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VIA EMAIL

January 14, 2022
File No. 21.0056546.20

Glenn May, CPG
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203
e-mail: *glenn.may@dec.ny.gov*

Re: **Periodic Review Report** - Number 11 – January 2022
Delphi Harrison Thermal Systems Site - Registry Site No. 932113
Lockport, New York

Dear Glenn:

GZA GeoEnvironmental of New York (GZA) prepared this 2021 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 that same portion of the Site was transferred from Delphi Properties Management LLC to MAHLE Manufacturing Management Inc., now called MAHLE BEHR USA 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. Delphi Thermal Systems (Delphi) notified the NYSDEC in 1994

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

that TCE was detected in soil during an excavation to repair fire protection lines in the vicinity of the former 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 or the environment – action may be deferred).

- In 2001, Delphi entered into a Remedial Investigation/Feasibility Study Order on Consent, Index #B9-0553-99-06 (RI/FS Order) 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 the NYSDEC Inactive Hazardous Waste Registry, to a Class 4 listing (site has been properly closed but requires continued site management consisting of operation, maintenance

and/or monitoring).

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

- There were no additional regulatory actions taken during the reporting period.

2021 PERIODIC REVIEW REPORTING PERIOD

In accordance with Section 5.3 of the SMP, the following constitutes the Calendar Year 2021 PRR:

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

(a) The annual inspection of the Site and Site Cover was completed on December 15, 2021 by Thomas Bohlen of GZA. The annual site inspection form was completed, a copy of which is provided as **Appendix A** along with a photo log associated with that inspection.

(b) A post-high-wind inspection of the Site cover was also completed on December 15, 2021 by Thomas Bohlen. The post weather event inspection form was completed and is also provided in Appendix A.

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

A copy of the completed site inspection forms from the two December 15, 2021 site inspections are included in **Appendix A**. Also, included as part of the electronic submittal is a copy of the Delphi Harrison Thermal Systems Site 2021 NYSDEC Site Management Periodic Review Report Institutional and Engineering Controls Certification Form. A copy of this Form is attached to the PRR as **Appendix B**.

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

The most recent groundwater sampling was completed in August 2021. A copy of the GZA report is included with this PRR as **Appendix C.** The report provides the conclusions and recommendations presented below.

CONCLUSIONS:

Based on the results of the August 2021 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 2021 sampling round:

- The concentrations of the parent compounds decrease significantly from the source area (MW-7) downgradient to the mid-point of the plume (MW-4 and MW-10), and from the mid-point on to the downgradient portions of the Site (MW-11 through MW-15). The decrease in concentrations is as much

as five orders of magnitude from the source area to the most downgradient wells where COCs are not detected.

- 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 NYSDEC Class GA groundwater standards at the down-gradient property line at wells MW-11, MW-13, and MW-14.

RECOMMENDATIONS

Based on the results of the August 2021 and previous sampling events and supported by the findings of the 2014 treatability study, current conditions mid-plume at well MW-4 show potential for complete reductive dechlorination of the COCs to ethene. COCs were not detected or were detected at concentrations below NYSDEC TOGS 1.1.1 GA standards in groundwater collected from the downgradient Site boundary, providing additional confirmation of continued natural attenuation.

On June 18, 2021, GMCH requested the removal of MW-10 from the groundwater monitoring well locations to be sampled during future monitoring events. If acceptable to the Department, the 2022 monitoring event should include the collection of representative groundwater samples for the analysis of COC and natural attenuation parameters at a total of seven wells (MW-4, -7, -11, -12, -13, -14 and -15). The COC and natural attenuation analytical parameters measured during the 2021 sampling round should also be measured during the 2022 sampling 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 this 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 2021 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 Item 3 above, the results of the groundwater sampling provide evidence that anaerobic biodegradation of the COCs is controlling migration of impacted groundwater downgradient from the Site.

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 are 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 continued maintenance of this control;

[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.

- 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 *(if applicable)* 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 10, 2022

Figure 1: Site Locus
Figure 2: Photograph Orientation Map
Appendix A: 2021 Site Inspection Forms and Inspection Photograph Log
Appendix B: Delphi 2021 – NYSDEC Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form
Appendix C: August 2021 MNA Groundwater Sampling Report

cc: Jim Hartnett (GM, electronic copy only)
Cynthia Tudor-Schultz (GMCH, electronic copy only)
Denis Conley (H&A, electronic copy only)

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

FIGURES

SCALE IN FEET

0 1000 2000 4000

DRAWN BY: TAK

DATE: DECEMBER 2021

GZA GeoEnvironmental of New York

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.

21.0056546.20

FIGURE No.

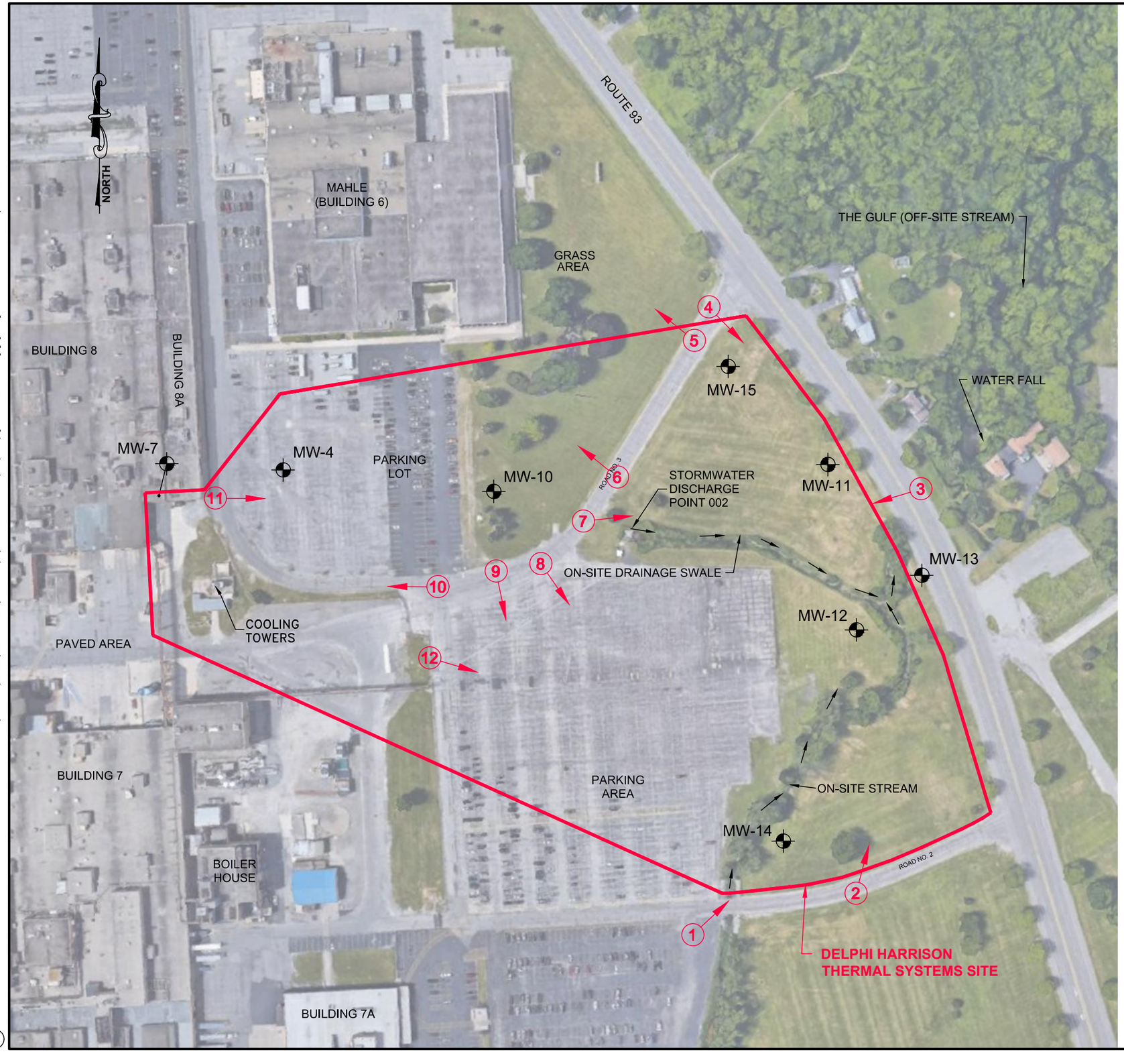
1

NOTE:

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

NORTH

NEW YORK



LEGEND:

1 — APPROXIMATE LOCATION AND ORIENTATION OF INSPECTION PHOTOGRAPHS TAKEN ON 12/15/2021 (SEE APPENDIX A)

MW-4 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL

NOTES:

1. BASE MAP ADAPTED FROM A 2016 AERIAL PHOTOGRAPH DOWNLOADED USING GOOGLE EARTH PRO AND SITE OBSERVATIONS.

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

DRAWN BY: TAK

DATE: DECEMBER 2021

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.

21.0056546.20

FIGURE No.

2

GZA–K:\PROJECTS\56500s\56546 GM Component LLC\Delphi Periodic Review Report\2021\Figure 2 – Site Plan.dwg [Figure 2] December 22, 2021 – 12:48pm theodore.kletke

APPENDIX A:

2021 SITE INSPECTION FORM and INSPECTION PHOTO LOG

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: Thomas Bohlen EMAIL: thomas.bohlen@gza.com

OTHERS PRESENT: No PHONE NUMBER: 716-844-7050

COMPANY: GZA GeoEnvironmental of NY

INSPECTION DATE AND SITE CONDITIONS

INSPECTION DATE: 12/15/2021 INSPECTION TIME: 13:30 Hrs

WEATHER CONDITIONS: Overcast, 48 degrees F, winds from South at 15 MPH.

