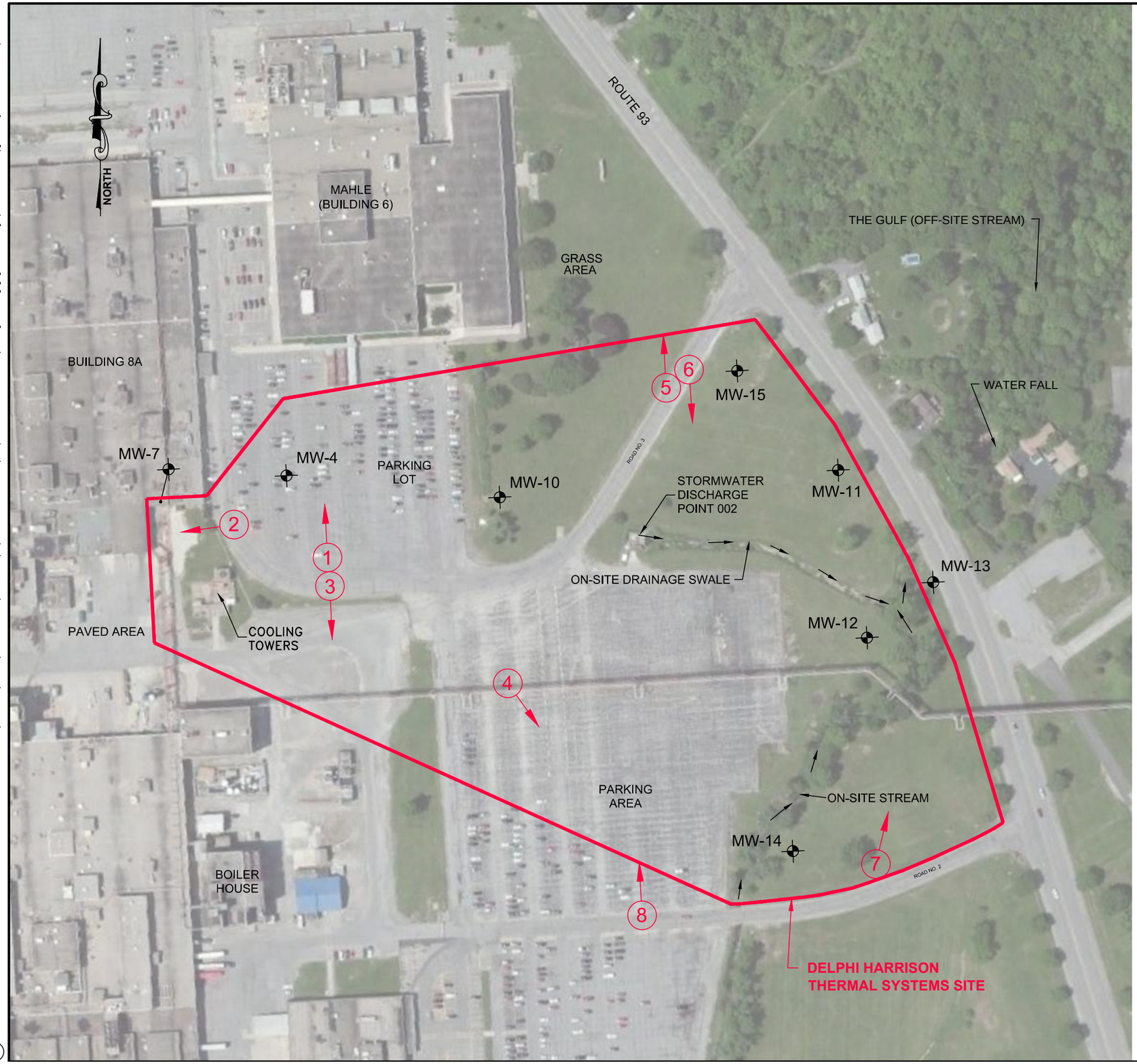
PROJECT No.

21.0056546.00

FIGURE No.

1

GZA–T:\PROJECTS\56500s\56546 GM Component LLC\Periodic Review Report\Figure 1 Site Plan.dwg [FIGURE 1] December 13, 2011 – 1:17pm daniel.wulf



LEGEND:

1 — APPROXIMATE LOCATION AND ORIENTATION OF INSPECTION PHOTOGRAPHS (SEE APPENDIX A)

MW-4 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL

NOTES:

1. BASE MAP ADAPTED FROM http://www.bing.com/mapspreview AND SITE OBSERVATIONS.

2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

DRAWN BY: **TAK**

DATE: **JANUARY 2016**

GZA GeoEnvironmental of New York

APPROXIMATE SCALE IN FEET

0 90 180 360

GM COMPONENTS HOLDINGS, LLC

DELPHI HARRISON THERMAL SYSTEMS SITE

PERIODIC REVIEW REPORT

200 UPPER MOUNTAIN ROAD

LOCKPORT, NEW YORK

SITE NO. 9-32-113

PHOTOGRAPH ORIENTATION MAP

PROJECT No.

21.0056546.00

FIGURE No.

2

G:\PROJECTS\56500s\56546 GM Component LLC\Delphi Periodic Review Report\2016 Periodic Review Report Figure 2.dwg [Figure 2 Photograph Orientation Map] January 08, 2016 – 3:30pm theodore.klettke

APPENDIX A

SITE INSPECTION FORM

SITE DETAILS

Site No.: 9-32-113
Site Name: Delphi Harrison Thermal Systems Site
Site Address: 200 Upper Mountain Road, Lockport NY

PERSON PERFORMING INSPECTION

NAME: Peter Nyznyk EMAIL: peter.nyznyk@gza.com
OTHERS PRESENT: PHONE NUMBER: 716-844-7045
COMPANY: GZA GeoEnvironmental of NY

INSPECTION DATE AND SITE CONDITIONS

INSPECTION DATE: January 7, 2016 INSPECTION TIME:1500
WEATHER CONDITIONS: °Mild Partly cloudy 40F

REASON FOR SITE INSPECTION

Scheduled Annual Inspection: YES NO
Inspection after a Severe Condition that could effect site controls: YES NO
describe severe conditions triggering inspection:

VERIFICATION OF SITE DETAILS

Current Site Owner: GM Components Holdings, LLC (GMCH)
Current Site Operators: GMCH
Describe Current Site Use (check all that apply):
Industrial Commercial Residential Other
briefly describe observed site uses: Area within the environmental easement was being used as parking lot and greenspace,
Has any new information come to your attention to indicate that assumptions made in the qualitative exposure assessment for off-site contamination are no longer valid? YES NO
If YES, is this information or evidence of submittal to NYSDEC attached?
Note any additional pertinent information to Verification of Site Details (use additional pages if necessary):

DESCRIPTION OF INSTITUTIONAL/ENGINEERING CONTROLS

Is Environmental Easement still in place? YES NO
If no, explain:
Is the Site Management Plan in place? YES NO
If no, explain:

AREAS IN NEED OF REPAIR OR MAINTENANCE

Area discussed in this section must be shown on a figure and have photographic documentation.
Parking lot showing signs of aging and overall wear. Condition is reported as fair.

INTRUSIVE ACTIVITIES PERFORMED AT SITE DURING INSPECTION PERIOD DATE LOCATION

None reported or observed

Are site records being properly generated and maintained? YES NO
Provide summary of recordkeeping review and adequacy:
GMCH Environmental Manager, Roy Knapp, maintains both hard copies and electronic copies of the site records per GM's Information Lifecycle Management system. The records are managed under "Corrective Action and Remediation Project Records", series ENV010. Hard copies are kept in a file cabinet in the Engineering office and electronic copies reside on the environmental . shared ("S") drive

ADDITIONAL NOTES & COMMENTS

See attached representative site photos from PRR site inspection.

INSPECTION CERTIFICATION

I hereby certfy that the information included in this report is complete and accurate to the best of my knowledge.

Inspector Signature:  Date: January 7, 2016

Periodic Review Report Site Inspection Photographs

Delphi Harrison Thermal Systems Site
Site Number 932113
200 Upper Mountain Road
Lockport New York

January 7, 2016
File No. 21.0056546.00 Task 36

Photo 1 – North western portion of Site looking north

Photo 2 – Western portion of Site looking west

Photo 3 – South western portion of Site looking south

Photo 4 – South eastern portion of Site looking south east

Periodic Review Report Site Inspection Photographs

Delphi Harrison Thermal Systems Site
Site Number 932113
200 Upper Mountain Road
Lockport New York

January 7, 2016
File No. 21.0056546.00 Task 36

Photo 5 – North eastern portion of Site looking north

Photo 6 – Eastern portion of Site looking south

Photo 7 – South eastern portion of Site looking north

Photo 8 – Southern portion of Site looking north

APPENDIX B

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932113

Site Name Delphi Harrison Thermal Systems

Site Address: 200 Upper Mountain Road Zip Code: 14094
City/Town: Lockport
County: Niagara
Site Acreage: 22.7

Reporting Period: December 16, 2014 to December 16, 2015

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☒	☐
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 932113 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
108.13-1-1	GM Components Holdings LLC	Site Management Plan Landuse Restriction Monitoring Plan Ground Water Use Restriction Soil Management Plan IC/EC Plan

In March 2005, a Record of Decision was issued for this site. The selected remedy was Monitored Natural Attenuation (MNA). Long-term groundwater monitoring is required to evaluate the continued effectiveness of MNA at the site.

An Environmental Easement was filed with the Niagara County Clerk's Office on October 6, 2011. This easement states that the Controlled Property may be used for commercial or industrial use as long as the following engineering controls are employed and the land use restrictions specified below are adhered to: (1) implement and comply with all elements of the Department approved Site Management Plan, (2) restrict use of groundwater at the Controlled Property as a source of potable or process water without necessary water quality treatment as determined by the Niagara County Department of Health, and (3) evaluate the potential for vapor intrusion into any buildings developed on the Controlled Property. Provision for mitigation (if determined to be necessary), such as installation of a vapor barrier and sub-slab vapor system or other engineering controls shall be implemented on all structures on the Controlled Property prior to occupancy.

Box 4

Description of Engineering Controls

None Required

Not Applicable/No EC's

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____

Signature of Owner, Remedial Party or Designated Representative — Date

IC CERTIFICATIONS
SITE NO. 932113

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I William J. McFarland (print name) at 30200 Mound Road, MC: 480-111-1N, Warren, MI 48090 (print business address),

am certifying as Director, Remediation Services (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

William J McFarland
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

January 06, 2016
Date

Allicia Malmgren

ALLICIA MALMGREN
Notary Public - Michigan
Macomb County
My Commission Expires Apr 3, 2021
Acting in the County of Macomb

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I BART A. KLETTKE (print name) at 535 WASHINGTON STREET, BUFFALO, NY 14203 (print business address)

am certifying as a Qualified Environmental Professional for the GM COMPONENTS HOLDINGS, LLC (Owner or Remedial Party)

Bart A. Klettke — Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

JANUARY 8, 2016 — Date

DELPHI

March 6, 2015

Chief, Site Control Section
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7020

RE: Site ID No. 932113, Delphi Harrison Thermal Systems

Dear Chief, Site Control Section:

The enclosed 60-day Advance Notification of Site Change of Use, Transfer of Certificate of Completion, and/or Ownership Form is being provided with regard to the pending sale by Delphi of Building 6 and associated property at the Delphi Harrison Thermal Systems Site in Niagara County, New York.

The purchaser will be Mahle Behr GmbH & Co. KG or an affiliated entity. Though the exact date of the property transfer is not known at this time, it may occur as early as May 1, 2015.

Please feel free to contact me if you have any questions.

Sincerely,

Jim Hunt
Manager, Global Technical & Remediation Services
Delphi Automotive Systems, LLC
Phone Number: (248) 813-1428
Email: james.hunt@delphi.com

Cc : Phil Lawrence (Mahle, by e-mail)
Christian Bald (Mahle, by e-mail)
James Hartnett (GMCH, by e-mail)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

60-Day Advance Notification of Site Change of Use, Transfer of Certificate of Completion, and/or Ownership

(to be submitted to: Chief, Site Control Section, New York State Department of Environmental Conservation, Division of Environmental Remediation, 625 Broadway, Albany NY 12233-7020; at least 60 days prior to any change of use, transfer of a Certificate of Completion, or change in ownership of a site as required by 6NYCRR Part 375-1.11(d) and 375-1.9(f))

I. Site Name: Delphi Harrison Thermal Systems **DEC Site ID No.** 932113

II. Contact Information of Person Submitting Notification:

Name: James Hunt

Address1: 5725 Delphi Drive

Address2: Troy, MI 48098-2815

Phone: (248) 813-1428 E-mail: james.hunt@delphi.com

III. Type of Change and Date: Indicate the Type of Change(s) (check all that apply):

☑ Change in Ownership or Change in Remedial Party(ies)

☐ Transfer of Certificate of Completion (CoC)

☐ Other (e.g., any physical alteration or other change of use)

Proposed Date of Change (mm/dd/yyyy): 05/01/2015

IV. Description: Describe proposed change(s) indicated above. Provide maps, drawings, and/or parcel information as applicable. If "Other," explain how such change may affect the site's proposed, ongoing, or completed remedial program (attach additional sheets if needed).

Mahle Behr GmbH & Co. KG is purchasing from Delphi property including Bldg. 6 and nearby parking lots and access roads as shown in attached drawing.

V. Certification Statement: Where the change of use results in a change in ownership or in responsibility for the proposed, ongoing, or completed remedial program for the site, the following certification must be completed (by owner or designated representative; see §375-1.11(d)(3)(i)):

I hereby certify that the prospective purchaser and/or remedial party has been provided a copy of any order, agreement, Site Management Plan, or State Assistance Contract regarding the Site's remedial program as well as a copy of all approved remedial work plans and reports.

Name: James Hunt (Signature) 3/6/2015 (Date)

James Hunt on behalf of Delphi Automotive Systems, LLC (Print Name)

Address1: 5725 Delphi Drive

Address2: Troy, MI 48098-2815

Phone: (248) 813-1428 E-mail: james.hunt@delphi.com

Reset Page

VI. Contact Information for New Owner, Remedial Party, or CoC Holder: If the site will be sold or there will be a new remedial party, identify the prospective owner(s) or party(ies) along with contact information. If the site is subject to an Environmental Easement, Deed Restriction, or Site Management Plan requiring periodic certification of institutional controls/engineering controls (IC/ECs), indicate who will be the certifying party (attach additional sheets if needed).

☑ Prospective Owner ☐ Prospective Remedial Party ☐ Prospective Owner Representative

Name: Mahle Behr GmbH & Co. KG Attn:

Address1:

Address2:

Phone: E-mail:

Certifying Party Name: GM Components Holdings LLC

Address1: 200 Upper Mountain Rd.

Address2: Lockport, NY

Phone: (315) 856-0211 E-mail: jim.f.hartnett@gm.com

VII. Agreement to Notify DEC after Property Transfer/Sale: If Section VI applies and all or part of the site will be sold, a letter to notify the DEC of the completion of the transfer must be provided. If the current owner is also the holder of a CoC for the site, the CoC should be transferred to the new owner using DEC's form found at http://www.dec.ny.gov/chemical/54736.html. This form has its own filing/recording requirements (see Part 375-1.9(f)).

Signing below indicates that a post transfer letter of notification for the sale of the property will be provided to the DEC within the specified timeframe. If the sale of the site also includes the transfer of a CoC, the DEC agrees to accept the notice given in VII.3 below in satisfaction of the post transfer notice required by VII.1 (to be submitted within 15 days of the sale of the site).

Within 30 days of the sale of the site, I agree to submit to the DEC:

1. the name and contact information for the new owner(s) (see §375-1.11(d)(3)(ii));
2. the name and contact information for any owner representative; and
3. a notice of transfer using the DEC's form found at http://www.dec.ny.gov/chemical/54736.html (see §375-1.9(f)).

Name: James Hunt (Signature) 03/06/2015 (Date mm/dd/yyyy)

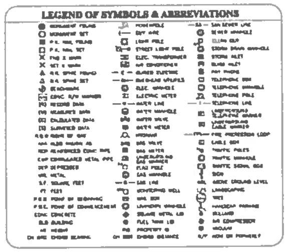
James Hunt on behalf of Delphi Automotive Systems, LLC (Print Name)

Address1: 5725 Delphi Drive

Address2: Troy, MI 48098-2815

Phone: (248) 813-1428 E-mail: james.hunt@delphi.com

Reset Page



SITE DATA

CITY OF LOCKPORT
CURRENT ZONING - I-3 - HEAVY INDUSTRIAL
BUILDING SETBACKS
MIN. FRONT YARD - 35 FT.
MIN. SIDE YARD - 20 FT.
MIN. REAR YARD - 30 FT.
MAX. BUILDING HEIGHT - 40 FT.
MAX. COVERAGE 50% OF LOT

TOWN OF LOCKPORT
CURRENT ZONING - R-1 - RESIDENTIAL
BUILDING SETBACKS
MIN. FRONT YARD - 70 FT.
MIN. SIDE YARD - 10 FT.
MIN. REAR YARD - 35 FT.
MAX. BUILDING HEIGHT - 43 STORIES
MAX. COVERAGE - N/A

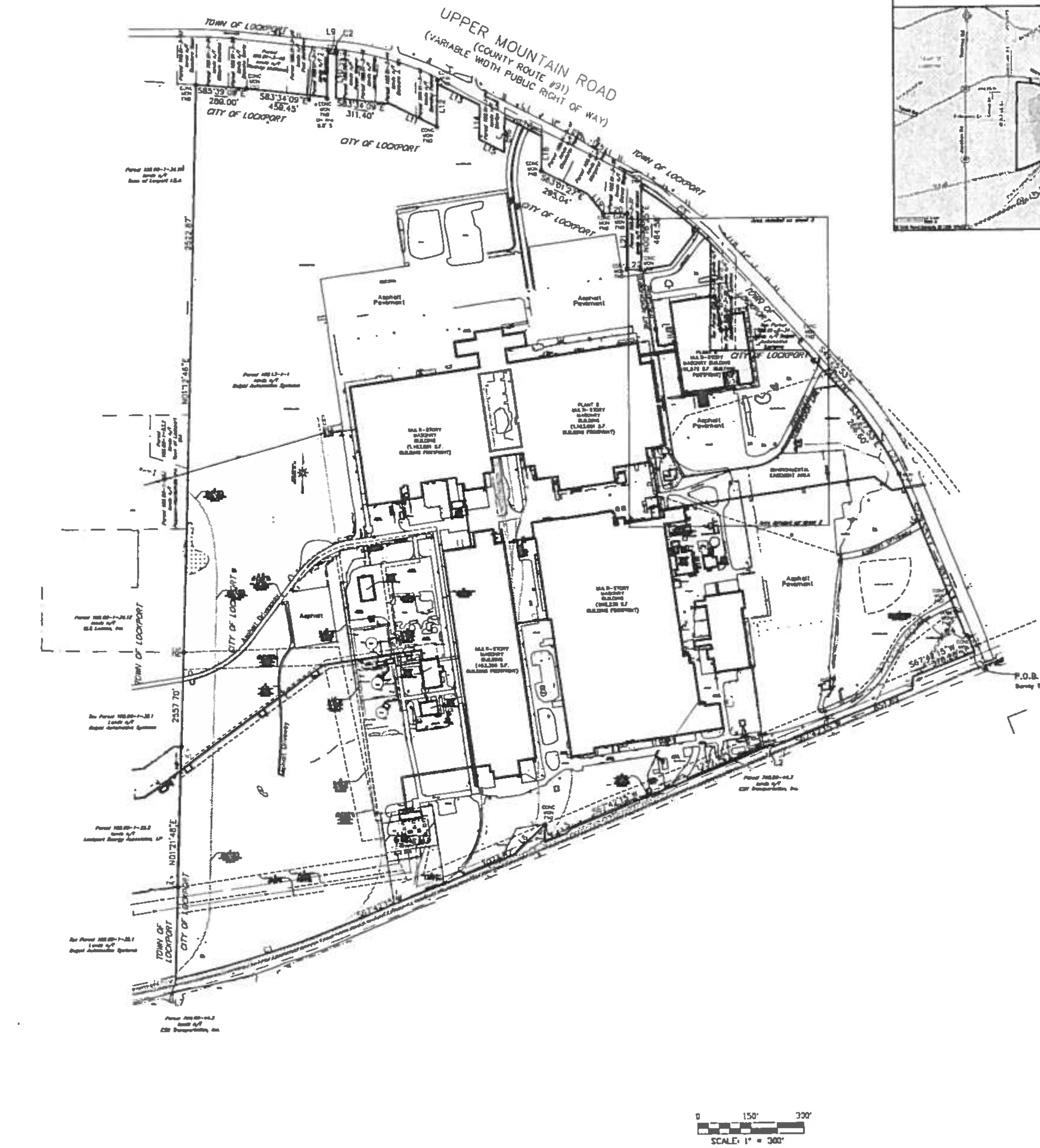
Tax Parcel 108.13-1-1
Area - 14,969,912 s.f. or 343.6619 Acres
Proposed Plant 6 Parcel
Area - 724,537 s.f. or 16.6331 Acres
Proposed net area for Tax Parcel 108.13-1-1
Area - 14,245,375 s.f. or 327.0288 Acres

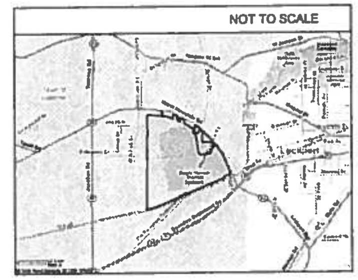
CURVE TABLE						
Curve No.	Radius	Length	Tangent	Ch Brg	Ch Dist.	Delta
C1	5698.85'	972.30'	487.33'	N72°35'38"E	971.12'	9°46'45"
C2	1879.00'	36.11'	18.05'	S83°06'56"E	36.11'	1°06'23"
C3	2098.80'	505.51'	253.98'	S51°18'25"E	504.29'	13°48'00"
C4	2098.80'	578.86'	290.18'	S30°18'05"E	574.85'	15°44'03"
C5	2098.80'	71.15'	35.58'	S43°24'09"E	71.15'	1°56'32"
C6	2098.80'	362.84'	181.77'	S53°15'26"E	362.19'	9°53'59"
C7	250.00'	242.09'	131.46'	S54°14'15"W	232.74'	55°28'00"
C8	2098.80'	214.02'	107.10'	S45°21'40"E	213.93'	5°50'34"
C9	2098.80'	142.87'	71.46'	S48°15'26"E	142.85'	3°54'01"

LINE NO.		
LINE NO	BEARING	DISTANCE
L1	S00°58'15"W	89.39
L2	N01°21'45"W	18.01
L3	S44°37'15"W	35.79
L4	S87°42'15"W	131.30
L5	N00°17'48"E	100.00
L6	S45°32'04"W	244.37
L7	S77°29'00"W	2.31
L8	N00°54'31"E	248.76
L9	S83°34'09"E	14.18
L10	S00°54'31"W	248.41
L11	S83°28'09"E	294.60
L12	N00°55'31"E	244.40
L13	S83°08'09"E	270.09
L14	S00°50'31"W	194.36
L15	S83°12'09"E	134.00
L16	N01°00'31"E	194.44
L17	S83°08'09"E	236.92
L18	S00°53'31"W	194.38
L19	S36°37'38"E	141.92
L20	S89°18'38"E	134.00
L21	S00°15'22"W	317.87
L22	S89°41'38"E	80.00
L23	S28°23'33"E	201.50
L24	N67°53'07"E	12.00
L25	S22°15'33"E	110.19

GENERAL NOTES

1. Property is known as Parcel 108.13-1-1 in the City of Lockport, Niagara County, NY
2. The purpose of this subdivision is to subdivide parcel 108.13-1-1 into a separate parcel for General Motors Plant 6. No development or improvements are proposed in association with this subdivision.
3. Suitable monuments are to be placed at all accessible property corners.
4. This plan is based on a survey prepared by First Order, LLC. dated September 16, 2009, last revised February 25, 2010.





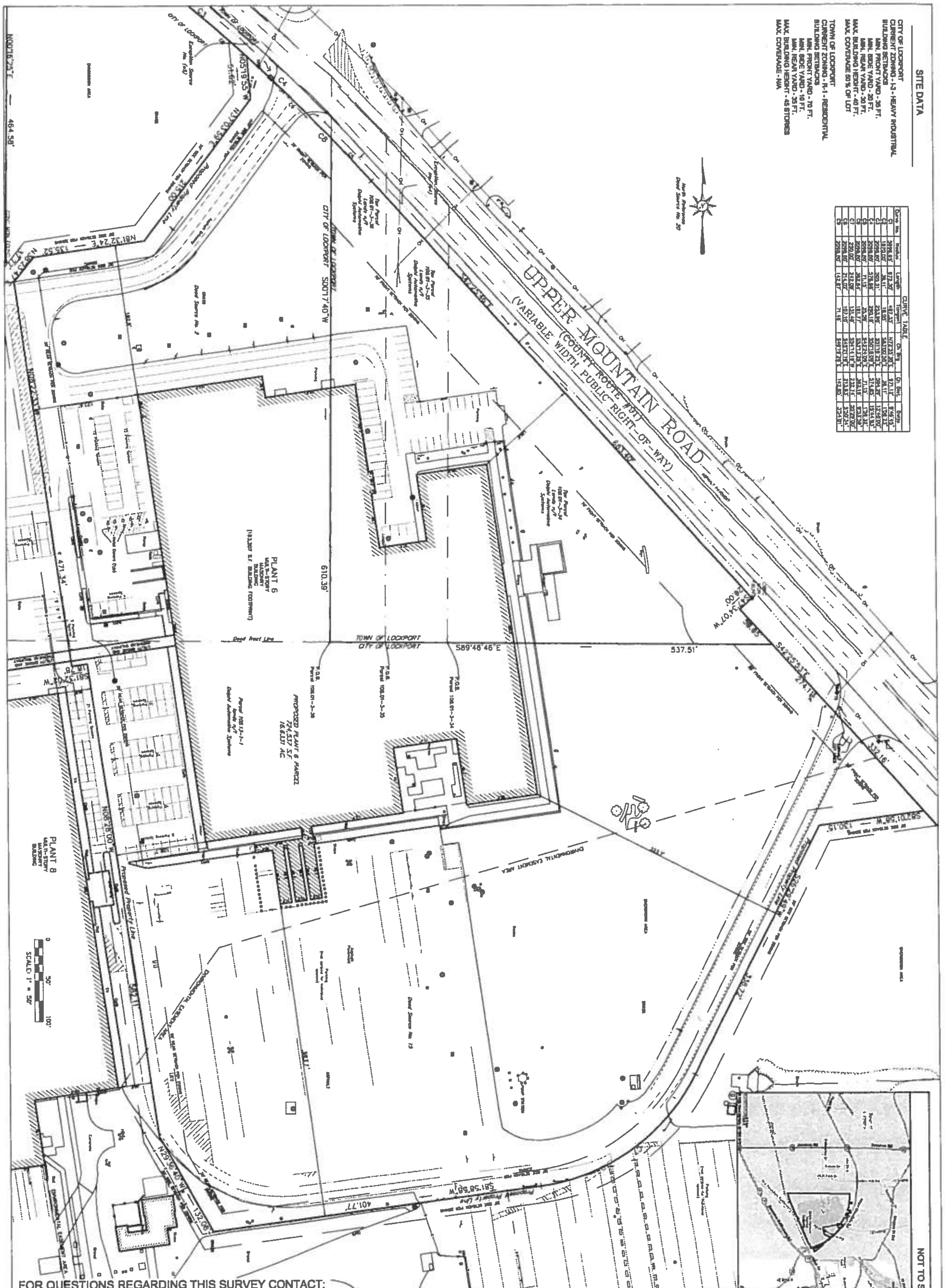
PLAN OF MINOR SUBDIVISION

FOR QUESTIONS REGARDING THIS SURVEY CONTACT:

CROWN SERVICES GROUP
5016 S. PLAZA DR. NEWBURGH, IN 47630
Ph. 812-490-5602 Fax 812-490-5606

PROJECT ADDRESS:	PROJECT LOCATION:	PREPARED FOR:	SURVEYOR'S NAME & FIRM NAME:
200 Upper Mountain Rd. Lockport, NY 14094	NIAGARA COUNTY NEW YORK	GENERAL MOTORS	FILE NAME: 1533 FIRST ORDER, LLC 1700 SULLIVAN TRAIL, SUITE 3 EASTON, PA 18040 Phone (610) 438-5840 Fax (610) 438-0004
SHEET 1 OF 2	CSG JOB NUMBER: 9222-08		

REVISIONS			
NO.	DESCRIPTION	DATE	REV BY
0		11-08-2010	JMB
1	REVISED PER CLIENT COMMENTS	01-11-2011	SBW
2	REVISED PER CLIENT COMMENTS	01-14-2011	SBW
3	REVISED PER CLIENT COMMENTS	05-13-2011	SBW



FOR QUESTIONS REGARDING THIS SURVEY CONTACT:

CROWN SERVICES GROUP
5016 S. PLAZA DR. NEWBURGH, IN 47630
Ph. 812-490-5602 Fax 812-490-5606

PLAN OF MINOR SUBDIVISION

PROJECT ADDRESS:	PROJECT LOCATION:	PREPARED FOR:	SURVEYOR'S NAME & FIRM NAME: FILE NAME: 1533
200 Upper Mountain Rd. Lockport, NY 14094	NIAGARA COUNTY NEW YORK	GENERAL MOTORS	FIRST ORDER, LLC 1700 SULLIVAN TRAIL, SUITE 3 EASTON, PA 18040 Phone (610) 438-5840 Fax (610) 438-0004
SHEET 2 OF 2	CSC JOB NUMBER 9272 08		

REVISIONS

NO.	DESCRIPTION	DATE	REV BY
0	PLAN ISSUED FOR GM REVIEW & COMMENT	[illegible]	JMG
1	REVISED PER CLIENT COMMENTS	[illegible]	[illegible]
2	REVISED PER CLIENT COMMENTS	[illegible]	[illegible]
3	REVISED PER CLIENT COMMENTS	[illegible]	[illegible]

FIRST ORDER, LLC
1700 Sullivan Trail, Suite 13
Easton, PA 18040
(610) 438-5840 * fax (610) 438-0004

June 24, 2011
Rev. July 14, 2011

Metes & Bounds Description
Proposed Plant 6 Parcel
Part of Parcel 108.13-1-1
City of Lockport
Niagara County, New York

Beginning at a point on the southwesterly right of way line of Upper Mountain Road (County Route #91), said point being located the arc of a curve to the right having a radius of 2098.80 feet, turning a central angle of 09°53'59", for an arc length of 362.64 feet, the chord of which bears South 53°13'26" East for a distance of 362.19 feet from a point where said right of way line is intersect by the dividing line between the parent tract from which this parcel is taken and the easterly line of Parcel 108.01-3-37, lands n/f Michael Vincent, and from said beginning point running thence

1. Along said Upper Mountain Road on the arc of a curve to the right having a radius of 2098.80 feet, turning a central angle of 03°54'01", for an arc length of 142.87 feet, the chord of which bears South 46°19'26" East for a distance of 142.85 feet to a point, thence

2. Along other lands of Delphi Automotive Systems, said line being the dividing line between the City of Lockport and the Town of Lockport, South 00°17'40" West a distance of 610.39 feet to a point, thence

3. Continuing along the same, South 89°46'46" East a distance of 537.51 feet to a point on the above referenced Upper Mountain Road, thence

4. Along the southwesterly right of way line of Upper Mountain Road, South 42°25'53" East a distance of 274.11 feet to a point, thence

Running the following courses along the newly created dividing line between the Proposed Plant 6 Parcel and lands reaming to Parcel 108.13-1-1:

5. South 82°01'58" West a distance of 130.15 feet to a point, thence

6. South 26°29'49" West a distance of 338.72 feet to a point, thence

7. Along the arc of a tangent curve to the right with a radius of 250.00 feet, turning a central angle of 55°29'00", for an arc length of 242.09 feet, the chord of which bears South 54°14'19" West for a distance of 232.74 feet to a point, thence;

8. South 81°58'58" West a distance of 401.77 feet to a point, thence
9. North 29°36'40" West a distance of 132.08 feet to a point, thence
10. North 08°28'00" West a distance of 582.11 feet to a point, thence
11. South 81°32'02" West a distance of 18.78 feet to a point, thence
12. North 08°22'33" West a distance of 471.34 feet to a point, thence
13. North 38°23'47" East a distance of 37.77 feet to a point, thence
14. North 81°32'24" East a distance of 135.52 feet to a point, thence
15. North 37°03'59" East a distance of 215.00 feet to a point, thence
16. North 05°19'55" West a distance of 51.62 feet to the point and place of beginning.

Containing 724,537 square feet or 16.6332 acres of land.

Jack W. Shoemaker
New York Professional Land Surveyor 50495

From: (248) 813-1474
James Hunt
DELPHI CORPORATION
5725 DELPHI DR
M/C 483 400 575
TROY, MI 48098

Origin ID: MTCA

FedEx Express

J1512150223030v

Ship Date: 06MAR15
ActWgt: 1.0 LB
CAD: 101990890/INET3610

Delivery Address Bar Code

SHIP TO: (518) 402-9814 BILL SENDER

Chief, Site Control Section
NYS Dpt Environmental Conservation
Div. Environmental Remediation
625 Broadway
ALBANY, NY 12233

Ref #
Invoice #
PO #
Dept #

MON - 09 MAR 10:30A
PRIORITY OVERNIGHT

TRK# 7730 7098 2554
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DELPHI

July 2, 2015

Chief, Site Control Section *by Express Mail*
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7020

RE: Notification of Completion of Property Transfer/Sale
Site Name: Delphi Harrison Thermal Systems
DEC Site ID No. 9-32-113, Lockport, NY

Dear Chief,

As required by the Notifications Section (2.4.2) of the 2011 Site Management Plan in place for the referenced Site, this notification will confirm the completion of the transfer/sale of Delphi's interest in the Site to MAHLE Manufacturing Management, Inc. The transfer is effective June 30, 2015.

Delphi Automotive Systems, LLC filed the required 60-Day Advance Notification of Change of Ownership on March 6, 2015. A copy is attached.

MAHLE's ongoing contact for the remediation under the Site Management Plan will be Jim Hunt, whose contact information is as follows:

James Hunt
5820 Delphi Drive
D2-B28, Mail Code 480.405.223
Troy, Michigan 48098
Email: jim.hunt@us.mahle.com
Phone : (248) 813-1428

Please feel free to contact me if you have any questions.

Sincerely,

Mark A. Hester
Assistant General Counsel
Delphi Automotive Systems, LLC
Phone Number: (248) 813-1472
Email: mark.a.hester@delphi.com

enclosure

Delphi Legal Staff
Troy Offices and Customer Center
5725 Delphi Drive Troy, Michigan 48098-2815 USA

cc : James Hunt (Mahle, by email)
Phil Lawrence (Mahle, by email)
Christian Bald (Mahle, by email)
James Hartnett (GMCH, by email)
Angelique Strong Marks (Mahle, by email)

APPENDIX C

July 28, 2015
File No. 21.0056546.00

Mr. Glenn May
NYSDEC Region 9
270 Michigan Avenue
Buffalo, New York 14203

535 Washington Street
11th Floor
Buffalo, New York
14203
716-685-2300
FAX 716-685-3629
http://www.gza.com

Re: Results of May 2015 Monitored Natural Attenuation Groundwater Sampling
Delphi Harrison Thermal Systems Site (Site)
Lockport, New York
Registry Site No. 932113

Dear Glenn:

GZA GeoEnvironmental of New York (GZA) presents this letter report to summarize results of the May 2015 groundwater and monitored natural attenuation (MNA) parameter sampling event at the above-referenced Site. The groundwater sampling event was conducted from May 6th through May 26th, and included eight monitoring wells (MW-4, -7, -10, -11, -12, -13, -14 and -15) that were sampled for the five compounds of concern (COCs)[1] and MNA parameters as identified in the Site Management Plan[2] (SMP). In addition to the MNA parameters identified in the SMP, carbon dioxide, hydrogen, ethene, and ethane were added to the sampling parameter list starting in 2014. These parameters are consistent with the 2011 through 2013 sampling events with the exception of the analysis of sodium (Na), calcium (Ca), and potassium (K) which were not included in the 2015 analyses as these parameters provide limited benefit in the further evaluation of MNA at this site.

BACKGROUND

2005

In March 2005, NYSDEC issued a Record of Decision (ROD) for the Site, which selected MNA as the remedial alternative to address the COCs present at the Site. Annual MNA groundwater sampling was completed voluntarily from October 2006 to May 2011. In November 2011, GM Components Holdings, LLC (GMCH) entered into an Order on Consent and Administrative Settlement, discussed later in this section, which requires that annual sampling be conducted as part of the SMP.