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: High winds prior Saturday and Sunday		

VERIFICATION OF SITE DETAILS

Current Site Owner: GM Components Holdings, LLC (GMCH) and MAHLE Manufacturing Management Inc.

Current Site Operators: GM Components Holdings, LLC (GMCH) and MAHLE Manufacturing Management Inc.

Describe Current Site Use (check all that apply):

Industrial Commercial Residential Other

briefly describe observed site uses: Area within the environmental easement is used as parking lots, site roads, and greenspace.

Has some or all of the Site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last inspection?	YES		NO
If YES, is documentation or evidence of documentation submittal to NYSDEC attached?	YES	N/A	NO
Have any federal, state and/or local permits (e.g., building or discharge) been issued for the property since the initial/last inspection?			NO
If YES, is documentation or evidence of documentation submittal to NYSDEC attached?	YES	N/A	NO
Has a change in Site usage per NYCRR 375-1.11(d) occurred since the last inspection?	YES		NO
If YES, is documentation or evidence of documentation submittal to NYSDEC attached?	YES	N/A	NO
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?	YES	N/A	NO

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.

None No areas in need of repair observed.

INTRUSIVE ACTIVITIES PERFORMED AT SITE DURING INSPECTION PERIOD	DATE	LOCATION
None	N/A	N/A

REVIEW OF SITE RECORDS

Are site records being properly generated and maintained? YES NO

Provide summary of recordkeeping review and adequacy:

GMCH Environmental Engineer, Cindy Tudor Schultz, 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 the 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: Thomas Bohlen Date: 12/15/2021

SITE INSPECTION FORM

1. SITE DETAILS

Site No.: C932138

Site Name: GM Components Holdings LLC

Site Address: 200 Upper Mountain Road, Lockport NY

2. PERSON PERFORMING INSPECTION

NAME: Thomas Bohlen EMAIL: thomas.bohlen@gza.com

OTHERS PRESENT: None PHONE NUMBER: 716-844-7050

COMPANY: GZA

3. INSPECTION DATE AND SITE CONDITIONS

INSPECTION DATE: 12/15/2021 INSPECTION TIME: 1:30 PM

WEATHER CONDITIONS: Overcast, Temp ~ 48 F, wind 15 mpg from the South

4. 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: *Inspection response to ~ 60 MPH winds on 12/11/21 and high winds on 12/12/21.*

5. VERIFICATION OF SITE DETAILS

Current Site Owner: GMCH

Current Site Operators: GMCH

Describe Current Site Use (check all that apply):

Industrial **Commercial** Residential Other

briefly describe observed site uses: GM Lockport manufacturing Plant

Has some or all of the Site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last inspection?	YES	**NO**
If YES, is documentation or evidence of documentation submittal to NYSDEC attached?	YES	
Have any federal, state and/or local permits (e.g., building or discharge) been issued for the property since the initial/last inspection?	YES	**NO**
If YES, is documentation or evidence of documentation submittal to NYSDEC attached?	YES	
Has a change in Site usage per NYCRR 375-1.11(d) occurred since the last inspection?	YES	**NO**
If YES, is documentation or evidence of documentation submittal to NYSDEC attached?	YES	
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?	YES	

Note any additional pertinent information to Verification of Site Details (use additional pages if necessary):

6. 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:			
Is the Cover System in place and functioning as intended?	**YES**	NO	if no, explain in section 6A below:
Comments:			
Is the Sub-Slab Depressurization System in place and functioning as intended?	**YES**	NO	if no, explain in section 6A below:
Comments:			

6A. AREAS IN NEED OF REPAIR OR MAINTENANCE

Area discussed in this section must be shown on a figure and have photographic documentation. (Photos collected must follow GMCH approved protocols).

Building Structures/ Concrete Sidewalks

Not Applicable

Pavement

Not Applicable

Soil Cover

Not Applicable

Sub-Slab Depressurization System

Not Applicable

6B. HAVE INTRUSIVE ACTIVITIES BEEN PERFORMED AT THE SITE THAT IMPACTED THE COVER SYSTEM (if "Yes" Describe below)	LOCATION	DATE	WAS SMP FOLLOWED FOR THESE ACTIVITIES (YES or NO)
No			

7. REVIEW OF SITE RECORDS

Are site records being properly generated and maintained? Not Applicable

Provide summary of recordkeeping review and adequacy:

8. ADDITIONAL NOTES & COMMENTS

Inspected exterior soil cover system. No uprooted trees or impact to the soil cover observed.

9. INSPECTION CERTIFICATION

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

Inspector Signature: Thomas Bohlen Date: 12/15/21

END OF INSPECTION FORM

Photograph Log

Client Name: General Motors Components Holdings	**Site Location:** Delphi Harrison Thermal Systems, Lockport, NY	**Project No.** 21.0056546.20

Photo No.	**Date:**
1	12/15/21

Direction Photo Taken:

NE

Description:
Creek and lawn area north of Site Road #2.

Photo No.	**Date:**
2	12/15/21

Direction Photo Taken:

NNE

Description:

Lawn area north of Site Road #2.

Photograph Log

Client Name: General Motors Components Holdings	**Site Location:** Delphi Harrison Thermal Systems, Lockport, NY	**Project No.** 21.0056546.20

Photo No.	**Date:**
3	12/15/21

Direction Photo Taken:

West

Description:

Eastern end of lawn area.

Photo No.	**Date:**
4	12/15/21

Direction Photo Taken:

SE

Description:

Northern end of eastern lawn area.

Photograph Log

Client Name: General Motors Components Holdings	**Site Location:** Delphi Harrison Thermal Systems, Lockport, NY	**Project No.** 21.0056546.20

Photo No.	**Date:**
5	12/15/21

Direction Photo Taken:

NW

Description:

Northern Site lawn and east wall of Building 6.

Photo No.	**Date:**
6	12/15/21

Direction Photo Taken:

NW

Description:

North lawn area and SE corner of Building 6.

Photograph Log

Client Name: General Motors Components Holdings	**Site Location:** Delphi Harrison Thermal Systems, Lockport, NY	**Project No.** 21.0056546.20

Photo No.	**Date:**
7	12/15/21

Direction Photo Taken:

East

Description:

View of eastern lawn area from Site Road #3.

Photo No.	**Date:**
8	12/15/21

Direction Photo Taken:

West

SE

Description:

GM Parking area from Site Road #3.

Photograph Log

Client Name: General Motors Components Holdings	**Site Location:** Delphi Harrison Thermal Systems, Lockport, NY	**Project No.** 21.0056546.20

Photo No. 9	**Date:** 12/15/21

Direction Photo Taken:

South

Description:

GM parking area from Site Road #3.

Photo No. 10	**Date:** 12/15/21

Direction Photo Taken:

West

Description:

Site Road #3, western end of Site, and SE corner of Building 8.

Photograph Log

Client Name: General Motors Components Holdings	**Site Location:** Delphi Harrison Thermal Systems, Lockport, NY	**Project No.** 21.0056546.20

Photo No.	**Date:**
11	12/15/21

Direction Photo Taken:

East

Description:

MAHLE Parking area south of Building 6.

Photo No.	**Date:**
12	12/15/21

Direction Photo Taken:

SE

Description:

GM Parking area.

APPENDIX B

INSTATUTIONAL AND ENGINEERING CONTROL CERTIFICATION FORM

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, 2020 to December 16, 2021**

	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
☒	☐

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
☒	☐

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 JAMES F. HARTNOTT (print name) at 30400 VAN DYKE AVENUE, WARREN MI (print business address)

am certifying as MANAGER, REMEDIATION SERVICES (Owner or Remedial Party)

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

James F. Hartnott

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

1/7/2022

Date

IC/EC CERTIFICATIONS

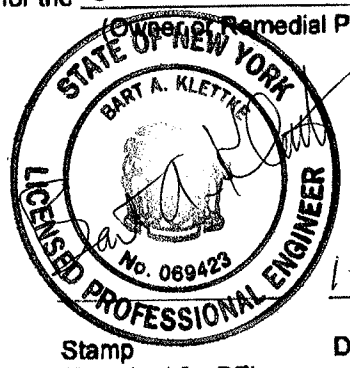
Box 7

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 300 PEARL STREET, SUITE 700, BUFFALO, NY 14202 (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)

1-10-2022 — Date

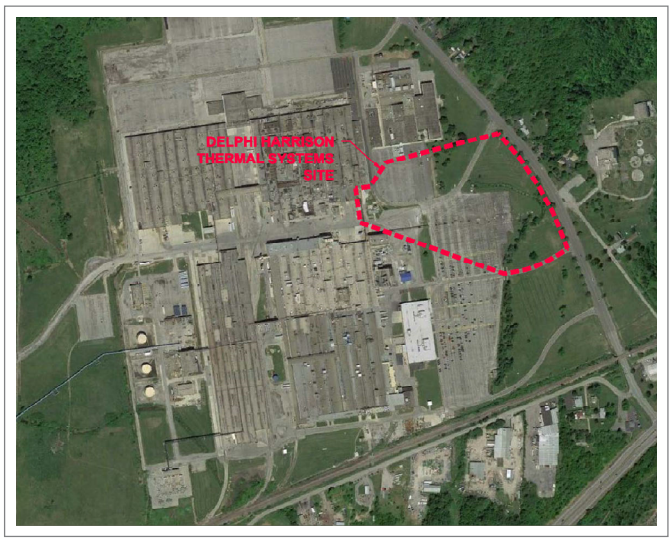
APPENDIX C

RESULTS OF AUGUST 2021 MONITORED NATURAL ATTENUATION GROUNDWATER SAMPLING REPORT

Proactive by Design

RESULTS OF AUGUST 2021 MONITORED NATURAL ATTENUATION GROUNDWATER SAMPLING
DELPHI HARRISON THERMAL SYSTEMS SITE
Registry Site No. 932113
GM COMPONENTS HOLDINGS, LLC
Lockport, New York

Submitted January 14, 2022
File No. 21.0056546.20



PREPARED FOR:
New York State Department of Environmental Conservation

GZA GeoEnvironmental of New York

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VIA E-MAIL

January 14, 2022
File No: 21.0056546.20

Mr. Glenn May, CPG
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Ave.
Buffalo, NY 14203-2915

RE: Results of August 2021 Monitored Natural Attenuation Groundwater Sampling Event
Delphi Harrison Thermal Systems Site (Site) - Registry Site No. 932113
Lockport, New York

Dear Glenn:

GZA GeoEnvironmental of New York (GZA) is pleased to provide the attached Report of the August 2021 Monitored Natural Attenuation (MNA) Groundwater Sampling event for the above reference Site.