In November 2011, GMCH entered into an Order on Consent and Administrative Settlement (Index #B9-0553-99-06) for the Site. The Final Engineering Report for the Site was

[1] The five COCs are trichloroethylene, tetrachloroethylene, *cis*-1,2-dichloroethene, *trans*-1,2-dichloroethylene, and vinyl chloride.
[2] "Delphi Harrison Thermal Systems Site, Niagara County, New York, Site Management Plan, NYSDEC Site Number 9-32-113" dated October, 2011. Prepared for GM Components Holdings, LLC by GZA.

submitted in March 2012 and a Certificate of Completion was issued by NYSDEC dated March 13, 2012. The Certificate of Completion required the following be completed:

- A record of notice for the Certificate of Completion must be filed with Niagara County within 30 days of issuance of the Certificate of Completion. The record of notice was recorded on April 10, 2012.
- A fact sheet must be issued describing the institutional and engineering controls that are required at the Site. The fact sheet was distributed by NYSDEC to their Listserv contact list in April 2012.
- The NYSDEC-approved SMP must be implemented.

2006 to 2010

Six monitoring wells (MW-7, MW-11, MW-12, MW-13, MW-14 and MW-15) were monitored in October 2006, November 2007 and November 2008 (see Figure 1 for locations). MW-7 is located in the vicinity of the Area of Concern (AOC) and the other five wells, MW-11 through MW-15, are down-gradient monitoring locations. Based on the results of the groundwater sampling program through March 2009, the sampling program was expanded in July 2009 to include 10 monitoring well locations: MW-4, -7, -8, -9, -10, -11, -12, -13, -14 and -15. Results of the 2010 event indicated that natural attenuation is occurring with limited evidence of reductive dechlorination near the source area (MW-7) and midpoint (MW-4 and -10) of the groundwater plume. However, there was adequate to strong evidence for anaerobic biodegradation of COCs at the leading edge of the groundwater plume (MW-11 through -15). Given these conditions, coupled with the lack of evidence of an expanding plume, it appeared that natural attenuation processes were effectively managing the COC plume migration.

2011 to 2014

Results of the 2011 to 2014 annual sampling included eight monitoring wells (MW-4, -7, -10, -11, -12, -13, -14 and -15), as stated in the SMP and collectively resulted in the following conclusions:

- natural attenuation of COCs is occurring via reductive dechlorination,
- The COC concentrations of the parent compounds were decreasing and the concentrations of daughter compounds increasing from the source area (MW-7) down-gradient to the mid-point of the plume (MW-4 and MW-10) and on to the down-gradient portions of the Site (MW-11 through MW-15).
- The COC concentrations at the down-gradient property line did not exceed the NYSDEC Class GA criteria.

Also, the 2013 data indicated that ethene was detected in groundwater samples collected from all eight monitoring wells. Assuming the ethene represents the ultimate daughter product of cVOC reductive dechlorination, its detection at each monitoring well was a direct line of evidence that cVOCs have been degraded to completion at the Site.

The temporal decreasing trend in TOC concentrations continued through the 2013 monitoring event. GZA recommended a treatability study to evaluate whether the addition of an organic carbon amendment might re-stimulate natural attenuation by reductive

dechlorination. The recommended study involved deployment of *in-situ* microcosms (Bio-Trap® ISMs, manufactured by Microbial Insights, Inc. of Knoxville, Tennessee) "baited" with an organic carbon additive to evaluate whether reductive dechlorination can be re-stimulated.

Conclusions of the 2014 Treatability Study:

At the Source area (MW-7):

- *Dehalococcoides* populations were detected in both the control and carbon amendment units. However, population counts were below the concentration at which an effective rate of dechlorination generally occurs.
- Addition of the organic carbon amendment at the source location did not substantially enhance growth of dechlorinating bacteria and increase reductive dechlorination within the study period.

At the mid-plume location (MW-4):

- High concentrations of *Dehalococcoides* and both vinyl chloride reductase enzyme genes were detected in the MNA unit, indicating the potential for complete reductive dechlorination of TCE to ethene under existing site conditions.
- The *Dehalococcoides* population in the BioStim unit, in which the organic carbon was added, was an order of magnitude higher compared to the MNA unit. Vinyl chloride reductase genes were also higher in this unit compared to MNA levels, suggesting that the carbon amendment enhanced growth of dechlorinating bacteria within the study period. Contaminant concentrations and geochemistry, however, were not substantially different from those in the MNA unit.

MAY 2015 GROUNDWATER MONITORING & SAMPLING

The May 2015 groundwater monitoring and sampling event was conducted from May 6th through May 26th , 2015 in accordance with the SMP and included eight monitoring wells (MW-4, MW-7, and MW-10 through MW-15, see Figure 1).

Methodology

The groundwater monitoring and sampling was performed using low flow sampling techniques with a peristaltic pump, disposable polyethylene tubing and a water quality meter with a flow-through cell to collect water quality field parameters. The sampling technique and analytical parameters were consistent with the SMP.

The following is the list of the analytical parameters for this sampling event:

Field Measured Parameters: temperature, specific conductance, pH, turbidity, dissolved oxygen (DO) and oxidation reduction potential (ORP).

Compounds of Concerns: tetrachloroethylene (PCE), trichloroethylene (TCE),

cis-1,2-dichloroethylene (*cis*-DCE), *trans*-1,2-dichloroethylene (*trans*-DCE) and vinyl chloride (VC).

Natural Attenuation Parameters: methane, iron, magnesium, manganese, alkalinity, TOC, chloride, nitrate, nitrite, sulfate, sulfide, carbon dioxide, hydrogen, ethene, and ethane.

Groundwater pumping rates varied from one well to another during monitoring/sampling in order to establish a stable water level. Once a stable water level was established within the monitoring well, flow rates were maintained during the monitoring/sampling period. Samples were collected for analysis after field-measured parameters stabilized, and a minimum of one well volume was purged. It should be noted that a stable water level could not be established at well MW-7 (similar to previous rounds). Therefore, this location was purged to dry-like conditions and allowed to recharge until the recharge volume was sufficient to collect the sample parameters. Also, due to the lack of a stable water level, the hydrogen sample could not be collected. The Monitoring Well Observations & Groundwater Sampling Logs are included in Appendix A.

ANALYTICAL RESULTS & DISCUSSION

Analytical results for the COCs for the current sampling event along with the data from previous sample rounds are shown on Figure 1. A contour map of the Total COC concentrations is presented on Figure 2 and a groundwater elevation contour map of the groundwater elevation data collected is shown on Figure 3. It should be noted that the concentrations of *cis*-DCE and *trans*-DCE have been combined for presentation purposes as total 1,2-DCE in Figure 1 and Appendix B, although the bulk of total 1,2-DCE mass includes the *cis* isomer. The analytical results for the COCs (current and historic) shown on Figure 1 have been graphically depicted and are included in Appendix B.

Analytical results for the MNA parameters are shown on Table 1, along with the data from previous sampling rounds. The Test America Laboratories, Inc. laboratory report is provided in Attachment A.

Compounds of Concern

Source Area Monitoring Well

MW-7: The TCE concentrations over time at MW-7 have generally been in the range of 530 to 880 mg/L from October 1996 through May 2015 with the exception of four contiguous sample rounds from April 2003 through November 2008, where the results ranged from 1.1 to 434 ppm. The TCE concentration graph in Appendix B indicates a downward temporal trend in concentrations from April 1996 to April of 2003, which is consistent with a higher availability of organic carbon for natural attenuation. The consistent TCE concentration

range reported from October 1996 to May 2015 may be attributed to a decrease of available organic carbon.

The concentrations of the PCE, 1,2-DCE and VC appear to generally be consistent since the start of the sampling in 1996, with some minor fluctuation.

Mid Plume Monitoring Wells

MW-4: The concentrations of the TCE and PCE appear to generally be consistent since the start of the sampling in 1996, with some minor fluctuations.

Since 2003, there has been a general downward trend of 1,2-DCE and VC concentrations at MW-4, which may reflected in the decreased available organic carbon concentration trend that would drive the microbially-mediated transformation of TCE→*cis*1,2-DCE→VC.

MW-10: There has been a slight downward trend of TCE and 1,2-DCE concentrations at MW-10 since 1996 with some minor fluctuations, which is consistent with natural attenuation. PCE concentrations have been generally lower since 1999 with some fluctuations, and the 2015 VC concentration increased an order of magnitude since 2014, also consistent with natural attenuation.

Down-gradient Monitoring Wells

MW-11: The detected concentrations of PCE and TCE have been below method detection limits since the start of sampling in 1997, generally consistent with natural attenuation at this down-gradient location.

The concentrations of 1,2-DCE have fluctuated from below method detection limits (multiple sample rounds) to 0.013 ppm (December 1998) with the majority of the detected concentrations (15 of 17 sample rounds) being below the NYSDEC Class GA criteria (0.005 ppm), including the 2015 sampling event.

The concentrations of VC have fluctuated from below method detection limits (multiple sample rounds) to 0.008 ppm (August 2001) in a pattern generally similar to the 1,2-DCE. Results from the last several sample rounds have been at or below the NYSDEC Class GA criteria (0.002 ppm), including the 2015 sampling event, which was below NYSDEC Class GA criteria.

MW-12: PCE and TCE were not detected above their respective Class GA criteria (0.005 ppm) from 2009 to 2013. The concentrations of VC have fluctuated

from 0.011 ppm (October 2001) to 0.190 ppm (August 1997). Concentrations of 1,2-DCE have fluctuated from 0.011 ppm (November 2007) to 0.272 ppm (April 2010). TCE, PCE, 1,2-DCE, and VC all were reported below method detection limits for the 2015 sampling event.

MW-13: The detected concentrations of PCE, TCE, 1,2-DCE and VC have been below method detection limits in all but one sample round (October 2006) since the start of sampling in 2001. The results for 2015 were below method detection limits.

MW-14: The detected concentrations of TCE have been below method detection limits in 10 of the 13 sample rounds conducted since the start of sampling in 2001. The TCE value (0.0051 ppm) in 2015 was at the NYSDEC Class GA criteria.

The detected concentration of PCE for 2015 was below the NYSDEC Class GA criteria.

The detected concentration of 1,2-DCE has been at or below its respective NYSDEC Class GA criteria in 8 of the 13 sample rounds conducted since the start of sampling in 2001. The concentration of 1,2-DCE during the 2015 sampling round was reported above the NYSDEC Class GA criteria.

VC (0.076 ppm) was reported above its respective NYSDEC Class GA criteria for the May 2015 sampling event. Historically, the detected concentrations of VC have been below method detection limits in 10 of the 13 sampling events since the start of sampling in 2001. The other event where VC (0.003 ppm) did slightly exceed its respective NYSDEC Class GA criteria was in November 2008.

MW-15: The detected concentrations of TCE was below method detection limits (<0.002 ppm) in the first 7 of the 13 sample events since the start of sampling in 2001. TCE has been detected in the last 6 events at concentrations above the method detection limits (0.00064 to 0.0007 ppm), but below the NYSDEC Class GA criterion.

The detected concentrations of PCE have been slightly above its NYSDEC Class GA criteria since the start of sampling in 2001, with the highest concentration of 0.02 ppm (October 2001) to the lowest concentration of 0.0054 ppm at the most recent (May 2015) sampling event.

1,2-DCE and VC have been below their method detection limits all 13 sampling events completed since 2001.

Natural Attenuation Performance

Findings of the May 2015 groundwater analytical and water quality data are generally consistent with the substantive conclusions and trends noted in prior reports. During 2015, GZA used Wiedemeier *et. al.'s* (1998[3]) approach to evaluate the performance data to re-assess the strength of the evidence supporting reductive dechlorination. A table summarizing the results of that evaluation is included in Appendix C, and the results are tabulated below.

WELL	STRENGTH OF NATURAL ATTENUATION EVIDENCE			
	INADEQUATE EVIDENCE	LIMITED EVIDENCE	ADEQUATE EVIDENCE	STRONG EVIDENCE
Source Area Well				
MW-7			**X**	
Mid Plume Wells				
MW-4				X
MW-10		X		
Down-gradient Wells				
MW-11		X		
MW-12			X	
MW-13		X		
MW-14			X	
MW-15		X		

Note: "X" indicates the respective strength of the evidence for natural attenuation by reductive dechlorination for the May 2015 groundwater monitoring round in accordance with Wiedemeier *et. al.*. (1998).

As summarized above in the embedded table, there is strong evidence for natural attenuation by reductive dechlorination at well MW-4 and limited to adequate evidence in the remaining seven wells. Comparison of the these natural attenuation evidence to that in 2014 reveals a general increase in evidence since 2014 when seven of the eight wells sampled showed limited evidence and one showed adequate evidence.

CONCLUSIONS

Based on the results of the May 2015 sampling round within the framework of the historical results, natural attenuation of COCs is occurring via reductive dechlorination. GZA offers the following additional observations relative to the 2015 sampling round:

- The COC concentrations of the parent compounds are decreasing from the source area (MW-7) downgradient to the mid-point of the plume (MW-4 and MW-10), and from the mid-point and on to the downgradient portions of the Site (MW-11 through MW-13).
- There is an increase in daughter compound concentrations from the source area to the mid-point of the plume, with an overall decrease in total COC concentrations.

[3] Wiedemeier, T.H., Swanson, M.A., Moutoux, D.E., Gordon, E.K., Wilson, J.T., Wilson, B.H., Kampbell, D.H., Haas, P.E., Miller, R.N., Hansen, J.E., and Chapelle, F.H., 1998, Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water, EPA/600/R-98/128, 78 p.

- The COCs were not detected above laboratory method detection limits near the down-gradient property line at MW-12 and MW-13.
- COCs of daughter compounds were detected above the method detection limits but below the groundwater quality standards in down-gradient well MW-11.

It should be noted that there is a temporal decreasing trend in TOC concentrations across the Site. TOC, as discussed previously, represents a surrogate measurement of the "fuel" driving reductive dechlorination and should continue to be monitored.

RECOMMENDATIONS:

Based on the results of the May 2015 and previous sampling events and supported by the findings of the 2014 treatability study, current conditions mid-plume show potential for complete reductive dechlorination of TCE to ethane. COCs were not detected or detected at concentrations below groundwater standards in groundwater collected from the downgradient Site boundary, providing additional confirmation of continued natural attenuation.
GZA recommends continued annual groundwater monitoring to confirm maintenance of natural attenuation parameters and continued spatial and temporal decrease in COCs.

Recommended groundwater monitoring will utilize the same eight monitoring wells (MW-4, -7, -10, -11, -12, -13, -14 and -15), as stated in the SMP, in the Spring of 2016. The natural attenuation analytical parameter list used during the 2015 sample round should also be used in the 2016 sample round.

Please do not hesitate to contact the undersigned if you have any questions or require any additional information.

Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK

Thomas Bohlen
Project Geologist

James Richert
Senior Project Manager

Bart A. Klettke, P.E.
Principal

TABLE

Table 1
Summary of Groundwater Field Measurements and Analytical Test Results for Natural Attenuation Parameters
DRAFT May 2015 Groundwater Sampling
Delphi Thermal Systems
West Lockport Complex
Lockport, New York

		Field Parameters					Analytical Test Results - Inorganic and Miscellaneous Water Quality Parameters																									
Location	Sample Date	Temp. (Deg. C)	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mv)	pH (Std Units)	Methane (mg/L)	Ethane (mg/L)	Ethene (mg/L)	Carbon Dioxide (mg/L)	Hydrogen (nm)	Organic Carbon (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Chloride (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Nitrate Nitrite (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Calcium (mg/L)	Dissolved Calcium (mg/L)	Iron (mg/L)	Dissolved Iron (mg/L)	Magnesium (mg/L)	Dissolved Magnesium (mg/L)	Manganese (mg/L)	Dissolved Manganese (mg/L)	Sodium (mg/L)	Dissolved Sodium (mg/L)	Potassium (mg/L)	Dissolved Potassium (mg/L)	Volatile Fatty Acids (mg/L)
MW-4	12/2/1998	14.2	2.730	0.23	-56	6.6	2.9					19	354	1.23	986	0.30	<0.05		120	0.2	503	443	0.58	0.51	105	106	0.40	0.32	282	293	13.3	12.8	
MW-4 DUP	12/2/1998	NA	NA	NA	NA	NA	5.5					8	368	1.57	971	0.05	<0.05		120	0.2	431	335	0.59	0.52	107	100	0.39	0.34	282	306	13.2	13.5	
MW-4	10/7/1999	13.8	3.412	0.08	-92.8	6.7	4.2					47	360	1.03	1,010			0.08	110	0.3	269	318	0.42	0.45	98	116	0.23	0.34	240	305	10.4	13.1	
MW-4	8/9/2001	12.6	3.420	0.12	-5.1	6.5	0.12					20.2	366	1.20	1,300	0.11	<0.05		190	0.2	371		1.01		107		0.54		384		12.7		
MW-4	10/31/2001	13.8	3.444	0.10	-128.0	6.6	3.3					10.8	366	1.17	1,100	<0.05	<0.05		160	1.2			0.77		102		0.46		358		12.3		
MW-4	7/20/2009	17.7	1.263	0.28	35.1	6.41	5.28					13	330	3.83	5,320	<0.6	<0.6		295	2.0				3.21		193		2.64		2,100		50.5	
MW-4	4/29/2010	15.0	9.664	0.96	-2.1	6.5	1.8					4.3	333	NA	3,510	<0.05	<0.05		272	<1.0				3.15		152		1.86		1,700		26.1	
MW-4 DUP	4/22/2011	11.85	7.391	0.73	-349.0	6.77	2					0.6	343	1.9	3,260	<0.05	<0.05		370	<0.1	493		3.1		139		1.6		1420		17.8		
MW-4	4/20/2012 [9]	14.5	10.130	6.00	40.5	6.09	3.8	0.65	2.3	9.5	28	3.1	320	2.6	3,580	<0.05	<0.05		282	<0.1			2.7		138		1.5		1400		15.6		ND
MW-4	5/1/2013	14.5	13.320	0.18	-34.2	6.62	<0.22	<0.0049	<0.0052	23	0.63	2.8	329	3.4	4,300	<0.02	<0.02		268	<0.052			3.9		163		2.0		2080		20.2		ND
MW-4	5/13/2014	14.6	6.830	0.04	-21.1	6.92	1.2	0.075	0.31	14	0.52	2.9	299	1.7	1,750	0.079	<0.02		223	<0.052			0.81		63.8		0.47						
MW-4	5/8/2015	18.7	6.070	0.02	-40.9	6.91	0.53	0.032	0.23	10	1.7	2.3	304	1.6	1,660	<0.020	<0.020		228	<0.052			0.70		65.8		0.38						13
MW-6	12/2/1998	19.5	3740.000	0.30	-67	6.8	0.84					9	319	0.45	897	0.22	<0.05		160	0.2	161	156	7.98	1.13	35.6	28.8	0.48	0.29	619	638	9.64	9.51	
MW-6	10/7/1999	21.9	3283.000	0.12	-145.8	7.1	0.34					30	260	0.32	476			0.09	140	0.4	86.4	108	3.62	0.55	24	30.2	0.24	0.19	300	311	7.4	8.8	
MW-7	12/3/1998	17.3	3.130	0.33	-35	7.0	0.06					36	376	1.43	944	0.29	<0.05		200	0.4	382	375	0.14	0.02	118	136	<0.01	<0.01	288	351	20.5	23.0	
MW-7 [3]	10/7/1999	19.4	3.049	0.69	-52	7.1	0.02					58	420	1.10	1,180			0.11	180	0.4	286	255	0.86	0.05	138	145	0.05	0.02	292	306	21.4	24.0	
MW-7	10/25/2006	17.4	2.620	1.08	-92	7.1	0.06					28	376	1.33	600	<0.05	<0.05		470	<0.01			0.23		112		0.02		237		19.4		
MW-7	11/29/2007	15.5	2.162	0.83	-195	7.2	0.13					14	322	1.14	430	<0.05	<0.05		519	0.8			0.58		98.5		0.05		278		20.7		
MW-7	11/4/2008	16.2	3.152	0.33	-80	6.8	0.11					4.4	348	0.08	980	<0.05	<0.05		23	<0.1	327		6.06		74		2.28		277		4.39		
MW-7	2/24/2009	13.1	1.718	1.22	-68	7.3	0.04					NM	270	0.98	410	<0.05	<0.05		430	<0.1	193		0.09		86.7		0.04		213		14.2		
MW-7	7/20/2009	16.4	2.558	0.88	32	7.1	0.07					28	310	1.28	452	<0.6	<0.6		460	2.4				0.03		84.9		0.03		230		24.1	
MW-7	4/29/2010	15.0	1.540	3.14	-13.4	7.24	0.057					10.9	239	NA	280	<0.05	<0.05		479	<1.0				0.41		70.2		0.02		204		13.9	
MW-7	4/22/2011	10.4	1.241	3.75	-334	7.68	0.015					9.2	223	0.53	267	<0.05	<0.05		463	<0.1	121		0.20		60.1		0.025		3290		13.8		
MW-7	4/20/2012	15.4	1.830	0	-34	7.49	0.046	0.017	0.098	1.6		8.7	240	0.77	416	<0.05	<0.05		332	<0.1			0.06		67.1		0.024		193		13.2		Note 8.
MW-7	5/3/2013	13.2	2.530	2.05	-55.6	7.3	0.12	0.032	0.25	4.4		7.6	242	0.75	569	<0.02	<0.02		253	<0.052			0.02		76		0.190		254		14.3		Note 8.
MW-7	5/30/2014	13..2	2.230	1.78	-10.7	7.32	0.009	<0.0075	0.048	4.3	NM	5.4	258	0.43	292	<0.02	<0.02		138	<0.052			<0.019		34.7		0.009						
MW-7	5/7/2015	13.1	1.815	0.21	-47.8	7.24	0.021	0.014	0.079	3.5	NM	9.4	244	0.7	300	<0.020	<0.020		143	<0.052			0.39		41.4		0.019						5.2
MW-7 DUP	5/7/2015	NA	NA	NA	NA	NA	0.025	0.016	0.091	3.6	NM	9.5	244	0.7	298	<0.020	<0.020		142	<0.052			0.41		42		0.019						46.0
MW-8	12/2/1998	16.7	3.210	0.90	-68	6.9	0.09					12	300	0.40	138	<0.05	<0.05		550	0.2	215	227	0.33	0.17	76	78	0.31	0.32	102	114	6.31	6.67	
MW-8	10/7/1999	19.7	1.640	0.08	-116.1	7.1	0.04					19	280	0.33	144			0.10	570	0.3	174	188	0.22	0.15	82.4	97.5	0.30	0.31	112	110	7.6	8.1	
MW-8	7/15/2009	16.3	2.408	0.20	-48.6	6.9	2.0					22	300	0.76	457	<0.6	<0.6		588	2				0.03		102		0.40		246		15.7	
MW-8	4/22/2011	9.39	2.327	4.56	-334	7.26	0.018					<1	244	0.30	683	<0.05	<0.05		562	<0.1	220		0.12		102		0.53		355		7.9		
MW-9	12/2/1998	16.2	7.150	1.6	120	6.9	0.04					3	309	0.23	640	0.25	<0.05		680	<0.1	330	300	0.33	<0.01	89	84.5	1.74	0.93	444	445	5.52	5.91	
MW-9	10/5/1999	18.7	4.042	0.08	103.5	6.9	0.02					24	330	0.20	963	0.46	<0.05		520	<0.1	250	283	0.20	0.02	63.8	89	1.36	0.99	476	535	4.6	26.5	
MW-9 DUP	10/5/1999	NA	NA	NA	NA	NA	0.02					27	340	0.14	833	0.63	<0.05		490	<0.1	252	284	0.20	0.02	72	86	1.46	0.94	478	560	5.0	5.6	
MW-9	7/20/2009	17.8	8.381	0.41	109.1	6.7	0.03					17	290	0.26	3,100	<0.6	0.9		379	1.2				<0.01		117		0.31		1,600		19.0	
MW-9	4/22/2011	9.49	7.263	0.24	-345	7.08	0.0069					<1	233	0.11	3,410	0.39	<0.05		362	<0.1	392		0.03		94.9		0.11		1,710		6.9		
MW-10	12/1/1998	14.5	4.100	0.40	-13.7	6.7	0.23					11	320	0.32	1,220	0.19	<0.05		270	0.2	310	305	1.95	0.76	54.6	85.5	2.30	2.07	584	645	13.4	13.2	
MW-10	10/5/1999	14.2	4.775	0.07	-2.0	6.8	0.14					24	280	0.29	1,010	0.15	0.10		240	<0.1	39.8	254	0.73	0.04	9.94	102	0.99	1.12	33.2	635	18.8	10.1	
MW-10	8/9/2001	12.2	5.033	0.17	249.1	6.6	0.018					10.0	334	0.16	1,700	0.08	<0.05		330	0.1	330		0.14		98.9	99.6	1.66		857	845	9.2		
MW-10	10/31/2001	14.4	3.990	0.15	90.9	6.7	0.20					3.6	336	0.12	2,800	0.17	<0.05		280	1.6			0.05		92.1		0.91		720		7.6		
MW-10	7/15/2009	13.2	9.579	0.76	79.6	6.6	0.36					33.0	330	0.27	4,260	<0.6	<0.6		276	0.8				0.08		103		2.63		1,950		21.1	
MW-10 (DUP)	4/28/2010	11.0	3.741	0.35	16.2	6.88	0.14					4.3	263	NA	1,460	0.053	<1.0		168	<1.0				10.5		35.0		1.31		890		4.57	
MW-10	4/19/2012 [9]	12.71	7.974	5.16	129.1	6.1	0.170	0.009	0.009	5.6	1	2.3	280	0.11	3,790	<0.05	<0.05		210	<0.1			0.32		95.5		2.40		2110		7		ND
MW-10	5/1/2013	11.9	4.820	0.75	131.2	7.05	0.058	0.001	0.001	7.4	0.77	3.3	270	0.039	1,470	0.33	<0.02		153	<0.052			0.48		31.8		1.50		845		3.4		ND
MW-10	5/14/2014	13.2	8.370	0.1	105.7	6.85	0.110	<0.0015	<0.0015	15.0	0.95	3.5	272	0.01	2,580	<0.02	<0.02		370	<0.052			0.07		53.7		1.90						
MW-10	5/8/2015	14.2	6.059	0.14	146.3	6.94	0.006	<0.0015	<0.0015	7.9	1.4	3.2	260	0.021	1,720	<0.02	<0.02		346	<0.052			0.035		40.5		1.30						12.5
MW-11	12/1/1998	11.9	4.360	0.22	-271	7.6	0.01					17	275	0.58	188	0.17	<0.05		110	0.2	122	97.3	1.00	0.26	39.0	36.4	0.11	0.08	116	129	8.88	10.1	
MW-11	10/5/1999	11.9	5.228	2.34	-231	7.7	0.05					20	270	0.76	192	0.05	<0.05		210	0.5	93.4	150	0.34	0.30	46.4	103	0.08	0.08	180	695	10.9	27	
MW-11	8/8/2001	10.4	3.576	0.12	-73.6	7.4	<0.002					12	285	0.46	250	<0.05	<0.05		140	0.1	111		0.14		43.2		0.12		130		8.0		
MW-11	10/30/2001	12.0	4.126	0.04	-248.8	7.5	<0.002					3.1	265	0.46	230	<0.05	<0.05		110	2.8			0.02		38.7		0.41		120		9.1		
MW-11	10/24/2006	13.1	8.000	1.61	-106	7.3	0.008					1.9	341	0.12	108	0.16	<0.05		66	<0.1			0.80		30.7		0.08		85		7.6		
MW-11	11/28/2007	10.7	1.390	0.38	-309	7.2	0.008					3	233	0.38	410	0.18	<0.05		144	1.0			0.74		42.1		0.08		235		12.3		
MW-11	11/4/2008	14.4	1.377	0.56	-200	7.3	0.005					2.38	249	0.28	200	<0.05	<0.05		101	0.2	95.6		0.38		38.8		0.08		134		8.4		
MW-11	7/16/2009	13.7	1.143	0.33	-15.2	7.3	0.019					16	260	0.45	246	<0.6	<0.6		112	2.0				0.11		41.3		0.11		138		11.4		
MW-11	4/28/2010	9.2	1.145	0.46	-126.3	7.3	0.013					2.1	245	NA	325	0.109	<0.05		93.6	<1.0				2.55		44.3		0.220		152		8.94		
MW-11	4/21/2011	7.5	0.807	1.72	-325	7.56	0.0071					2.8	294	0.038	170	0.32	<0.05		53.5	<0.1	92.5		0.14		30.8		0.09		119		5.7		
MW-11	4/18/2012	10.9	1.450	0	-75	7.6	0.014	0.00099	0.0013	2.1	12	1.3	248	0.27	360	0.095	<0.05		98.9	0.053			0.20		48.5		0.14		143		8.3		ND
MW-11	5/2/2013	9.7	1.670	0.71	-101.9	7.41	0.04	0.001	0.0013	4.2	0.91	1.6	259	0.15	333	0.34	<0.02		84.6	<0.052			0.70		47.0		0.17		151		9.0		ND
MW-11	5/20/2014	9.6	1.310	0.64	-72.6	7.41	0.0067	<0.0015	<0.0015	5	60	1.2	274	0.12	200	0.29	<0.02		61.5	<0.052			0.18		34.4		0.13						
MW-11	5/6/2015	11.0	1.598	0.52	19	7.33	0.025	<0.0015	<0.0015	3.9	1.3	2.0	28	0.27	367	0.12	<0.02		121	<0.052			0.13		48.2		0.08						40.1

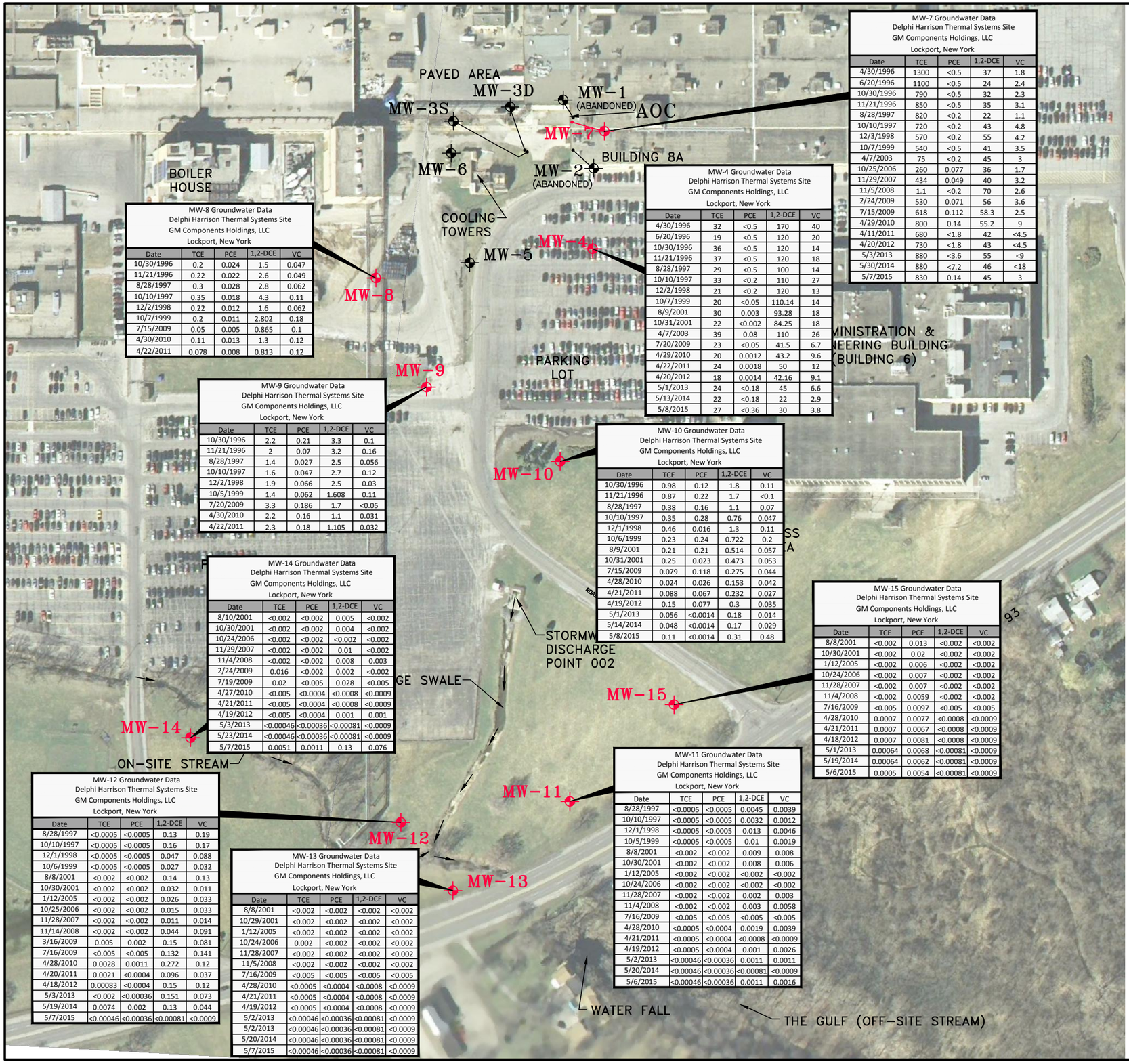
Notes:
1. In general the field parameters were stable with very little variation. However, as noted, some readings varied.
2. Readings were collected using a low flow peristalic pump and water quailty meter with flow through cell..
3. Analytical Testing completed by TestAmerica Laboratories, Inc.
4. < - Indicates compound not detected above the specified detection limit.
5. Blank = Not tested.
6. NM = not measured
7. ND = non-detect for tested volatile fatty acids: acetic acid, formic acid, lactic acid, n-Butyric acid, propionic acid, and pyruvic acid.
8. All tested volatile fatty acids = ND; except acetic acid (7.0 ppm).
9. Water quality readings were recollected on 5/4/2012 due to lack of DO readings collected with initial water quality meter.

Table 1
Summary of Groundwater Field Measurements and Analytical Test Results for Natural Attenuation Parameters
DRAFT May 2015 Groundwater Sampling
Delphi Thermal Systems
West Lockport Complex
Lockport, New York

		Field Parameters					Analytical Test Results - Inorganic and Miscellaneous Water Quality Parameters																									
Location	Sample Date	Temp. (Deg. C)	Specific Cond. (mS/cm)	DO (mg/L)	ORP (mv)	pH (Std Units)	Methane (mg/L)	Ethane (mg/L)	Ethene (mg/L)	Carbon Dioxide (mg/L)	Hydrogen (nm)	Organic Carbon (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Chloride (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Nitrate Nitrite (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Calcium (mg/L)	Dissolved Calcium (mg/L)	Iron (mg/L)	Dissolved Iron (mg/L)	Magnesium (mg/L)	Dissolved Magnesium (mg/L)	Manganese (mg/L)	Dissolved Manganese (mg/L)	Sodium (mg/L)	Dissolved Sodium (mg/L)	Potassium (mg/L)	Dissolved Potassium (mg/L)	Volatile Fatty Acids (mg/L)
MW-12	12/1/1998	13.4	2.006	0.39	-41	6.9	0.5					7	284	0.94	294	0.48	<0.05		73	0.2	119	104	7.48	4.01	26.8	25.3	4.41	4.40	183	197	4.1	3.81	3.81
MW-12	10/5/1999	15.8	1.849	0.10	-105.2	7.0	0.36					30	300	0.90	342	0.27	<0.05		66	0.2	104	126	<0.01	3.66	27.8	31.6	<0.01	4.90	166	226	4.9	5.3	5.3
MW-12	8/8/2001	13.5	3.300	0.24	-38.5	6.6	0.50					13.9	336	1.77	920	<0.05	<0.05		160	<0.1	217		16.9		57.5		8.41		427		6.3		
MW-12 DUP	8/8/2001	NA	NA	NA	NA	NA	0.74					14.9	338	1.85	930	<0.05	<0.05		160	<0.1	217		14.8		56.2		8.14		433		6.0		
MW-12	10/30/2001	14.2	2.850	0.14	-127.1	6.8	0.57					5.7	309	1.35	590	0.18	<0.05		110	3.5			4.73		37.0		4.69		342		5.0		
MW-12	10/25/2006	13.7	3.500	1.26	-127.1	6.9	0.024					6.5	333	1.55	1,300	<0.05	<0.05		110	<0.1			7.50		44.8		6.02		684		4.5		
MW-12	11/28/2007	11.2	3.307	0.18	-302	7.0	0.012					4.0	274	1.47	1,300	<0.05	<0.05		79	<0.04			6.68		46.0		4.44		666		3.9		
MW-12	11/4/2008	14.3	6.319	0.02	-88	6.7	0.12					2.74	332	2.08	2,000	<0.05	<0.05		138	<0.1	259		13.70		69.7		7.82		1110		5.6		
MW-12	3/16/2009	6.1	4.516	1.08	-48	6.6	0.87					NM	270	1.89	2,300	<0.05	<0.05		140	<0.1	269		11.50		81.7		8.60		1060		5.1		
MW-12	7/16/2009	14.5	6.493	0.64	-39.3	6.7	0.9					14	360	2.57	2,480	<0.6	<0.6		148	0.8				15.10		79.1		9.07		1,170		10.9	10.9
MW-12	4/28/2010	8.8	6.562	0.32	-46.1	6.6	0.46					5.0	315	NA	2,630	<0.05	0.039		153	<1.0				14.0		98.0		10.40		1,470		5.22	5.22
MW-12	4/20/2011	8.83	6.320	0.00	-65	6.9	0.042					3.3	272	1.1	1,880	<0.05	<0.05		108	<1.0	227		6.6		65.1		7.1		958		3.7		
MW-12	4/18/2012	10.02	7.920	0.59	-74	7.0	0.3	0.011	0.011	15	0.76	3.7	280	1.8	2,900	<0.05	<0.05		133	<1.0			12.7		84.3		9.1		1250		3.7		ND
MW-12	5/3/2013	9	7.300	0.31	-48.3	6.8	0.2	0.0031	0.0042	14	1.1	3.6	232	1.2	3,090	<0.02	<0.02		120	<0.052			8.1		76.4		7.4		1260		3.9		ND
MW-12	5/19/2014	11.1	5.400	0.11	-41.2	6.9	0.11	<0.0015	<0.0015	16	33	4	291	1.2	1,650	0.032	<0.02		96.5	<0.052			3.7		50.0		4.9						
MW-12	5/7/2015	11.2	7.819	0.07	-61.1	6.9	0.048	<0.0015	<0.0015	6.1	1.6	2.2	796	0.12	1,390	0.036	<0.020		58.9	<0.052			0.0		60.1		0.3						48
MW-13	8/8/2001	15.4	5.742	0.23	-118.5	7.8	0.08					15.2	255	1.45	1,900	0.05	<0.05		160	<0.1	209		2.59		49.6		2.67		1,200		12.1		
MW-13	10/29/2001	15.5	6.625	0.20	-136	7.4	0.07					9.9	426	1.29	1,700	0.61	0.08		120	2.2			3.75		40.9		2.96		1,160		8.2		
MW-13	10/24/2006	15.2	6.090	2.67	-146	7.3	0.16					8.4	431	1.35	2,200	<0.05	<0.05		98	<0.1			9.21		53.7		6.03		1,210		9.1		
MW-13	11/28/2007	12.7	5.696	0.08	-274	7.3	0.003					7.0	420	1.74	2,200	0.05	<0.05		95	0.4			7.83		50.8		4.95		1,250		9.6		
MW-13	11/5/2008	7.08	6.782	0.12	-97	7.1	0.021					3.8	410	1.57	2,000	<0.05	<0.5		91	<0.1	196		7.60		52.3		5.40		1,430		11.0		
MW-13	7/16/2009	16.0	6.476	0.60	-113.4	7.2	6.15					15	400	2.10	2,290	<0.6	<0.6		112	<0.5				1.75		53.9		6.51		1,390		18.9	18.9
MW-13	4/28/2010	9.4	5.783	0.28	-133.5	7.2	0.17					6.1	382	NA	2,280	0.069	<0.05		102	<1.0				9.12		59.9		7.18		1,380		11.2	11.2
MW-13	4/21/2011	7.64	5.023	0.34	-336	7.4	0.058					5.8	368	0.94	2,090	0.069	<0.05		105	<0.1	210		7.4		53.2		6.30		1,320		8.3		
MW-13 DUP	4/19/2012	10.7	5.480	0.00	-120	7.4	0.093	0.0086	0.008	4.5	0.79	4	360	0.96	1,490	0.081	<0.05		71.3	<0.1			5.8		38.5		4.40		940		5.4		ND
MW-13	5/2/2013	10.5	5.410	1.27	-71.2	7.3	0.11	<0.0049	<0.0052	3.7	0.69	3.8	382	0.6	1,590	0.57	<0.02		62.7	<0.052			4.7		39.4		4.30		964		6.2		ND
MW-13	5/20/2014	11.5	5.850	0.24	-82.1	7.1	0.073	<0.0015	<0.015	16	1.8	4.5	419	0.88	1,740	0.089	<0.05		82.5	<0.052			6.4		42.3		4.40						
MW-13	5/13/2015	12	7.369	0.27	-87.1	7.0	0.029	<0.0015	<0.0015	8.8	2.1	5.5	299	1.2	2,390	0.48	0.058		264	<0.052			5.9		61.7		5.80						ND
MW-14	8/9/2001	11.5	2.064	3.66	330.7	7.2	<0.002					14.1	328	0.19	680	0.08	<0.05		130	<0.1	144		0.18		64.1		0.04		394		6.4		
MW-14	10/30/2001	13.2	2.478	0.80	-39.1	7.2	0.013					4.3	334	0.31	770	<0.05	<0.05		120	2.5			0.06		64.8		0.06		466		7.3		
MW-14	10/24/2006	12.9	4.310	3.11	-60.6	7.2	0.31					3.3	336	0.25	1,700	<0.05	<0.05		88	<0.1			0.15		94.9		0.20		831		8.0		
MW-14	11/29/2007	10.3	4.402	1.27	-110	7.1	0.16					4.0	371	0.53	1,800	<0.05	<0.05		87	0.12			0.44		111		0.25		777		10.5		
MW-14	11/4/2008	14.5	6.397	0.13	11.2	6.8	0.14					2.4	340	0.39	2,100	<0.05	<0.05		80	<0.1	320		0.39		138		0.28		1010		13.5		
MW-14	2/24/2009	5.3	3.534	0.73	-34	7.2	0.15					NM	299	0.23	1,500	0.07	<0.05		68	<0.1	165		0.06		79.8		0.18		833		7.3		
MW-14	7/16/2009	11.6	5.970	1.87	72.6	6.8	0.465					51	380	0.69	2,430	<0.6	<0.6		81.4	1.2				0.11		132		0.53		931		21.1	21.1
MW-14	4/27/2010	9.8	3.726	0.32	16.8	7.1	0.055					2.7	354	NA	1,450	0.03	<0.05		65.7	<1.0				0.06		70.2		0.194		870		6.22	6.22
MW-14	4/21/2011	7.72	3.779	2.45	-335	7.5	0.016					2.8	339	0.14	1,750	0.093	<0.05		78.2	<0.1	149		0.052		68		0.19		875		5.4		
MW-14	4/19/2012	10.85	5.460	0.00	-9	7.3	0.071	0.0086	0.0083	2.9	6.7	1.5	328	0.25	1,720	<0.05	<0.05		88.2	<0.1			0.140		86.7		0.29		916		6.2		ND
MW-14	5/3/2013	10.1	4.670	0.17	-1.8	7.3	0.05	<0.00049	<0.00052	6.2	16	1.7	361	0.15	1,340	0.061	<0.02		60	<0.052			0.038		59.4		0.20		850		5.1		ND
MW-14	5/23/2014	9.4	3.400	0.07	22.7	7.3	0.0083	<0.015	<0.015	7.14	2.3	1.6	396	0.055	790	<0.02	0.036		34.7	<0.052			0.036		40.1		0.30						
MW-14	5/7/2015	14.1	4.702	0.07	153.7	7.2	0.27	<0.0015	<0.0015	17	1.7	3.4	468	1.8	2,590	<0.020	<0.020		123	<0.052			11.3		81.7		7.90						27.5
MW-15	10/30/2001	14.6	1656.000	0.16	83.9	6.8	<0.002					4.1	395	0.07	410	0.85	<0.05		110	1.4			0.02		47.5		0.40		196		3.8		
MW-15 DUP	11/4/2008	14.3	4.719	2.42	75	6.8	<0.002					1.77	345	0.07	1,900	0.34	<0.05		110	<0.1	327		<0.02		82.3		0.82		594		6.1		
MW-15	7/16/2009	14.6	3.349	1.49	135.7	6.8	<0.004					12	400	<0.1	1,130	1.7	<0.6		88.7	1.6				0.02		65.0		0.14		475		7.94	7.94
MW-15	4/28/2010	9.5	1.998	0.35	41.1	6.8	<0.0022					3.3	419	NA	627	1.03	<0.02		66.0	<0.7				<0.019		48.2		0.13		318		3.14	3.14
MW-15	4/21/2011	7.71	2.294	2.43	-328	6.8	<0.0022					3.5	394	<0.02	895	0.95	<0.02		86.7	<0.1	217		0.02		55.5		0.24		390		3.7		
MW-15	4/18/2012	10.95	3.537	4.77	385.1	7.1	0.00047	0.00078	0.00064	11	0.82	2	384	<0.02	962	0.73	<0.02		111	<0.1			<0.05		54.4		0.24		424		3.3		ND
MW-15	5/1/2013	11	2.950	0.19	88.3	6.9	<0.00022	<0.00049	<0.00052	15	0.75	2.1	415	<0.009	672	1.4	<0.02		74.7	<0.052			<0.019		43.7		0.21		384		3.2		ND
MW-15	5/19/2014	10	2.500	0.10	120.4	6.9	<0.001	<0.0015	<0.0015	21	0.83	2.2	439	0.033	590	0.46	<0.02		55.2	<0.052			<0.019		42.5		0.11						
MW-15	5/6/2015	9.8	2.941	0.05	162.5	6.9	0.017	<0.0015	<0.0015	16	7.7	2.5	448	<0.0090	730	0.7	<0.0050		77	<0.052			<0.019		44.8		0.13						1.5
TK-2	10/6/1999	13.3	7.02	0.19	66.9	7.5							380		20.2																		
Stream (SS-1)	12/2/1998	8.0	300	10.0	50	8.0																											
Stream (SS-2)	10/7/1999	10.2	718	17.5	53.1	8.4																											
Stream (SS-3)	10/7/1999	8.5	1552	8.9	-28.9	7.7																											

Notes:
1. In general the field parameters were stable with very little variation. However, as noted, some readings varied.
2. Readings were collected using a low flow peristalic pump and water quailty meter with flow through cell..
3. Analytical Testing completed by TestAmerica Laboratories, Inc.
4. < - Indicates compound not detected above the specified detection limit.
5. Blank = Not tested.
6. NM = not measured
7. ND = non-detect for tested volatile fatty acids: acetic acid, formic acid, lactic acid, n-Butyric acid, propionic acid, and pyruvic acid.
8. All tested volatile fatty acids = ND; except acetic acid (7.0 ppm).
9. Water quality readings were recollected on 5/4/2012 due to lack of DO readings collected with initial water quality meter.

FIGURES



MW-8 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/30/1996	0.2	0.024	1.5	0.047
11/21/1996	0.22	0.022	2.6	0.049
8/28/1997	0.3	0.028	2.8	0.062
10/10/1997	0.35	0.018	4.3	0.11
12/2/1998	0.22	0.012	1.6	0.062
10/7/1999	0.2	0.011	2.802	0.18
7/15/2009	0.05	0.005	0.865	0.1
4/30/2010	0.11	0.013	1.3	0.12
4/22/2011	0.078	0.008	0.813	0.12

MW-9 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/30/1996	2.2	0.21	3.3	0.1
11/21/1996	2	0.07	3.2	0.16
8/28/1997	1.4	0.027	2.5	0.056
10/10/1997	1.6	0.047	2.7	0.12
12/2/1998	1.9	0.066	2.5	0.03
10/5/1999	1.4	0.062	1.608	0.11
7/20/2009	3.3	0.186	1.7	<0.05
4/30/2010	2.2	0.16	1.1	0.031
4/22/2011	2.3	0.18	1.105	0.032

MW-14 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/10/2001	<0.002	<0.002	0.005	<0.002
10/30/2001	<0.002	<0.002	0.004	<0.002
10/24/2006	<0.002	<0.002	<0.002	<0.002
11/29/2007	<0.002	<0.002	0.01	<0.002
11/4/2008	<0.002	<0.002	0.008	0.003
2/24/2009	0.016	<0.002	0.002	<0.002
7/19/2009	0.02	<0.005	0.028	<0.005
4/27/2010	<0.005	<0.0004	<0.0008	<0.0009
4/21/2011	<0.005	<0.0004	<0.0008	<0.0009
4/19/2012	<0.005	<0.0004	0.001	0.001
5/3/2013	<0.00046	<0.00036	<0.00081	<0.0009
5/23/2014	<0.00046	<0.00036	<0.00081	<0.0009
5/7/2015	0.0051	0.0011	0.13	0.076

MW-12 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/28/1997	<0.0005	<0.0005	0.13	0.19
10/10/1997	<0.0005	<0.0005	0.16	0.17
12/1/1998	<0.0005	<0.0005	0.047	0.088
10/6/1999	<0.0005	<0.0005	0.027	0.032
8/8/2001	<0.002	<0.002	0.14	0.13
10/30/2001	<0.002	<0.002	0.032	0.011
1/12/2005	<0.002	<0.002	0.026	0.033
10/25/2006	<0.002	<0.002	0.015	0.033
11/28/2007	<0.002	<0.002	0.011	0.014
11/14/2008	<0.002	<0.002	0.044	0.091
3/16/2009	0.005	0.002	0.15	0.081
7/16/2009	<0.005	<0.005	0.132	0.141
4/28/2010	0.0028	0.0011	0.272	0.12
4/20/2011	0.0021	<0.0004	0.096	0.037
4/18/2012	0.00083	<0.0004	0.15	0.12
5/3/2013	<0.002	<0.00036	0.151	0.073
5/19/2014	0.0074	0.002	0.13	0.044
5/7/2015	<0.00046	<0.00036	<0.00081	<0.0009

MW-13 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/8/2001	<0.002	<0.002	<0.002	<0.002
10/29/2001	<0.002	<0.002	<0.002	<0.002
1/12/2005	<0.002	<0.002	<0.002	<0.002
10/24/2006	0.002	<0.002	<0.002	<0.002
11/28/2007	<0.002	<0.002	<0.002	<0.002
11/5/2008	<0.002	<0.002	<0.002	<0.002
7/16/2009	<0.005	<0.005	<0.005	<0.005
4/28/2010	<0.0005	<0.0004	<0.0008	<0.0009
4/21/2011	<0.0005	<0.0004	<0.0008	<0.0009
4/19/2012	<0.0005	<0.0004	<0.0008	<0.0009
5/2/2013	<0.00046	<0.00036	<0.00081	<0.0009
5/2/2013	<0.00046	<0.00036	<0.00081	<0.0009
5/20/2014	<0.00046	<0.00036	<0.00081	<0.0009
5/7/2015	<0.00046	<0.00036	<0.00081	<0.0009

MW-4 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/30/1996	32	<0.5	170	40
6/20/1996	19	<0.5	120	20
10/30/1996	36	<0.5	120	14
11/21/1996	37	<0.5	120	18
8/28/1997	29	<0.5	100	14
10/10/1997	33	<0.2	110	27
12/2/1998	21	<0.2	120	13
10/7/1999	20	<0.05	110.14	14
8/9/2001	30	0.003	93.28	18
10/31/2001	22	<0.002	84.25	18
4/7/2003	39	0.08	110	26
7/20/2009	23	<0.05	41.5	6.7
4/29/2010	20	0.0012	43.2	9.6
4/22/2011	24	0.0018	50	12
4/20/2012	18	0.0014	42.16	9.1
5/1/2013	24	<0.18	45	6.6
5/13/2014	22	<0.18	22	2.9
5/8/2015	27	<0.36	30	3.8

MW-10 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/30/1996	0.98	0.12	1.8	0.11
11/21/1996	0.87	0.22	1.7	<0.1
8/28/1997	0.38	0.16	1.1	0.07
10/10/1997	0.35	0.28	0.76	0.047
12/1/1998	0.46	0.016	1.3	0.11
10/6/1999	0.23	0.24	0.722	0.2
8/9/2001	0.21	0.21	0.514	0.057
10/31/2001	0.25	0.023	0.473	0.053
7/15/2009	0.079	0.118	0.275	0.044
4/28/2010	0.024	0.026	0.153	0.042
4/21/2011	0.088	0.067	0.232	0.027
4/19/2012	0.15	0.077	0.3	0.035
5/1/2013	0.056	<0.0014	0.18	0.014
5/14/2014	0.048	<0.0014	0.17	0.029
5/8/2015	0.11	<0.0014	0.31	0.48

MW-11 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/28/1997	<0.0005	<0.0005	0.0045	0.0039
10/10/1997	<0.0005	<0.0005	0.0032	0.0012
12/1/1998	<0.0005	<0.0005	0.013	0.0046
10/5/1999	<0.0005	<0.0005	0.01	0.0019
8/8/2001	<0.002	<0.002	0.009	0.008
10/30/2001	<0.002	<0.002	0.008	0.006
1/12/2005	<0.002	<0.002	<0.002	<0.002
10/24/2006	<0.002	<0.002	<0.002	<0.002
11/28/2007	<0.002	<0.002	0.002	0.003
11/4/2008	<0.002	<0.002	0.003	0.0058
7/16/2009	<0.005	<0.005	<0.005	<0.005
4/28/2010	<0.0005	<0.0004	0.0019	0.0039
4/21/2011	<0.0005	<0.0004	<0.0008	<0.0009
4/19/2012	<0.0005	<0.0004	0.001	0.0026
5/2/2013	<0.00046	<0.00036	0.0011	0.0011
5/20/2014	<0.00046	<0.00036	<0.00081	<0.0009
5/6/2015	<0.00046	<0.00036	0.0011	0.0016

MW-7 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/30/1996	1300	<0.5	37	1.8
6/20/1996	1100	<0.5	24	2.4
10/30/1996	790	<0.5	32	2.3
11/21/1996	850	<0.5	35	3.1
8/28/1997	820	<0.2	22	1.1
10/10/1997	720	<0.2	43	4.8
12/3/1998	570	<0.2	55	4.2
10/7/1999	540	<0.5	41	3.5
4/7/2003	75	<0.2	45	3
10/25/2006	260	0.077	36	1.7
11/29/2007	434	0.049	40	3.2
11/5/2008	1.1	<0.2	70	2.6
2/24/2009	530	0.071	56	3.6
7/15/2009	618	0.112	58.3	2.5
4/29/2010	800	0.14	55.2	9
4/11/2011	680	<1.8	42	<4.5
4/20/2012	730	<1.8	43	<4.5
5/3/2013	880	<3.6	55	<9
5/30/2014	880	<7.2	46	<18
5/7/2015	830	0.14	45	3

MW-15 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/8/2001	<0.002	0.013	<0.002	<0.002
10/30/2001	<0.002	0.02	<0.002	<0.002
1/12/2005	<0.002	0.006	<0.002	<0.002
10/24/2006	<0.002	0.007	<0.002	<0.002
11/28/2007	<0.002	0.007	<0.002	<0.002
11/4/2008	<0.002	0.0059	<0.002	<0.002
7/16/2009	<0.005	0.0097	<0.005	<0.005
4/28/2010	0.0007	0.0077	<0.0008	<0.0009
4/21/2011	0.0007	0.0067	<0.0008	<0.0009
4/18/2012	0.0007	0.0081	<0.0008	<0.0009
5/1/2013	0.00064	0.0068	<0.00081	<0.0009
5/19/2014	0.00064	0.0062	<0.00081	<0.0009
5/6/2015	0.0005	0.0054	<0.00081	<0.0009

NORTH

NOTES:

1. BASE MAP ADAPTED FROM A 2005 AERIAL PHOTOGRAPH DOWNLOADED FROM http://www.nysgis.state.ny.us/gateway/mg/interactive_main.html AND SITE OBSERVATIONS.

2. ANALYTICAL TESTING WAS COMPLETED BY TEST AMERICA LABORATORIES.

3. UNITS ARE LISTED IN MILLIGRAMS PER LITER (mg/l). (< - INDICATES COMPOUND NOT DETECTED ABOVE THE SPECIFIED DETECTION LIMIT)

4. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

MW-8 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL INSTALLED BY GZA

AOC — DENOTES AREA OF CONCERN

TCE = TRICHLOROETHENE

PCE = TETRACHLOROETHENE

1,2-DCE = TRANS & CIS 1,2-DICHLOROETHENE

VC = VINYL CHLORIDE

DRAWN BY: MDK

DATE: JULY 2015

GZA GeoEnvironmental of New York

APPROXIMATE SCALE IN FEET

0 90 180 360

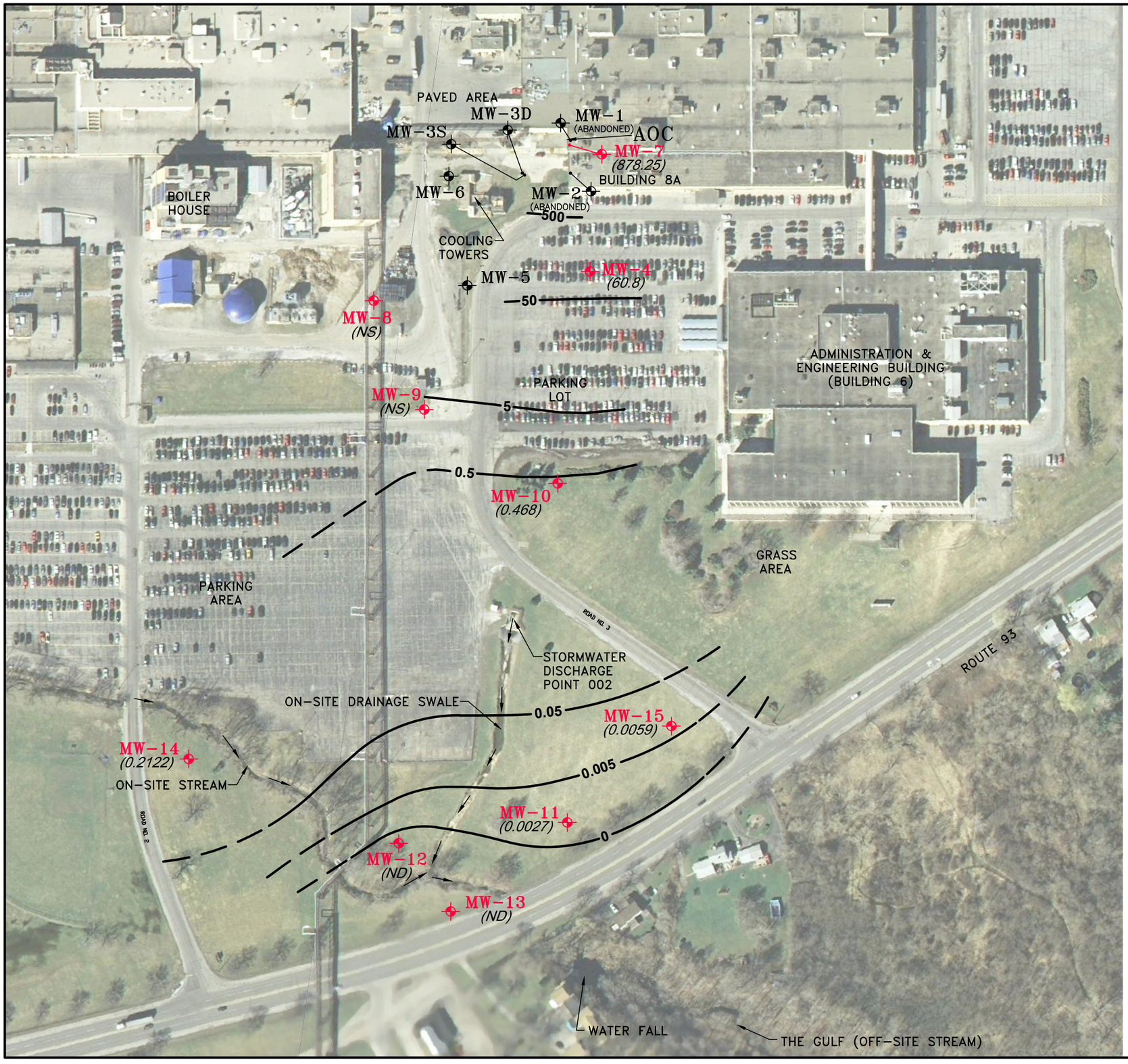
GM COMPONENTS HOLDINGS, LLC
DELPHI HARRISON THERMAL SYSTEMS SITE
200 UPPER MOUNTAIN ROAD
LOCKPORT, NEW YORK
MAY 2015 GROUNDWATER SAMPLING

GROUNDWATER ANALYTICAL RESULTS

PROJECT No.
21.0056546.00

FIGURE No.
1

G:\env\GZA-Ji\21.0056546.00\Figures\CAD\Figures 1-2.dwg [Figure 1 Analytical Results] July 28, 2015 - 1:09pm miguel.torres



NOTES:

1. BASE MAP ADAPTED FROM A 2005 AERIAL PHOTOGRAPH DOWNLOADED FROM http://www.nysgis.state.ny.us/gateway/mg/interactive_main.html AND SITE OBSERVATIONS.

2. ANALYTICAL TESTING WAS COMPLETED BY TEST AMERICA LABORATORIES.

3. UNITS ARE LISTED IN MILLIGRAMS PER LITER (mg/l). (< - INDICATES COMPOUND NOT DETECTED ABOVE THE SPECIFIED DETECTION LIMIT)

4. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

50 — APPROXIMATE LOCATION AND CONCENTRATION OF TOTAL VOC CONTOUR

MW-4 (60.9) — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL INSTALLED BY GZA SHOWN WITH TOTAL VOC CONCENTRATION

AOC — DENOTES AREA OF CONCERN

NS = NOT SAMPLED

DRAWN BY: MDK

DATE: JULY 2015

GZA GeoEnvironmental of New York

APPROXIMATE SCALE IN FEET

0 90 180 360

GM COMPONENTS HOLDINGS, LLC

DELPHI HARRISON THERMAL SYSTEMS SITE

200 UPPER MOUNTAIN ROAD

LOCKPORT, NEW YORK

MAY 2015 GROUNDWATER SAMPLING

TOTAL COC CONTOUR MAP

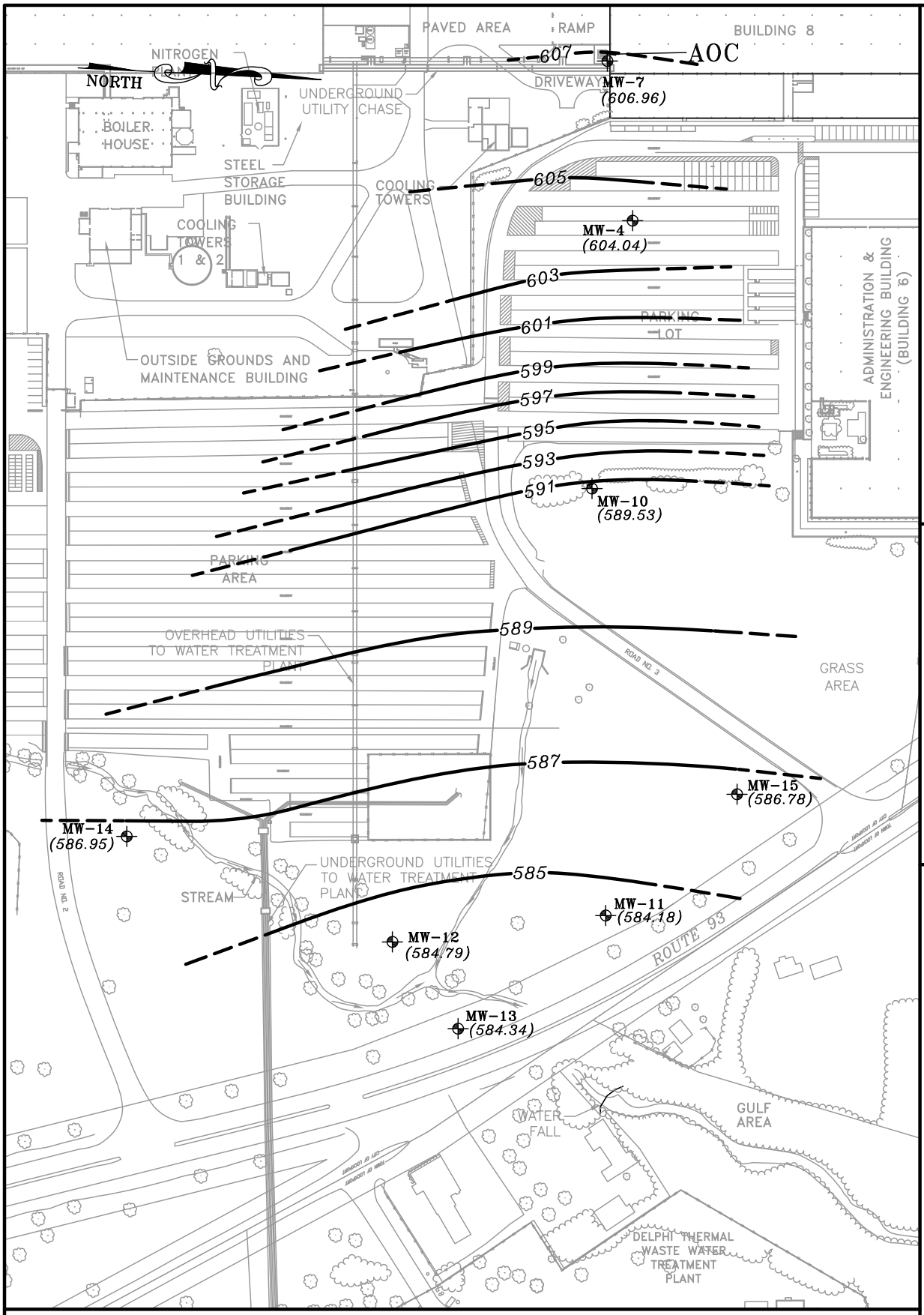
PROJECT No.

21.0056546.00

FIGURE No.

2

G:\21.0056546.00\Figures\CAD\Figures 1-2.dwg [Figure 2 VOC Contours] July 23, 2015 - 11:19am miguel.torres



LEGEND:

MW-4 (604.04) — APPROXIMATE LOCATION AND DESIGNATION OF EXISTING MONITORING WELL INSTALLED BY GZA

APPROXIMATE GROUNDWATER ELEVATION MEASURED ON DATE SHOWN IN TITLE BLOCK

AOC DENOTES AREA OF CONCERN

NOTES:

1. BASE MAP ADAPTED FROM AN AUTOCAD FILE PROVIDED BY DELPHI HARRISON THERMAL SYSTEMS.

DRAWN BY: MDK

DATE: JULY 2015

GZA GeoEnvironmental of New York

SCALE IN FEET

0 100 200 400

GM COMPONENTS HOLDINGS, LLC

DELPHI HARRISON THERMAL SYSTEMS SITE

200 UPPER MOUNTAIN ROAD

LOCKPORT, NEW YORK

MAY 2015 GROUNDWATER SAMPLING

GROUNDWATER ISOPOTENTIAL MAP

(MAY 5, 2015)

PROJECT No.

21.0056546.00

FIGURE No.

3

GZA-J:\21.0056546.00\Figures\CAD\FIGURE 3 GW CONTOURS.dwg [FIGURE 3] July 23, 2015 - 10:11am miguel.torres

APPENDIX A

MONITORING WELL OBSERVATION & GROUNDWATER SAMPLING LOGS

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: Delphi Harrison Thermal Systems Site — PROJECT NO. 56546

SAMPLING CREW MEMBERS: D. Wulf — SUPERVISOR: T. Bohlen

DATE OF SAMPLE COLLECTION: 5/6/15 – 5/13/15

[Note: For 2" dia. well, 1 ft. = 0.14 gal (imp) or 0.16 gal (us)]

Sample I.D. Number	Well No.	Measuring Point Elev. (ft. AMSL)	Bottom Depth (ft. btoc)	Water Depth (ft. btoc)	Water Elevation (ft. AMSL)	Well Volume (gallons)	Bailer Volume No. Bails	Volume Purged (gallons)	Field pH	Field Temp.	Field Cond.	Time	Sample Description & Analysis
MW-15 050615	MW-15	594.04	16.91	7.86	586.18	1.48	/	1.75	6.86	9.8	2.941	1051	VOC MNA H_2
MW-11 050615	MW-11	590.10	25.15	5.92	584.18	3.13	/	3.25	7.33	11.0	1.598	1521	VOC MNA H_2
MW-12 050715	MW-12	590.71	16.42	5.92	584.79	1.70	/	2.20	6.74	11.2	7.819	1010	VOC MNA H_2
MW-14 050715	MW-14	592.77	21.40	5.82	586.95	2.5	/	2.80	7.19	14.1	4.702	1425	VOC MNA H_2
MW-10 050815	MW-10	604.70	23.7	15.17	589.53	1.4	/	1.9	6.94	14.2	6.057	0735	VOC MNA H_2
MW-4 050815	MW-4	613.07	34.92	9.03	604.04	4.2	/	4.4	6.91	18.7	6.070	1555	VOC MNA H_2
MW-7 050815	MW-7	613.86	28.95	6.90	606.96	3.7	/	4.0	7.24	13.1	1.815	1030	VOC MNA
DUPE-1 050815	DUPE-1	SAMPLE TAKEN FROM MW-7											
MW-13 051315	MW-13	589.02	14.09	4.63	584.34	1.5		1.6	7.04	12.0	7.369	1140	VOC MNA H_2

Additional Comments:

Copies to:

FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

Revision 1 October 29, 2002

MICROSOFT RAN — 1555-1625

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: DELPHI HARRISON
Ref. No.: 565446

Date: 5/8/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-4
Measurement Point: TOR
Constructed Well Depth (ft): 32.5
Measured Well Depth (ft): 34.92
Depth of Sediment (ft):

Screen Length (ft): 17.5-32.5=17'
Depth to Pump Intake (ft)[1]: 20'
Well Diameter, D (in): 2"
Well ~~Screen~~ Volume, V_s ~~(mL)~~[2]: 4.2 GAL
Initial Depth to Water (ft): 9.03

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1211	* 83	9.49	0.46	6.95	16.2	6.193	89.2	1.42	4.6	0	0
1141		9.81	0.78	6.92	16.3	6.105	44.9	0.12	3.5	.6	0
1211		9.81	0.78	6.90	18.0	6.135	-9.1	0.04	5.2	1.25	0
1241		9.81	0.78	6.90	19.1	6.131	-29.9	0.02	6.1	2.0	0
1311		9.81	0.78	6.90	19.1	6.072	-37.3	0.01	4.0	2.3	0
1341		9.81	0.78	6.91	19.0	6.089	-40.9	0.03	4.2	2.6	0
1411		9.81	0.78	6.93	18.9	6.068	-42.1	0.02	4.5	3.0	0
1441		9.81	0.78	6.92	18.6	6.072	-41.2	0.02	4.1	3.4	0
1511		9.81	0.78	6.90	18.7	6.075	-40.5	0.02	4.2	3.8	0
1541		9.81	0.78	6.91	18.8	6.073	-40.2	0.03	4.0	4.2	1
1546		9.81	0.78	6.92	18.7	6.069	-40.9	0.02	4.2	4.3	1
1551		9.81	0.78	6.91	18.7	6.070	-40.5	0.02	4.1	4.4	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

* CALCULATED WITH 1L BOTTLE

OVM @ TOR = 13.7 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: DELPHI HARRISON WELL# MW-8

WELL PURGING INFORMATION

050915	050815	142	
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL IN CASING (LITRES/GALLONS)	ACTUAL VOL PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED (Y) N (CIRCLE ONE)

PURGING DEVICE: B — A- SUBMERSIBLE PUMP, B- PERISTALTIC PUMP, C- BLADDER PUMP, D- GAS LIFT PUMP, E- PURGE PUMP, F- GRAB BOTTLE, G- BAILER, H- WATERRA®, X- PURGING OTHER (SPECIFY)

SAMPLING DEVICE: B — X- SAMPLING OTHER (SPECIFY)

PURGING DEVICE: E — A- TEFLON, B- STAINLESS STEEL, C- POLYPROPYLENE, D- PVC, E- POLYETHYLENE, X- PURGING OTHER (SPECIFY)

SAMPLING DEVICE: E — X- SAMPLING OTHER (SPECIFY)

PURGING DEVICE: C — A- TEFLON, B- TYGON, C- ROPE, D- POLYPROPYLENE, E- POLYETHYLENE, F- SILICONE, G- COMBINATION TEFLON/POLYPROPYLENE, X- PURGING OTHER (SPECIFY)

SAMPLING DEVICE: E — X- SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 — A- IN-LINE DISPOSABLE, B- PRESSURE, C- VACUUM