We hope this report satisfies your present needs. If you need any additional site-specific information, please contact Jim Richert at 716-844-7048

Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK

Jim Richert

James J. Richert, P.G
Sr. Project Manager

Karen Kinsella

Karen Kinsella, Ph.D
Sr. Technical Specialist/Consultant Reviewer

Bart A. Klettke

Bart A. Klettke, P.E.
Principal

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1.0 INTRODUCTION AND BACKGROUND

GZA GeoEnvironmental of New York (GZA) presents this report to summarize results of the August 2021 groundwater and monitored natural attenuation (MNA) parameter sampling event at the above-referenced Site. The groundwater sampling event was conducted from August 17th through August 20th, and included eight monitoring wells (MW-4, -7, -10, -11, -12, -13, -14 and -15). All eight wells 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.

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.

2006 to 2011

Six monitoring wells (MW-7, MW-11, MW-12, MW-13, MW-14 and MW-15) were monitored in October 2006, November 2007, November 2008, and March 2009 (Figure 1). MW-7 is 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 two mid-plume wells (MW-4 and MW-7) and two cross-gradient wells (MW-8 and MW-9). 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.

2012 to 2014

In November 2011, GMCH entered into an Order on Consent and Administrative Settlement (Index #B9-0553-99-06) for the Site which requires that annual sampling be conducted as part of the SMP. The 2012 to 2014 annual sampling included eight monitoring wells (MW-4, -7, -10, -11, -12, -13, -14 and -15) with the mid-plume wells MW-8 and MW-9 no longer sampled. Groundwater sampling results through 2014, 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); and

[1] The five COCs are trichloroethylene, tetrachloroethylene, *cis*-1,2-dichloroethylene, *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.

- The COC concentrations at the most down-gradient well (MW-13) along the 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 end-product of chlorinated volatile organic compounds (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® In-Situ Microcosms, manufactured by Microbial Insights, Inc. of Knoxville, Tennessee) "baited" or "BioStim" unit 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 during 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.

2.0 2021 GROUNDWATER MONITORING AND SAMPLING

The 2021 groundwater monitoring and sampling event was conducted from August 17 through August 20, 2021, in accordance with the SMP, and included eight monitoring wells (MW-4, MW-7, and MW-10 through MW-15 **(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.

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

Compounds of Concern: tetrachloroethylene (PCE), trichloroethylene (TCE), *cis*-1,2-dichloroethylene (*cis*-DCE), *trans*-1,2-dichloroethylene (*trans*-DCE) and vinyl chloride (VC).

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

Groundwater pumping rates varied from one well to another during monitoring/sampling to establish a stable water level. Once a stable water level (constant head) 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. It should be noted that a stable water level could not be established at well MW-7 (as experienced in previous sampling rounds). Therefore, this location was purged to dry-like conditions and allowed to recharge until the recharge volume was sufficient to collect the samples. Also, due to the lack of a stable water level in this well, the dissolved hydrogen sample could not be collected. The Monitoring Well Observations and Groundwater Sampling field forms are included in **Appendix A**.

3.0 ANALYTICAL RESULTS AND DISCUSSION

Analytical results of the COCs show an overall downward trend in total COC concentrations over time. Analytical results of the 2021 sampling round are summarized in **Table 1** and shown on **Figure 1**. The analytical results for the COCs (current and historical) shown on **Figure 1** as well as total COCs and TOC have been graphically depicted and are included in **Appendix B**. 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 on the graphs in **Appendix B**. A contour map of the Total COC concentrations is presented on **Figure 2** and a contour map of the 2021 groundwater elevation data is provided on **Figure 3**.

The Eurofins Test America, Buffalo laboratory report and the third-party data validation report are provided in **Appendix D**.

<u>Compounds of Concern</u>

Source Area Monitoring Well (MW-7)

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 June 2020 except for four contiguous sample rounds from April 2003 through November 2008, where the results ranged from 1.1 to 434 mg/L. The August 2021 TCE concentration of 400 mg/L, as shown on the graph in **Appendix B** is less than half of that detected in June 2020.

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 fluctuations.

Mid Plume Monitoring Wells (MW-4 and MW-10)

MW-4: The concentrations of the PCE, TCE and VC generally have been consistent since the start of the sampling in 1996, with some minor fluctuations. 1,2-DCE showed a decreasing trend until approximately 2009 after which the decrease in concentrations has slowed notably. This may be reflected in the decreased available organic carbon concentration trend that would drive the microbially-mediated transformation of TCE→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 non-detect since 2013. VC concentrations remain in a range between 0.007 and 0.48 mg/L.

Down-gradient Monitoring Wells (MW-11 through MW-15)

MW-11: None of the COCs tested were present above method detection limits in 2021. This has been the case for five of the last six years. In 2020, TCE was detected at a concentration below its Class GA Criteria.

MW-12: With just one exception in 2014. PCE and TCE have not been detected above their respective Class GA criteria (0.005 ppm) since sampling began in 1997. In 2014 TCE was detected in at a concentration of 0.0074 mg/L. Most years TCE and PCE are not detected above their respective MDLs. 1,2-DCE was detected at a concentration of 0.056 mg/L in 2021, slightly above its NYSDEC TOGS 1.1.1 Class GA standard of 0.005 mg/L. Concentrations of VC have fluctuated from 0.011 mg/L (October 2001) to 0.190 mg/L (August 1997). VC was detected at a concentration of 0.0059 mg/L in 2021, above its NYSDEC Class GA standard of 0.002 mg/L but much less than that seen in the last three years. Both 1,2-DEC and VC are TCE degradation products that are biodegraded by many different groups of environmental bacteria. The MNA geochemistry and the fact that both 1,2-DCE and VC are not detected in downgradient well MW-13 provide evidence that these cVOCs are degrading.

MW-13: None of the COCs tested were present above method detection limits in 2021. PCE, 1,2-DCE and VC have been below method detection limits in all sampling rounds since the start of sampling in 2001. TCE was detected on only two occasions (October 2006 and May 2019) at concentrations above the method detection limit but well below the reporting limit of 0.001 and its NYSDEC Class GA standard of 0.005 mg/L.

MW-14: None of the COCs tested were present above method detection limits in from 2016 to 2020. For the first time since 2015, 1,2, DCE was detected at a concentration of 0.0013 mg/L, below its Class GA criteria (0.005 ppm)

MW-15: Concentrations of TCE were below method detection limits in the first 7 of the 19 sample events since the start of sampling in 2001. Between 2010 and 2018 TCE has been detected in nine consecutive sampling events at concentrations above the method detection limits (0.00064 to 0.001 mg/L), but below the NYSDEC Class GA criterion. In 2019 TCE was not detected above the method detection limit but was again present in 2020 and now again in 2021 at a concentration below the NYSDEC Class GA criterion.

The detected concentrations of PCE have been slightly above its NYSDEC Class GA criterion from the start of sampling in 2001 up until 2019, with the highest concentration of 0.02 mg/L (October 2001). The 2020 concentration of PCE (0.0039 mg/L was the lowest concentration detected at this location to date and was, for the first time, below the NYSDEC Class GA criterion. The 2021 detected concentration (0.0058 mg/L) of PCE is a slight increase from the 2020 concentration and is again greater than the NYSDEC Class GA criterion of (0.005 mg/L).

Concentrations of VC have been below their method detection limits in all sampling events completed since 2001. 1,2-DCE was not detected above the method detection limit here in 2021 as has been the case 16 of the 19 times sampled.

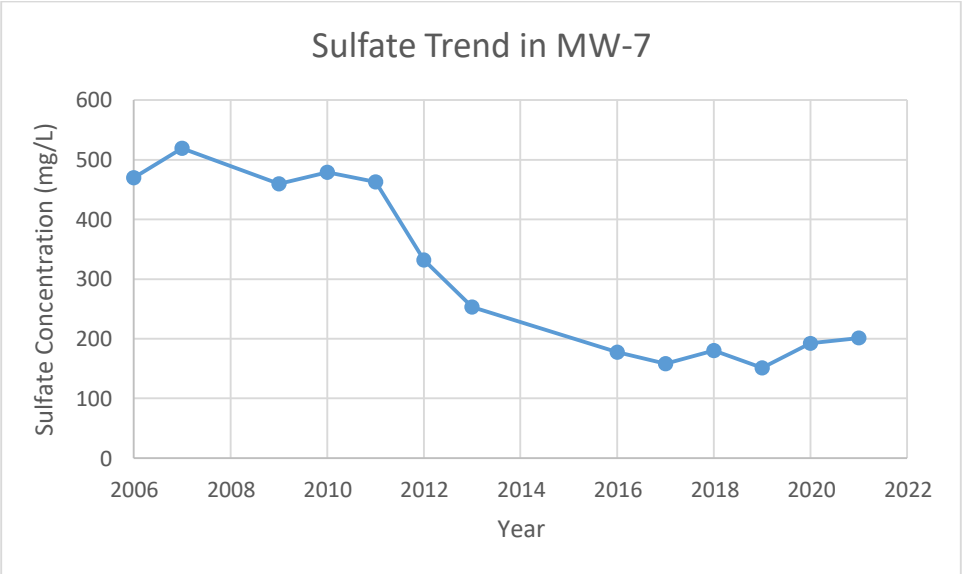
Natural Attenuation Performance

Findings of the June 2021 groundwater analytical and water quality data are generally consistent with the substantive conclusions and trends noted in prior reports. During 2021, 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. Notably, a comparison of the 2020 summary of strength of natural attenuation evidence with that of 2021 reveals that well MW-12 moved from being "Adequate" in 2020 to "Strong" in 2021 and MW-14 moved from "Limited" in 2020 to Adequate in 2021. The other six wells were unchanged by category year over year.