FIELD MEASUREMENTS

WELL ELEVATION: 613.07 (m/ft)

GROUNDWATER ELEVATION: 604.04 (m/ft)

DEPTH TO WATER: 9.03 (m/ft)

WELL DEPTH: 34.92 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(std)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(std)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(std)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(std)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)
(std)	(ntu)	(µmhos/cm at 25°C)	(mV)		(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: SLIGHTLY SOLVENT ODOR: CLEAR COLOR: CLEAR TURBIDITY: CLEAR

WEATHER CONDITIONS: WIND SPEED 0-5 DIRECTION SW PRECIPITATION (N) OUTLOOK SUNNY

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

DATE PRINT SIGNATURE

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH DELPHI
Ref. No.: 56546

Date: 5/7/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-7
Measurement Point: TOR
Constructed Well Depth (ft): 27.20
Measured Well Depth (ft): 28.95
Depth of Sediment (ft):

Screen Length (ft): 12.2-27.2=15'
Depth to Pump Intake (ft)[1]: 22
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 3.7 GAL
Initial Depth to Water (ft): 6.90

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
1553		7.36		7.16	15.0	1.924	-39.9	0.88	3.8	0	0
1558		8.00		7.19	14.2	1.916	-46.4	0.39	5.0	0.25	0
1603		10.85		7.18	13.0	1.896	-52.5	0.05	5.2	0.8	0
1608		13.09		7.20	12.8	1.889	-54.8	0.02	6.0	1.5	0
1612		14.64		7.19	12.9	1.884	-55.0	0.00	6.1	2.0	0
1617		17.80		7.22	12.8	1.892	-56.1	0.16	5.7	2.5	0
1622		19.75		7.23	12.8	1.799	-48.4	0.18	5.2	3.0	0
1627		20.73		7.24	13.1	1.825	-58.2	0.19	5.5	3.6	0
1632	DRY	22.00		7.24	13.1	1.815	-47.8	0.21	5.0	4.0	1
5/7/15											
5/8/15											
1030		7.35	SAMPLE COLLECTED								

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s=p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

OVM @ TOR = 175.8
@ 6" ABOVE TOR = 1.1

WELL PURGING FIELD INFORMATION FORM

JOB# 565466 - 00

SITE/PROJECT NAME: GMCH DELPHI

WELL# MW-7

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (GALLONS)	HEAT SOURCE TEMP (°C)
05/07/15	07/08/15	3.7	4.0

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRAS	X= PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B	A - SUBMERSIBLE PUMP B - PERISTALTIC PUMP	D - GAS LIFT PUMP E - PURGE PUMP	G - BAILER H - WATERRAS	X= SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - STAINLESS STEEL	C - PVC D - POLYETHYLENE		X= PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	A - TEFLON B - STAINLESS STEEL	C - PVC D - POLYETHYLENE		X= SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON B - STAINLESS STEEL	C - PVC D - POLYETHYLENE	E - SILICONE F - COMBINATION TEFLON/POLYETHYLENE	X= PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	A - TEFLON B - STAINLESS STEEL	C - PVC D - POLYETHYLENE	E - SILICONE F - COMBINATION TEFLON/POLYETHYLENE	X= SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 [ ] Y - IN LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	613.86 (msl)	GROUNDWATER ELEVATION	610.96 (msl)
DEPTH TO WATER	6.90 (btoc)	WELL DEPTH	28.95 (btoc)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE GOOD ODOR SOLVENT COLOR CLEAR

WEATHER (ONLY FOR SAMPLING) WIND SPEED 0-5 WIND DIR W PRECIPITATION (PAST 24 HOURS) CLEAR SUNNY

SPECIFIC CONSTITUENTS SMELL OF SOLVENT

DEVIATIONS FROM SAMPLING PLAN OR PROCEDURES AND REASONS/JUSTIFICATION WITH APPROPRIATE SUPPORTING DOCUMENTATION

SIGNATURE DATE

REVIEWED BY DATE

SECTION USE

ANY NON-CONFORMANCES MUST BE ADDRESSED BY A REVISION REQUEST FORM AND APPROVED BY THE PROJECT MANAGER

MICRO SEEP RANGE 1005-1035

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: DSCPH1 HARRISON
Ref. No.: 56546
Date: 5/8/15
Personnel: D. WULF

Monitoring Well Data:

Well No.: MW-10
Measurement Point: TOR
Constructed Well Depth (ft): 21.3
Measured Well Depth (ft): 23.70
Depth of Sediment (ft):
Screen Length (ft): 8.8'
Depth to Pump Intake (ft)[1]: 19'
Well Diameter, D (in): 2
Well Screen Volume, V_s (~~mL~~)[2]: 1.4 GAL
Initial Depth to Water (ft): 15.17

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
0807	* 83	15.34	0.17	6.89	13.5	5.582	176.4	1.37	0.3	0	0
0823		15.51	0.34	6.91	13.6	5.723	165.6	0.29	0.4	.5	0
0833		15.51	0.34	6.92	13.7	5.828	159.4	0.17	1.1	.75	0
0843		15.51	0.34	6.92	13.8	5.882	156.0	0.23	0.5	1.0	0
0853		15.51	0.34	6.92	13.8	5.931	153.6	0.16	0.5	1.2	0
0903		15.51	0.34	6.93	14.0	6.003	149.2	0.16	0.7	1.3	0
0912		15.51	0.34	6.93	14.1	6.049	147.1	0.13	0.9	1.6	1
0917		15.51	0.34	6.94	14.1	6.047	146.4	0.13	0.8	1.7	1
0922		15.51	0.34	6.94	14.2	6.050	146.9	0.13	0.9	1.8	1
0927		15.51	0.34	6.94	14.2	6.057	146.3	0.14	0.9	1.9	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

* CALCULATED WITH 1L BOTTLE

OVM @ TOR = 0.0

WELL PURGING FIELD INFORMATION FORM

JOB# 565460.00

SITE/PROJECT NAME: DeCPDI HARRISON

WELL# MW-10

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL IN CASING (LITERS/GALLONS)	PURGE VOLUME (LITERS/GALLONS)
05/08/15	05/08/15	1.4	4.9

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED? Y N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED? Y N (CIRCLE ONE)

PURGING DEVICE	B	A = BLADDER PUMP (SS) B = BLADDER PUMP (TEFLON) C = BAILER D = PERISTALTIC PUMP E = PETRISTATIC PUMP F = SUBMERSIBLE PUMP G = WATERRAM		N = OTHER (SPECIFY)
SAMPLING DEVICE	B	A = BLADDER PUMP B = BAILER		N = OTHER (SPECIFY)
PURGING DEVICE	E	A = PERISTALTIC B = PERISTALTIC (TEFLON)		N = OTHER (SPECIFY)
SAMPLING DEVICE	E	A = PERISTALTIC B = PERISTALTIC (TEFLON)		N = OTHER (SPECIFY)
PURGING DEVICE	E	A = TEFLON B = TYGON	C = POLYPROPYLENE D = SILICONE E = POLYETHYLENE	F = COMBINATION G = OTHER (SPECIFY)
SAMPLING DEVICE	G	A = TEFLON B = TYGON	C = POLYPROPYLENE D = SILICONE E = POLYETHYLENE	F = COMBINATION G = OTHER (SPECIFY)

FILTERING DEVICES 0.45 [ ] A = INLINE DISPOSABLE B = PRESSURE C = VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	610.710 (msl)	GROUNDWATER ELEVATION	589.53 (msl)
DEPTH TO WATER	11.17 (toc)	WELL DEPTH	123.70 (toc)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
(std)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)
(std)	(ntu)	(uS/cm)	(mV)	(mg/L)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE GOOD ODOR NONE COLOR CLEAR

WEATHER AND TEMP 0-5 WIND SW PRECIP 0 SKY SUNNY

SPECIFIC COMMENTS

5/8/15 DANIEL WOLF

SIGNATURE

ANY SIGNIFICANT DEVIATIONS MUST BE EXPLAINED IN A REVISION REQUEST FORM AND APPROVED BY THE PROJECT MANAGER

MICKO SEEP RUN @ 1553-1623

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: DELPHI HARRISON
Ref. No.: 56546.00

Date: 5/6/15
Personnel: D. Wolf

Monitoring Well Data:

Well No.: MW-11
Measurement Point: TOR
Constructed Well Depth (ft): 24.10
Measured Well Depth (ft): 25.15
Depth of Sediment (ft):

Screen Length (ft): 9'-21.4' (15.1')
Depth to Pump Intake (ft)(1): 15
Well Diameter, D (in): 2
Well Screen Volume, ~~V_s (mL)~~(2): 3.13 GAL
Initial Depth to Water (ft): 5.92

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level(3) (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, Vp (mL)	No. of Well Screen Volumes Purged(4)
1258	* 74	6.56	0.64	7.92	10.7	1.398	155.9	1.35	0.2	0.25	
1324		6.56	0.64	7.41	11.0	1.511	129.7	0.98	0.3	0.50	
1356		6.56	0.64	7.38	11.1	1.450	72.0	0.80	0.2	1.50	
1427		6.56	0.64	7.34	10.6	1.534	20.0	0.69	0.2	2.00	
1441		6.56	0.64	7.34	10.9	1.542	19.5	0.60	0.2	2.40	
1458		6.56	0.64	7.33	10.9	1.584	18.9	0.53	0.3	2.75	
1511		6.56	0.64	7.32	10.8	1.592	19.1	0.56	0.4	3.00	
1516		6.56	0.64	7.31	11.0	1.601	18.7	0.50	0.4	3.20	1
1521		6.56	0.64	7.33	11.0	1.598	19.0	0.52	0.4	3.25	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p^*(D/2)^{2*}(5^*12)^*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

* CALCULATED WITH 1L BOTTLE

OVM @ TOR = 0.0 PPM

WELL PURGING FIELD INFORMATION FORM

JOB# 565446

SITE/PROJECT NAME: DOLPHI HARRISON

WELL# MW-11

WELL PURGING INFORMATION

PURGE DATE (MM/DD/YY)	SAMPLE DATE (MM/DD/YY)	WATER VOL IN CASING (LITERS/GALLONS)	PUMP SETTING DEPTH (FEET)
05/06/15	05/06/15		

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE	B	A - BLADDER PUMP (PORTABLE OR FIXED)	D - GAS LIFT PUMP	G - OTHER (SPECIFY)
		B - PERISTALTIC PUMP	E - PEristaltic PUMP	H - WATERRAM
		C - SUBMERSIBLE PUMP	F - PEristaltic BOTTLE	
SAMPLING DEVICE	B	A - BLADDER PUMP	F - PEristaltic BOTTLE	G - OTHER (SPECIFY)
PURGING DEVICE	E	A - BAILER	D - PVC	G - OTHER (SPECIFY)
		B - STAINLESS STEEL	E - POLYETHYLENE	
SAMPLING DEVICE	E	C - TEFLON OR TEFLON LINED		G - OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON	D - POLYPROPYLENE	F - SILICONE
		B - TYGON	E - POLYETHYLENE	G - COMBINATION
SAMPLING DEVICE	E	C - PVC		TEFLON/SILICONE
		(SPECIFY)		G - OTHER (SPECIFY)

FILTERING DEVICES 0.45 [ ] A - INLINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (MSL)	5910.10	GROUNDWATER ELEVATION (MSL)	
DEPTH TO WATER (TOC)	5.92	WELL DEPTH (TOC)	25.15

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: NONE COLOR: CLEAR CASING: CLEAR

WEATHER CONDITIONS: WIND DIR: 0-5 WIND SPEED: SW PRESENT CONDITIONS/PAST 24 HRS:

SPECIFIC CONSTITUENTS:

I CERTIFY THAT SAMPLING WAS PERFORMED IN ACCORDANCE WITH APPLICABLE PROTOCOL

5/6/15 DANIEL WOLF Daniel E. Wolf

DATE PRINT SIGNATURE

EMPLOYEE ABBREVIATIONS ARE TO BE ASSIGNED BY A REVIEWER REQUESTED PERSONNEL RECORDED BY THE PROJECT MANAGER

MICROSURF RUN @ 1045-1115

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: DELPHI HARRISON
Ref. No.: 565446

Date: 5/7/15
Personnel: D. Wulf

Monitoring Well Data:

Well No.: MW-12
Measurement Point: TOR
Constructed Well Depth (ft): 15.10
Measured Well Depth (ft): 16.42
Depth of Sediment (ft):

Screen Length (ft): 7.1
Depth to Pump Intake (ft)(1): 14
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)(2): 1.7 GAL
Initial Depth to Water (ft): 5.92

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level(3) (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, Vp (mL)	No. of Well Screen Volumes Purged(4)
0826	* 90	6.19	0.27	6.64	10.8	7.307	71.3	0.68	7.3	0.1	0
0850		6.25	0.33	6.64	10.6	7.474	26.9	0.22	6.8	0.4	0
0918		6.25	0.33	6.68	10.7	7.714	-39.7	0.14	2.1	1.2	0
0937		6.25	0.33	6.72	11.1	7.766	-55.1	0.10	2.9	1.5	0
0945		6.25	0.33	6.73	11.2	7.799	-58.9	0.12	1.6	1.75	1
0950		6.25	0.33	6.74	10.6	7.810	-60.7	0.07	1.5	1.80	1
0955		6.25	0.33	6.74	11.0	7.818	-60.2	0.07	1.3	2.00	1
1000		6.25	0.33	6.74	11.2	7.819	-61.1	0.07	1.2	2.2	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing), No. of Well Screen Volumes Purged= Vp/Vs.

* CALCULATED WITH 1L BOTTLE

OVM @ TOR = 0.0 ppm

FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 .

SITE/PROJECT NAME: DELPHI HARRISON   WELL# MW-12

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GAL)	ACTUAL VOL. PURGED (LITERS/GAL)
050715	050715	1.7	20

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)   SAMPLING EQUIPMENT DEDICATED Y (N) (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP / B - PERISTALTIC PUMP / C - BLADDER PUMP	D - GAS LIFT PUMP / E - PURGE PUMP / F - DIP BOTTLE	G - BAILER / H - WATERRA	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B				X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON / B - STAINLESS STEEL / C - POLYPROPYLENE	D - PVC / E - POLYETHYLENE		X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E				X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON / B - TYGON / C - ROPE	D - POLYPROPYLENE / E - POLYETHYLENE	F - SILICONE / G - COMBINATION TEFLON/POLYPROPYLENE	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E				X - SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45 [ ] A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	590.71	(m/ft)	GROUNDWATER ELEVATION	584.79	(m/ft)
DEPTH TO WATER	5.92	(m/ft)	WELL DEPTH	16.42	(m/ft)

pH	TURBIDITY (ntu)	CONDUCTIVITY (umhos/cm at 25°C)	ORP (mV)	DO	SAMPLE TEMPERATURE (°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: TOR COLOR: CLEAR TURBIDITY: CLEAR

WEATHER CONDITIONS: WIND SPEED 0-5 DIRECTION W PRECIPITATION Y/(N) OUTLOOK SUNNY

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

DATE: 5/7/15 PRINT: DANIEL WOLF SIGNATURE: [signature]

ANY MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

MICROSEEP RAN @ 1145-1225

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: DELPHI HARRISON
Ref. No.: 560546
Date: 5/13/15
Personnel: D. WULK

Monitoring Well Data:

Well No.: MW-13
Measurement Point: TOR
Constructed Well Depth (ft): 15'
Measured Well Depth (ft): 14.09
Depth of Sediment (ft):
Screen Length (ft): 7'
Depth to Pump Intake (ft)[1]: 12'
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 115 mL
Initial Depth to Water (ft): 4.68

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged[4]
0955	* 77	4.78	0.10	6.85	11.2	8.606	71.4	1.41	2.1	0	0
1007		4.78	0.10	7.00	11.0	8.645	-4.0	0.45	3.6	0.2	0
1025		4.78	0.10	7.09	11.3	7.693	-50.6	1.11	4.2	0.7	0
1055		4.78	0.10	7.06	11.2	7.126	-83.5	0.43	4.0	1.1	0
1100		4.78	0.10	7.05	11.6	7.388	-85.2	0.26	3.8	1.25	0
1125		4.78	0.10	7.03	11.8	7.412	-86.3	0.28	3.7	1.40	0
1130		4.78	0.10	7.04	11.9	7.401	-86.2	0.27	3.6	1.55	1
1135		4.78	0.10	7.04	12.0	7.369	-87.1	0.27	3.5	1.65	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length, $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

* CALCULATED WITH 1L BOTTLE

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 .

SITE/PROJECT NAME: DELPHI HARRISON

WELL# MW-13

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	ACTUAL VOL. PURGED (LITERS/GALLONS)
051315	051315	1.5	1.6

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT: DEDICATED Y (N) (CIRCLE ONE)

SAMPLING EQUIPMENT: DEDICATED (Y) N (CIRCLE ONE)

	Code	Options	Other
PURGING DEVICE	B	A - SUBMERSIBLE PUMP, B - PERISTALTIC PUMP, C - BLADDER PUMP, D - GAS LIFT PUMP, E - PURGE PUMP, F - DIPPER BOTTLE, G - BAILER, H - WATERRA®	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	B		X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON, B - STAINLESS STEEL, C - POLYPROPYLENE, D - PVC, E - POLYETHYLENE	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E		X - SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON, B - TYGON, C - ROPE, D - POLYPROPYLENE, E - POLYETHYLENE, F - SILICONE, G - COMBINATION TEFLON/POLYPROPYLENE, X - OTHER (SPECIFY)	X - PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E		X - SAMPLING OTHER (SPECIFY)

FILTERING DEVICES 0.45: A - IN-LINE DISPOSABLE, B - PRESSURE, C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION (m/ft)	589.02	GROUNDWATER ELEVATION (m/ft)	584.34
DEPTH TO WATER (m/ft)	4.68	WELL DEPTH (m/ft)	18.09

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µmhos/cm at 25°C)	ORP (mV)	DO (mg/L)	SAMPLE TEMPERATURE (°C)

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD ODOR: NONE COLOR: CLEAR TURBIDITY: CLEAR

WEATHER CONDITIONS: WIND SPEED 0-5 DIRECTION NW PRECIPITATION Y/N OUTLOOK CLOUDY

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE PROTOCOLS

DATE 5/13/15 PRINT DANIEL WULF SIGNATURE [signature]

FORM DEVIATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

MICROSEEP RAW 1451-1521

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: DELPHI HARRISON
Ref. No.: 56546

Date: 5/7/15
Personnel: D. WULF

Monitoring Well Data:

Well No.: MW-14
Measurement Point: TOR
Constructed Well Depth (ft): 19.1
Measured Well Depth (ft): 21.40
Depth of Sediment (ft):

Screen Length (ft): 9.1-19.1=10'
Depth to Pump Intake (ft)(1): 17
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)(2): 2.5 GAL
Initial Depth to Water (ft): 5.82

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level(3) (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well Screen Volumes Purged(4)
11:48	* 80	6.22	0.40	7.15	13.7	4.449	168.7	0.65	0.4	0	0
12:20		7.34	1.52	7.19	13.6	4.454	162.9	0.19	0.6	0.3	0
12:50		7.34	1.52	7.19	13.7	4.555	160.8	0.12	1.0	1.1	0
13:25		7.34	1.52	7.19	13.5	4.683	157.1	0.08	1.2	2.0	0
13:55		7.34	1.52	7.19	13.8	4.679	158.5	0.07	1.4	2.3	0
1410		7.34	1.52	7.19	13.8	4.722	156.7	0.07	1.3	2.6	1
1415		7.34	1.52	7.19	14.0	4.706	155.5	0.07	1.4	2.7	1
1420		7.34	1.52	7.19	14.1	4.702	153.7	0.07	1.3	2.8	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s = p*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

* CALCULATED WITH 1L BOTTLE

OVM @ TOR = 0.0

FMG MODIFICATIONS MUST BE ACCOMPANIED BY A REVISION REQUEST FORM APPROVED BY THE PROJECT MANAGER

WELL PURGING FIELD INFORMATION FORM

JOB# 565946 - 00

SITE/PROJECT NAME: _____

WELL# MW-114

WELL PURGING INFORMATION

PURGE DATE	SAMPLE DATE	WATER VOL EVACUATED (LITRES/GALLONS)	TIME ACCUMULATED (MINUTES)
05/07/15	05/07/15	2.5	30

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT DEDICATED Y / N (CIRCLE ONE)

SAMPLING EQUIPMENT DEDICATED Y / N (CIRCLE ONE)

PURGING DEVICE	B	A - SUBMERSIBLE PUMP (PERISTALTIC PUMP)	D - GAS LIFT PUMP E - PUSH TUBE	G - BAILER H - WATERRAS	M= O - OTHER (SPECIFY)
SAMPLING DEVICE	B	A - SUBMER PUMP	F - BAILER (TEFLON)		N= P - OTHER (SPECIFY)
PURGING DEVICE	E	A - SUBMERS (STAINLESS STEEL)	B - PVC		M= O - OTHER (SPECIFY)
SAMPLING DEVICE	E	C - PERISTALTIC PUMP	E - POLYETHYLENE		N= P - OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON	D - POLYPROPYLENE	F - SILICONE	M= O - OTHER (SPECIFY)
SAMPLING DEVICE	E	A - TEFLON	E - POLYETHYLENE	G - COMBINATION TEFLON/POLYPROPYLENE	N= P - OTHER (SPECIFY)

SPECIFY

FILTERING DEVICES 0.45 _____ A - INLINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	5912.77 (feet)	GROUNDWATER ELEVATION	5816.95 (m, ft)
DEPTH TO WATER	5.82 (m, ft)	WELL DEPTH	21.40 (m, ft)

	pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE
	(std)	(units)	(µS/cm or mS/cm AT 25 C)	(mV)	(%)	(°C)
	(std)	(units)	(µS/cm or mS/cm AT 25 C)	(mV)	(%)	(°C)
	(std)	(units)	(µS/cm or mS/cm AT 25 C)	(mV)	(%)	(°C)
	(std)	(units)	(µS/cm or mS/cm AT 25 C)	(mV)	(%)	(°C)
	(std)	(units)	(µS/cm or mS/cm AT 25 C)	(mV)	(%)	(°C)

FIELD COMMENTS

SAMPLE APPEARANCE: CLEAR ODOUR: NONE WATER: CLEAR COLOUR: CLEAR

WEATHER CONDITIONS: WIND SPEED: 0-5 WIND DIR: W PRECIPITATION (mm): 0 AIR TEMP (°C): SUNNY

SPECIFIC COMMENTS: _____

I ATTEST THAT THE SAMPLING WAS CONDUCTED IN ACCORDANCE WITH APPLICABLE PROTOCOLS

5/7/15 DANIEL WOLF

DATE PRINT NAME SIGNATURE

FOR ANY DEVIATIONS FROM THE ABOVE NOTED PROTOCOLS, A REVISION REQUEST FORM MUST BE SUBMITTED BY THE PROJECT MANAGER

MICRO SLEEP RAN 1125-1155

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: GMCH DELPHI HARRISON
Ref. No.: 516546
Date: 5/6/15
Personnel: D. WOLF

Monitoring Well Data:

Well No.: MW-15
Measurement Point: TOR
Constructed Well Depth (ft): 17.90
Measured Well Depth (ft): 16.91
Depth of Sediment (ft):
Screen Length (ft): 7'
Depth to Pump Intake (ft)[1]: 13'
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (mL)[2]: 1.48 GAL.
Initial Depth to Water (ft): 7.86

Time	Pumping Rate (mL/min)	Depth to Water (ft)	Drawdown from Initial Water Level[3] (ft)	pH	Temperature °C	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Volume Purged, V_p (mL)	No. of Well ~~Screen~~ Volumes Purged[4]
0935	* 74	8.11	0.25	6.81	10.3	2.816	140.0	1.01	0.4	0	
1006		8.11	0.25	6.85	10.1	2.851	158.5	0.13	0.5	0.6	
1034		8.11	0.25	6.86	10.1	2.911	161.8	0.07	0.3	1.4	
1039		8.11	0.25	6.86	9.9	2.932	162.3	0.05	0.3	1.5	1
1044		8.11	0.25	6.86	9.8	2.941	162.5	0.05	0.2	1.6	1

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 2 ft above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 5-foot screen length. $V_s=\pi*(D/2)^2*(5*12)*(2.54)^3$

(3) The drawdown from the initial water level should not exceed 0.3 ft.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stablization criteria and appear to be stablizing). No. of Well Screen Volumes Purged= Vp/Vs.

* CALCULATED WITH 1L BOTTLE

OVM @ TOR = 0.0 ppm

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 -

SITE/PROJECT NAME: DUCPH HARRISON

WELL# MW-15

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITERS/GALLONS)	
050615	050615	1.5	1.5

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT — DEDICATED Y N (CIRCLE ONE)

SAMPLING EQUIPMENT — DEDICATED Y N (CIRCLE ONE)

PURGING DEVICE	B	
SAMPLING DEVICE	B	
PURGING DEVICE	E	
SAMPLING DEVICE	E	
PURGING DEVICE	E	
SAMPLING DEVICE	E	
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE B - PRESSURE C - VACUUM

FIELD MEASUREMENTS

WELL ELEVATION	594.04 (m/ft)	GROUNDWATER ELEVATION	586.18 (m/ft)
DEPTH TO WATER	7.86 (m/ft)	WELL DEPTH	16.91 (m/ft)

pH	TURBIDITY	CONDUCTIVITY	ORP	DO	SAMPLE TEMPERATURE

FIELD COMMENTS

SAMPLE APPEARANCE: GOOD — ODOR: NONE — COLOR: CLEAR — TURBIDITY: CLEAR

WEATHER CONDITIONS: WIND SPEED 0-5 — OUTLOOK 50 — PRECIPITATION 0

SPECIFIC COMMENTS

5/6/15 — DANIEL WULF — (signature)

DATE — PRINT — SIGNATURE

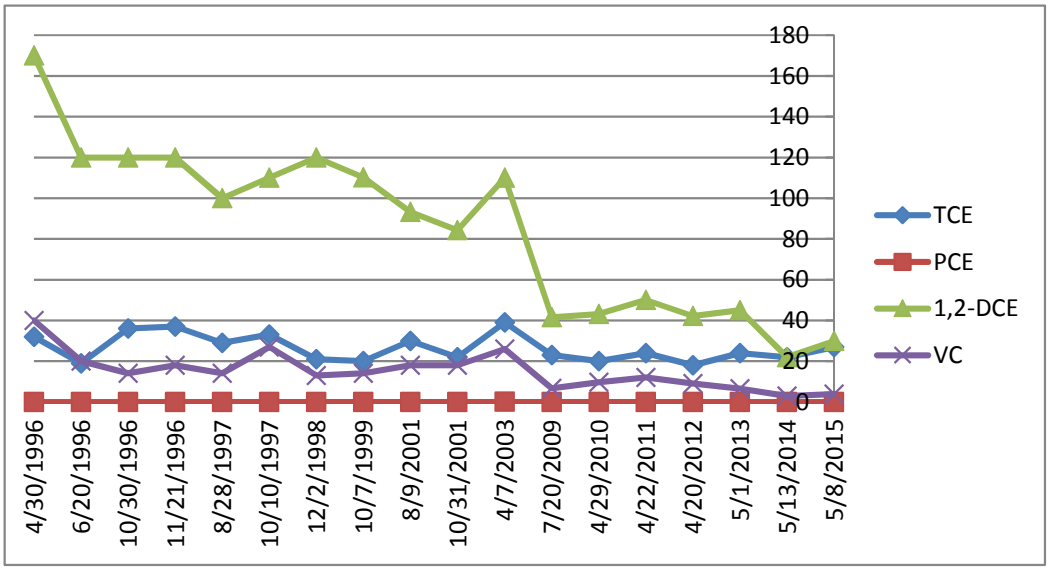
APPENDIX B

GRAPHS OF MONITORING WELL ANALYTICAL DATA FOR THE COCs

MW-4 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/30/1996	32	<0.5	170	40
6/20/1996	19	<0.5	120	20
10/30/1996	36	<0.5	120	14
11/21/1996	37	<0.5	120	18
8/28/1997	29	<0.5	100	14
10/10/1997	33	<0.2	110	27
12/2/1998	21	<0.2	120	13
10/7/1999	20	<0.05	110.14	14
8/9/2001	30	0.003	93.28	18
10/31/2001	22	<0.002	84.25	18
4/7/2003	39	0.08	110	26
7/20/2009	23	<0.05	41.5	6.7
4/29/2010	20	0.0012	43.2	9.6
4/22/2011	24	0.0018	50	12
4/20/2012	18	0.0014	42.16	9.1
5/1/2013	24	<0.18	45	6.6
5/13/2014	22	<0.18	22	2.9
5/8/2015	27	<0.36	30	3.8

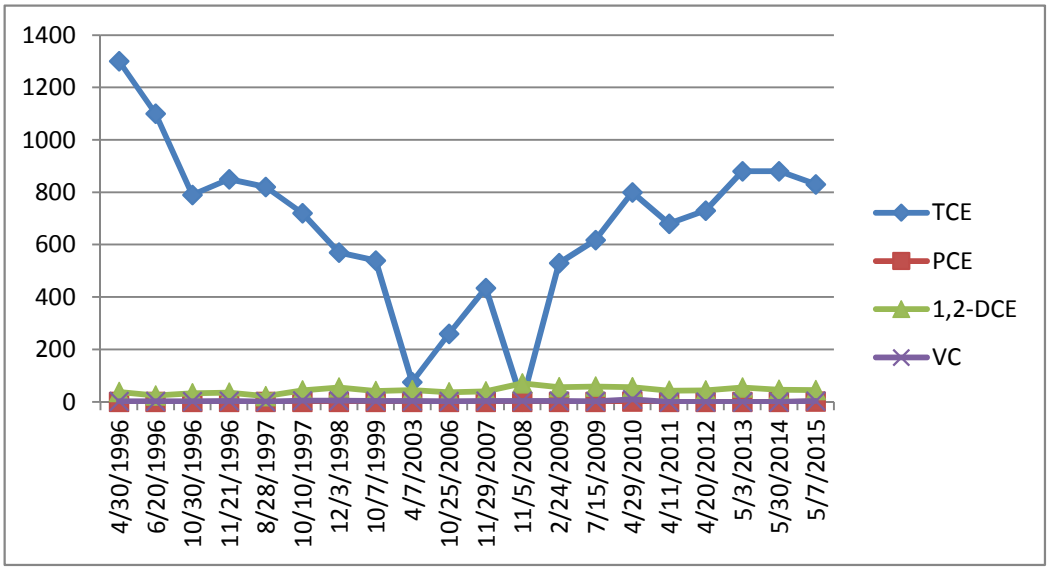
Notes:
Results are provided in parts per million (ppm)
Duplicate samples were collected from this location on 6/20/96, 10/30/96 and 12/2/98.
The higher of the two concentrations were recorded in this graph.



MW-7 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
4/30/1996	1300	<0.5	37	1.8
6/20/1996	1100	<0.5	24	2.4
10/30/1996	790	<0.5	32	2.3
11/21/1996	850	<0.5	35	3.1
8/28/1997	820	<0.2	22	1.1
10/10/1997	720	<0.2	43	4.8
12/3/1998	570	<0.2	55	4.2
10/7/1999	540	<0.5	41	3.5
4/7/2003	75	<0.2	45	3
10/25/2006	260	0.077	36	1.7
11/29/2007	434	0.049	40	3.2
11/5/2008	1.1	<0.2	70	2.6
2/24/2009	530	0.071	56	3.6
7/15/2009	618	0.112	58.3	2.5
4/29/2010	800	0.14	55.2	9
4/11/2011	680	<1.8	42	<4.5
4/20/2012	730	<1.8	43	<4.5
5/3/2013	880	<3.6	55	<9
5/30/2014	880	<7.2	46	<18
5/7/2015	830	0.14	45	3

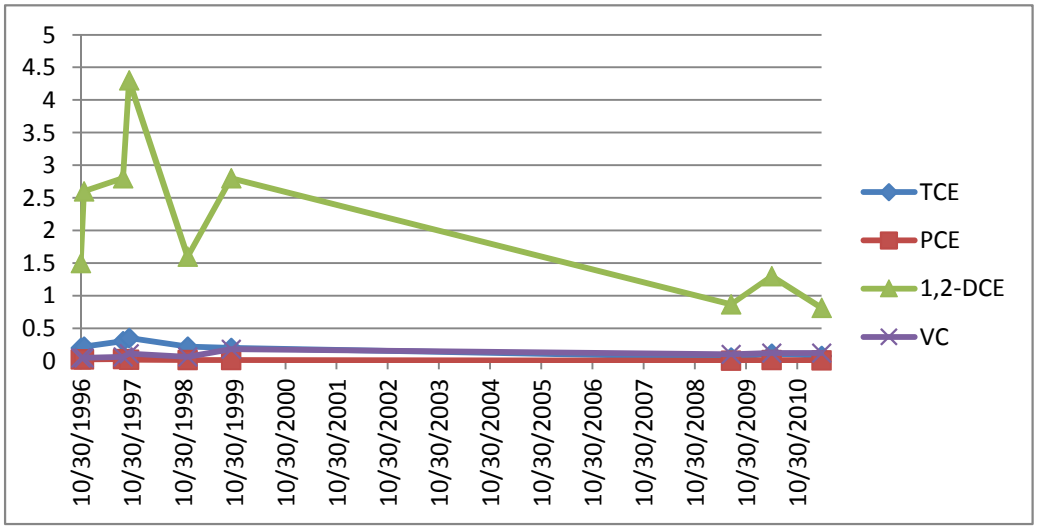
Notes:
Results are provided in parts per million (ppm)



MW-8 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/30/1996	0.2	0.024	1.5	0.047
11/21/1996	0.22	0.022	2.6	0.049
8/28/1997	0.3	0.028	2.8	0.062
10/10/1997	0.35	0.018	4.3	0.11
12/2/1998	0.22	0.012	1.6	0.062
10/7/1999	0.2	0.011	2.802	0.18
7/15/2009	0.05	0.005	0.865	0.1
4/30/2010	0.11	0.013	1.3	0.12
4/22/2011	0.078	0.008	0.813	0.12

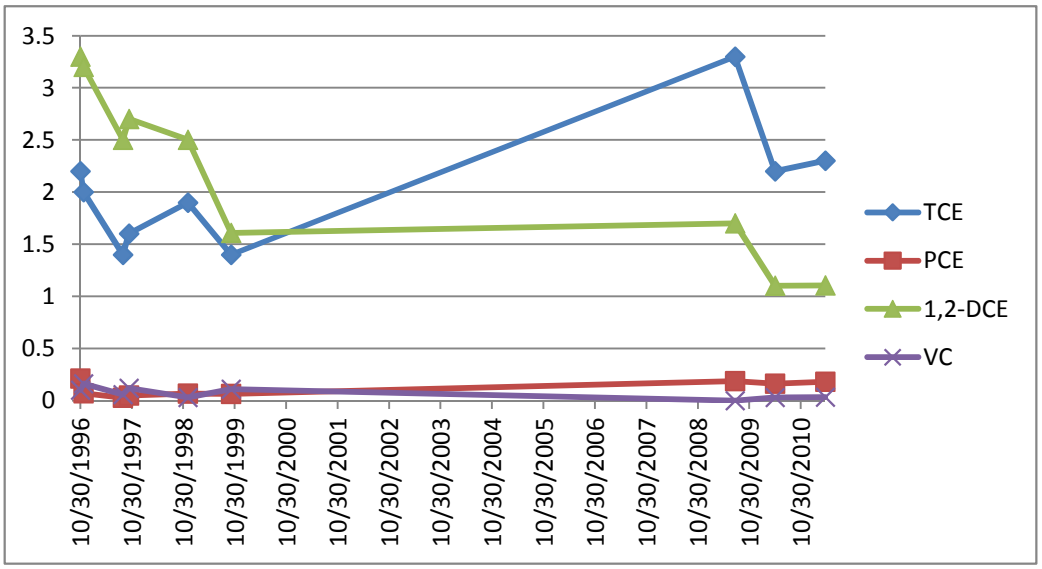
Notes:
Results are provided in parts per million (ppm)



MW-9 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/30/1996	2.2	0.21	3.3	0.1
11/21/1996	2	0.07	3.2	0.16
8/28/1997	1.4	0.027	2.5	0.056
10/10/1997	1.6	0.047	2.7	0.12
12/2/1998	1.9	0.066	2.5	0.03
10/5/1999	1.4	0.062	1.608	0.11
7/20/2009	3.3	0.186	1.7	<0.05
4/30/2010	2.2	0.16	1.1	0.031
4/22/2011	2.3	0.18	1.105	0.032

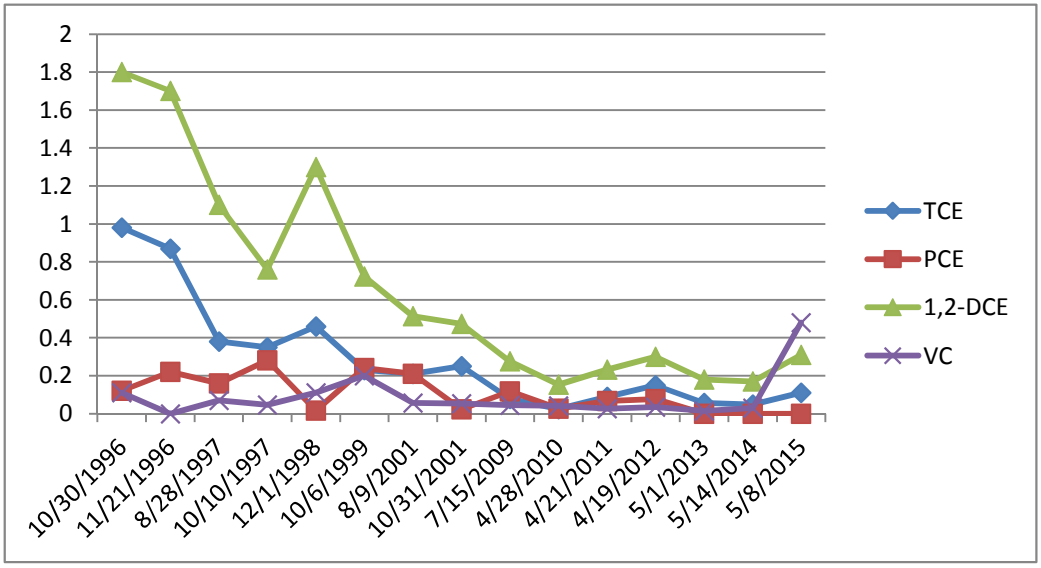
Notes:
Results are provided in parts per million (ppm)
Duplicate samples were collected from this location on 11/21/96 and 10/5/99. The higher of the two concentrations were recorded in this graph.



MW-10 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
10/30/1996	0.98	0.12	1.8	0.11
11/21/1996	0.87	0.22	1.7	<0.1
8/28/1997	0.38	0.16	1.1	0.07
10/10/1997	0.35	0.28	0.76	0.047
12/1/1998	0.46	0.016	1.3	0.11
10/6/1999	0.23	0.24	0.722	0.2
8/9/2001	0.21	0.21	0.514	0.057
10/31/2001	0.25	0.023	0.473	0.053
7/15/2009	0.079	0.118	0.275	0.044
4/28/2010	0.024	0.026	0.153	0.042
4/21/2011	0.088	0.067	0.232	0.027
4/19/2012	0.15	0.077	0.3	0.035
5/1/2013	0.056	<0.0014	0.18	0.014
5/14/2014	0.048	<0.0014	0.17	0.029
5/8/2015	0.11	<0.0014	0.31	0.48

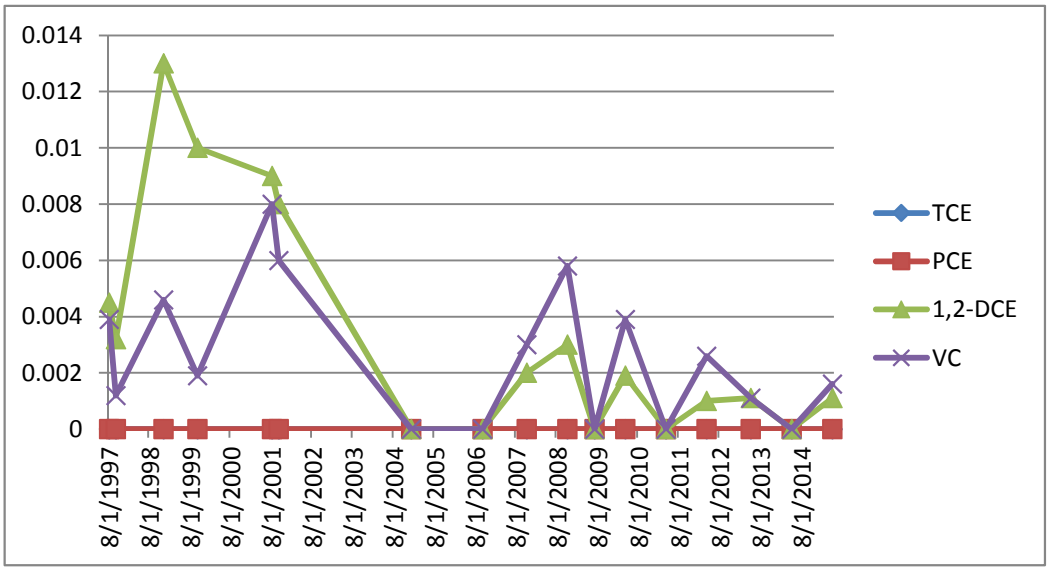
Notes:
Results are provided in parts per million (ppm)



MW-11 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/28/1997	<0.0005	<0.0005	0.0045	0.0039
10/10/1997	<0.0005	<0.0005	0.0032	0.0012
12/1/1998	<0.0005	<0.0005	0.013	0.0046
10/5/1999	<0.0005	<0.0005	0.01	0.0019
8/8/2001	<0.002	<0.002	0.009	0.008
10/30/2001	<0.002	<0.002	0.008	0.006
1/12/2005	<0.002	<0.002	<0.002	<0.002
10/24/2006	<0.002	<0.002	<0.002	<0.002
11/28/2007	<0.002	<0.002	0.002	0.003
11/4/2008	<0.002	<0.002	0.003	0.0058
7/16/2009	<0.005	<0.005	<0.005	<0.005
4/28/2010	<0.0005	<0.0004	0.0019	0.0039
4/21/2011	<0.0005	<0.0004	<0.0008	<0.0009
4/19/2012	<0.0005	<0.0004	0.001	0.0026
5/2/2013	<0.00046	<0.00036	0.0011	0.0011
5/20/2014	<0.00046	<0.00036	<0.00081	<0.0009
5/6/2015	<0.00046	<0.00036	0.0011	0.0016

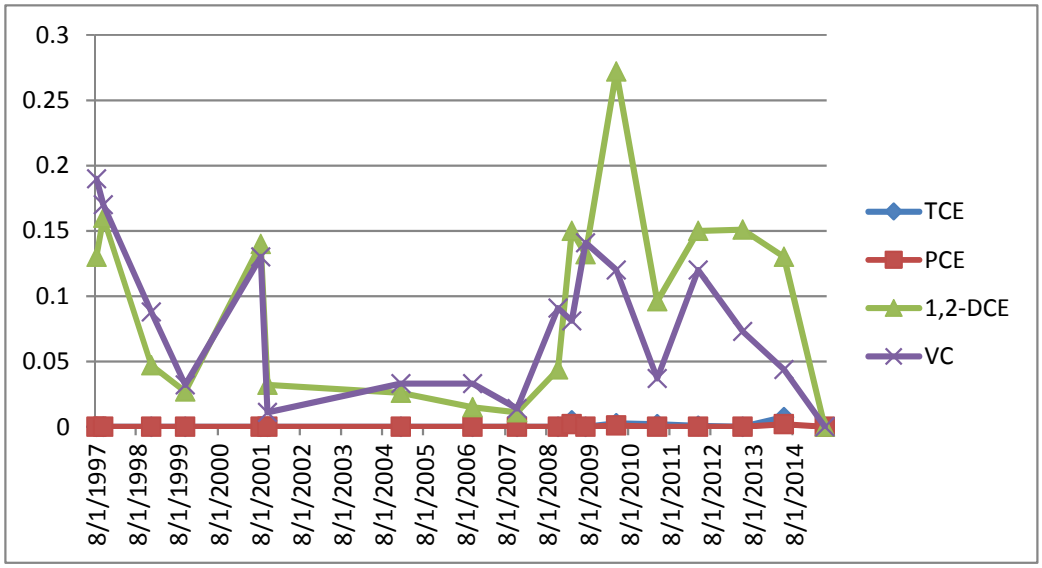
Notes:
Results are provided in parts per million (ppm)
Duplicate samples were collected from this location on 10/10/97. The higher of the two concentrations were recorded in this graph.



MW-12 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/28/1997	<0.0005	<0.0005	0.13	0.19
10/10/1997	<0.0005	<0.0005	0.16	0.17
12/1/1998	<0.0005	<0.0005	0.047	0.088
10/6/1999	<0.0005	<0.0005	0.027	0.032
8/8/2001	<0.002	<0.002	0.14	0.13
10/30/2001	<0.002	<0.002	0.032	0.011
1/12/2005	<0.002	<0.002	0.026	0.033
10/25/2006	<0.002	<0.002	0.015	0.033
11/28/2007	<0.002	<0.002	0.011	0.014
11/14/2008	<0.002	<0.002	0.044	0.091
3/16/2009	0.005	0.002	0.15	0.081
7/16/2009	<0.005	<0.005	0.132	0.141
4/28/2010	0.0028	0.0011	0.272	0.12
4/20/2011	0.0021	<0.0004	0.096	0.037
4/18/2012	0.00083	<0.0004	0.15	0.12
5/3/2013	<0.002	<0.00036	0.151	0.073
5/19/2014	0.0074	0.002	0.13	0.044
5/7/2015	<0.00046	<0.00036	<0.00081	<0.0009

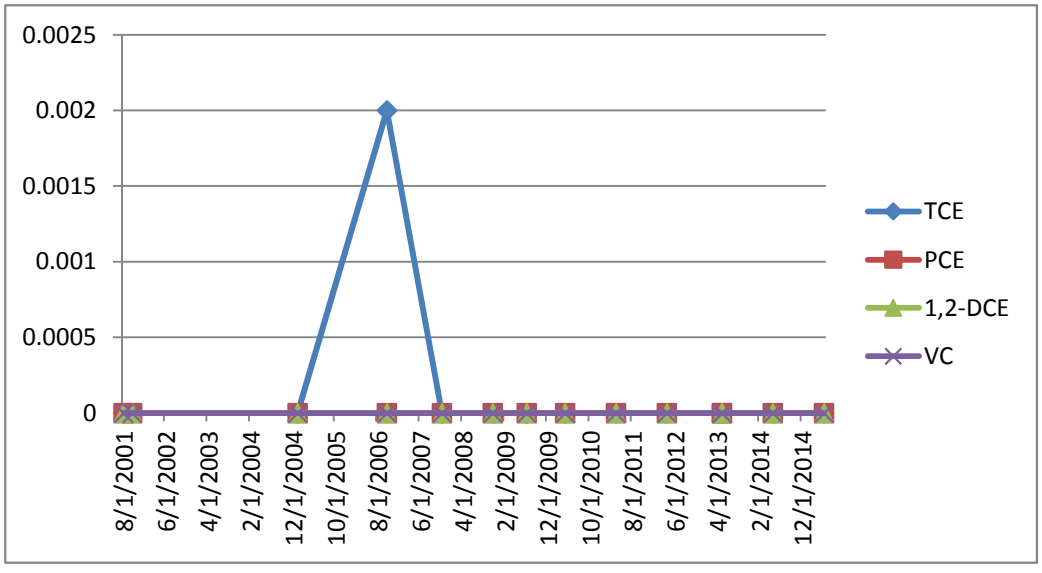
Notes:
Results are provided in parts per million (ppm)
Duplicate samples were collected from this location on 8/28/97 and 8/8/01. The higher of the two concentrations were recorded in this graph.



MW-13 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/8/2001	<0.002	<0.002	<0.002	<0.002
10/29/2001	<0.002	<0.002	<0.002	<0.002
1/12/2005	<0.002	<0.002	<0.002	<0.002
10/24/2006	0.002	<0.002	<0.002	<0.002
11/28/2007	<0.002	<0.002	<0.002	<0.002
11/5/2008	<0.002	<0.002	<0.002	<0.002
7/16/2009	<0.005	<0.005	<0.005	<0.005
4/28/2010	<0.0005	<0.0004	<0.0008	<0.0009
4/21/2011	<0.0005	<0.0004	<0.0008	<0.0009
4/19/2012	<0.0005	<0.0004	<0.0008	<0.0009
5/2/2013	<0.00046	<0.00036	<0.00081	<0.0009
5/2/2013	<0.00046	<0.00036	<0.00081	<0.0009
5/20/2014	<0.00046	<0.00036	<0.00081	<0.0009
5/7/2015	<0.00046	<0.00036	<0.00081	<0.0009

Notes:
Results are provided in parts per million (ppm)
A duplicate sample was collected from this location on 4/19/2012.
The higher of the two concentrations were recorded in this graph.

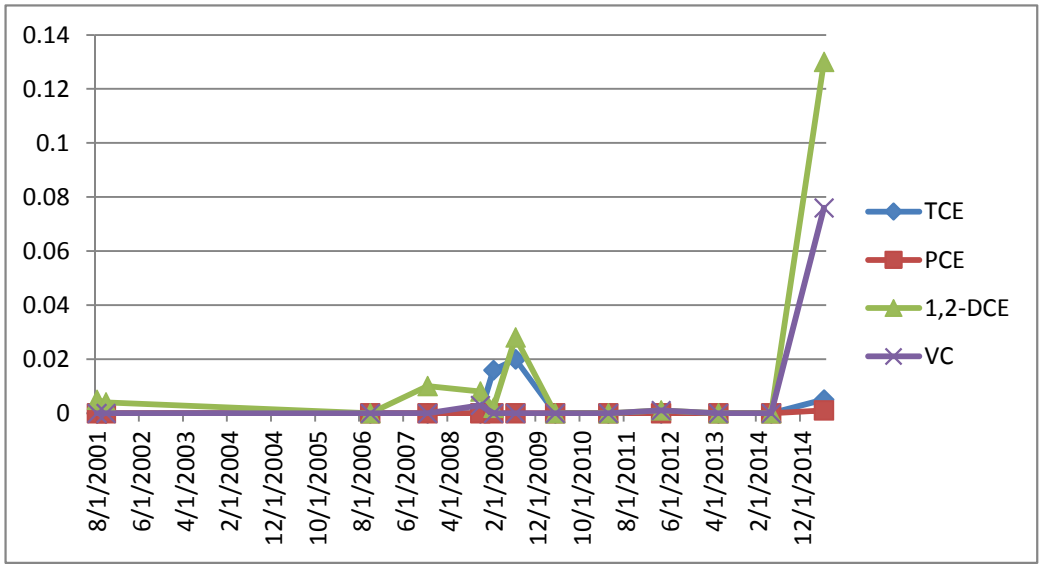


MW-14 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/10/2001	<0.002	<0.002	0.005	<0.002
10/30/2001	<0.002	<0.002	0.004	<0.002
10/24/2006	<0.002	<0.002	<0.002	<0.002
11/29/2007	<0.002	<0.002	0.01	<0.002
11/4/2008	<0.002	<0.002	0.008	0.003
2/24/2009	0.016	<0.002	0.002	<0.002
7/19/2009	0.02	<0.005	0.028	<0.005
4/27/2010	<0.005	<0.0004	<0.0008	<0.0009
4/21/2011	<0.005	<0.0004	<0.0008	<0.0009
4/19/2012	<0.005	<0.0004	0.001	0.001
5/3/2013	<0.00046	<0.00036	<0.00081	<0.0009
5/23/2014	<0.00046	<0.00036	<0.00081	<0.0009
5/7/2015	0.0051	0.0011	0.13	0.076

Notes:
Results are provided in parts per million (ppm)

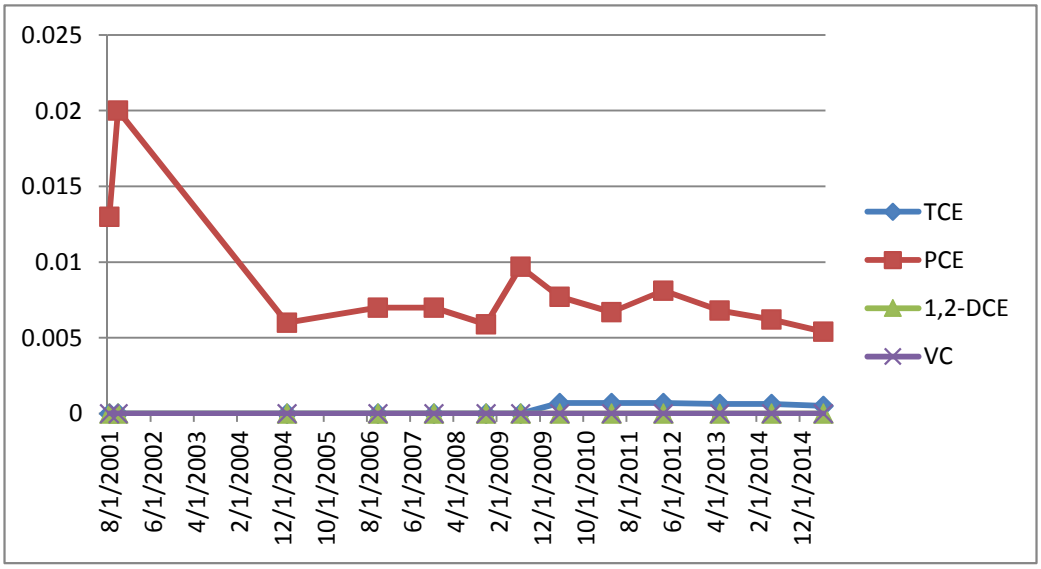
0.0051



MW-15 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

Date	TCE	PCE	1,2-DCE	VC
8/8/2001	<0.002	0.013	<0.002	<0.002
10/30/2001	<0.002	0.02	<0.002	<0.002
1/12/2005	<0.002	0.006	<0.002	<0.002
10/24/2006	<0.002	0.007	<0.002	<0.002
11/28/2007	<0.002	0.007	<0.002	<0.002
11/4/2008	<0.002	0.0059	<0.002	<0.002
7/16/2009	<0.005	0.0097	<0.005	<0.005
4/28/2010	0.0007	0.0077	<0.0008	<0.0009
4/21/2011	0.0007	0.0067	<0.0008	<0.0009
4/18/2012	0.0007	0.0081	<0.0008	<0.0009
5/1/2013	0.00064	0.0068	<0.00081	<0.0009
5/19/2014	0.00064	0.0062	<0.00081	<0.0009
5/6/2015	0.0005	0.0054	<0.00081	<0.0009

Notes:
Results are provided in parts per million (ppm)
Duplicate samples were collected from this location on 10/30/01. The higher of the two concentrations were recorded in this graph.



APPENDIX C

ANAEROBIC BIODEGRADATION SCREENING TABLES

EPA cVOC MONITORED NATURAL ATTENUATION RANKING SYSTEM

Strength of Evidence Scorecard
Delphi Harrison Thermal Systems Site
GM Component Holdings, LLC
Lockport, New York

Analysis	Concentration in Most Contaminated Zone	Value	EXAMPLE Lab or Field Analysis Value (mg/L)	EXAMPLE Score	MW-4	MW-7	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15
DO	<0.5 mg/L	3	3.5		3	3	3	0	3	3	3	3
DO	>5 mg/l	-3										
Nitrate	<1 mg/L	2	ND	2	2	2	2	2	2	2	2	2
Iron II	>1 mg/l	2	0.2						0	0		
Sulfate	<20 mg/L	2	243					0	0	0	0	0
Sulfide	>1 mg/L	3	0.6					0	0	0	0	0
Methane	<0.5 mg/L	0	0.26	0	3	0	0	0	0	0	0	0
Methane	>0.5 mg/L	3										
ORP	<50 mV	1	-98.5	1	1	1		1	1	1	0	0
ORP	<-100 mV	2										
pH	5< pH <9	0	6.8	0	0	0	0	0	0	0	0	0
pH	5> pH >10	-2										
TOC	>20 mg/L	2	1.5		0	0	0	0	0	0	0	0
Temp	> 20°C	1	20.4	1	0	0	0	0	0	0	0	0
Carbon Dioxide	>2 times background (4.2)	1	6.8		1	0	0		0	1	1	1
Alkalinity	>2 times background (200)	1	372				0		1	0	1	2
Chloride	>2 times background (1440)	2	338				0		0	0	0	0
Hydrogen	>1 nM	3	NT		3	NT	0	0	3	3	3	3
Hydrogen	<1nM	0	NT									
Volatile Fatty Acids	>0.1 mg/L	2	ND		2	2	2	2	2	0	2	2
BTEX	>0.1 mg/L	2	ND		NT	NT	NT	NT	NT	NT	NT	NT
PCE		0	ND									
TCE	If Daughter Product	2	190									
DCE	If Daughter Product	2	10,034	2	2	2	2	2	2	0	2	0
VC	If Daughter Product	2	380.00	2	2	2	2	2	2	0	2	0
1,1,1-TCA		0	ND									
DCA	If Daughter Product	2	ND									
Carbon Tetrachloride		0	ND									
Chloroethane	If Daughter Product	2	ND									
Ethene/Ethane	>0.01 mg/L or	2	0.0097		3	3	0	0	0	0	0	0
	>0.1 mg/L	3										
Chloroform	If Daughter Product	2	ND									
Dichloromethane	If Daughter Product	2	ND									
				8	**22**	**15**	**11**	**9**	**16**	**10**	**16**	**13**

Scoring Interpretation	
0 to 5	Inadequate evidence for anaerobic biodegradation* of chlorinated organics
6 to 14	Limited evidence for anaerobic biodegradation* of chlorinated organics
15 to 20	Adequate evidence for anaerobic biodegradation* of chlorinated organics
>20	Strong evidence for anaerobic biodegradation* of chlorinated organics
*reductive dechlorination	

Values Taken from EPA Document **EPA/600/R-98/128,** *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* , 1998, Table 2.3 and Table 2.4

Notes:
1. ND=not detected
2. NT=not tested

ATTACHMENT A

TEST AMERICA ANALYTICAL LABORATORY REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-79810-1

Client Project/Site: 058507, GM-Lockport Groundwater Sampling

For:

Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Kathleen Willy

Authorized for release by:
5/20/2015 6:03:52 PM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-79810-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-79810-1

Receipt
The samples were received on 5/6/2015 5:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) VFA-IC: The following sample was diluted due to the nature of the sample matrix: MW-11-050615 (480-79810-2). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-15-050615 (480-79810-1), MW-11-050615 (480-79810-2). The sample was analyzed at a dilution based on screening results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Client Sample ID: MW-15-050615 — Lab Sample ID: 480-79810-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.4		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	0.50	J	1.0	0.46	ug/L	1		8260C	Total/NA
Hydrogen	7.7		0.60	0.13	nm	1		AM20GAX	Total/NA
Methane	17		4.0	1.0	ug/L	1		RSK-175	Total/NA
Magnesium	44.8		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.13		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	730		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	77.0	J	100	17.5	mg/L	50		300.0	Total/NA
Nitrate	0.70		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.5	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	448		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Lactic acid	1.5		1.0	0.14	mg/L	1		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	16000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-11-050615 — Lab Sample ID: 480-79810-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.1		1.0	0.81	ug/L	1		8260C	Total/NA
Vinyl chloride	1.6		1.0	0.90	ug/L	1		8260C	Total/NA
Hydrogen	1.3		0.60	0.13	nm	1		AM20GAX	Total/NA
Methane	25		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.13		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	48.2		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.082		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	367		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	121		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.27		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.12		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.0	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	28.0		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Lactic acid	1.1		1.0	0.14	mg/L	1		VFA-IC	Total/NA
Propionic acid	40.1		5.0	0.85	mg/L	5		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	3900		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-79810-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-15-050615

Date Collected: 05/06/15 10:51
Date Received: 05/06/15 17:10

Lab Sample ID: 480-79810-1

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/15/15 05:19	1
Tetrachloroethene	**5.4**		1.0	0.36	ug/L			05/15/15 05:19	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/15/15 05:19	1
Trichloroethene	**0.50**	**J**	1.0	0.46	ug/L			05/15/15 05:19	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/15/15 05:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/15/15 05:19*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/15/15 05:19*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/15/15 05:19*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/15/15 05:19*	*1*

Method: AM20GAX - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen	**7.7**		0.60	0.13	nm			05/13/15 13:48	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/07/15 14:49	1
Ethene	ND		7.0	1.5	ug/L			05/07/15 14:49	1
Methane	**17**		4.0	1.0	ug/L			05/07/15 14:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**16000**		1000	1000	ug/L			05/15/15 09:51	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/08/15 08:44	05/08/15 23:22	1
Magnesium	**44.8**		0.20	0.043	mg/L		05/08/15 08:44	05/08/15 23:22	1
Manganese	**0.13**		0.0030	0.00040	mg/L		05/08/15 08:44	05/08/15 23:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**730**		25.0	14.1	mg/L			05/15/15 01:36	50
Sulfate	**77.0**	**J**	100	17.5	mg/L			05/15/15 01:36	50
Ammonia	ND		0.020	0.0090	mg/L			05/07/15 13:15	1
Nitrate	**0.70**		0.050	0.020	mg/L			05/07/15 01:21	1
Nitrite	ND		0.050	0.020	mg/L			05/07/15 01:21	1
Total Organic Carbon	**2.5**	**B**	1.0	0.43	mg/L			05/11/15 15:06	1
Total Alkalinity	**448**		5.0	0.79	mg/L			05/12/15 18:56	1
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	ND		1.0	0.15	mg/L			05/07/15 21:18	1
Formic-acid	ND		1.0	0.11	mg/L			05/07/15 21:18	1
Lactic acid	**1.5**		1.0	0.14	mg/L			05/07/15 21:18	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/07/15 21:18	1
Propionic acid	ND		1.0	0.17	mg/L			05/07/15 21:18	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/07/15 21:18	1

Client Sample ID: MW-11-050615 **Lab Sample ID: 480-79810-2**
Date Collected: 05/06/15 15:21 **Matrix: Water**
Date Received: 05/06/15 17:10

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.1		1.0	0.81	ug/L			05/15/15 05:42	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/15/15 05:42	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/15/15 05:42	1
Trichloroethene	ND		1.0	0.46	ug/L			05/15/15 05:42	1
Vinyl chloride	1.6		1.0	0.90	ug/L			05/15/15 05:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*05/15/15 05:42*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/15/15 05:42*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/15/15 05:42*	*1*
Dibromofluoromethane (Surr)	*99*		*60 - 140*		*05/15/15 05:42*	*1*

Method: AM20GAX - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen	1.3		0.60	0.13	nm			05/13/15 13:48	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/07/15 15:06	1
Ethene	ND		7.0	1.5	ug/L			05/07/15 15:06	1
Methane	25		4.0	1.0	ug/L			05/07/15 15:06	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	3900		1000	1000	ug/L			05/15/15 09:59	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.13		0.050	0.019	mg/L		05/08/15 08:44	05/08/15 23:36	1
Magnesium	48.2		0.20	0.043	mg/L		05/08/15 08:44	05/08/15 23:36	1
Manganese	0.082		0.0030	0.00040	mg/L		05/08/15 08:44	05/08/15 23:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	367		10.0	5.6	mg/L			05/15/15 01:45	20
Sulfate	121		40.0	7.0	mg/L			05/15/15 01:45	20
Ammonia	0.27		0.020	0.0090	mg/L			05/07/15 13:16	1
Nitrate	0.12		0.050	0.020	mg/L			05/07/15 01:25	1
Nitrite	ND		0.050	0.020	mg/L			05/07/15 01:25	1
Total Organic Carbon	2.0	B	1.0	0.43	mg/L			05/11/15 15:33	1
Total Alkalinity	28.0		5.0	0.79	mg/L			05/12/15 18:56	1
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	ND		1.0	0.15	mg/L			05/07/15 21:47	1
Formic-acid	ND		1.0	0.11	mg/L			05/07/15 21:47	1
Lactic acid	1.1		1.0	0.14	mg/L			05/07/15 21:47	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/07/15 21:47	1
Propionic acid	40.1		5.0	0.85	mg/L			05/12/15 12:08	5
Pyruvic Acid	ND		1.0	0.080	mg/L			05/07/15 21:47	1

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Client Sample ID: TRIP BLANK
Date Collected: 05/06/15 00:00
Date Received: 05/06/15 17:10

Lab Sample ID: 480-79810-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/15/15 06:04	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/15/15 06:04	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/15/15 06:04	1
Trichloroethene	ND		1.0	0.46	ug/L			05/15/15 06:04	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/15/15 06:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/15/15 06:04*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/15/15 06:04*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/15/15 06:04*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/15/15 06:04*	*1*

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-79810-1	MW-15-050615	106	102	98	98
480-79810-2	MW-11-050615	105	99	96	99
480-79810-3	TRIP BLANK	106	99	96	95
LCS 480-242524/4	Lab Control Sample	101	99	99	100
MB 480-242524/6	Method Blank	103	100	96	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-242524/6
Matrix: Water
Analysis Batch: 242524

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/14/15 23:21	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/14/15 23:21	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/14/15 23:21	1
Trichloroethene	ND		1.0	0.46	ug/L			05/14/15 23:21	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/14/15 23:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*05/14/15 23:21*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*05/14/15 23:21*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/14/15 23:21*	*1*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/14/15 23:21*	*1*

Lab Sample ID: LCS 480-242524/4
Matrix: Water
Analysis Batch: 242524

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	24.9		ug/L		100	74 - 124
Tetrachloroethene	25.0	25.5		ug/L		102	74 - 122
trans-1,2-Dichloroethene	25.0	24.9		ug/L		100	73 - 127
Trichloroethene	25.0	25.5		ug/L		102	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*99*		*71 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-241058/4
Matrix: Water
Analysis Batch: 241058

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/07/15 09:47	1
Ethene	ND		7.0	1.5	ug/L			05/07/15 09:47	1
Methane	ND		4.0	1.0	ug/L			05/07/15 09:47	1

Lab Sample ID: LCS 480-241058/5
Matrix: Water
Analysis Batch: 241058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.8		ug/L		101	79 - 120
Ethene	13.6	13.5		ug/L		99	78 - 115
Methane	7.77	7.59		ug/L		98	71 - 118

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-241058/6
Matrix: Water
Analysis Batch: 241058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	15.2		ug/L		104	79 - 120	3	50
Ethene	13.6	13.6		ug/L		100	78 - 115	1	50
Methane	7.77	7.74		ug/L		100	71 - 118	2	50

Lab Sample ID: MB 200-88309/3
Matrix: Water
Analysis Batch: 88309

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/14/15 13:54	1

Lab Sample ID: LCS 200-88309/2
Matrix: Water
Analysis Batch: 88309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5530		ug/L		110	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-241152/1-A
Matrix: Water
Analysis Batch: 241460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241152

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/08/15 08:44	05/08/15 23:05	1
Magnesium	ND		0.20	0.043	mg/L		05/08/15 08:44	05/08/15 23:05	1
Manganese	ND		0.0030	0.00040	mg/L		05/08/15 08:44	05/08/15 23:05	1

Lab Sample ID: LCS 480-241152/2-A
Matrix: Water
Analysis Batch: 241460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241152

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.20		mg/L		102	80 - 120
Magnesium	10.0	10.07		mg/L		101	80 - 120
Manganese	0.200	0.204		mg/L		102	80 - 120

Lab Sample ID: LCSD 480-241152/3-A
Matrix: Water
Analysis Batch: 241460

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 241152

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	10.27		mg/L		103	80 - 120	1	20
Magnesium	10.0	10.19		mg/L		102	80 - 120	1	20
Manganese	0.200	0.206		mg/L		103	80 - 120	1	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-79810-1 MS
Matrix: Water
Analysis Batch: 241460

Client Sample ID: MW-15-050615
Prep Type: Total/NA
Prep Batch: 241152

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	ND		10.0	9.99		mg/L		100	75 - 125
Magnesium	44.8		10.0	54.45	4	mg/L		97	75 - 125
Manganese	0.13		0.200	0.333		mg/L		103	75 - 125

Lab Sample ID: 480-79810-1 MSD
Matrix: Water
Analysis Batch: 241460

Client Sample ID: MW-15-050615
Prep Type: Total/NA
Prep Batch: 241152

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	ND		10.0	9.97		mg/L		100	75 - 125	0	20
Magnesium	44.8		10.0	54.17	4	mg/L		94	75 - 125	1	20
Manganese	0.13		0.200	0.331		mg/L		102	75 - 125	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-242324/52
Matrix: Water
Analysis Batch: 242324

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/14/15 23:01	1
Sulfate	ND		2.0	0.35	mg/L			05/14/15 23:01	1

Lab Sample ID: MB 480-242324/76
Matrix: Water
Analysis Batch: 242324

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/15/15 02:40	1
Sulfate	ND		2.0	0.35	mg/L			05/15/15 02:40	1

Lab Sample ID: LCS 480-242324/51
Matrix: Water
Analysis Batch: 242324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	21.81		mg/L		109	83 - 121
Sulfate	20.0	21.60		mg/L		108	80 - 129

Lab Sample ID: LCS 480-242324/75
Matrix: Water
Analysis Batch: 242324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	21.58		mg/L		108	83 - 121
Sulfate	20.0	21.47		mg/L		107	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-241117/123
Matrix: Water
Analysis Batch: 241117

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/07/15 13:08	1

Lab Sample ID: MB 480-241117/75
Matrix: Water
Analysis Batch: 241117

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/07/15 12:26	1

Lab Sample ID: LCS 480-241117/124
Matrix: Water
Analysis Batch: 241117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: LCS 480-241117/76
Matrix: Water
Analysis Batch: 241117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: 480-79810-2 MS
Matrix: Water
Analysis Batch: 241117

Client Sample ID: MW-11-050615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	0.27		0.200	0.488		mg/L		109	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-240940/3
Matrix: Water
Analysis Batch: 240940

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/07/15 01:11	1

Lab Sample ID: LCS 480-240940/4
Matrix: Water
Analysis Batch: 240940

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.52		mg/L		101	90 - 110

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: 480-79810-2 MS
Matrix: Water
Analysis Batch: 240940

Client Sample ID: MW-11-050615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	ND		1.00	1.01		mg/L		101	90 - 110

Lab Sample ID: 480-79810-2 DU
Matrix: Water
Analysis Batch: 240940

Client Sample ID: MW-11-050615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite	ND		ND		mg/L		NC	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-241810/28
Matrix: Water
Analysis Batch: 241810

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.610	J	1.0	0.43	mg/L			05/11/15 02:57	1

Lab Sample ID: MB 480-241810/52
Matrix: Water
Analysis Batch: 241810

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.750	J	1.0	0.43	mg/L			05/11/15 13:46	1

Lab Sample ID: LCS 480-241810/29
Matrix: Water
Analysis Batch: 241810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	58.25		mg/L		97	90 - 110

Lab Sample ID: LCS 480-241810/53
Matrix: Water
Analysis Batch: 241810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	57.83		mg/L		96	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-241999/27
Matrix: Water
Analysis Batch: 241999

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/12/15 18:56	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-241999/28
Matrix: Water
Analysis Batch: 241999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	108	108.0		mg/L		100	90 - 110

Lab Sample ID: 480-79810-1 DU
Matrix: Water
Analysis Batch: 241999

Client Sample ID: MW-15-050615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	448		448.0		mg/L		0	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-241723/3
Matrix: Water
Analysis Batch: 241723

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1

Lab Sample ID: LCS 480-241723/4
Matrix: Water
Analysis Batch: 241723

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.794		mg/L		106	90 - 110

Lab Sample ID: 480-79810-2 MS
Matrix: Water
Analysis Batch: 241723

Client Sample ID: MW-11-050615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		0.500	0.480		mg/L		96	90 - 110

Lab Sample ID: 480-79810-2 MSD
Matrix: Water
Analysis Batch: 241723

Client Sample ID: MW-11-050615
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	ND		0.500	0.491		mg/L		98	90 - 110	2	20

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-241016/13
Matrix: Water
Analysis Batch: 241016

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/07/15 18:52	1
Formic-acid	ND		1.0	0.11	mg/L			05/07/15 18:52	1
Lactic acid	ND		1.0	0.14	mg/L			05/07/15 18:52	1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography (Continued)

Lab Sample ID: MB 480-241016/13
Matrix: Water
Analysis Batch: 241016

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butyric Acid	ND		1.0	0.16	mg/L			05/07/15 18:52	1
Propionic acid	ND		1.0	0.17	mg/L			05/07/15 18:52	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/07/15 18:52	1

Lab Sample ID: LCS 480-241016/12
Matrix: Water
Analysis Batch: 241016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	9.11		mg/L		91	80 - 120
Formic-acid	10.0	9.14		mg/L		91	80 - 120
Lactic acid	10.0	10.14		mg/L		101	80 - 120
n-Butyric Acid	10.0	9.48		mg/L		95	80 - 120
Propionic acid	10.0	9.55		mg/L		96	80 - 120
Pyruvic Acid	10.0	10.22		mg/L		102	80 - 120