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 June 2020 groundwater monitoring round in accordance with Wiedemeier *et al.* (1998).

[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 decline in sulfate concentrations over time in source area monitoring well MW-7 illustrated above provides additional evidence in support of natural attenuation. Sulfide produced by native sulfate-reducing bacteria can combine with iron to form reactive ferrous sulfide which degrades TCE abiotically by direct electron donation. The concurrent decrease in dissolved iron concentrations, which were three times lower 2012-2021 than 2006-2011, supports the probability that abiotic reduction of TCE is contributing to natural attenuation in the source area.

4.0 GROUNDWATER MONITORING CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Based on the results of the August 2021 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 2021 sampling round:

- The concentrations of the parent compounds decrease significantly from the source area (MW-7) downgradient to the mid-point of the plume (MW-4 and MW-10), and from the mid-point on to the downgradient portions of the Site (MW-11 through MW-15). The decrease in concentrations is as much as five orders of magnitude from the source area to the most downgradient wells where COCs are not detected.
- 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 NYSDEC Class GA groundwater standards at the down-gradient property line at wells MW-11, MW-13, and MW-14.

RECOMMENDATIONS

Based on the results of the August 2021 and previous sampling events and supported by the findings of the 2014 treatability study, current conditions mid-plume at well MW-4 show potential for complete reductive dechlorination of the COCs to ethene. COCs were not detected or were detected at concentrations below NYSDEC TOGS 1.1.1 GA standards in groundwater collected from the downgradient Site boundary, providing additional confirmation of continued natural attenuation.

On June 18, 2021, GMCH requested the removal of MW-10 from the groundwater monitoring well locations to be sampled during future monitoring events. If acceptable to the Department, the 2022 monitoring event should include the collection of representative groundwater samples for the analysis of COC and natural attenuation parameters at a total of seven wells (MW-4, -7, -11, -12, -13, -14 and -15). The COC and natural attenuation analytical parameters measured during the 2021 sampling round should also be measured during the 2022 sampling round.

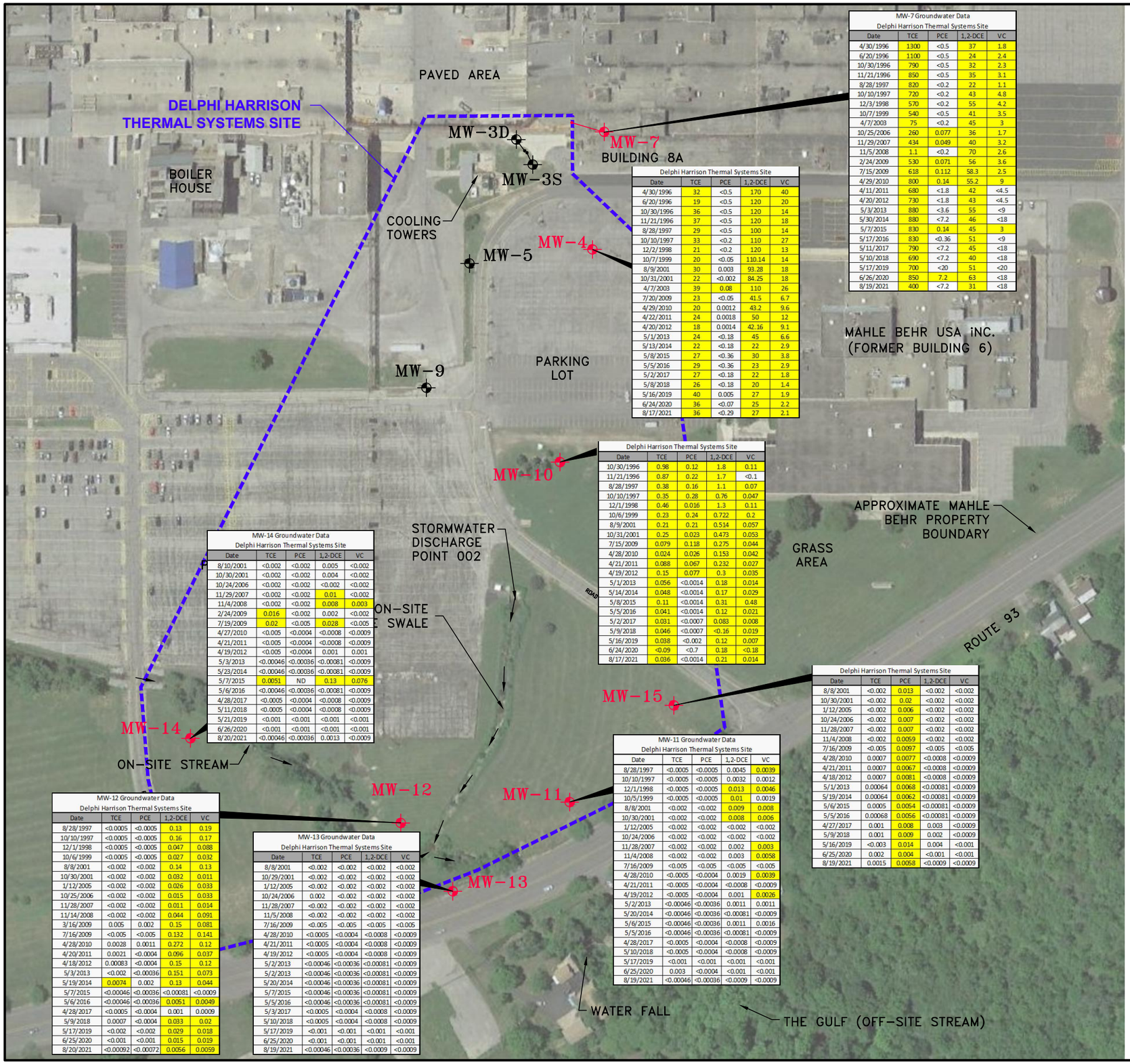
TABLES

Table 1
Summary of Groundwater Sample Analytical Results
Delphi Harrison Thermal Systems Site
Site No. C932113

Sample Location Sample Date	Class GA Criteria	DELPHI HARRISON GROUNDWATER WELLS MW-4 8/17/2021		MW-7 8/19/2021		MW-10 8/17/2021		MW-11 8/19/2021		MW-12 8/20/2021		MW-13 8/19/2021		MW-14 8/20/2021		MW-15 8/19/2021	
VOC Compounds of Concern (ug/L)																	
cis-1,2-Dichloroethene	5	27,000		31,000		210		0.81	U	5.6		0.81	U	1.3		0.81	U
Tetrachloroethene	5	290.0	U	7,200	U	1.4	U	0.36	U	0.72	U	0.36	U	0.36	U	5.8	
trans-1,2-dichloroethene	5	720	U	18,000	U	3.6	U	0.90	U	1.80	U	0.90	U	0.90	U	0.90	U
Trichloroethene	5	36,000		400,000		36		0.46	U	0.92	U	0.46	U	0.46	U	1.5	
Vinyl Chloride	2	2,100		18,000	U	14		0.90	U	5.9		0.90	U	0.90	U	0.90	U
Total VOCs		65,100		431,000		260		0.0		11.5		0.00		1.3		7.3	
Field Parameters																	
Temperature (Deg. C)	NV	19.4		18.3		17.5		17.7		17		20.8		20.1		18.4	
Specific Conductance (mS/cm)	NV	9.202		2.182		6.22		1.153		9.122		5.881		8.711		2.972	
Dissolved Oxygen (mg/L)	NV	0.43		2.65		0.4		0.19		0.21		0.8		0.28		0.14	
Oxygen Reduction Potential (mv)	NV	-3.5		-9		117		-107.8		-55.6		110.2		-21.8		90.5	
pH (std. units)	NV	6.82		7.25		7.07		7.35		6.79		6.97		6.98		6.93	
Turbidity (NTUs)	NV	3.76		35.32		2.46		5.01		3.01		3.09		48.01		6.51	
Inorganics (mg/L)																	
Iron	0.3	1.20		0.019	U	0.071		0.38		10.8		0.24		1.1		0.019	U
Magnesium	35 Note 4	91.3		46.6		35.3		33.4		58.8		40.6		98.7		44.7	
Manganese	NV	0.51	B	0.012		0.75	B	0.15		6.8		0.38		0.67		0.36	
Potassium	NV	20.7		11.6		3.1		8.0		5.1		10.2		7.4		4.3	
Sodium	20	1480		229		1,140		118		1,570		1,010		1,310		369	
Miscellaneous Water Quality Parameters																	
Methane (ug/L)	NV	1,100		77		86		29.0		260		1.0	U	200.0		1.0	U
Ethane (ug/L)	NV	33	J	46	J	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Ethene (ug/L)	NV	350		820		1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Carbon Dioxide (ug/L)	NV	39,000		16,000		36,000		16,000		74,000		56,000		47,000		60,000	
Total Organic Carbon (mg/L)	NV	2.3		12.1		3.6		1.3		6		2.3		3.2		1.9	
Alkalinity (mg/L)	NV	309		253	J F1	356	F1	260	J	373	J	460	J	355	J	399	J
Ammonia (mg/L)	NV	1.5		0.51	J F1	0.009	U	0.160	J	1.5	J	0.061	J F1	0.3	J	0.009	J U
Chloride (mg/L)	NV	4,030	J F1	391		1,810	J	189		2910		1,700		2,680		716	
Nitrate (mg/L)	NV	0.020	U	0.020	U	0.13		0.020	U	0.020	U	0.53		0.045	J	0.65	
Nitrite (mg/L)	NV	0.020	U	0.020	U	0.020	U	0.020	U	0.020	U	0.020	U	0.020	U	0.020	U
Sulfate (mg/L)	NV	777		201		316		104		131		114		77.3		68.4	
Hydrogen (nm)	NV	16		NT		2.9		4.4		3.4		3.6		4.6		4.0	