Lab Sample ID: MB 480-241821/4
Matrix: Water
Analysis Batch: 241821

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/12/15 10:40	1
Formic-acid	ND		1.0	0.11	mg/L			05/12/15 10:40	1
Lactic acid	ND		1.0	0.14	mg/L			05/12/15 10:40	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/12/15 10:40	1
Propionic acid	ND		1.0	0.17	mg/L			05/12/15 10:40	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/12/15 10:40	1

Lab Sample ID: LCS 480-241821/3
Matrix: Water
Analysis Batch: 241821

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	10.01		mg/L		100	80 - 120
Formic-acid	10.0	9.98		mg/L		100	80 - 120
Lactic acid	10.0	10.08		mg/L		101	80 - 120
n-Butyric Acid	10.0	11.39		mg/L		114	80 - 120
Propionic acid	10.0	9.59		mg/L		96	80 - 120
Pyruvic Acid	10.0	10.13		mg/L		101	80 - 120

GC/MS VOA

Analysis Batch: 242524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	8260C	
480-79810-2	MW-11-050615	Total/NA	Water	8260C	
480-79810-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-242524/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-242524/6	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	RSK-175	
480-79810-2	MW-11-050615	Total/NA	Water	RSK-175	
LCS 200-88309/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88309/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 241058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	RSK-175	
480-79810-2	MW-11-050615	Total/NA	Water	RSK-175	
LCS 480-241058/5	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-241058/6	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-241058/4	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 243699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	AM20GAX	
480-79810-2	MW-11-050615	Total/NA	Water	AM20GAX	

Metals

Prep Batch: 241152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	3005A	
480-79810-1 MS	MW-15-050615	Total/NA	Water	3005A	
480-79810-1 MSD	MW-15-050615	Total/NA	Water	3005A	
480-79810-2	MW-11-050615	Total/NA	Water	3005A	
LCS 480-241152/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-241152/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
MB 480-241152/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 241460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	6010C	241152
480-79810-1 MS	MW-15-050615	Total/NA	Water	6010C	241152
480-79810-1 MSD	MW-15-050615	Total/NA	Water	6010C	241152
480-79810-2	MW-11-050615	Total/NA	Water	6010C	241152
LCS 480-241152/2-A	Lab Control Sample	Total/NA	Water	6010C	241152
LCSD 480-241152/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	241152
MB 480-241152/1-A	Method Blank	Total/NA	Water	6010C	241152

General Chemistry

Analysis Batch: 240940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	353.2	
480-79810-2	MW-11-050615	Total/NA	Water	353.2	
480-79810-2 DU	MW-11-050615	Total/NA	Water	353.2	
480-79810-2 MS	MW-11-050615	Total/NA	Water	353.2	
LCS 480-240940/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-240940/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 240942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	353.2	
480-79810-2	MW-11-050615	Total/NA	Water	353.2	

Analysis Batch: 241016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	VFA-IC	
480-79810-2	MW-11-050615	Total/NA	Water	VFA-IC	
LCS 480-241016/12	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-241016/13	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 241117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	350.1	
480-79810-2	MW-11-050615	Total/NA	Water	350.1	
480-79810-2 MS	MW-11-050615	Total/NA	Water	350.1	
LCS 480-241117/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-241117/76	Lab Control Sample	Total/NA	Water	350.1	
MB 480-241117/123	Method Blank	Total/NA	Water	350.1	
MB 480-241117/75	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 241723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	SM 4500 S2 D	
480-79810-2	MW-11-050615	Total/NA	Water	SM 4500 S2 D	
480-79810-2 MS	MW-11-050615	Total/NA	Water	SM 4500 S2 D	
480-79810-2 MSD	MW-11-050615	Total/NA	Water	SM 4500 S2 D	
LCS 480-241723/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-241723/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 241810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	9060A	
480-79810-2	MW-11-050615	Total/NA	Water	9060A	
LCS 480-241810/29	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-241810/53	Lab Control Sample	Total/NA	Water	9060A	
MB 480-241810/28	Method Blank	Total/NA	Water	9060A	
MB 480-241810/52	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 241821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-2	MW-11-050615	Total/NA	Water	VFA-IC	
LCS 480-241821/3	Lab Control Sample	Total/NA	Water	VFA-IC	

General Chemistry (Continued)

Analysis Batch: 241821 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-241821/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 241999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	SM 2320B	
480-79810-1 DU	MW-15-050615	Total/NA	Water	SM 2320B	
480-79810-2	MW-11-050615	Total/NA	Water	SM 2320B	
LCS 480-241999/28	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-241999/27	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 242324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79810-1	MW-15-050615	Total/NA	Water	300.0	
480-79810-2	MW-11-050615	Total/NA	Water	300.0	
LCS 480-242324/51	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-242324/75	Lab Control Sample	Total/NA	Water	300.0	
MB 480-242324/52	Method Blank	Total/NA	Water	300.0	
MB 480-242324/76	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Client Sample ID: MW-15-050615

Lab Sample ID: 480-79810-1

Date Collected: 05/06/15 10:51

Matrix: Water

Date Received: 05/06/15 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	242524	05/15/15 05:19	LJF	TAL BUF
Total/NA	Analysis	AM20GAX		1	243699	05/13/15 13:48	CTB	SC0015
Total/NA	Analysis	RSK-175		1	88309	05/15/15 09:51	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241058	05/07/15 14:49	JMO	TAL BUF
Total/NA	Prep	3005A			241152	05/08/15 08:44	TAS	TAL BUF
Total/NA	Analysis	6010C		1	241460	05/08/15 23:22	LMH	TAL BUF
Total/NA	Analysis	300.0		50	242324	05/15/15 01:36	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241117	05/07/15 13:15	STD	TAL BUF
Total/NA	Analysis	353.2		1	240942	05/07/15 01:21	CLT	TAL BUF
Total/NA	Analysis	353.2		1	240940	05/07/15 01:21	CLT	TAL BUF
Total/NA	Analysis	9060A		1	241810	05/11/15 15:06	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	241999	05/12/15 18:56	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		1	241016	05/07/15 21:18	CAS	TAL BUF

Client Sample ID: MW-11-050615

Lab Sample ID: 480-79810-2

Date Collected: 05/06/15 15:21

Matrix: Water

Date Received: 05/06/15 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	242524	05/15/15 05:42	LJF	TAL BUF
Total/NA	Analysis	AM20GAX		1	243699	05/13/15 13:48	CTB	SC0015
Total/NA	Analysis	RSK-175		1	88309	05/15/15 09:59	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241058	05/07/15 15:06	JMO	TAL BUF
Total/NA	Prep	3005A			241152	05/08/15 08:44	TAS	TAL BUF
Total/NA	Analysis	6010C		1	241460	05/08/15 23:36	LMH	TAL BUF
Total/NA	Analysis	300.0		20	242324	05/15/15 01:45	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241117	05/07/15 13:16	STD	TAL BUF
Total/NA	Analysis	353.2		1	240940	05/07/15 01:25	CLT	TAL BUF
Total/NA	Analysis	353.2		1	240942	05/07/15 01:25	CLT	TAL BUF
Total/NA	Analysis	9060A		1	241810	05/11/15 15:33	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	241999	05/12/15 18:56	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		1	241016	05/07/15 21:47	CAS	TAL BUF
Total/NA	Analysis	VFA-IC		5	241821	05/12/15 12:08	CAS	TAL BUF

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Client Sample ID: TRIP BLANK

Date Collected: 05/06/15 00:00
Date Received: 05/06/15 17:10

Lab Sample ID: 480-79810-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	242524	05/15/15 06:04	LJF	TAL BUF

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
VFA-IC		Water	Acetic acid
VFA-IC		Water	Formic-acid
VFA-IC		Water	Lactic acid
VFA-IC		Water	n-Butyric Acid
VFA-IC		Water	Propionic acid
VFA-IC		Water	Pyruvic Acid

Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
AM20GAX	Dissolved Gases (GC)	NONE	SC0015
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79810-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-79810-1	MW-15-050615	Water	05/06/15 10:51	05/06/15 17:10
480-79810-2	MW-11-050615	Water	05/06/15 15:21	05/06/15 17:10
480-79810-3	TRIP BLANK	Water	05/06/15 00:00	05/06/15 17:10

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

May 18, 2015

Melissa Deyo
Test America
10 Hazelwood Drive
Buffalo, NY 14228

RE: **480-79810-1 / GM-Lockport**
Microseeps Workorder: 15484

Dear Melissa Deyo:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, May 08, 2015. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbin Robl 05/18/2015
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 10

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
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Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 15484 480-79810-1 / GM-Lockport

Lab ID	Sample ID	Matrix	Date Collected	Date Received
154840001	MW-15-050615 (480-79810-1)	Bubble Strip	5/6/2015 10:51	5/8/2015 13:00
154840002	MW-11-050615 (480-79810-2)	Bubble Strip	5/6/2015 15:21	5/8/2015 13:00

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 15484 480-79810-1 / GM-Lockport

Lab ID: **154840001** Date Received: 5/8/2015 13:00 Matrix: Bubble Strip
Sample ID: **MW-15-050615 (480-79810-1)** Date Collected: 5/6/2015 10:51

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**7.7**	nM	0.60	0.13	1	5/13/2015 13:48	TD	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 15484 480-79810-1 / GM-Lockport

Lab ID: **154840002** Date Received: 5/8/2015 13:00 Matrix: Bubble Strip

Sample ID: **MW-11-050615 (480-79810-2)** Date Collected: 5/6/2015 15:21

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.3**	nM	0.60	0.13	1	5/13/2015 14:01	TD	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 15484 480-79810-1 / GM-Lockport

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 15484 480-79810-1 / GM-Lockport

QC Batch: DISG/4562 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 154840001, 154840002

METHOD BLANK: 34891

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.60 U	0.60	n

LABORATORY CONTROL SAMPLE & LCSD: 34892 34893

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	27	27	111	111	80-120	0	20	n

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Fax: (412) 826-3433

QUALITY CONTROL DATA QUALIFIERS

Workorder: 15484 480-79810-1 / GM-Lockport

QUALITY CONTROL PARAMETER QUALIFIERS

n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 15484 480-79810-1 / GM-Lockport

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
154840001	MW-15-050615 (480-79810-1)			AM20GAX	DISG/4562
154840002	MW-11-050615 (480-79810-2)			AM20GAX	DISG/4562

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

15484

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

5/20/2015

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-23930.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: Pace Analytical Services, Inc.		Analysis Requested		Job #: 480-79810-1
Address: 220 William Pitt Way, ,	Due Date Requested: 5/18/2015			Preservation Codes:
City: Pittsburgh	TAT Requested (days):			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
State, Zip: PA, 15238				
Phone: 412-826-5245(Tel)	PO #:			Other:
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AM20GAX/ Hydrogen	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-15-050615 (480-79810-1)	5/6/15	10:51 Eastern		Water			X	1	
MW-11-050615 (480-79810-2)	5/6/15	15:21 Eastern		Water			X	1	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Cameron Wallace	5-7-15 1700	TAS		5.8.15 1300	PACE
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica

Client Information	Sampler: DAN WULF	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.4
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 4 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2 - Carbon dioxide	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCE, TCE, DCE (trans and cis), Vinyl Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	VFA	AM20GAX *	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N				
MW-15-050615	5/6/15	1051	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X	X		*DISSOLVED H2
MW-11-050615	5/6/15	1521	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X	X		FOR MICROSEEPS
TRIP BLANK	5/6/15			Water																
				Water																
				Water																
				Water																

480-79810 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5/6/15 17:10		[signature]	5-6-15 1710	TAB
2	Relinquished by:	Date/Time:	Company	Received by: [signature] 5/6/15	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.3 #1

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-23910.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-79810-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/18/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-15-050615 (480-79810-1)	5/6/15	10:51 Eastern		Water			X	2	
MW-11-050615 (480-79810-2)	5/6/15	15:21 Eastern		Water			X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Cameron Wallace	5-7-15 1960	TAB		5/8/15 1000	TABTN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/20/2015

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 07MAY15
ACTWGT: 50.4 LB
CAD: 846654/CAFE2807
DIMS: 26x15x14 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

1 of 3
TRK# 0201 5657 0118 3500
MASTER

FRI - 08 MAY AA
STANDARD OVERNIGHT

EK BTVA

05403
VT - US BTV

2 of 3
MPS# 0263 5657 0118 3510
Mstr# 5657 0118 3500
0201

3 of 3
MPS# 0263 5657 0118 3521
Mstr# 5657 0118 3500
0201

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-79810-1

Login Number: 79810
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GZA GEO
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-79810-1

Login Number: 79810
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/08/15 11:39 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	234221,215,214
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.6ºC,3.6ºC,5.0ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-79931-1

Client Project/Site: 058507, GM-Lockport Groundwater Sampling

For:

Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Kathleen Willy

Authorized for release by:
5/21/2015 10:32:05 AM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-79931-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-79931-1

Receipt
The samples were received on 5/7/2015 5:19 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3° C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 242949 recovered above the upper control limit for Vinyl Chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: TRIP BLANK (480-79931-3).

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 242949 was outside the method criteria for the following analyte:Vinyl Chloride. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14-050715 (480-79931-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method(s) VFA-IC: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-12-050715 (480-79931-1). Elevated reporting limits (RLs) are provided.

Method(s) VFA-IC: The following sample wasuted due to the nature of the sample matrix: MW-14-050715 (480-79931-2). Elevated reporting limits (RLs) are provided.

Method(s) VFA-IC: The continuing calibration verification (CCV) associated with batch 241802 recovered above the upper control limit for n-Butyric acid. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-12-050715 (480-79931-1) and MW-14-050715 (480-79931-2).

Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-12-050715 (480-79931-1), MW-14-050715 (480-79931-2) and (480-79931-G-2 MS). The sample was analyzed at a dilution based on screening results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
Method(s) RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-14-050715 (480-79931-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Client Sample ID: MW-12-050715 — Lab Sample ID: 480-79931-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hydrogen	1.6		0.60	0.13	nm	1		AM20GAX	Total/NA
Methane	48		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.028	J	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	60.1		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.26		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1390		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	58.9	J	100	17.5	mg/L	50		300.0	Total/NA
Ammonia	0.12		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.036	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.2	B	1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	796	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Propionic acid	48.0		10.0	1.7	mg/L	10		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	6100		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-14-050715 — Lab Sample ID: 480-79931-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.1		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	5.1		1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	76	^	1.0	0.90	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene - DL	130		2.0	1.6	ug/L	2		8260C	Total/NA
Hydrogen	1.7		0.60	0.13	nm	1		AM20GAX	Total/NA
Methane - DL	270		20	5.0	ug/L	5		RSK-175	Total/NA
Iron	11.3		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	81.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	7.9		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	2590		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	123	J	200	34.9	mg/L	100		300.0	Total/NA
Ammonia	1.8		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	3.4		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	468	B	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Propionic acid	27.5		10.0	1.7	mg/L	10		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	17000		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-79931-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-12-050715 — Lab Sample ID: 480-79931-1

Date Collected: 05/07/15 10:10 — **Matrix: Water**
Date Received: 05/07/15 17:19

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/18/15 13:29	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/18/15 13:29	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/18/15 13:29	1
Trichloroethene	ND		1.0	0.46	ug/L			05/18/15 13:29	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/18/15 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*66 - 137*		*05/18/15 13:29*	*1*
4-Bromofluorobenzene (Surr)	*88*		*73 - 120*		*05/18/15 13:29*	*1*
Toluene-d8 (Surr)	*88*		*71 - 126*		*05/18/15 13:29*	*1*
Dibromofluoromethane (Surr)	*117*		*60 - 140*		*05/18/15 13:29*	*1*

Method: AM20GAX - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen	**1.6**		0.60	0.13	nm			05/16/15 11:23	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/08/15 15:11	1
Ethene	ND		7.0	1.5	ug/L			05/08/15 15:11	1
Methane	**48**		4.0	1.0	ug/L			05/08/15 15:11	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**6100**		1000	1000	ug/L			05/15/15 14:26	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.028**	**J**	0.050	0.019	mg/L		05/08/15 12:29	05/09/15 19:34	1
Magnesium	**60.1**		0.20	0.043	mg/L		05/08/15 12:29	05/09/15 19:34	1
Manganese	**0.26**		0.0030	0.00040	mg/L		05/08/15 12:29	05/09/15 19:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1390**		25.0	14.1	mg/L			05/15/15 07:14	50
Sulfate	**58.9**	**J**	100	17.5	mg/L			05/15/15 07:14	50
Ammonia	**0.12**		0.020	0.0090	mg/L			05/11/15 15:06	1
Nitrate	**0.036**	**J**	0.050	0.020	mg/L			05/08/15 00:53	1
Nitrite	ND		0.050	0.020	mg/L			05/08/15 00:53	1
Total Organic Carbon	**2.2**	**B**	1.0	0.43	mg/L			05/10/15 21:38	1
Total Alkalinity	**796**	**B**	5.0	0.79	mg/L			05/13/15 22:24	1
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	ND		10.0	1.5	mg/L			05/12/15 14:15	10
Formic-acid	ND		10.0	1.1	mg/L			05/12/15 14:15	10
Lactic acid	ND		10.0	1.4	mg/L			05/12/15 14:15	10
n-Butyric Acid	ND	^	10.0	1.6	mg/L			05/12/15 14:15	10
Propionic acid	**48.0**		10.0	1.7	mg/L			05/12/15 14:15	10
Pyruvic Acid	ND		10.0	0.80	mg/L			05/12/15 14:15	10

Client Sample ID: MW-14-050715 **Lab Sample ID: 480-79931-2**
Date Collected: 05/07/15 14:25 **Matrix: Water**
Date Received: 05/07/15 17:19

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.1		1.0	0.36	ug/L			05/18/15 02:34	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/18/15 02:34	1
Trichloroethene	5.1		1.0	0.46	ug/L			05/18/15 02:34	1
Vinyl chloride	76	^	1.0	0.90	ug/L			05/18/15 02:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*66 - 137*		*05/18/15 02:34*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*05/18/15 02:34*	*1*
Toluene-d8 (Surr)	*87*		*71 - 126*		*05/18/15 02:34*	*1*
Dibromofluoromethane (Surr)	*115*		*60 - 140*		*05/18/15 02:34*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	130		2.0	1.6	ug/L			05/18/15 13:57	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*05/18/15 13:57*	*2*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*		*05/18/15 13:57*	*2*
Toluene-d8 (Surr)	*90*		*71 - 126*		*05/18/15 13:57*	*2*
Dibromofluoromethane (Surr)	*116*		*60 - 140*		*05/18/15 13:57*	*2*

Method: AM20GAX - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen	1.7		0.60	0.13	nm			05/16/15 11:23	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/08/15 15:29	1
Ethene	ND		7.0	1.5	ug/L			05/08/15 15:29	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	17000		1000	1000	ug/L			05/15/15 14:36	1

Method: RSK-175 - Dissolved Gases (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	270		20	5.0	ug/L			05/08/15 16:14	5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	11.3		0.050	0.019	mg/L		05/08/15 12:29	05/09/15 19:37	1
Magnesium	81.7		0.20	0.043	mg/L		05/08/15 12:29	05/09/15 19:37	1
Manganese	7.9		0.0030	0.00040	mg/L		05/08/15 12:29	05/09/15 19:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2590		50.0	28.2	mg/L			05/15/15 07:23	100
Sulfate	123	J	200	34.9	mg/L			05/15/15 07:23	100
Ammonia	1.8		0.020	0.0090	mg/L			05/11/15 15:07	1
Nitrate	ND		0.050	0.020	mg/L			05/08/15 00:54	1
Nitrite	ND		0.050	0.020	mg/L			05/08/15 00:54	1
Total Organic Carbon	3.4		1.0	0.43	mg/L			05/15/15 00:58	1
Total Alkalinity	468	B	5.0	0.79	mg/L			05/13/15 22:24	1

Client Sample ID: MW-14-050715 — Lab Sample ID: 480-79931-2

Date Collected: 05/07/15 14:25 — **Matrix: Water**
Date Received: 05/07/15 17:19

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	ND		10.0	1.5	mg/L			05/12/15 14:44	10
Formic-acid	ND		10.0	1.1	mg/L			05/12/15 14:44	10
Lactic acid	ND		10.0	1.4	mg/L			05/12/15 14:44	10
n-Butyric Acid	ND	^	10.0	1.6	mg/L			05/12/15 14:44	10
Propionic acid	**27.5**		10.0	1.7	mg/L			05/12/15 14:44	10
Pyruvic Acid	ND		10.0	0.80	mg/L			05/12/15 14:44	10

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-79931-3

Date Collected: 05/07/15 00:00 — **Matrix: Water**
Date Received: 05/07/15 17:19

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/18/15 01:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/18/15 01:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/18/15 01:39	1
Trichloroethene	ND		1.0	0.46	ug/L			05/18/15 01:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/18/15 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*66 - 137*		*05/18/15 01:39*	*1*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*05/18/15 01:39*	*1*
Toluene-d8 (Surr)	*88*		*71 - 126*		*05/18/15 01:39*	*1*
Dibromofluoromethane (Surr)	*124*		*60 - 140*		*05/18/15 01:39*	*1*

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-79931-1	MW-12-050715	116	88	88	117
480-79931-2	MW-14-050715	108	87	87	115
480-79931-2 - DL	MW-14-050715	107	89	90	116
480-79931-3	TRIP BLANK	110	86	88	124
LCS 480-242949/4	Lab Control Sample	100	101	99	103
LCS 480-243041/4	Lab Control Sample	103	97	95	102
MB 480-242949/6	Method Blank	107	90	90	113
MB 480-243041/6	Method Blank	111	89	90	116

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-242949/6
Matrix: Water
Analysis Batch: 242949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/17/15 23:56	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/17/15 23:56	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/17/15 23:56	1
Trichloroethene	ND		1.0	0.46	ug/L			05/17/15 23:56	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/17/15 23:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*66 - 137*		*05/17/15 23:56*	*1*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*		*05/17/15 23:56*	*1*
Toluene-d8 (Surr)	*90*		*71 - 126*		*05/17/15 23:56*	*1*
Dibromofluoromethane (Surr)	*113*		*60 - 140*		*05/17/15 23:56*	*1*

Lab Sample ID: LCS 480-242949/4
Matrix: Water
Analysis Batch: 242949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.5		ug/L		102	74 - 124
Tetrachloroethene	25.0	26.4		ug/L		105	74 - 122
trans-1,2-Dichloroethene	25.0	26.0		ug/L		104	73 - 127
Trichloroethene	25.0	25.0		ug/L		100	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*
Toluene-d8 (Surr)	*99*		*71 - 126*
Dibromofluoromethane (Surr)	*103*		*60 - 140*

Lab Sample ID: MB 480-243041/6
Matrix: Water
Analysis Batch: 243041

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/18/15 12:53	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/18/15 12:53	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/18/15 12:53	1
Trichloroethene	ND		1.0	0.46	ug/L			05/18/15 12:53	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/18/15 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*66 - 137*		*05/18/15 12:53*	*1*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*		*05/18/15 12:53*	*1*
Toluene-d8 (Surr)	*90*		*71 - 126*		*05/18/15 12:53*	*1*
Dibromofluoromethane (Surr)	*116*		*60 - 140*		*05/18/15 12:53*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-243041/4
Matrix: Water
Analysis Batch: 243041

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	23.9		ug/L		96	74 - 124
Tetrachloroethene	25.0	24.4		ug/L		98	74 - 122
trans-1,2-Dichloroethene	25.0	24.4		ug/L		98	73 - 127
Trichloroethene	25.0	23.3		ug/L		93	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*
Toluene-d8 (Surr)	*95*		*71 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-241325/3
Matrix: Water
Analysis Batch: 241325

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/08/15 09:56	1
Ethene	ND		7.0	1.5	ug/L			05/08/15 09:56	1
Methane	ND		4.0	1.0	ug/L			05/08/15 09:56	1

Lab Sample ID: LCS 480-241325/4
Matrix: Water
Analysis Batch: 241325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	14.9		ug/L		102	79 - 120
Ethene	13.6	13.2		ug/L		97	78 - 115
Methane	7.77	7.79		ug/L		100	71 - 118

Lab Sample ID: LCSD 480-241325/5
Matrix: Water
Analysis Batch: 241325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	15.1		ug/L		103	79 - 120	1	50
Ethene	13.6	13.9		ug/L		102	78 - 115	5	50
Methane	7.77	7.88		ug/L		101	71 - 118	1	50

Lab Sample ID: MB 200-88364/3
Matrix: Water
Analysis Batch: 88364

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/15/15 14:17	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 200-88364/2
Matrix: Water
Analysis Batch: 88364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	6000		ug/L		120	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-241337/1-A
Matrix: Water
Analysis Batch: 241709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241337

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/08/15 12:29	05/11/15 09:50	1
Magnesium	ND		0.20	0.043	mg/L		05/08/15 12:29	05/11/15 09:50	1
Manganese	ND		0.0030	0.00040	mg/L		05/08/15 12:29	05/11/15 09:50	1

Lab Sample ID: LCS 480-241337/2-A
Matrix: Water
Analysis Batch: 241622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241337

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.21		mg/L		102	80 - 120
Magnesium	10.0	10.04		mg/L		100	80 - 120
Manganese	0.200	0.205		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-242324/100
Matrix: Water
Analysis Batch: 242324

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/15/15 06:19	1
Sulfate	ND		2.0	0.35	mg/L			05/15/15 06:19	1

Lab Sample ID: LCS 480-242324/99
Matrix: Water
Analysis Batch: 242324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	21.62		mg/L		108	83 - 121
Sulfate	20.0	21.48		mg/L		107	80 - 129

Lab Sample ID: 480-79931-2 MS
Matrix: Water
Analysis Batch: 242324

Client Sample ID: MW-14-050715
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2590		2500	5103		mg/L		101	83 - 121
Sulfate	123	J	2500	2635		mg/L		100	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-241756/147
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/11/15 15:41	1

Lab Sample ID: MB 480-241756/27
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/11/15 13:56	1

Lab Sample ID: MB 480-241756/51
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/11/15 14:17	1

Lab Sample ID: MB 480-241756/99
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/11/15 14:59	1

Lab Sample ID: LCS 480-241756/100
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.07		mg/L		107	90 - 110

Lab Sample ID: LCS 480-241756/148
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Lab Sample ID: LCS 480-241756/28
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Lab Sample ID: LCS 480-241756/52
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-241691/28
Matrix: Water
Analysis Batch: 241691

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.610	J	1.0	0.43	mg/L			05/11/15 02:57	1

Lab Sample ID: MB 480-241691/4
Matrix: Water
Analysis Batch: 241691

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.655	J	1.0	0.43	mg/L			05/10/15 16:17	1

Lab Sample ID: LCS 480-241691/29
Matrix: Water
Analysis Batch: 241691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	58.25		mg/L		97	90 - 110

Lab Sample ID: LCS 480-241691/5
Matrix: Water
Analysis Batch: 241691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	59.17		mg/L		99	90 - 110

Lab Sample ID: MB 480-242584/3
Matrix: Water
Analysis Batch: 242584

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/14/15 18:23	1

Lab Sample ID: LCS 480-242584/4
Matrix: Water
Analysis Batch: 242584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	55.05		mg/L		92	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-242291/3
Matrix: Water
Analysis Batch: 242291

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.20	J	5.0	0.79	mg/L			05/13/15 22:24	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-242291/4
Matrix: Water
Analysis Batch: 242291

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	108	108.0		mg/L		100	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-241723/3
Matrix: Water
Analysis Batch: 241723

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1

Lab Sample ID: LCS 480-241723/4
Matrix: Water
Analysis Batch: 241723

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.794		mg/L		106	90 - 110

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-241802/4
Matrix: Water
Analysis Batch: 241802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/12/15 09:23	1
Formic-acid	ND		1.0	0.11	mg/L			05/12/15 09:23	1
Lactic acid	ND		1.0	0.14	mg/L			05/12/15 09:23	1
Propionic acid	ND		1.0	0.17	mg/L			05/12/15 09:23	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/12/15 09:23	1

Lab Sample ID: LCS 480-241802/3
Matrix: Water
Analysis Batch: 241802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	9.42		mg/L		94	80 - 120
Formic-acid	10.0	9.38		mg/L		94	80 - 120
Lactic acid	10.0	10.24		mg/L		102	80 - 120
Propionic acid	10.0	9.66		mg/L		97	80 - 120
Pyruvic Acid	10.0	8.29		mg/L		83	80 - 120

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

GC/MS VOA

Analysis Batch: 242949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-2	MW-14-050715	Total/NA	Water	8260C	
480-79931-3	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-242949/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-242949/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 243041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	8260C	
480-79931-2 - DL	MW-14-050715	Total/NA	Water	8260C	
LCS 480-243041/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243041/6	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	RSK-175	
480-79931-2	MW-14-050715	Total/NA	Water	RSK-175	
LCS 200-88364/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88364/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 241325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	RSK-175	
480-79931-2	MW-14-050715	Total/NA	Water	RSK-175	
480-79931-2 - DL	MW-14-050715	Total/NA	Water	RSK-175	
LCS 480-241325/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-241325/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-241325/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 243829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	AM20GAX	
480-79931-2	MW-14-050715	Total/NA	Water	AM20GAX	

Metals

Prep Batch: 241337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	3005A	
480-79931-2	MW-14-050715	Total/NA	Water	3005A	
LCS 480-241337/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-241337/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 241622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	6010C	241337
480-79931-2	MW-14-050715	Total/NA	Water	6010C	241337
LCS 480-241337/2-A	Lab Control Sample	Total/NA	Water	6010C	241337

Metals (Continued)

Analysis Batch: 241709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-241337/1-A	Method Blank	Total/NA	Water	6010C	241337

General Chemistry

Analysis Batch: 241216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	353.2	
480-79931-2	MW-14-050715	Total/NA	Water	353.2	

Analysis Batch: 241217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	353.2	
480-79931-2	MW-14-050715	Total/NA	Water	353.2	

Analysis Batch: 241691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	9060A	
LCS 480-241691/29	Lab Control Sample	Total/NA	Water	9060A	
LCS 480-241691/5	Lab Control Sample	Total/NA	Water	9060A	
MB 480-241691/28	Method Blank	Total/NA	Water	9060A	
MB 480-241691/4	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 241723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	SM 4500 S2 D	
480-79931-2	MW-14-050715	Total/NA	Water	SM 4500 S2 D	
LCS 480-241723/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-241723/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 241756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	350.1	
480-79931-2	MW-14-050715	Total/NA	Water	350.1	
LCS 480-241756/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-241756/148	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-241756/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-241756/52	Lab Control Sample	Total/NA	Water	350.1	
MB 480-241756/147	Method Blank	Total/NA	Water	350.1	
MB 480-241756/27	Method Blank	Total/NA	Water	350.1	
MB 480-241756/51	Method Blank	Total/NA	Water	350.1	
MB 480-241756/99	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 241802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	VFA-IC	
480-79931-2	MW-14-050715	Total/NA	Water	VFA-IC	
LCS 480-241802/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-241802/4	Method Blank	Total/NA	Water	VFA-IC	

General Chemistry (Continued)

Analysis Batch: 242291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	SM 2320B	
480-79931-2	MW-14-050715	Total/NA	Water	SM 2320B	
LCS 480-242291/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-242291/3	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 242324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-1	MW-12-050715	Total/NA	Water	300.0	
480-79931-2	MW-14-050715	Total/NA	Water	300.0	
480-79931-2 MS	MW-14-050715	Total/NA	Water	300.0	
LCS 480-242324/99	Lab Control Sample	Total/NA	Water	300.0	
MB 480-242324/100	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 242584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-79931-2	MW-14-050715	Total/NA	Water	9060A	
LCS 480-242584/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-242584/3	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Client Sample ID: MW-12-050715

Lab Sample ID: 480-79931-1

Date Collected: 05/07/15 10:10

Matrix: Water

Date Received: 05/07/15 17:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243041	05/18/15 13:29	NMD1	TAL BUF
Total/NA	Analysis	AM20GAX		1	243829	05/16/15 11:23	CTB	SC0015
Total/NA	Analysis	RSK-175		1	88364	05/15/15 14:26	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241325	05/08/15 15:11	JMO	TAL BUF
Total/NA	Prep	3005A			241337	05/08/15 12:29	TAS	TAL BUF
Total/NA	Analysis	6010C		1	241622	05/09/15 19:34	AMH	TAL BUF
Total/NA	Analysis	300.0		50	242324	05/15/15 07:14	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241756	05/11/15 15:06	STD	TAL BUF
Total/NA	Analysis	353.2		1	241216	05/08/15 00:53	CLT	TAL BUF
Total/NA	Analysis	353.2		1	241217	05/08/15 00:53	CLT	TAL BUF
Total/NA	Analysis	9060A		1	241691	05/10/15 21:38	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	242291	05/13/15 22:24	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		10	241802	05/12/15 14:15	CAS	TAL BUF

Client Sample ID: MW-14-050715

Lab Sample ID: 480-79931-2

Date Collected: 05/07/15 14:25

Matrix: Water

Date Received: 05/07/15 17:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	242949	05/18/15 02:34	JWG	TAL BUF
Total/NA	Analysis	8260C	DL	2	243041	05/18/15 13:57	NMD1	TAL BUF
Total/NA	Analysis	AM20GAX		1	243829	05/16/15 11:23	CTB	SC0015
Total/NA	Analysis	RSK-175		1	88364	05/15/15 14:36	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241325	05/08/15 15:29	JMO	TAL BUF
Total/NA	Analysis	RSK-175	DL	5	241325	05/08/15 16:14	JMO	TAL BUF
Total/NA	Prep	3005A			241337	05/08/15 12:29	TAS	TAL BUF
Total/NA	Analysis	6010C		1	241622	05/09/15 19:37	AMH	TAL BUF
Total/NA	Analysis	300.0		100	242324	05/15/15 07:23	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241756	05/11/15 15:07	STD	TAL BUF
Total/NA	Analysis	353.2		1	241216	05/08/15 00:54	CLT	TAL BUF
Total/NA	Analysis	353.2		1	241217	05/08/15 00:54	CLT	TAL BUF
Total/NA	Analysis	9060A		1	242584	05/15/15 00:58	NCH	TAL BUF
Total/NA	Analysis	SM 2320B		1	242291	05/13/15 22:24	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		10	241802	05/12/15 14:44	CAS	TAL BUF

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Client Sample ID: TRIP BLANK

Date Collected: 05/07/15 00:00
Date Received: 05/07/15 17:19

Lab Sample ID: 480-79931-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	242949	05/18/15 01:39	JWG	TAL BUF

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
VFA-IC		Water	Acetic acid
VFA-IC		Water	Formic-acid
VFA-IC		Water	Lactic acid
VFA-IC		Water	n-Butyric Acid
VFA-IC		Water	Propionic acid
VFA-IC		Water	Pyruvic Acid

Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
AM20GAX	Dissolved Gases (GC)	NONE	SC0015
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-79931-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-79931-1	MW-12-050715	Water	05/07/15 10:10	05/07/15 17:19
480-79931-2	MW-14-050715	Water	05/07/15 14:25	05/07/15 17:19
480-79931-3	TRIP BLANK	Water	05/07/15 00:00	05/07/15 17:19

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

May 20, 2015

Melissa Deyo
Test America
10 Hazelwood Drive
Buffalo, NY 14228

RE: **480-79931-1**

Microseeps Workorder: 15499

Dear Melissa Deyo:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, May 12, 2015. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbin Robl 05/20/2015
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 10

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 15499 480-79931-1

Lab ID	Sample ID	Matrix	Date Collected	Date Received
154990001	MW-12-050715 (480-79931-1)	Bubble Strip	5/7/2015 10:10	5/12/2015 11:35
154990002	MW-14-050715 (480-79931-2)	Bubble Strip	5/7/2015 14:25	5/12/2015 11:35

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 15499 480-79931-1

Lab ID: **154990001** Date Received: 5/12/2015 11:35 Matrix: Bubble Strip

Sample ID: **MW-12-050715 (480-79931-1)** Date Collected: 5/7/2015 10:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.6**	nM	0.60	0.13	1	5/16/2015 11:23	TD	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 15499 480-79931-1

Lab ID: **154990002** Date Received: 5/12/2015 11:35 Matrix: Bubble Strip

Sample ID: **MW-14-050715 (480-79931-2)** Date Collected: 5/7/2015 14:25

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.7**	nM	0.60	0.13	1	5/16/2015 11:37	TD	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 15499 480-79931-1

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 15499 480-79931-1

QC Batch: DISG/4570 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 154990001, 154990002

METHOD BLANK: 34955

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.60 U	0.60	n

LABORATORY CONTROL SAMPLE & LCSD: 34956 34957

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	26	26	106	107	80-120	0.94	20	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA QUALIFIERS

Workorder: 15499 480-79931-1

QUALITY CONTROL PARAMETER QUALIFIERS

n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 15499 480-79931-1

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
154990001	MW-12-050715 (480-79931-1)			AM20GAX	DISG/4570
154990002	MW-14-050715 (480-79931-2)			AM20GAX	DISG/4570

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

15499

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

5/21/2015

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-23952.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: Pace Analytical Services, Inc.		Analysis Requested		Job #: 480-79931-1
Address: 220 William Pitt Way,	Due Date Requested: 5/19/2015			Preservation Codes:
City: Pittsburgh	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: PA, 15238				
Phone: 412-826-5245(Tel)	PO #:			Other:
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AM20GAX/ Hydrogen	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-12-050715 (480-79931-1)	5/7/15	10:10 Eastern		Water			X	1	
MW-14-050715 (480-79931-2)	5/7/15	14:25 Eastern		Water			X	1	

Possible Hazard Identification *Unconfirmed*	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)* ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/11/15 1700	FAT Buf	[signature]	5-12-15 1135	PAES
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica

Client Information	Sampler: Dan Wolf	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2 - Carbon dioxide	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCE, TCE, DCE (trans and cis), Vinyl Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	VFA	AM20GAX *	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N				
MW-12-050715	5/7/15	1010	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X	X		* Dissolved H2
MW-14-050715	5/7/15	1425	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X	X		Microscop
TRIP BLANK				Water																
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																

480-79931 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Dan G Wolf	5/7/15 17:19		Amrkar	5/7/15 1719	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.3 #1

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-23951.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-79931-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/19/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-12-050715 (480-79931-1)	5/7/15	10:10 Eastern		Water			X	3	
MW-14-050715 (480-79931-2)	5/7/15	14:25 Eastern		Water			X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by: Cameron Wallace	Date/Time: 5-8-15 1600	Company	Received by:	Date/Time: 5/9/15 0945	Company TABV
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/21/2015


ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE
AMHERST, NY 14228
UNITED STATES US
BIL
TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: BURLINGTON
DEPT: SAMPLE CONTROL
FedEx
Express
TRK# 0201 5657 0118 3646
SATURDAY 12:00P
PRIORITY OVERNIGHT
XO BTVA
05403
VT-US BTV
Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-79931-1

Login Number: 79931
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GZA GEO.
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-79931-1

Login Number: 79931
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/09/15 12:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	468682
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-80045-1

Client Project/Site: 058507, GM-Lockport Groundwater Sampling

For:

Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Kathleen Willy

Authorized for release by:
5/22/2015 2:34:43 PM
Rebecca Jones, Project Management Assistant I
rebecca.jones@testamericainc.com

Designee for

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
E	Result exceeded calibration range.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-80045-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80045-1

Receipt
The samples were received on 5/8/2015 5:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 243214 was outside the method criteria for the following analyte: Vinyl Chloride. A CCV standard at or below the reporting limit (RL) was analyzed with the affected sample and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.MW-10-050815 (480-80045-1)

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-10-050815 (480-80045-1) and DUPE-1-050815 (480-80045-5). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples was diluted to bring the concentration of target analytes within the calibration range: MW-4-050815 (480-80045-2), MW-7-050815 (480-80045-3) and DUPE-1-050815 (480-80045-5). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Trans-1,2-Dichloroethene was detected in the following sample at a concentration above the linear range of the initial calibration curve: MW-4-050815 (480-80045-2). Due to the high dilution dictated by other target compounds, this analyte was diluted out in the re-analysis of the sample. Therefore, the value being reported is from the original analysis and is qualified with an E flag.