Notes:
1. Only compounds detected in one or more of the groundwater samples are presented in this table.
2. "<" indicates compound was not detected above the method detection limit.
3. Analytical testing completed by TestAmerica in Amherst, New York.
4. Criteria is a guidance value.
5. Laboratory qualifiers: 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 approximation; * - LCS or LCSD exceeds the control limits. H=Sample prepped or analyzed beyond holding time.F1=MS and/or MSD Recovery is outside acceptance limits. F2 = MS/MSD RPD exceeds control limits. ^ = Instrument related quality control is outside of acceptable range. E = Result exceeded calibration range.
6. mg/L = parts per million; ug/L = parts per billion
7. NYSDEC Class GA Groundwater Criteria as promulgated in 6 NYCRR 703; Table 1 in Technical and Operational Guidance Series (1.1.1): Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, dated October 1993; revised June 1998; errata dated January 1999; addendum dated April 2000.
8. NV = no value, NT = not tested, NA = not applicable U = below Method Detectable Limit
9. Shaded concentrations exceed Class GA criteria.

FIGURES



MW-7 Groundwater Data
Delphi Harrison Thermal Systems Site

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
5/17/2016	830	<0.36	51	<9
5/11/2017	790	<7.2	45	<18
5/10/2018	690	<7.2	40	<18
5/17/2019	700	<20	51	<20
6/26/2020	850	7.2	63	<18
8/19/2021	400	<7.2	31	<18

Delphi Harrison Thermal Systems Site

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
5/5/2016	29	<0.36	23	2.9
5/2/2017	27	<0.18	22	1.8
5/8/2018	26	<0.18	20	1.4
5/16/2019	40	0.005	27	1.9
6/24/2020	36	<0.07	25	2.2
8/17/2021	36	<0.29	27	2.1

Delphi Harrison Thermal Systems Site

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
5/5/2016	0.041	<0.0014	0.12	0.021
5/2/2017	0.031	<0.0007	0.083	0.008
5/9/2018	0.046	<0.0007	<0.16	0.019
5/16/2019	0.038	<0.002	0.12	0.007
6/24/2020	<0.09	<0.7	0.18	<0.18
8/17/2021	0.036	<0.0014	0.21	0.014

MW-14 Groundwater Data
Delphi Harrison Thermal Systems Site

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	ND	0.13	0.076
5/6/2016	<0.00046	<0.00036	<0.00081	<0.0009
4/28/2017	<0.0005	<0.0004	<0.0008	<0.0009
5/11/2018	<0.0005	<0.0004	<0.0008	<0.0009
5/21/2019	<0.001	<0.001	<0.001	<0.001
6/26/2020	<0.001	<0.001	<0.001	<0.001
8/20/2021	<0.00046	<0.00036	0.0013	<0.0009

Delphi Harrison Thermal Systems Site

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
5/5/2016	0.00068	0.0056	<0.00081	<0.0009
4/27/2017	0.001	0.008	0.003	<0.0009
5/9/2018	0.001	0.009	0.002	<0.0009
5/16/2019	<0.003	0.014	0.004	<0.001
6/25/2020	0.002	0.004	<0.001	<0.001
8/19/2021	0.0015	0.0058	<0.0009	<0.0009

MW-11 Groundwater Data
Delphi Harrison Thermal Systems Site

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
5/5/2016	<0.00046	<0.00036	0.0011	0.0016
5/5/2016	<0.00046	<0.00036	<0.00081	<0.0009
4/28/2017	<0.0005	<0.0004	<0.0008	<0.0009
5/10/2018	<0.0005	<0.0004	<0.0008	<0.0009
5/17/2019	<0.001	<0.001	<0.001	<0.001
6/25/2020	0.003	<0.0004	<0.001	<0.001
8/19/2021	<0.00046	<0.00036	<0.0009	<0.0009

MW-12 Groundwater Data
Delphi Harrison Thermal Systems Site

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
5/6/2016	<0.00046	<0.00036	0.0051	0.0049
4/28/2017	<0.0005	<0.0004	0.001	0.0009
5/9/2018	0.0007	<0.0004	0.033	0.02
5/17/2019	<0.002	<0.002	0.029	0.018
6/25/2020	<0.001	<0.001	0.015	0.019
8/20/2021	<0.00092	<0.00072	0.0056	0.0059

MW-13 Groundwater Data
Delphi Harrison Thermal Systems Site

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
5/20/2014	<0.00046	<0.00036	<0.00081	<0.0009
5/2/2013	<0.00046	<0.00036	<0.00081	<0.0009
5/7/2015	<0.00046	<0.00036	<0.00081	<0.0009
5/5/2016	<0.00046	<0.00036	<0.00081	<0.0009
5/3/2017	<0.0005	<0.0004	<0.0008	<0.0009
5/10/2018	<0.0005	<0.0004	<0.0008	<0.0009
5/17/2019	<0.001	<0.001	<0.001	<0.001
6/25/2020	<0.001	<0.001	<0.001	<0.001
8/19/2021	<0.00046	<0.00036	<0.0009	<0.0009

NORTH

NOTES:

1. BASE MAP ADAPTED FROM A 2015 AERIAL PHOTOGRAPH DOWNLOADED FROM GOOGLE EARTH PRO AND SITE OBSERVATIONS.

2. ANALYTICAL TESTING WAS COMPLETED BY EUROFINS/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-4 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL INSTALLED BY GZA

TCE = TRICHLOROETHENE

PCE = TETRACHLOROETHENE

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

VC = VINYL CHLORIDE

0.006 — HIGHLIGHTED VALUES INDICATE EXCEEDANCE OF NYS CLASS GA GROUNDWATER CRITERIA

DRAWN BY: **TAK**

DATE: **NOVEMBER 2021**

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
AUGUST 2021 GROUNDWATER SAMPLING

GROUNDWATER ANALYTICAL RESULTS

PROJECT No.
21.0056546.20

FIGURE No.
1

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 EUROFINS/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 (65.1) — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL INSTALLED BY GZA SHOWN WITH TOTAL VOC CONCENTRATION

NS = NOT SAMPLED

ND = NON-DETECT

DRAWN BY: TAK

DATE: NOVEMBER 2021

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

AUGUST 2021 GROUNDWATER SAMPLING

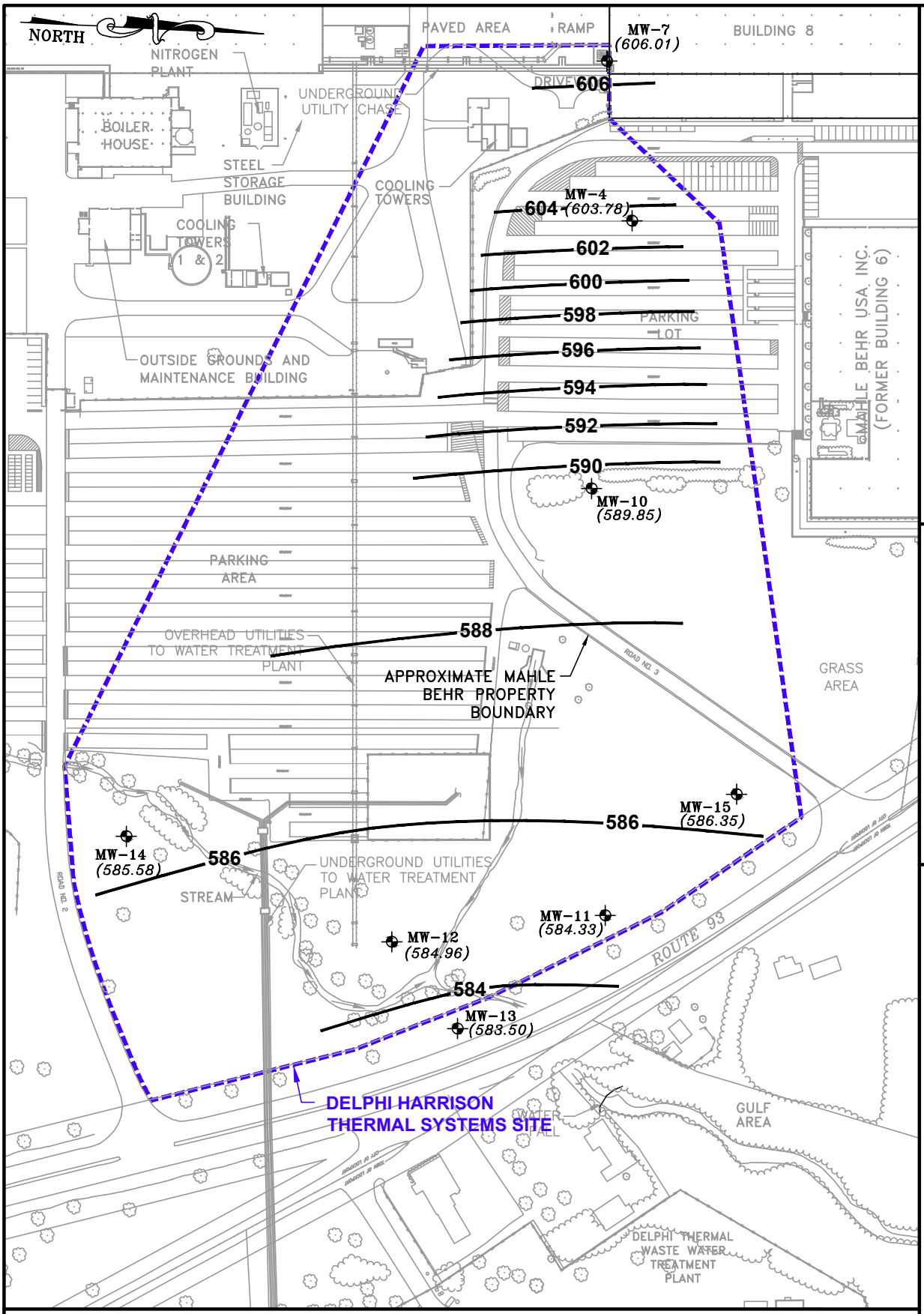
TOTAL COC CONTOUR MAP

PROJECT No.

21.0056546.20

FIGURE No.

2



LEGEND:

MW-4 (603.78) — APPROXIMATE LOCATION AND DESIGNATION OF EXISTING MONITORING WELL INSTALLED BY GZA

APPROXIMATE GROUNDWATER ELEVATION MEASURED ON DATE SHOWN IN TITLE BLOCK

NOTES:

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

2. GROUNDWATER ELEVATIONS MEASURED ON 8-16-2021.

DRAWN BY: MDK

DATE: SEPTEMBER 2021

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

AUGUST 2021 GROUNDWATER SAMPLING

GROUNDWATER ISOPOTENTIAL MAP

(AUGUST 16, 2021)

PROJECT No.

21.0056546.20

FIGURE No.

3

APPENDIX A

GROUNDWATER FIELD FORMS

SAMPLE COLLECTION DATA SHEET - GROUNDWATER SAMPLING PROGRAM

PROJECT NAME: Delphi Harrison Thermal Systems Site   PROJECT NO.: 56546.20 T.4

SAMPLING CREW MEMBERS: Morgan Brown   SUPERVISOR: Richert

DATE OF SAMPLE COLLECTION: 8-17-21 – 8-20-21

[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-4 081721	MW-4	613.07	34.93	9.24	603.83	4.2	/	1.2	6.82	19.4	9.202	1152	VOC MNA H_2 VFA
MW-7 082021	MW-7	613.86	28.98	7.75	606.11	3.5	/	5.1	7.25	18.3	2.182	1316	VOC MNA VFA
MW-10 081721	MW-10	604.70	23.71	14.82	589.88	1.5	/	1.0	7.07	17.5	6.20	1517	VOC MNA H_2 VFA
MW-11 081921	MW-11	590.16	15.19	6.01	584.15	1.5	/	1.2	7.35	17.7	1.453	1226	VOC MNA H_2 VFA
MW-12 082021	MW-12	590.71	16.40	5.73	584.98	1.7	/	0.9	6.79	17.0	9.122	0819	VOC MNA H_2 VFA
MW-13 081921	MW-13	589.02	14.06	5.46	583.56	1.4	/	1.3	6.97	20.8	5.881	1535	VOC MNA H_2 VFA
MW-14 082021	MW-14	592.77	21.38	7.12	571.39	2.3	/	1.3	6.98	20.1	8.711	1057	VOC MNA H_2 VFA
MW-15 081921	MW-15	594.04	16.94	7.70	586.34	1.5	/	1.2	6.93	18.4	2.972	1020	VOC MNA H_2 VFA

Additional Comments:

Copies to:

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

PID @ TOR = 0.0

PID @ Breathing Space = 0.0

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site
Ref. No.: 56546.20 Task 4

Date: 8-17-21
Personnel: Morgan Brown

Monitoring Well Data:

Well No.: MW-4
Measurement Point: TOR
Constructed Well Depth (ft): 32.5
Measured Well Depth (ft): 34.93
Depth of Sediment (ft):

Screen Length (ft): 17.5 - 32.5 = 17'
Depth to Pump Intake (ft)[1]: 26
Well Diameter, D (in): 2
Well ~~Screen~~ Volume, V_s (~~gal.~~)[2]: 4.2
Initial Depth to Water (ft): 9.24

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 (~~gal.~~)	No. of Well Screen Volumes Purged[4]
1114	87*	9.41		6.86	20.5	9.250	12.4	1.11	2.47	0	
1120		9.41		6.77	19.0	9.226	8.2	0.63	2.08	0.1	
1125		9.69		6.75	19.0	9.211	7.1	0.53	2.46	0.2	
1130		10.15		6.75	18.8	9.206	4.6	0.47	2.70	0.3	
1135		10.15		6.77	19.5	9.210	2.7	0.45	2.35	0.4	
1140		10.15		6.79	19.4	9.220	-0.1	0.45	2.78	0.5	
1147		10.15		6.81	19.6	9.215	-2.5	0.43	3.48	0.7	
1152		10.15		6.82	19.4	9.202	-3.5	0.43	3.76	0.9	

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= V_p/V_s.

* Lowest Pump Speed

WELL PURGING FIELD INFORMATION FORM

JOB# 565461-20

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

WELL# MW-4

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
08 17 21	08 17 21	1.42	7.12

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	C - BLADDER PUMP	F - DIPPER BOTTLE		X- SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON; B - STAINLESS STEEL	D - PVC; E - POLYETHYLENE		X- PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	C - POLYPROPYLENE			X- SAMPLING OTHER (SPECIFY)
PURGING DEVICE	E	A - TEFLON; B - TYGON	D - POLYPROPYLENE; E - POLYETHYLENE	F - SILICONE; G - COMBINATION TEFLON/POLYPROPYLENE	X- PURGING OTHER (SPECIFY)
SAMPLING DEVICE	E	C - ROPE	X- (SPECIFY)		X- SAMPLING OTHER (SPECIFY)
FILTERING DEVICES 0.45		A - IN-LINE DISPOSABLE	B - PRESSURE	C - VACUUM	

FIELD MEASUREMENTS

WELL ELEVATION	611.307	(m/ft)	GROUNDWATER ELEVATION	603.883	(m/ft)
DEPTH TO WATER	7.424	(m/ft)	WELL DEPTH	13.913	(m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE: Good (ODOR) solvent (COLOR) clear (TURBIDITY) clear

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

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE GM PROTOCOLS

08-17-21 (DATE) Morgan Brown (PRINT) (SIGNATURE)

PID @ TOR = 670.2 PID @ Breathing Space = 0.3

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site

Ref. No.: 56546.20 Task 4

Date: 8-19-21

Personnel: M. Brown

Monitoring Well Data:

Well No.: MW-7

Measurement Point: TOR

Constructed Well Depth (ft): 27.20

Measured Well Depth (ft): 28.98

Depth of Sediment (ft):

Screen Length (ft): 15

Depth to Pump Intake (ft)[1]: 22

Well Diameter, D (in): 2

Well Screen Volume, V_s (~~mL~~ gal)[2]: 3.5

Initial Depth to Water (ft): 7.75

8-19-21 (rows 0739–0847); 8-20-21 (row 1316)

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~~ G)	No. of Well Screen Volumes Purged[4]
0739		8.51		7.19	18.8	2.210	24.0	0.81	4.38	0.0	
0744		9.43		7.14	18.4	2.175	-2.2	0.49	42.20	0.2	
0750		10.45		7.14	18.5	2.058	-21.8	0.44	163.64	0.4	
0800		11.26		7.16	18.7	2.042	-30.8	0.42	233.71	0.8	
0805		11.77		7.17	18.9	2.006	-34.5	6.40	228.04	1.1	
0815		14.05		7.16	18.5	1.925	-33.0	0.33	270.46	1.8	
0825		16.29		7.18	18.5	1.990	-37.3	0.55	302.10	2.5	
0835		18.90		7.20	18.4	2.054	-28.6	2.23	66.51	4.1	
0842		20.91		7.19	18.0	2.145	-17.0	2.34	28.45	4.7	
0847	dry	22.10		7.25	18.3	2.182	-9.0	2.65	35.32	5.1	
1316		8.2		7.36	22.0	2.015	82.4	6.40	2.17	0.1	

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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546.20

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

WELL# MW-7

WELL PURGING INFORMATION

081921	082021	3.5	5.1
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME 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 - 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 X- ____ (SPECIFY)	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	613.86	(m/ft)	GROUNDWATER ELEVATION	606.11	(m/ft)
DEPTH TO WATER	7.75	(m/ft)	WELL DEPTH	28.98	(m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE Good ODOR Solvent COLOR Clear TURBIDITY Clear

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

SPECIFIC COMMENTS Purged Dry 8-17-21 Sampled 8-20-21

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE GM PROTOCOLS

8-19-21	Morgan Brown	Morgan Brown
DATE	PRINT	SIGNATURE

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

PID @ TOR = 0.0   PID @ Breathing Space = 0.0

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site
Ref. No.: 56546.20 Task 4

Date: 08-17-21
Personnel: M. Brown

Monitoring Well Data:

Well No.: MW-10
Measurement Point: TOR
Constructed Well Depth (ft): 21.3
Measured Well Depth (ft): 23.71
Depth of Sediment (ft):

Screen Length (ft): 8.8'
Depth to Pump Intake (ft)(1): ~17'
Well Diameter, D (in): 2
Well Screen Volume, V_s ~~(mL)~~ gal (2): 1.5
Initial Depth to Water (ft): 14.82

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)~~ G	No. of Well Screen Volumes Purged (4)
1434	86*	15.17		7.10	17.8	6.053	126.9	0.88	2.09	0.0	
1439		15.17		7.06	17.2	5.993	130.3	0.57	1.76	0.1	
1445		15.17		7.06	18.4	6.015	128.3	0.56	1.96	0.2	
1450		15.21		7.06	17.4	6.030	127.3	0.49	2.23	0.3	
1465		15.24		7.06	16.9	6.095	125.3	0.45	2.21	0.4	
1502		15.24		7.06	17.0	6.131	122.5	0.43	2.03	0.5	
1507		15.24		7.06	17.1	6.143	121.0	0.41	2.10	0.6	
1512		15.24		7.07	17.2	6.186	118.7	0.40	2.40	0.8	
1517		15.24		7.07	17.5	6.220	117.0	0.40	2.46	1.0	

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.