Method(s) 8260C: Tetrachloroethene and Vinyl chloride were detected in the following sample at a concentration above the linear range of the initial calibration curve: MW-7-050815 (480-80045-3). Due to the high dilution dictated by other target compounds, this analyte was diluted out in the re-analysis of the sample. Therefore, the value being reported is from the original analysis and is qualified with an E flag.

Method(s) 8260C: Vinyl Chloride was detected in the following sample at a concentration above the linear range of the initial calibration curve: DUPE-1-050815 (480-80045-5). Due to the high dilution dictated by other target compounds, this analyte was diluted out in the re-analysis of the sample. Therefore, the value being reported is from the original analysis and is qualified with an E flag.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method(s) VFA-IC: The following samples wereuted due to the nature of the sample matrix: MW-10-050815 (480-80045-1), MW-4-050815 (480-80045-2) and MW-7-050815 (480-80045-3). Elevated reporting limits (RLs) are provided.

Method(s) VFA-IC: The continuing calibration verification (CCV) associated with batch 241802 recovered above the upper control limit for n-butyric acid. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-10-050815 (480-80045-1), MW-4-050815 (480-80045-2), MW-7-050815 (480-80045-3) and DUPE-1-050815 (480-80045-5).

Method(s) VFA-IC: The following samples were diluted due to the nature of the sample matrix: DUPE-1-050815 (480-80045-5), (720-64686-H-7) and (720-64686-H-7 MS). Elevated reporting limits (RLs) are provided.

Method(s) VFA-IC: The following samples were diluted due to the nature of the sample matrix: DUPE-1-050815 (480-80045-5), (240-50505-A-2) and (240-50505-A-2 MS). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-10-050815 (480-80045-1), MW-4-050815 (480-80045-2), MW-7-050815 (480-80045-3), DUPE-1-050815 (480-80045-5) and (480-80045-G-5 MS). The sample was analyzed at a dilution based on screening results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 480-80045-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

GC VOA
Method(s) RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-4-050815 (480-80045-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The low level continuing calibration verification (CCVL 480-242566/37) for analytical batch 480-242566 contained Total Iron above the upper quality control limit. All reported samples associated with this CCVL were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of sample MW-4-050815 (480-80045-2) was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Client Sample ID: MW-10-050815 — Lab Sample ID: 480-80045-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	310		4.0	3.2	ug/L	4		8260C	Total/NA
Trichloroethene	110		4.0	1.8	ug/L	4		8260C	Total/NA
Vinyl chloride	48	^	4.0	3.6	ug/L	4		8260C	Total/NA
Hydrogen	1.4		0.60	0.13	nm	1		AM20GAX	Total/NA
Methane	55		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.035	J	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	40.5		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	1.3	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1720		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	346		100	17.5	mg/L	50		300.0	Total/NA
Ammonia	0.021		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	3.2		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	260		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Propionic acid	12.5		10.0	1.7	mg/L	10		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	7900		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-4-050815 — Lab Sample ID: 480-80045-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	3.1		1.0	0.36	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	100	E	1.0	0.90	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene - DL	30000		500	410	ug/L	500		8260C	Total/NA
Trichloroethene - DL	27000		500	230	ug/L	500		8260C	Total/NA
Vinyl chloride - DL	3800		500	450	ug/L	500		8260C	Total/NA
Hydrogen	1.7		0.60	0.13	nm	1		AM20GAX	Total/NA
Ethane	32	J	75	15	ug/L	10		RSK-175	Total/NA
Ethene	230		70	15	ug/L	10		RSK-175	Total/NA
Methane	530		40	10	ug/L	10		RSK-175	Total/NA
Iron	0.70	^	0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	65.8		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.38	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	1660		25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	228		100	17.5	mg/L	50		300.0	Total/NA
Ammonia	1.6		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	2.3		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	304		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Propionic acid	13.0		10.0	1.7	mg/L	10		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	9700		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: MW-7-050815 — Lab Sample ID: 480-80045-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	140	E	1.0	0.36	ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	92		1.0	0.90	ug/L	1		8260C	Total/NA
Vinyl chloride	1600	E ^	1.0	0.90	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene - DL	40000		10000	8100	ug/L	10000		8260C	Total/NA
Trichloroethene - DL	710000		10000	4600	ug/L	10000		8260C	Total/NA
Ethane	14		7.5	1.5	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-7-050815 (Continued) — Lab Sample ID: 480-80045-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethene	79		7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane	21		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.39		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	41.4		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.019	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	300		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	143		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.70		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	9.4		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	244		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Acetic acid	2.5	J	10.0	1.5	mg/L	10		VFA-IC	Total/NA
Lactic acid	2.7	J	10.0	1.4	mg/L	10		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	3500		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80045-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	4.4		1.0	0.81	ug/L	1		8260C	Total/NA
Trichloroethene	94		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: DUPE-1-050815 — Lab Sample ID: 480-80045-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	130		4.0	1.4	ug/L	4		8260C	Total/NA
trans-1,2-Dichloroethene	110		4.0	3.6	ug/L	4		8260C	Total/NA
Vinyl chloride	3000	E ^	4.0	3.6	ug/L	4		8260C	Total/NA
cis-1,2-Dichloroethene - DL	45000		10000	8100	ug/L	10000		8260C	Total/NA
Trichloroethene - DL	830000		10000	4600	ug/L	10000		8260C	Total/NA
Ethane	16		7.5	1.5	ug/L	1		RSK-175	Total/NA
Ethene	91		7.0	1.5	ug/L	1		RSK-175	Total/NA
Methane	25		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.41		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	42.0		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.019	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	298		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	142		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.70		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	9.5		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	244		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Acetic acid	5.4		1.0	0.15	mg/L	1		VFA-IC	Total/NA
Formic-acid	0.67	J	1.0	0.11	mg/L	1		VFA-IC	Total/NA
Lactic acid	6.5		1.0	0.14	mg/L	1		VFA-IC	Total/NA
Propionic acid	33.4		5.0	0.85	mg/L	5		VFA-IC	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	3600		1000	1000	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-10-050815 **Lab Sample ID: 480-80045-1**
Date Collected: 05/08/15 09:35 **Matrix: Water**
Date Received: 05/08/15 17:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**310**		4.0	3.2	ug/L			05/19/15 06:14	4
Tetrachloroethene	ND		4.0	1.4	ug/L			05/19/15 06:14	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			05/19/15 06:14	4
Trichloroethene	**110**		4.0	1.8	ug/L			05/19/15 06:14	4
Vinyl chloride	**48**	^	4.0	3.6	ug/L			05/19/15 06:14	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*66 - 137*		*05/19/15 06:14*	*4*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*05/19/15 06:14*	*4*
Toluene-d8 (Surr)	*89*		*71 - 126*		*05/19/15 06:14*	*4*
Dibromofluoromethane (Surr)	*120*		*60 - 140*		*05/19/15 06:14*	*4*

Method: AM20GAX - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen	**1.4**		0.60	0.13	nm			05/16/15 10:57	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/12/15 14:11	1
Ethene	ND		7.0	1.5	ug/L			05/12/15 14:11	1
Methane	**55**		4.0	1.0	ug/L			05/12/15 14:11	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**7900**		1000	1000	ug/L			05/19/15 13:55	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.035**	**J**	0.050	0.019	mg/L		05/13/15 07:45	05/15/15 10:27	1
Magnesium	**40.5**		0.20	0.043	mg/L		05/13/15 07:45	05/14/15 22:37	1
Manganese	**1.3**	**B**	0.0030	0.00040	mg/L		05/13/15 07:45	05/14/15 22:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1720**		25.0	14.1	mg/L			05/15/15 19:30	50
Sulfate	**346**		100	17.5	mg/L			05/15/15 19:30	50
Ammonia	**0.021**		0.020	0.0090	mg/L			05/11/15 15:56	1
Nitrate	ND		0.050	0.020	mg/L			05/08/15 22:20	1
Nitrite	ND		0.050	0.020	mg/L			05/08/15 22:20	1
Total Organic Carbon	**3.2**		1.0	0.43	mg/L			05/14/15 04:30	1
Total Alkalinity	**260**		5.0	0.79	mg/L			05/14/15 15:00	1
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	ND		10.0	1.5	mg/L			05/12/15 15:42	10
Formic-acid	ND		10.0	1.1	mg/L			05/12/15 15:42	10
Lactic acid	ND		10.0	1.4	mg/L			05/12/15 15:42	10
n-Butyric Acid	ND	^	10.0	1.6	mg/L			05/12/15 15:42	10
Propionic acid	**12.5**		10.0	1.7	mg/L			05/12/15 15:42	10
Pyruvic Acid	ND		10.0	0.80	mg/L			05/12/15 15:42	10

Client Sample ID: MW-4-050815

Date Collected: 05/08/15 15:55
Date Received: 05/08/15 17:00

Lab Sample ID: 480-80045-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	3.1		1.0	0.36	ug/L			05/19/15 06:42	1
trans-1,2-Dichloroethene	100	E	1.0	0.90	ug/L			05/19/15 06:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*		*05/19/15 06:42*	*1*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*05/19/15 06:42*	*1*
Toluene-d8 (Surr)	*99*		*71 - 126*		*05/19/15 06:42*	*1*
Dibromofluoromethane (Surr)	*112*		*60 - 140*		*05/19/15 06:42*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	30000		500	410	ug/L			05/20/15 12:55	500
Trichloroethene	27000		500	230	ug/L			05/20/15 12:55	500
Vinyl chloride	3800		500	450	ug/L			05/20/15 12:55	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/20/15 12:55*	*500*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*05/20/15 12:55*	*500*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/20/15 12:55*	*500*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/20/15 12:55*	*500*

Method: AM20GAX - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen	1.7		0.60	0.13	nm			05/16/15 11:10	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	32	J	75	15	ug/L			05/12/15 12:28	10
Ethene	230		70	15	ug/L			05/12/15 12:28	10
Methane	530		40	10	ug/L			05/12/15 12:28	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	9700		1000	1000	ug/L			05/19/15 14:06	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.70	^	0.050	0.019	mg/L		05/13/15 07:45	05/14/15 22:40	1
Magnesium	65.8		0.20	0.043	mg/L		05/13/15 07:45	05/14/15 22:40	1
Manganese	0.38	B	0.0030	0.00040	mg/L		05/13/15 07:45	05/14/15 22:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1660		25.0	14.1	mg/L			05/15/15 19:38	50
Sulfate	228		100	17.5	mg/L			05/15/15 19:38	50
Ammonia	1.6		0.020	0.0090	mg/L			05/11/15 15:57	1
Nitrate	ND		0.050	0.020	mg/L			05/08/15 22:22	1
Nitrite	ND		0.050	0.020	mg/L			05/08/15 22:22	1
Total Organic Carbon	2.3		1.0	0.43	mg/L			05/14/15 04:59	1
Total Alkalinity	304		5.0	0.79	mg/L			05/14/15 15:00	1
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	ND		10.0	1.5	mg/L			05/12/15 16:12	10
Formic-acid	ND		10.0	1.1	mg/L			05/12/15 16:12	10

Client Sample ID: MW-4-050815 — Lab Sample ID: 480-80045-2

Date Collected: 05/08/15 15:55 — **Matrix: Water**
Date Received: 05/08/15 17:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lactic acid	ND		10.0	1.4	mg/L			05/12/15 16:12	10
n-Butyric Acid	ND	^	10.0	1.6	mg/L			05/12/15 16:12	10
Propionic acid	**13.0**		10.0	1.7	mg/L			05/12/15 16:12	10
Pyruvic Acid	ND		10.0	0.80	mg/L			05/12/15 16:12	10

Client Sample ID: MW-7-050815 — Lab Sample ID: 480-80045-3

Date Collected: 05/08/15 10:30 — **Matrix: Water**
Date Received: 05/08/15 17:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**140**	**E**	1.0	0.36	ug/L			05/19/15 07:10	1
trans-1,2-Dichloroethene	**92**		1.0	0.90	ug/L			05/19/15 07:10	1
Vinyl chloride	**1600**	**E ^**	1.0	0.90	ug/L			05/19/15 07:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*66 - 137*		*05/19/15 07:10*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*05/19/15 07:10*	*1*
Toluene-d8 (Surr)	*90*		*71 - 126*		*05/19/15 07:10*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*05/19/15 07:10*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**40000**		10000	8100	ug/L			05/20/15 13:18	10000
Trichloroethene	**710000**		10000	4600	ug/L			05/20/15 13:18	10000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/20/15 13:18*	*10000*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/20/15 13:18*	*10000*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/20/15 13:18*	*10000*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/20/15 13:18*	*10000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**14**		7.5	1.5	ug/L			05/12/15 14:28	1
Ethene	**79**		7.0	1.5	ug/L			05/12/15 14:28	1
Methane	**21**		4.0	1.0	ug/L			05/12/15 14:28	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**3500**		1000	1000	ug/L			05/19/15 14:17	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.39**		0.050	0.019	mg/L		05/13/15 07:45	05/15/15 10:30	1
Magnesium	**41.4**		0.20	0.043	mg/L		05/13/15 07:45	05/14/15 22:43	1
Manganese	**0.019**	**B**	0.0030	0.00040	mg/L		05/13/15 07:45	05/14/15 22:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**300**		10.0	5.6	mg/L			05/15/15 19:46	20
Sulfate	**143**		40.0	7.0	mg/L			05/15/15 19:46	20
Ammonia	**0.70**		0.020	0.0090	mg/L			05/11/15 15:57	1

Client Sample ID: MW-7-050815 — Lab Sample ID: 480-80045-3

Date Collected: 05/08/15 10:30 — **Matrix: Water**
Date Received: 05/08/15 17:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate	ND		0.050	0.020	mg/L			05/08/15 22:23	1
Nitrite	ND		0.050	0.020	mg/L			05/08/15 22:23	1
Total Organic Carbon	**9.4**		1.0	0.43	mg/L			05/14/15 05:27	1
Total Alkalinity	**244**		5.0	0.79	mg/L			05/14/15 15:00	1
Sulfide	ND	F1	0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	**2.5**	**J**	10.0	1.5	mg/L			05/12/15 16:41	10
Formic-acid	ND		10.0	1.1	mg/L			05/12/15 16:41	10
Lactic acid	**2.7**	**J**	10.0	1.4	mg/L			05/12/15 16:41	10
n-Butyric Acid	ND	^	10.0	1.6	mg/L			05/12/15 16:41	10
Propionic acid	ND		10.0	1.7	mg/L			05/12/15 16:41	10
Pyruvic Acid	ND		10.0	0.80	mg/L			05/12/15 16:41	10

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80045-4

Date Collected: 05/08/15 00:00 — **Matrix: Water**
Date Received: 05/08/15 17:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**4.4**		1.0	0.81	ug/L			05/20/15 00:47	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 00:47	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 00:47	1
Trichloroethene	**94**		1.0	0.46	ug/L			05/20/15 00:47	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 00:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*		*05/20/15 00:47*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/20/15 00:47*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/20/15 00:47*	*1*
Dibromofluoromethane (Surr)	*96*		*60 - 140*		*05/20/15 00:47*	*1*

Client Sample ID: DUPE-1-050815 — Lab Sample ID: 480-80045-5

Date Collected: 05/08/15 00:00 — **Matrix: Water**
Date Received: 05/08/15 17:00

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**130**		4.0	1.4	ug/L			05/19/15 08:07	4
trans-1,2-Dichloroethene	**110**		4.0	3.6	ug/L			05/19/15 08:07	4
Vinyl chloride	**3000**	**E ^**	4.0	3.6	ug/L			05/19/15 08:07	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*05/19/15 08:07*	*4*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*		*05/19/15 08:07*	*4*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/19/15 08:07*	*4*
Dibromofluoromethane (Surr)	*109*		*60 - 140*		*05/19/15 08:07*	*4*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**45000**		10000	8100	ug/L			05/20/15 13:41	10000
Trichloroethene	**830000**		10000	4600	ug/L			05/20/15 13:41	10000

Client Sample ID: DUPE-1-050815 **Lab Sample ID: 480-80045-5**
Date Collected: 05/08/15 00:00 **Matrix: Water**
Date Received: 05/08/15 17:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*05/20/15 13:41*	*10000*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/20/15 13:41*	*10000*
Toluene-d8 (Surr)	*98*		*71 - 126*		*05/20/15 13:41*	*10000*
Dibromofluoromethane (Surr)	*98*		*60 - 140*		*05/20/15 13:41*	*10000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	**16**		7.5	1.5	ug/L			05/12/15 14:46	1
Ethene	**91**		7.0	1.5	ug/L			05/12/15 14:46	1
Methane	**25**		4.0	1.0	ug/L			05/12/15 14:46	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**3600**		1000	1000	ug/L			05/19/15 14:30	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.41**		0.050	0.019	mg/L		05/13/15 07:45	05/15/15 10:33	1
Magnesium	**42.0**		0.20	0.043	mg/L		05/13/15 07:45	05/14/15 22:46	1
Manganese	**0.019**	**B**	0.0030	0.00040	mg/L		05/13/15 07:45	05/14/15 22:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**298**		10.0	5.6	mg/L			05/15/15 19:54	20
Sulfate	**142**		40.0	7.0	mg/L			05/15/15 19:54	20
Ammonia	**0.70**		0.020	0.0090	mg/L			05/11/15 15:58	1
Nitrate	ND		0.050	0.020	mg/L			05/08/15 22:24	1
Nitrite	ND		0.050	0.020	mg/L			05/08/15 22:24	1
Total Organic Carbon	**9.5**		1.0	0.43	mg/L			05/14/15 05:56	1
Total Alkalinity	**244**		5.0	0.79	mg/L			05/14/15 15:00	1
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1
Acetic acid	**5.4**		1.0	0.15	mg/L			05/12/15 17:10	1
Formic-acid	**0.67**	**J**	1.0	0.11	mg/L			05/12/15 17:10	1
Lactic acid	**6.5**		1.0	0.14	mg/L			05/12/15 17:10	1
n-Butyric Acid	ND	^	1.0	0.16	mg/L			05/12/15 17:10	1
Propionic acid	**33.4**		5.0	0.85	mg/L			05/13/15 22:02	5
Pyruvic Acid	ND		1.0	0.080	mg/L			05/12/15 17:10	1

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80045-1	MW-10-050815	114	87	89	120
480-80045-2	MW-4-050815	98	86	99	112
480-80045-2 - DL	MW-4-050815	102	95	98	95
480-80045-3	MW-7-050815	91	87	90	104
480-80045-3 - DL	MW-7-050815	102	97	96	95
480-80045-4	TRIP BLANK	102	98	96	96
480-80045-5	DUPE-1-050815	92	89	102	109
480-80045-5 - DL	DUPE-1-050815	103	98	98	98
LCS 480-243214/6	Lab Control Sample	102	98	96	105
LCS 480-243483/4	Lab Control Sample	98	96	100	98
LCS 480-243532/5	Lab Control Sample	99	99	99	97
MB 480-243214/8	Method Blank	109	89	90	116
MB 480-243483/6	Method Blank	101	94	96	95
MB 480-243532/7	Method Blank	100	96	97	94

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-243214/8
Matrix: Water
Analysis Batch: 243214

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/19/15 01:48	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/15 01:48	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/15 01:48	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/15 01:48	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/15 01:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*66 - 137*		*05/19/15 01:48*	*1*
4-Bromofluorobenzene (Surr)	*89*		*73 - 120*		*05/19/15 01:48*	*1*
Toluene-d8 (Surr)	*90*		*71 - 126*		*05/19/15 01:48*	*1*
Dibromofluoromethane (Surr)	*116*		*60 - 140*		*05/19/15 01:48*	*1*

Lab Sample ID: LCS 480-243214/6
Matrix: Water
Analysis Batch: 243214

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	26.6		ug/L		106	74 - 124
Tetrachloroethene	25.0	26.7		ug/L		107	74 - 122
trans-1,2-Dichloroethene	25.0	26.7		ug/L		107	73 - 127
Trichloroethene	25.0	26.3		ug/L		105	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*66 - 137*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*
Toluene-d8 (Surr)	*96*		*71 - 126*
Dibromofluoromethane (Surr)	*105*		*60 - 140*

Lab Sample ID: MB 480-243483/6
Matrix: Water
Analysis Batch: 243483

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/19/15 23:47	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/19/15 23:47	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/19/15 23:47	1
Trichloroethene	ND		1.0	0.46	ug/L			05/19/15 23:47	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/19/15 23:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/19/15 23:47*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*05/19/15 23:47*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*05/19/15 23:47*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*		*05/19/15 23:47*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-243483/4
Matrix: Water
Analysis Batch: 243483

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	24.9		ug/L		99	74 - 124
Tetrachloroethene	25.0	26.9		ug/L		108	74 - 122
trans-1,2-Dichloroethene	25.0	25.2		ug/L		101	73 - 127
Trichloroethene	25.0	24.4		ug/L		98	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Toluene-d8 (Surr)	*100*		*71 - 126*
Dibromofluoromethane (Surr)	*98*		*60 - 140*

Lab Sample ID: MB 480-243532/7
Matrix: Water
Analysis Batch: 243532

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/20/15 11:46	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/20/15 11:46	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/20/15 11:46	1
Trichloroethene	ND		1.0	0.46	ug/L			05/20/15 11:46	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/20/15 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*66 - 137*		*05/20/15 11:46*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/20/15 11:46*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*05/20/15 11:46*	*1*
Dibromofluoromethane (Surr)	*94*		*60 - 140*		*05/20/15 11:46*	*1*

Lab Sample ID: LCS 480-243532/5
Matrix: Water
Analysis Batch: 243532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	24.0		ug/L		96	74 - 124
Tetrachloroethene	25.0	22.6		ug/L		91	74 - 122
trans-1,2-Dichloroethene	25.0	23.4		ug/L		94	73 - 127
Trichloroethene	25.0	22.6		ug/L		90	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*99*		*71 - 126*
Dibromofluoromethane (Surr)	*97*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-241845/3
Matrix: Water
Analysis Batch: 241845

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/12/15 09:15	1
Ethene	ND		7.0	1.5	ug/L			05/12/15 09:15	1
Methane	ND		4.0	1.0	ug/L			05/12/15 09:15	1

Lab Sample ID: LCS 480-241845/4
Matrix: Water
Analysis Batch: 241845

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	17.1		ug/L		118	79 - 120
Ethene	13.6	15.5		ug/L		114	78 - 115
Methane	7.77	8.88		ug/L		114	71 - 118

Lab Sample ID: LCSD 480-241845/5
Matrix: Water
Analysis Batch: 241845

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	14.7		ug/L		101	79 - 120	15	50
Ethene	13.6	13.4		ug/L		99	78 - 115	14	50
Methane	7.77	7.61		ug/L		98	71 - 118	15	50

Lab Sample ID: MB 200-88489/3
Matrix: Water
Analysis Batch: 88489

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/19/15 13:45	1

Lab Sample ID: LCS 200-88489/2
Matrix: Water
Analysis Batch: 88489

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	5170		ug/L		103	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-241953/1-A
Matrix: Water
Analysis Batch: 242566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241953

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/13/15 07:45	05/14/15 21:27	1
Magnesium	ND		0.20	0.043	mg/L		05/13/15 07:45	05/14/15 21:27	1
Manganese	0.00136	J	0.0030	0.00040	mg/L		05/13/15 07:45	05/14/15 21:27	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 480-241953/2-A
Matrix: Water
Analysis Batch: 242566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241953

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.96		mg/L		100	80 - 120
Magnesium	10.0	10.16		mg/L		102	80 - 120
Manganese	0.200	0.197		mg/L		98	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-242450/52
Matrix: Water
Analysis Batch: 242450

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/15/15 17:19	1
Sulfate	ND		2.0	0.35	mg/L			05/15/15 17:19	1

Lab Sample ID: LCS 480-242450/51
Matrix: Water
Analysis Batch: 242450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.42		mg/L		102	83 - 121
Sulfate	20.0	19.75		mg/L		99	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-241756/123
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/11/15 15:20	1

Lab Sample ID: MB 480-241756/147
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/11/15 15:41	1

Lab Sample ID: LCS 480-241756/124
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.08		mg/L		108	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 480-241756/148
Matrix: Water
Analysis Batch: 241756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			1.00	1.08		mg/L		108	90 - 110		

Lab Sample ID: 480-80045-5 MS
Matrix: Water
Analysis Batch: 241756

Client Sample ID: DUPE-1-050815
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	0.70		0.200	0.892		mg/L		97	90 - 110		

Lab Sample ID: 480-80045-5 DU
Matrix: Water
Analysis Batch: 241756

Client Sample ID: DUPE-1-050815
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia	0.70			0.698		mg/L				0.1	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-242329/3
Matrix: Water
Analysis Batch: 242329

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/13/15 20:01	1

Lab Sample ID: LCS 480-242329/4
Matrix: Water
Analysis Batch: 242329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			60.0	57.00		mg/L		95	90 - 110		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-242520/27
Matrix: Water
Analysis Batch: 242520

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/14/15 15:00	1

Lab Sample ID: MB 480-242520/3
Matrix: Water
Analysis Batch: 242520

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/14/15 15:00	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-242520/28
Matrix: Water
Analysis Batch: 242520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	108.0		mg/L		108	90 - 110

Lab Sample ID: LCS 480-242520/4
Matrix: Water
Analysis Batch: 242520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	108.0		mg/L		108	90 - 110

Lab Sample ID: 480-80045-5 MS
Matrix: Water
Analysis Batch: 242520

Client Sample ID: DUPE-1-050815
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	244		200	364.0		mg/L		60	60 - 140

Lab Sample ID: 480-80045-3 DU
Matrix: Water
Analysis Batch: 242520

Client Sample ID: MW-7-050815
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	244		240.0		mg/L		2	20

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-241723/3
Matrix: Water
Analysis Batch: 241723

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/11/15 13:45	1

Lab Sample ID: LCS 480-241723/4
Matrix: Water
Analysis Batch: 241723

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.794		mg/L		106	90 - 110

Lab Sample ID: 480-80045-3 MS
Matrix: Water
Analysis Batch: 241723

Client Sample ID: MW-7-050815
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND	F1	0.500	0.325	F1	mg/L		65	90 - 110

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 480-80045-3 MSD
Matrix: Water
Analysis Batch: 241723

Client Sample ID: MW-7-050815
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	ND	F1	0.500	0.319	F1	mg/L		64	90 - 110	2	20

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-241802/4
Matrix: Water
Analysis Batch: 241802

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/12/15 09:23	1
Formic-acid	ND		1.0	0.11	mg/L			05/12/15 09:23	1
Lactic acid	ND		1.0	0.14	mg/L			05/12/15 09:23	1
n-Butyric Acid	ND	^	1.0	0.16	mg/L			05/12/15 09:23	1
Propionic acid	ND		1.0	0.17	mg/L			05/12/15 09:23	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/12/15 09:23	1

Lab Sample ID: LCS 480-241802/3
Matrix: Water
Analysis Batch: 241802

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	9.42		mg/L		94	80 - 120
Formic-acid	10.0	9.38		mg/L		94	80 - 120
Lactic acid	10.0	10.24		mg/L		102	80 - 120
n-Butyric Acid	10.0	9.40	^	mg/L		94	80 - 120
Propionic acid	10.0	9.66		mg/L		97	80 - 120
Pyruvic Acid	10.0	8.29		mg/L		83	80 - 120

Lab Sample ID: MB 480-242177/4
Matrix: Water
Analysis Batch: 242177

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Formic-acid	ND		1.0	0.11	mg/L			05/13/15 17:10	1
Lactic acid	ND		1.0	0.14	mg/L			05/13/15 17:10	1
Propionic acid	ND		1.0	0.17	mg/L			05/13/15 17:10	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/13/15 17:10	1

Lab Sample ID: LCS 480-242177/3
Matrix: Water
Analysis Batch: 242177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Formic-acid	10.0	9.13		mg/L		91	80 - 120
Lactic acid	10.0	9.22		mg/L		92	80 - 120
Propionic acid	10.0	9.33		mg/L		93	80 - 120
Pyruvic Acid	10.0	8.30		mg/L		83	80 - 120

GC/MS VOA

Analysis Batch: 243214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	8260C	
480-80045-2	MW-4-050815	Total/NA	Water	8260C	
480-80045-3	MW-7-050815	Total/NA	Water	8260C	
480-80045-5	DUPE-1-050815	Total/NA	Water	8260C	
LCS 480-243214/6	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243214/8	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 243483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-4	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-243483/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243483/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 243532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-2 - DL	MW-4-050815	Total/NA	Water	8260C	
480-80045-3 - DL	MW-7-050815	Total/NA	Water	8260C	
480-80045-5 - DL	DUPE-1-050815	Total/NA	Water	8260C	
LCS 480-243532/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243532/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	RSK-175	
480-80045-2	MW-4-050815	Total/NA	Water	RSK-175	
480-80045-3	MW-7-050815	Total/NA	Water	RSK-175	
480-80045-5	DUPE-1-050815	Total/NA	Water	RSK-175	
LCS 200-88489/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88489/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 241845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	RSK-175	
480-80045-2	MW-4-050815	Total/NA	Water	RSK-175	
480-80045-3	MW-7-050815	Total/NA	Water	RSK-175	
480-80045-5	DUPE-1-050815	Total/NA	Water	RSK-175	
LCS 480-241845/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-241845/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-241845/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 243829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	AM20GAX	
480-80045-2	MW-4-050815	Total/NA	Water	AM20GAX	

Metals

Prep Batch: 241953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	3005A	
480-80045-2	MW-4-050815	Total/NA	Water	3005A	
480-80045-3	MW-7-050815	Total/NA	Water	3005A	
480-80045-5	DUPE-1-050815	Total/NA	Water	3005A	
LCS 480-241953/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-241953/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 242566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	6010C	241953
480-80045-2	MW-4-050815	Total/NA	Water	6010C	241953
480-80045-3	MW-7-050815	Total/NA	Water	6010C	241953
480-80045-5	DUPE-1-050815	Total/NA	Water	6010C	241953
LCS 480-241953/2-A	Lab Control Sample	Total/NA	Water	6010C	241953
MB 480-241953/1-A	Method Blank	Total/NA	Water	6010C	241953

Analysis Batch: 242730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	6010C	241953
480-80045-3	MW-7-050815	Total/NA	Water	6010C	241953
480-80045-5	DUPE-1-050815	Total/NA	Water	6010C	241953

General Chemistry

Analysis Batch: 241444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	353.2	
480-80045-2	MW-4-050815	Total/NA	Water	353.2	
480-80045-3	MW-7-050815	Total/NA	Water	353.2	
480-80045-5	DUPE-1-050815	Total/NA	Water	353.2	

Analysis Batch: 241445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	353.2	
480-80045-2	MW-4-050815	Total/NA	Water	353.2	
480-80045-3	MW-7-050815	Total/NA	Water	353.2	
480-80045-5	DUPE-1-050815	Total/NA	Water	353.2	

Analysis Batch: 241723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	SM 4500 S2 D	
480-80045-2	MW-4-050815	Total/NA	Water	SM 4500 S2 D	
480-80045-3	MW-7-050815	Total/NA	Water	SM 4500 S2 D	
480-80045-3 MS	MW-7-050815	Total/NA	Water	SM 4500 S2 D	
480-80045-3 MSD	MW-7-050815	Total/NA	Water	SM 4500 S2 D	
480-80045-5	DUPE-1-050815	Total/NA	Water	SM 4500 S2 D	
LCS 480-241723/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-241723/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

General Chemistry (Continued)

Analysis Batch: 241756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	350.1	
480-80045-2	MW-4-050815	Total/NA	Water	350.1	
480-80045-3	MW-7-050815	Total/NA	Water	350.1	
480-80045-5	DUPE-1-050815	Total/NA	Water	350.1	
480-80045-5 DU	DUPE-1-050815	Total/NA	Water	350.1	
480-80045-5 MS	DUPE-1-050815	Total/NA	Water	350.1	
LCS 480-241756/124	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-241756/148	Lab Control Sample	Total/NA	Water	350.1	
MB 480-241756/123	Method Blank	Total/NA	Water	350.1	
MB 480-241756/147	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 241802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	VFA-IC	
480-80045-2	MW-4-050815	Total/NA	Water	VFA-IC	
480-80045-3	MW-7-050815	Total/NA	Water	VFA-IC	
480-80045-5	DUPE-1-050815	Total/NA	Water	VFA-IC	
LCS 480-241802/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-241802/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 242177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-5	DUPE-1-050815	Total/NA	Water	VFA-IC	
LCS 480-242177/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-242177/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 242329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	9060A	
480-80045-2	MW-4-050815	Total/NA	Water	9060A	
480-80045-3	MW-7-050815	Total/NA	Water	9060A	
480-80045-5	DUPE-1-050815	Total/NA	Water	9060A	
LCS 480-242329/4	Lab Control Sample	Total/NA	Water	9060A	
MB 480-242329/3	Method Blank	Total/NA	Water	9060A	