* lowest pump speed

WELL PURGING FIELD INFORMATION FORM

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

JOB# 56546-20

WELL# MW-10

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
08 17 21	08 17 21	1.4	10

PURGING AND SAMPLING EQUIPMENT

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

SAMPLING EQIPMENT......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 - 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 X- ____ (SPECIFY)	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	604.70	(m/ft)	GROUNDWATER ELEVATION	589.88	(m/ft)
DEPTH TO WATER	14.82	(m/ft)	WELL DEPTH	23.71	(m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (μm/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 SW PRECIPITATION Y/N OUTLOOK Y

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CM PROTOCOLS

DATE	PRINT	SIGNATURE
08-17-21	Morgan Brown	[signature]

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

PID @ TOR = 0.0   PID @ Breathing Space = 0.0

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site
Ref. No.: 56546.20 Task 4

Date: 8-19-21
Personnel: M. Brown

Monitoring Well Data:

Well No.: MW-11
Measurement Point: TOR
Constructed Well Depth (ft): 24.10
Measured Well Depth (ft): 15.19
Depth of Sediment (ft):

Screen Length (ft): 9-21.4
Depth to Pump Intake (ft)(1): 15
Well Diameter, D (in): 2
Well Screen Volume, V_s (gal)(2): 1.5
Initial Depth to Water (ft): 6.01

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 (G)	No. of Well Screen Volumes Purged(4)
1149	90	6.31		7.50	18.3	1.181	-93.6	0.63	1.88	0.0	
1154		6.56		7.44	17.8	1.169	-98.0	0.31	1.82	0.1	
1201		6.81		7.42	17.6	1.159	-90.2	0.23	2.32	0.2	
1211		6.91		7.40	17.6	1.146	-95.8	0.19	3.74	0.4	
1216		7.01		7.36	17.5	1.152	-99.8	0.20	3.61	0.5	
1221		7.08		7.36	17.0	1.159	-101.1	0.19	4.53	0.6	
1226		7.09		7.35	17.7	1.153	-107.8	0.19	5.01	0.7	

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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546-20

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

WELL# MW-11

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
08 19 21	08 19 21	1.5	1.2

PURGING AND SAMPLING EQUIPMENT

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

SAMPLING EQIPMENT.......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 - 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 X- ______ (SPECIFY)	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	590.16	(m/ft)	GROUNDWATER ELEVATION	584.15	(m/ft)
DEPTH TO WATER	6.01	(m/ft)	WELL DEPTH	15.19	(m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/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 N

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE GM PROTOCOLS

DATE	PRINT	SIGNATURE
8-19-21	Morgan Brown	[signature]

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

PID @ TOR = 0.0   PID @ Breathing Space = 0.0

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site   Date: 8-20-21
Rel. No.: 56546.20 Task 4   Personnel: M. Brown

Monitoring Well Data:

Well No.: MW-12   Screen Length (ft): 7.1
Measurement Point: TOR   Depth to Pump Intake (ft)[1]: 13
Constructed Well Depth (ft): 15.10   Well Diameter, D (in): 2
Measured Well Depth (ft): 16.40   Well Screen Volume, V_s (~~mL~~ gal)[2]: 1.7
Depth of Sediment (ft):   Initial Depth to Water (ft): 5.73

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~~ G)	*No. of Well Screen Volumes Purged*[4]
0734	85	6.18		6.74	16.9	8.374	3.0	0.75	11.03	0.0	
0744		6.12		6.73	17.3	8.675	-31.9	0.45	5.20	0.1	
0749		6.16		6.75	17.1	8.796	-37.8	0.35	5.32	0.2	
0754		6.20		6.76	17.1	8.958	-44.3	0.30	3.56	0.3	
0804		6.21		6.77	17.1	9.057	-49.6	0.26	3.03	0.4	
0809		6.24		6.78	17.1	9.110	-53.4	0.22	3.06	0.5	
0814		6.24		6.78	17.2	9.123	-54.3	0.22	3.08	0.6	
0819		6.26		6.79	17.0	9.122	-55.6	0.21	3.01	0.7	

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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546.20

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

WELL# MW-12

WELL PURGING INFORMATION

08/20/21	08/20/21	1.7	0.9
PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)

PURGING AND SAMPLING EQUIPMENT

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

SAMPLING EQIPMENT.......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 - 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 X- ______ (SPECIFY)	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)
DEPTH TO WATER	5.73	(m/ft)
GROUNDWATER ELEVATION	584.98	(m/ft)
WELL DEPTH	16.40	(m/ft)

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

FIELD COMMENTS

SAMPLE APPEARANCE: good ODOR: none COLOR: yellow TURBIDITY: cloudy

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

SPECIFIC COMMENTS:

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE GM PROTOCOLS

8-20-21	Morgan Brown	[signature]
DATE	PRINT	SIGNATURE

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

PID @ TOR = 0.0 PID @ Breathing Space = 0.0

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site

Ref. No.: 56546.20 Task 4

Date: 8-19-21

Personnel: M. Brown

Monitoring Well Data:

Well No.: MW-13

Measurement Point: TOR

Constructed Well Depth (ft): 15

Measured Well Depth (ft): 14.06

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 (gal)[2]: 1.4

Initial Depth to Water (ft): 5.46

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 (G)	No. of Well Screen Volumes Purged[4]
1456	90	5.76		7.00	20.4	5.378	119.2	2.60	2.76	0.0	
1506		5.94		6.97	20.4	5.559	119.2	1.70	2.84	0.1	
1514		5.65		6.97	21.2	5.711	116.8	1.33	2.43	0.3	
1519		5.65		6.97	21.3	5.900	115.2	1.14	2.45	0.4	
1524		5.65		6.98	22.5	5.704	111.8	1.22	3.51	0.5	
1530		5.65		6.97	20.5	5.837	111.8	0.95	3.08	0.7	
1536		5.68		6.97	20.8	5.881	110.2	0.80	3.09	0.8	

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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546-20

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

WELL# MW-13

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
081921	081921	1.4	1.3

Units circled: GALLONS

PURGING AND SAMPLING EQUIPMENT

PURGING EQUIPMENT ....DEDICATED (Y) N (CIRCLE ONE) — Y circled

SAMPLING EQIPMENT ....DEDICATED (Y) N (CIRCLE ONE) — Y circled

	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 X- ____ (SPECIFY)	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	589.02 (m/ft)	GROUNDWATER ELEVATION	583.56 (m/ft)
DEPTH TO WATER	5.46 (m/ft)	WELL DEPTH	14.06 (m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/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 N

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE GM PROTOCOLS

DATE: 08-19-21 PRINT: Morgan Brown SIGNATURE: [signature]

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

PID @ TOR = 0.0   PID @ Breathing Space = 0.0

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site   Date: 08-20-21

Ref. No.: 56546.20 Task 4   Personnel: M. Brown

Monitoring Well Data:

Well No.: MW-14   Screen Length (ft): 9.1-19.1

Measurement Point: TOR   Depth to Pump Intake (ft)[1]: 14

Constructed Well Depth (ft): 19.1   Well Diameter, D (in): 2

Measured Well Depth (ft): 21.38   Well Screen Volume, V_s (~~mL~~ gal)[2]: 2.3

Depth of Sediment (ft):   Initial Depth to Water (ft): 7.12

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~~ G)	No. of Well Screen Volumes Purged[4]
1005	88	7.15		7.17	19.9	6.848	109.2	0.55	3.82	0.0	
1012		7.22		7.15	21.4	6.895	106.1	0.57	5.71	0.1	
1022		8.25		7.13	18.9	6.971	39.5	0.49	9.20	0.3	
1027		8.31		7.08	19.5	7.349	7.4	0.67	13.34	0.4	
1037		8.61		7.06	19.5	7.671	-8.8	0.83	18.81	0.7	
1042		8.61		7.05	20.0	7.881	-12.5	0.85	22.22	0.8	
1047		8.65		7.02	20.3	8.173	-16.8	0.67	28.06	0.9	
1057		8.45		6.99	21.7	8.550	-21.5	0.47	38.36	1.0	
1052		8.64		6.98	19.9	8.704	-21.5	0.30	48.40	1.2	
1057		8.65		6.98	20.1	8.711	-21.8	0.28	48.61	1.3	

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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546.20

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

WELL# MW-14

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
08202021	08202021	2.3	1.3

PURGING AND SAMPLING EQUIPMENT

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

SAMPLING EQIPMENT.......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 - 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 X- ____ (SPECIFY)	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	592.77	(m/ft)	GROUNDWATER ELEVATION	571.39	(m/ft)
DEPTH TO WATER	21.38	(m/ft)	WELL DEPTH		(m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/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 SW PRECIPITATION Y/N OUTLOOK N

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CM PROTOCOLS

8-20-21 DATE Morgan Brown PRINT [signature] SIGNATURE

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

17800 (2) PART (C) MG-IN-4-01
Revision 3 October 29, 2002

PID @ TOR = 0.0   PID @ Breathing Space = 0.0

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Delphi Harrison Thermal Systems Site
Ref. No.: 56546.20 Task 4

Date: 8-19-20
Personnel: M. Brown

Monitoring Well Data:

Well No.: MW-15
Measurement Point: TOR
Constructed Well Depth (ft): 17.90
Measured Well Depth (ft): 16.94
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 (gal)[2]: 1.5
Initial Depth to Water (ft): 7.7

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 (G)	No. of Well Screen Volumes Purged[4]
0940	86	7.87		6.96	19.1	2.954	100.3	0.75	1.67	0.0	
0995		7.92		6.95	17.9	2.946	98.4	0.29	1.39	0.1	
0983		7.92		6.93	17.8	2.952	97.9	0.22	1.49	0.2	
1000		7.92		6.92	17.2	2.967	96.0	0.16	2.10	0.3	
1010		7.92		6.92	19.8	2.970	93.4	0.14	4.60	0.5	
1015		7.94		6.92	18.0	2.969	93.0	0.14	5.10	0.6	
1020		7.94		6.93	18.4	2.972	90.5	0.14	6.51	0.7	

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.