Analysis Batch: 242450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	300.0	
480-80045-2	MW-4-050815	Total/NA	Water	300.0	
480-80045-3	MW-7-050815	Total/NA	Water	300.0	
480-80045-5	DUPE-1-050815	Total/NA	Water	300.0	
480-80045-5 MS	DUPE-1-050815	Total/NA	Water	300.0	
LCS 480-242450/51	Lab Control Sample	Total/NA	Water	300.0	
MB 480-242450/52	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 242520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-1	MW-10-050815	Total/NA	Water	SM 2320B	
480-80045-2	MW-4-050815	Total/NA	Water	SM 2320B	
480-80045-3	MW-7-050815	Total/NA	Water	SM 2320B	
480-80045-3 DU	MW-7-050815	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 242520 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80045-5	DUPE-1-050815	Total/NA	Water	SM 2320B	
480-80045-5 MS	DUPE-1-050815	Total/NA	Water	SM 2320B	
LCS 480-242520/28	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-242520/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-242520/27	Method Blank	Total/NA	Water	SM 2320B	
MB 480-242520/3	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Client Sample ID: MW-10-050815

Date Collected: 05/08/15 09:35
Date Received: 05/08/15 17:00

Lab Sample ID: 480-80045-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	243214	05/19/15 06:14	JWG	TAL BUF
Total/NA	Analysis	AM20GAX		1	243829	05/16/15 10:57	CTB	SC0015
Total/NA	Analysis	RSK-175		1	88489	05/19/15 13:55	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241845	05/12/15 14:11	JMO	TAL BUF
Total/NA	Prep	3005A			241953	05/13/15 07:45	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242566	05/14/15 22:37	AMH	TAL BUF
Total/NA	Prep	3005A			241953	05/13/15 07:45	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242730	05/15/15 10:27	AMH	TAL BUF
Total/NA	Analysis	300.0		50	242450	05/15/15 19:30	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241756	05/11/15 15:56	STD	TAL BUF
Total/NA	Analysis	353.2		1	241444	05/08/15 22:20	MRF	TAL BUF
Total/NA	Analysis	353.2		1	241445	05/08/15 22:20	MRF	TAL BUF
Total/NA	Analysis	9060A		1	242329	05/14/15 04:30	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	242520	05/14/15 15:00	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		10	241802	05/12/15 15:42	CAS	TAL BUF

Client Sample ID: MW-4-050815

Date Collected: 05/08/15 15:55
Date Received: 05/08/15 17:00

Lab Sample ID: 480-80045-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243214	05/19/15 06:42	JWG	TAL BUF
Total/NA	Analysis	8260C	DL	500	243532	05/20/15 12:55	GTG	TAL BUF
Total/NA	Analysis	AM20GAX		1	243829	05/16/15 11:10	CTB	SC0015
Total/NA	Analysis	RSK-175		1	88489	05/19/15 14:06	NEA	TAL BUR
Total/NA	Analysis	RSK-175		10	241845	05/12/15 12:28	JMO	TAL BUF
Total/NA	Prep	3005A			241953	05/13/15 07:45	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242566	05/14/15 22:40	AMH	TAL BUF
Total/NA	Analysis	300.0		50	242450	05/15/15 19:38	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241756	05/11/15 15:57	STD	TAL BUF
Total/NA	Analysis	353.2		1	241444	05/08/15 22:22	MRF	TAL BUF
Total/NA	Analysis	353.2		1	241445	05/08/15 22:22	MRF	TAL BUF
Total/NA	Analysis	9060A		1	242329	05/14/15 04:59	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	242520	05/14/15 15:00	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		10	241802	05/12/15 16:12	CAS	TAL BUF

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Client Sample ID: MW-7-050815

Date Collected: 05/08/15 10:30
Date Received: 05/08/15 17:00

Lab Sample ID: 480-80045-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243214	05/19/15 07:10	JWG	TAL BUF
Total/NA	Analysis	8260C	DL	10000	243532	05/20/15 13:18	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88489	05/19/15 14:17	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241845	05/12/15 14:28	JMO	TAL BUF
Total/NA	Prep	3005A			241953	05/13/15 07:45	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242566	05/14/15 22:43	AMH	TAL BUF
Total/NA	Prep	3005A			241953	05/13/15 07:45	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242730	05/15/15 10:30	AMH	TAL BUF
Total/NA	Analysis	300.0		20	242450	05/15/15 19:46	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241756	05/11/15 15:57	STD	TAL BUF
Total/NA	Analysis	353.2		1	241444	05/08/15 22:23	MRF	TAL BUF
Total/NA	Analysis	353.2		1	241445	05/08/15 22:23	MRF	TAL BUF
Total/NA	Analysis	9060A		1	242329	05/14/15 05:27	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	242520	05/14/15 15:00	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		10	241802	05/12/15 16:41	CAS	TAL BUF

Client Sample ID: TRIP BLANK

Date Collected: 05/08/15 00:00
Date Received: 05/08/15 17:00

Lab Sample ID: 480-80045-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243483	05/20/15 00:47	LJF	TAL BUF

Client Sample ID: DUPE-1-050815

Date Collected: 05/08/15 00:00
Date Received: 05/08/15 17:00

Lab Sample ID: 480-80045-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	243214	05/19/15 08:07	JWG	TAL BUF
Total/NA	Analysis	8260C	DL	10000	243532	05/20/15 13:41	GTG	TAL BUF
Total/NA	Analysis	RSK-175		1	88489	05/19/15 14:30	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	241845	05/12/15 14:46	JMO	TAL BUF
Total/NA	Prep	3005A			241953	05/13/15 07:45	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242566	05/14/15 22:46	AMH	TAL BUF
Total/NA	Prep	3005A			241953	05/13/15 07:45	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242730	05/15/15 10:33	AMH	TAL BUF
Total/NA	Analysis	300.0		20	242450	05/15/15 19:54	CAS	TAL BUF
Total/NA	Analysis	350.1		1	241756	05/11/15 15:58	STD	TAL BUF
Total/NA	Analysis	353.2		1	241444	05/08/15 22:24	MRF	TAL BUF
Total/NA	Analysis	353.2		1	241445	05/08/15 22:24	MRF	TAL BUF

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Client Sample ID: DUPE-1-050815

Date Collected: 05/08/15 00:00
Date Received: 05/08/15 17:00

Lab Sample ID: 480-80045-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1	242329	05/14/15 05:56	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	242520	05/14/15 15:00	LED	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	241723	05/11/15 13:45	MDL	TAL BUF
Total/NA	Analysis	VFA-IC		1	241802	05/12/15 17:10	CAS	TAL BUF
Total/NA	Analysis	VFA-IC		5	242177	05/13/15 22:02	CAS	TAL BUF

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc. TestAmerica Job ID: 480-80045-1
Project/Site: 058507, GM-Lockport Groundwater Sampling

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
VFA-IC		Water	Acetic acid
VFA-IC		Water	Formic-acid
VFA-IC		Water	Lactic acid
VFA-IC		Water	n-Butyric Acid
VFA-IC		Water	Propionic acid
VFA-IC		Water	Pyruvic Acid

Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
AM20GAX	Dissolved Gases (GC)	NONE	SC0015
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80045-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80045-1	MW-10-050815	Water	05/08/15 09:35	05/08/15 17:00
480-80045-2	MW-4-050815	Water	05/08/15 15:55	05/08/15 17:00
480-80045-3	MW-7-050815	Water	05/08/15 10:30	05/08/15 17:00
480-80045-4	TRIP BLANK	Water	05/08/15 00:00	05/08/15 17:00
480-80045-5	DUPE-1-050815	Water	05/08/15 00:00	05/08/15 17:00

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

May 20, 2015

Melissa Deyo
Test America
10 Hazelwood Drive
Buffalo, NY 14228

RE: **480-80045-1**

Microseeps Workorder: 15498

Dear Melissa Deyo:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, May 12, 2015. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbin Robl 05/20/2015
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 10

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 15498 480-80045-1

Lab ID	Sample ID	Matrix	Date Collected	Date Received
154980001	MW-10-050815 (480-80045-1)	Bubble Strip	5/8/2015 09:35	5/12/2015 12:00
154980002	MW-4-050815 (480-80045-2)	Bubble Strip	5/8/2015 15:55	5/12/2015 12:00

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 15498 480-80045-1

Lab ID: **154980001** Date Received: 5/12/2015 12:00 Matrix: Bubble Strip

Sample ID: **MW-10-050815 (480-80045-1)** Date Collected: 5/8/2015 09:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.4**	nM	0.60	0.13	1	5/16/2015 10:57	TD	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 15498 480-80045-1

Lab ID: **154980002** Date Received: 5/12/2015 12:00 Matrix: Bubble Strip

Sample ID: **MW-4-050815 (480-80045-2)** Date Collected: 5/8/2015 15:55

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**1.7**	nM	0.60	0.13	1	5/16/2015 11:10	TD	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 15498 480-80045-1

DEFINITIONS/QUALIFIERS

Disclaimer :	The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.
MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 15498 480-80045-1

QC Batch: DISG/4570 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 154980001, 154980002

METHOD BLANK: 34955

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.60 U	0.60	n

LABORATORY CONTROL SAMPLE & LCSD: 34956 34957

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	26	26	106	107	80-120	0.94	20	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA QUALIFIERS

Workorder: 15498 480-80045-1

QUALITY CONTROL PARAMETER QUALIFIERS

n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 15498 480-80045-1

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
154980001	MW-10-050815 (480-80045-1)			AM20GAX	DISG/4570
154980002	MW-4-050815 (480-80045-2)			AM20GAX	DISG/4570

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

15498

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

5/22/2015

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-23995.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: Pace Analytical Services, Inc.		Analysis Requested		Job #: 480-80045-1
Address: 220 William Pitt Way, ,	Due Date Requested: 5/20/2015			Preservation Codes:
City: Pittsburgh	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: PA, 15238				
Phone: 412-826-5245(Tel)	PO #:			Other:
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AM20GAX/ Hydrogen	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-10-050815 (480-80045-1)	5/8/15	09:35 Eastern		Water			X	1	
MW-4-050815 (480-80045-2)	5/8/15	15:55 Eastern		Water			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/11/15 1700	TA Buf.	[signature]	5.12.15 1200	PACE
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica

Client Information	Sampler: Dan Wolf	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2 - Carbon dioxide	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCE, TCE, DCE (trans and cis), Vinyl Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	VFA	AM20GAX *	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N				
MW-10-050815	5/8/15	0935	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X	X		* DISSOLVED H2
MW-4-050815	5/8/15	1555	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X	X		MICROSEEP
MW-7-050815	5/8/15	1030	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
TRIP BLANK	5/8/15			Water					•	X										
DUPE-1-050815	5/8/15	—	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X			
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																

480-80045 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		5/9/15 1700	GZA		5/8/15 1700	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.8 #1

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24004.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		**Analysis Requested**		Job #: 480-80045-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/20/2015			**Preservation Codes:** A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			**Other:**
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-10-050815 (480-80045-1)	5/8/15	09:35 Eastern		Water			X	3	
MW-4-050815 (480-80045-2)	5/8/15	15:55 Eastern		Water			X	3	
MW-7-050815 (480-80045-3)	5/8/15	10:30 Eastern		Water			X	3	
DUPE-1-050815 (480-80045-5)	5/8/15	Eastern		Water			X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/11/15 1700	TA Buff.	[signature]	5/12/15 1000	TAB7V
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

5/22/2015

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 11MAY15
ACTWGT: 17.5 LB
CAD: 846654/CAFE2807
DIMS: 22x14x11 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
DEPT: SAMPLE CONTROL
REF: BURLINGTON

FedEx Express

1 of 2

TRK# 0201 5657 0118 3749

TUE - 12 MAY AA
STANDARD OVERNIGHT

MASTER

EK BTVA

05403
VT - US BTV

Part # 156146V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80045-1

Login Number: 80045
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GZA
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80045-1

Login Number: 80045
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/12/15 12:39 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455338
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.6°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-80273-1

Client Project/Site: 058507, GM-Lockport Groundwater Sampling

For:

Conestoga-Rovers & Associates, Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Kathleen Willy

Melissa Deyo

Authorized for release by:
5/29/2015 2:46:06 PM

Melissa Deyo, Project Manager I
(716)504-9874
melissa.deyo@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-80273-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-80273-1

Receipt
The samples were received on 5/13/2015 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following samples were reported with elevated reporting limits for all analytes: MW-13-051315 (480-80273-1). The samples were analyzed at a dilution based on screening results.

Method(s) VFA-IC: The following samples were diluted due to the nature of the sample matrix: MW-13-051315 (480-80273-1). Elevated reporting limits (RLs) are provided.

Method(s) VFA-IC: The following samples were diluted due to the nature of the sample matrix: MW-13-051315 (480-80273-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Client Sample ID: MW-13-051315 — Lab Sample ID: 480-80273-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Hydrogen	2.1		0.60	0.13	nm	1		AM20GAX	Total/NA
Methane	29		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	5.9		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	61.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	5.8		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chloride	2390		50.0	28.2	mg/L	100		300.0	Total/NA
Sulfate	264		200	34.9	mg/L	100		300.0	Total/NA
Ammonia	1.2		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.48		0.050	0.020	mg/L	1		353.2	Total/NA
Nitrite	0.058		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	5.5		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	299		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	8800		1000	1000	ug/L	1		RSK-175	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-80273-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-13-051315 **Lab Sample ID: 480-80273-1**
Date Collected: 05/13/15 11:40 **Matrix: Water**
Date Received: 05/13/15 16:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/21/15 16:40	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/15 16:40	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/21/15 16:40	1
Trichloroethene	ND		1.0	0.46	ug/L			05/21/15 16:40	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/21/15 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*05/21/15 16:40*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*05/21/15 16:40*	*1*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/21/15 16:40*	*1*
Dibromofluoromethane (Surr)	*103*		*60 - 140*		*05/21/15 16:40*	*1*

Method: AM20GAX - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydrogen	**2.1**		0.60	0.13	nm			05/20/15 14:40	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/14/15 16:28	1
Ethene	ND		7.0	1.5	ug/L			05/14/15 16:28	1
Methane	**29**		4.0	1.0	ug/L			05/14/15 16:28	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**8800**		1000	1000	ug/L			05/21/15 14:39	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**5.9**		0.050	0.019	mg/L		05/15/15 08:30	05/15/15 16:46	1
Magnesium	**61.7**		0.20	0.043	mg/L		05/15/15 08:30	05/15/15 16:46	1
Manganese	**5.8**		0.0030	0.00040	mg/L		05/15/15 08:30	05/15/15 16:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2390**		50.0	28.2	mg/L			05/16/15 21:22	100
Sulfate	**264**		200	34.9	mg/L			05/16/15 21:22	100
Ammonia	**1.2**		0.020	0.0090	mg/L			05/14/15 14:39	1
Nitrate	**0.48**		0.050	0.020	mg/L			05/15/15 03:11	1
Nitrite	**0.058**		0.050	0.020	mg/L			05/15/15 03:11	1
Total Organic Carbon	**5.5**		1.0	0.43	mg/L			05/19/15 16:09	1
Total Alkalinity	**299**		5.0	0.79	mg/L			05/18/15 19:29	1
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1
Acetic acid	ND		10.0	1.5	mg/L			05/16/15 10:20	10
Formic-acid	ND		10.0	1.1	mg/L			05/16/15 10:20	10
Lactic acid	ND		10.0	1.4	mg/L			05/16/15 10:20	10
n-Butyric Acid	ND		10.0	1.6	mg/L			05/16/15 10:20	10
Propionic acid	ND		10.0	1.7	mg/L			05/16/15 10:20	10
Pyruvic Acid	ND		10.0	0.80	mg/L			05/16/15 10:20	10

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Client Sample ID: TRIP BLANK
Date Collected: 05/13/15 00:00
Date Received: 05/13/15 16:30

Lab Sample ID: 480-80273-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/21/15 17:08	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/15 17:08	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/21/15 17:08	1
Trichloroethene	ND		1.0	0.46	ug/L			05/21/15 17:08	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/21/15 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/21/15 17:08*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*05/21/15 17:08*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/21/15 17:08*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*05/21/15 17:08*	*1*

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)	(60-140)
480-80273-1	MW-13-051315	103	103	102	103
480-80273-2	TRIP BLANK	104	103	103	104
LCS 480-243838/5	Lab Control Sample	99	104	101	100
MB 480-243838/7	Method Blank	104	102	103	104

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-243838/7
Matrix: Water
Analysis Batch: 243838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			05/21/15 12:59	1
Tetrachloroethene	ND		1.0	0.36	ug/L			05/21/15 12:59	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/21/15 12:59	1
Trichloroethene	ND		1.0	0.46	ug/L			05/21/15 12:59	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/21/15 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/21/15 12:59*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/21/15 12:59*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/21/15 12:59*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*05/21/15 12:59*	*1*

Lab Sample ID: LCS 480-243838/5
Matrix: Water
Analysis Batch: 243838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	74 - 124
Tetrachloroethene	25.0	27.2		ug/L		109	74 - 122
trans-1,2-Dichloroethene	25.0	26.0		ug/L		104	73 - 127
Trichloroethene	25.0	25.6		ug/L		102	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Toluene-d8 (Surr)	*101*		*71 - 126*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 480-242451/3
Matrix: Water
Analysis Batch: 242451

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND		7.5	1.5	ug/L			05/14/15 11:24	1
Ethene	ND		7.0	1.5	ug/L			05/14/15 11:24	1
Methane	ND		4.0	1.0	ug/L			05/14/15 11:24	1

Lab Sample ID: LCS 480-242451/4
Matrix: Water
Analysis Batch: 242451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	14.6	15.5		ug/L		106	79 - 120
Ethene	13.6	14.1		ug/L		104	78 - 115
Methane	7.77	7.83		ug/L		101	71 - 118

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 480-242451/5
Matrix: Water
Analysis Batch: 242451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	14.6	15.9		ug/L		109	79 - 120	3	50
Ethene	13.6	14.4		ug/L		106	78 - 115	2	50
Methane	7.77	8.06		ug/L		104	71 - 118	3	50

Lab Sample ID: MB 200-88605/3
Matrix: Water
Analysis Batch: 88605

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		1000	1000	ug/L			05/21/15 11:05	1

Lab Sample ID: LCS 200-88605/2
Matrix: Water
Analysis Batch: 88605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon dioxide	5010	4650		ug/L		93	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-242488/1-A
Matrix: Water
Analysis Batch: 242999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 242488

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		05/15/15 08:30	05/15/15 15:38	1
Magnesium	ND		0.20	0.043	mg/L		05/15/15 08:30	05/15/15 15:38	1
Manganese	ND		0.0030	0.00040	mg/L		05/15/15 08:30	05/15/15 15:38	1

Lab Sample ID: LCS 480-242488/2-A
Matrix: Water
Analysis Batch: 242999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 242488

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.47		mg/L		95	80 - 120
Magnesium	10.0	9.84		mg/L		98	80 - 120
Manganese	0.200	0.196		mg/L		98	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-242859/36
Matrix: Water
Analysis Batch: 242859

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/16/15 14:03	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 14:03	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-242859/60
Matrix: Water
Analysis Batch: 242859

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/16/15 17:18	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 17:18	1

Lab Sample ID: MB 480-242859/84
Matrix: Water
Analysis Batch: 242859

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			05/16/15 20:33	1
Sulfate	ND		2.0	0.35	mg/L			05/16/15 20:33	1

Lab Sample ID: LCS 480-242859/35
Matrix: Water
Analysis Batch: 242859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.54		mg/L		103	83 - 121
Sulfate	20.0	19.76		mg/L		99	80 - 129

Lab Sample ID: LCS 480-242859/59
Matrix: Water
Analysis Batch: 242859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.63		mg/L		103	83 - 121
Sulfate	20.0	19.94		mg/L		100	80 - 129

Lab Sample ID: LCS 480-242859/83
Matrix: Water
Analysis Batch: 242859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.60		mg/L		103	83 - 121
Sulfate	20.0	19.93		mg/L		100	80 - 129

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-242480/3
Matrix: Water
Analysis Batch: 242480

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 13:09	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-242480/75
Matrix: Water
Analysis Batch: 242480

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 14:12	1

Lab Sample ID: MB 480-242480/98
Matrix: Water
Analysis Batch: 242480

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 14:32	1

Lab Sample ID: LCS 480-242480/4
Matrix: Water
Analysis Batch: 242480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110

Lab Sample ID: LCS 480-242480/76
Matrix: Water
Analysis Batch: 242480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110

Lab Sample ID: LCS 480-242480/99
Matrix: Water
Analysis Batch: 242480

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.04		mg/L		104	90 - 110

Lab Sample ID: 480-80273-1 MS
Matrix: Water
Analysis Batch: 242480

Client Sample ID: MW-13-051315
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.2		0.200	1.34	4	mg/L		95	90 - 110

Lab Sample ID: MB 480-242507/27
Matrix: Water
Analysis Batch: 242507

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 16:18	1

Lab Sample ID: MB 480-242507/3
Matrix: Water
Analysis Batch: 242507

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.020	0.0090	mg/L			05/14/15 15:57	1

Lab Sample ID: LCS 480-242507/28
Matrix: Water
Analysis Batch: 242507

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: LCS 480-242507/4
Matrix: Water
Analysis Batch: 242507

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.00	1.06		mg/L		106	90 - 110

Lab Sample ID: 480-80273-1 MS
Matrix: Water
Analysis Batch: 242507

Client Sample ID: MW-13-051315
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia	1.2		0.200	1.37	4	mg/L		95	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-242551/3
Matrix: Water
Analysis Batch: 242551

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite	ND		0.050	0.020	mg/L			05/15/15 03:08	1

Lab Sample ID: LCS 480-242551/4
Matrix: Water
Analysis Batch: 242551

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	1.50	1.61		mg/L		107	90 - 110

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-243607/27
Matrix: Water
Analysis Batch: 243607

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.43	mg/L			05/19/15 07:45	1

Lab Sample ID: LCS 480-243607/28
Matrix: Water
Analysis Batch: 243607

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	58.47		mg/L		97	90 - 110

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 480-80273-1 MS
Matrix: Water
Analysis Batch: 243607

Client Sample ID: MW-13-051315
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	5.5		20.0	22.06		mg/L		83	54 - 131

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-243288/30
Matrix: Water
Analysis Batch: 243288

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	1.54	J	5.0	0.79	mg/L			05/18/15 21:38	1

Lab Sample ID: MB 480-243288/7
Matrix: Water
Analysis Batch: 243288

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		5.0	0.79	mg/L			05/18/15 19:12	1

Lab Sample ID: LCS 480-243288/31
Matrix: Water
Analysis Batch: 243288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	94.55		mg/L		95	90 - 110

Lab Sample ID: LCS 480-243288/8
Matrix: Water
Analysis Batch: 243288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	100	93.71		mg/L		94	90 - 110

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 480-242891/3
Matrix: Water
Analysis Batch: 242891

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.10	0.052	mg/L			05/16/15 12:37	1

Lab Sample ID: LCS 480-242891/4
Matrix: Water
Analysis Batch: 242891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	0.750	0.697		mg/L		93	90 - 110

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Method: VFA-IC - Volatile Fatty Acids, Ion Chromatography

Lab Sample ID: MB 480-242747/4
Matrix: Water
Analysis Batch: 242747

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/16/15 09:51	1
Formic-acid	ND		1.0	0.11	mg/L			05/16/15 09:51	1
Lactic acid	ND		1.0	0.14	mg/L			05/16/15 09:51	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/16/15 09:51	1
Propionic acid	ND		1.0	0.17	mg/L			05/16/15 09:51	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/16/15 09:51	1

Lab Sample ID: LCS 480-242747/3
Matrix: Water
Analysis Batch: 242747

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	8.55		mg/L		85	80 - 120
Formic-acid	10.0	8.61		mg/L		86	80 - 120
Lactic acid	10.0	9.33		mg/L		93	80 - 120
n-Butyric Acid	10.0	8.37		mg/L		84	80 - 120
Propionic acid	10.0	9.69		mg/L		97	80 - 120
Pyruvic Acid	10.0	8.70		mg/L		87	80 - 120

Lab Sample ID: MB 480-243569/4
Matrix: Water
Analysis Batch: 243569

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		1.0	0.15	mg/L			05/21/15 05:27	1
Formic-acid	ND		1.0	0.11	mg/L			05/21/15 05:27	1
n-Butyric Acid	ND		1.0	0.16	mg/L			05/21/15 05:27	1
Propionic acid	ND		1.0	0.17	mg/L			05/21/15 05:27	1
Pyruvic Acid	ND		1.0	0.080	mg/L			05/21/15 05:27	1

Lab Sample ID: LCS 480-243569/3
Matrix: Water
Analysis Batch: 243569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetic acid	10.0	9.86		mg/L		99	80 - 120
Formic-acid	10.0	10.16		mg/L		102	80 - 120
n-Butyric Acid	10.0	9.25		mg/L		92	80 - 120
Propionic acid	10.0	8.96		mg/L		90	80 - 120
Pyruvic Acid	10.0	9.45		mg/L		95	80 - 120

GC/MS VOA

Analysis Batch: 243838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	8260C	
480-80273-2	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-243838/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-243838/7	Method Blank	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 88605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	RSK-175	
LCS 200-88605/2	Lab Control Sample	Total/NA	Water	RSK-175	
MB 200-88605/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 242451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	RSK-175	
LCS 480-242451/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-242451/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 480-242451/3	Method Blank	Total/NA	Water	RSK-175	

Analysis Batch: 245219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	AM20GAX	

Metals

Prep Batch: 242488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	3005A	
LCS 480-242488/2-A	Lab Control Sample	Total/NA	Water	3005A	
MB 480-242488/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 242999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	6010C	242488
LCS 480-242488/2-A	Lab Control Sample	Total/NA	Water	6010C	242488
MB 480-242488/1-A	Method Blank	Total/NA	Water	6010C	242488

General Chemistry

Analysis Batch: 242480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	350.1	
480-80273-1 MS	MW-13-051315	Total/NA	Water	350.1	
LCS 480-242480/4	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-242480/76	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-242480/99	Lab Control Sample	Total/NA	Water	350.1	
MB 480-242480/3	Method Blank	Total/NA	Water	350.1	
MB 480-242480/75	Method Blank	Total/NA	Water	350.1	
MB 480-242480/98	Method Blank	Total/NA	Water	350.1	

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Analysis Batch: 242507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1 MS	MW-13-051315	Total/NA	Water	350.1	
LCS 480-242507/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-242507/4	Lab Control Sample	Total/NA	Water	350.1	
MB 480-242507/27	Method Blank	Total/NA	Water	350.1	
MB 480-242507/3	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 242551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	353.2	
LCS 480-242551/4	Lab Control Sample	Total/NA	Water	353.2	
MB 480-242551/3	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 242553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	353.2	

Analysis Batch: 242747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	VFA-IC	
LCS 480-242747/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-242747/4	Method Blank	Total/NA	Water	VFA-IC	

Analysis Batch: 242859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	300.0	
LCS 480-242859/35	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-242859/59	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-242859/83	Lab Control Sample	Total/NA	Water	300.0	
MB 480-242859/36	Method Blank	Total/NA	Water	300.0	
MB 480-242859/60	Method Blank	Total/NA	Water	300.0	
MB 480-242859/84	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 242891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	SM 4500 S2 D	
LCS 480-242891/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MB 480-242891/3	Method Blank	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 243288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	SM 2320B	
LCS 480-243288/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-243288/8	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 480-243288/30	Method Blank	Total/NA	Water	SM 2320B	
MB 480-243288/7	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 243569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-243569/3	Lab Control Sample	Total/NA	Water	VFA-IC	
MB 480-243569/4	Method Blank	Total/NA	Water	VFA-IC	

General Chemistry (Continued)

Analysis Batch: 243607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-80273-1	MW-13-051315	Total/NA	Water	9060A	
480-80273-1 MS	MW-13-051315	Total/NA	Water	9060A	
LCS 480-243607/28	Lab Control Sample	Total/NA	Water	9060A	
MB 480-243607/27	Method Blank	Total/NA	Water	9060A	

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Client Sample ID: MW-13-051315

Lab Sample ID: 480-80273-1

Date Collected: 05/13/15 11:40

Matrix: Water

Date Received: 05/13/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243838	05/21/15 16:40	NMD1	TAL BUF
Total/NA	Analysis	AM20GAX		1	245219	05/20/15 14:40	CTB	SC0015
Total/NA	Analysis	RSK-175		1	88605	05/21/15 14:39	NEA	TAL BUR
Total/NA	Analysis	RSK-175		1	242451	05/14/15 16:28	JMO	TAL BUF
Total/NA	Prep	3005A			242488	05/15/15 08:30	TAS	TAL BUF
Total/NA	Analysis	6010C		1	242999	05/15/15 16:46	AMH	TAL BUF
Total/NA	Analysis	300.0		100	242859	05/16/15 21:22	DMR	TAL BUF
Total/NA	Analysis	350.1		1	242480	05/14/15 14:39	STD	TAL BUF
Total/NA	Analysis	353.2		1	242553	05/15/15 03:11	KC	TAL BUF
Total/NA	Analysis	353.2		1	242551	05/15/15 03:11	KC	TAL BUF
Total/NA	Analysis	9060A		1	243607	05/19/15 16:09	EKB	TAL BUF
Total/NA	Analysis	SM 2320B		1	243288	05/18/15 19:29	KMF	TAL BUF
Total/NA	Analysis	SM 4500 S2 D		1	242891	05/16/15 12:37	NCH	TAL BUF
Total/NA	Analysis	VFA-IC		10	242747	05/16/15 10:20	CAS	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-80273-2

Date Collected: 05/13/15 00:00

Matrix: Water

Date Received: 05/13/15 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	243838	05/21/15 17:08	NMD1	TAL BUF

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
VFA-IC		Water	Acetic acid
VFA-IC		Water	Formic-acid
VFA-IC		Water	Lactic acid
VFA-IC		Water	n-Butyric Acid
VFA-IC		Water	Propionic acid
VFA-IC		Water	Pyruvic Acid

Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-15
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-16
Florida	NELAP	4	E87467	06-30-15 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-15
New Hampshire	NELAP	1	2006	12-18-15
New Jersey	NELAP	2	VT972	06-30-15
New York	NELAP	2	10391	03-31-16
Pennsylvania	NELAP	3	68-00489	04-30-16
Rhode Island	State Program	1	LAO00298	12-30-15
US Fish & Wildlife	Federal		LE-058448-0	02-28-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-15
Virginia	NELAP	3	460209	12-14-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
AM20GAX	Dissolved Gases (GC)	NONE	SC0015
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
353.2	Nitrogen, Nitrite	MCAWW	TAL BUF
353.2	Nitrate	EPA	TAL BUF
9060A	Organic Carbon, Total (TOC)	SW846	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF
SM 4500 S2 D	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

NONE = NONE

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TestAmerica SOP = TestAmerica, Inc., Standard Operating Procedure

Laboratory References:

SC0015 = Pittsburgh, PA (formerly Microseeps), 220 William Pitt Way, Pittsburgh, PA 15238, TEL (412)826-5245

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 058507, GM-Lockport Groundwater Sampling

TestAmerica Job ID: 480-80273-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-80273-1	MW-13-051315	Water	05/13/15 11:40	05/13/15 16:30
480-80273-2	TRIP BLANK	Water	05/13/15 00:00	05/13/15 16:30

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

May 27, 2015

Melissa Deyo
Test America
10 Hazelwood Drive
Buffalo, NY 14228

RE: **480-80273-1**

Microseeps Workorder: 15557

Dear Melissa Deyo:

Enclosed are the analytical results for sample(s) received by the laboratory on Friday, May 15, 2015. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbin Robl 05/27/2015
rrobl@microseeps.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 10

CERTIFICATE OF ANALYSIS

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 15557 480-80273-1

Lab ID	Sample ID	Matrix	Date Collected	Date Received
155570001	MW-13-051315 (480-80273-1)	Bubble Strip	5/13/2015 11:40	5/15/2015 14:30

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

PROJECT SUMMARY

Workorder: 15557 480-80273-1

Batch Comments

Batch: DISG/4581 - AM20GAX Bubble Strip QC

The percent recovery for the closing calibration verification was above laboratory control limits. Analytes Hydrogen. Results associated to the analytes in samples may be bias high.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 15557 480-80273-1

Lab ID: **155570001** Date Received: 5/15/2015 14:30 Matrix: Bubble Strip

Sample ID: **MW-13-051315 (480-80273-1)** Date Collected: 5/13/2015 11:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: AM20GAX			Analytical Method: AM20GAX					
Hydrogen	**2.1**	nM	0.60	0.13	1	5/20/2015 14:40	TD	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 15557 480-80273-1

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAx, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL	Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.
PQL	Practical Quanitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.
ND	Not detected at or above reporting limit.
DF	Dilution Factor.
S	Surrogate.
RPD	Relative Percent Difference.
% Rec	Percent Recovery.
U	Indicates the compound was analyzed for, but not detected at or above the noted concentration.
J	Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).
n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 15557 480-80273-1

QC Batch: DISG/4581 Analysis Method: AM20GAX

QC Batch Method: AM20GAX

Associated Lab Samples: 155570001

METHOD BLANK: 35053

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK				
Hydrogen	nM	0.60 U	0.60	n

LABORATORY CONTROL SAMPLE & LCSD: 35055 35057

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK										
Hydrogen	nM	24	28	27	113	112	80-120	0.89	20	n

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA QUALIFIERS

Workorder: 15557 480-80273-1

QUALITY CONTROL PARAMETER QUALIFIERS

n	The laboratory does not hold NELAP/TNI accreditation for this method or analyte.

Microseeps/Pace Analytical Energy Services, LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 15557 480-80273-1

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
155570001	MW-13-051315 (480-80273-1)			AM20GAX	DISG/4581

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

15557

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

5/29/2015

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24075.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: Pace Analytical Services, Inc.				Job #: 480-80273-1

Address: 220 William Pitt Way, ,	Due Date Requested: 5/26/2015
City: Pittsburgh	TAT Requested (days):
State, Zip: PA, 15238	
Phone: 412-826-5245(Tel)	PO #:
Email:	WO #:
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	AM20GAX/ Hydrogen	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-13-051315 (480-80273-1)	5/13/15	11:40 Eastern		Water			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Emmaren Wallace	Date/Time: 5-14-15 1700	Company TAS	Received by: PAES	Date/Time: 5.15.15 1430	Company PAES
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica LABORATORIES

Client Information	Sampler: DAN WUCK	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-67126-13138.1
Client Contact: Mr. Tom Bohlen	Phone: 716-844-7050	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 4
Company: GZA GeoEnvironmental, Inc.				Job #:
Address: 535 Washington Street 11th Floor	Due Date Requested:			
City: Buffalo	TAT Requested (days):			
State, Zip: NY, 14203				
Phone:	PO #: 4065906			
Email: thomas.bohlen@gza.com	WO #: 058507			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2 - Carbon dioxide	350.1 - Ammonia	6010B - Metals - Fe, Mn, Mg	8260B - PCE, TCE, DCE (trans and cis), Vinyl Chl	9060 - Total Organic Carbon	RSK_175 - Methane, Ethane, Ethene	SM4500_S2_D - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Total Alkalinity	300.0_28D - Anions (Chloride & Sulfate)	VFA	AM20GAX *	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	A	A	A	CB	N	N	N				
MW-13-05 13/15	5/13/15	1140	G	Water	N	N	X	X	X	X	X	X	X	X	X	X	X	X		* DISSOLVED H2
TRIP BLANK	5/13/15			Water	N	N				X										MICROSCOP
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																
				Water																

480-80273 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/13/15 16:30			5/13/15 1630	TA Buff
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: #1 25

5/29/2015

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-24074.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 480-80273-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 5/26/2015			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: 058507, GM-Lockport Groundwater Sampling	Project #: 48004014			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	RSK_175_CO2/ Carbon dioxide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-13-051315 (480-80273-1)	5/13/15	11:40 Eastern		Water			X	3	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5-14-15 1700	TAB	[signature]	5/15/15 0950	TAB
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

5/29/2015

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 14MAY15
ACTWGT: 50.3 LB
CAD: 8466654/CAFE2807
DIMS: 26x15x14 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

J141214073001uv

1 of 2

TRK# 0201 5657 0118 4068

MASTER

FRI - 15 MAY AA
STANDARD OVERNIGHT

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

ORIGIN ID:DKKA (716) 504-9848
KEN KINECKI
TESTAMERICA LABS
10 HAZELWOOD DRIVE

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 14MAY15
ACTWGT: 50.3 LB
CAD: 8466654/CAFE2807
DIMS: 26x15x14 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF: BURLINGTON
DEPT: SAMPLE CONTROL

FedEx Express

J141214073001uv

2 of 2

MPS# 0263 5657 0118 4079

Mstr# 5657 0118 4068

0201

FRI - 15 MAY AA
STANDARD OVERNIGHT

EK BTVA

05403
VT-US BTV

Part # 156148V-434 RIT2 03/15

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80273-1

Login Number: 80273
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GZA GEO
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Conestoga-Rovers & Associates, Inc.

Job Number: 480-80273-1

Login Number: 80273
List Number: 2
Creator: Young, Joseph W

List Source: TestAmerica Burlington
List Creation: 05/15/15 11:47 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	455358,357
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2ºC,2.6ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	