WELL PURGING FIELD INFORMATION FORM

JOB# 56546 . 20

SITE/PROJECT NAME: Delphi Harrison Thermal Systems Site

WELL# MW-15

WELL PURGING INFORMATION

PURGE DATE (MM DD YY)	SAMPLE DATE (MM DD YY)	WATER VOL. IN CASING (LITRES/GALLONS)	ACTUAL VOLUME PURGED (LITRES/GALLONS)
08 19 21	08 19 21	1.5	1.2

PURGING AND SAMPLING EQUIPMENT

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

SAMPLING EQIPMENT ....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 - 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 X- ______ (SPECIFY)	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	594.04	(m/ft)	GROUNDWATER ELEVATION	586.34	(m/ft)
DEPTH TO WATER	7.70	(m/ft)	WELL DEPTH	16.94	(m/ft)

pH (std)	TURBIDITY (ntu)	CONDUCTIVITY (µm/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 0-6 DIRECTION NW PRECIPITATION Y/N OUTLOOK Y

SPECIFIC COMMENTS

I CERTIFY THAT SAMPLING PROCEDURES WERE IN ACCORDANCE WITH APPLICABLE CM PROTOCOLS

DATE	PRINT	SIGNATURE
08-19-21	Morgan Brown	[signature]

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

APPENDIX B

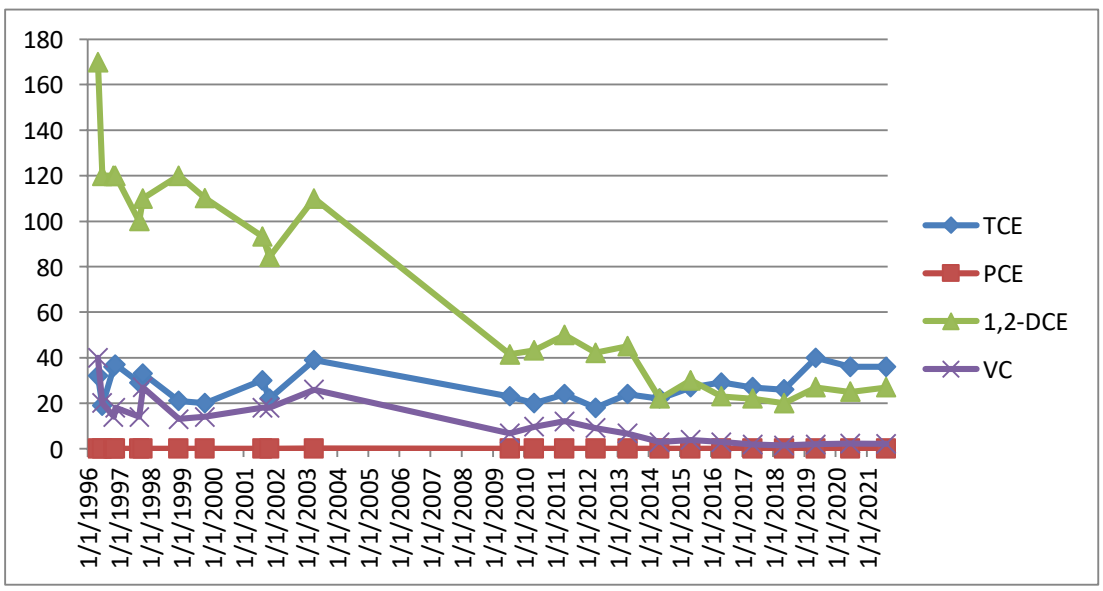
COCs, Total VOCs and TOC DATA GRAPHS

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
5/5/2016	29	<0.36	23	2.9
5/2/2017	27	<0.18	22	1.8
5/8/2018	26	<0.18	20	1.4
5/16/2019	40	0.005	27	1.9
6/24/2020	36	<0.072	25	2.2
8/17/2021	36	<0.29	27	2.1

Notes:
Results are provided in parts per million (ppm)
Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.
If "<" value, the listed value is the higher of the two method detection limits.

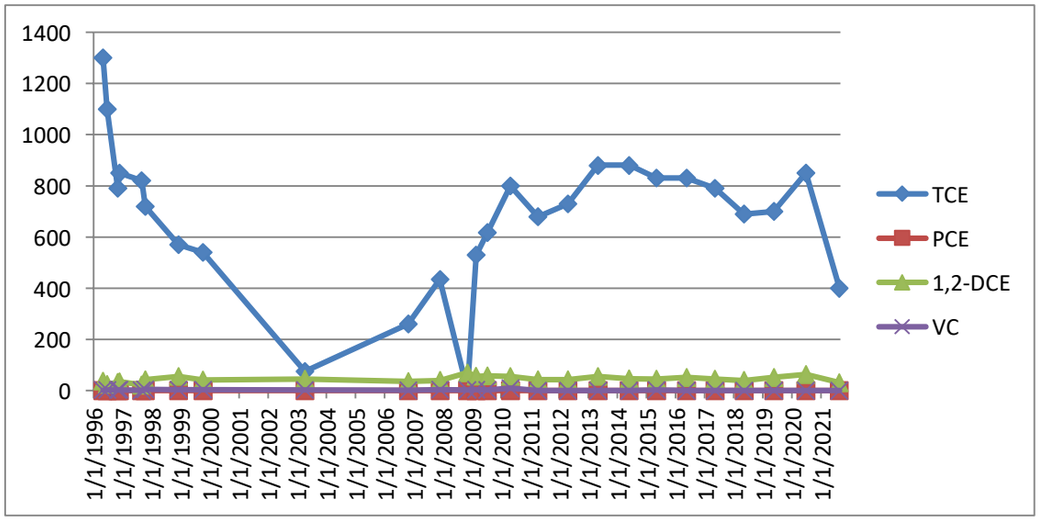
Duplicate samples were collected from this location on 6/20/96, 10/30/96 and 12/2/98.
The higher of the two concentrations were recorded in this graph.



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
5/17/2016	830	<3.6	51	<9
5/11/2017	790	<7.2	45	<18
5/10/2018	690	<7.2	40	<18
5/17/2019	700	<7.2	51	<18
6/26/2020	850	<7.2	63	<18
8/19/2021	400	<7.2	31	<18

Notes:
Results are provided in parts per million (ppm)
Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.
If "<" value, the listed value is the higher of the two method detection limits.



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

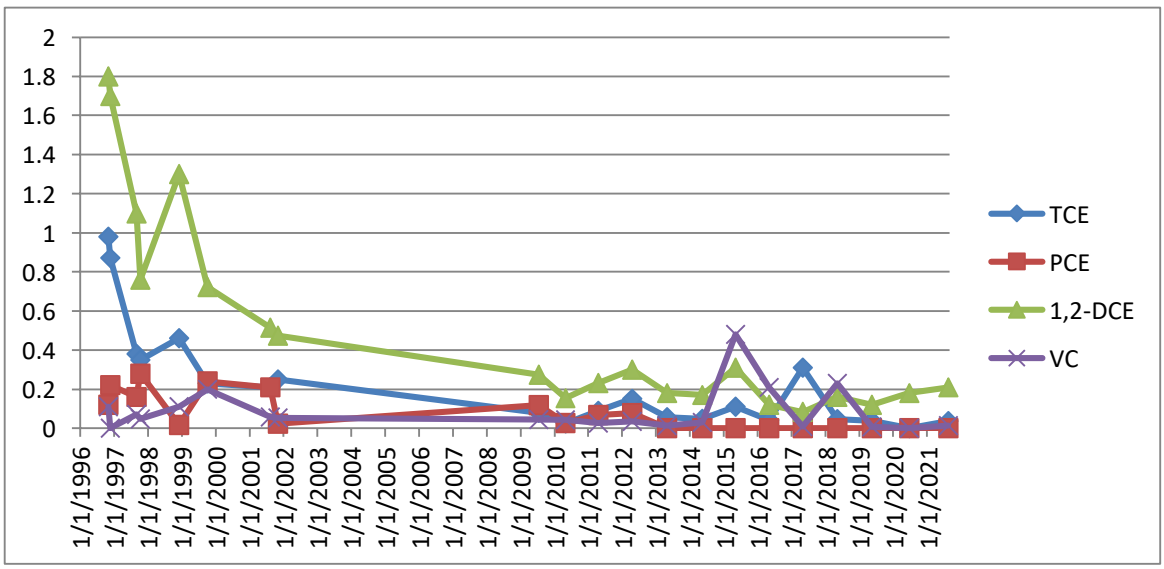
Date	TCE	PCE	1,2-DCE	VC
10/30/1996	0.98	0.12	1.8	0.11
11/21/1996	0.87	0.22	1.7	<0.1
8/28/1997	0.38	0.16	1.1	0.07
10/10/1997	0.35	0.28	0.76	0.047
12/1/1998	0.46	0.016	1.3	0.11
10/6/1999	0.23	0.24	0.722	0.2
8/9/2001	0.21	0.21	0.514	0.057
10/31/2001	0.25	0.023	0.473	0.053
7/15/2009	0.079	0.118	0.275	0.044
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
5/5/2016	0.041	<0.0014	0.12	0.21
5/2/2017	0.31	<0.0007	0.083	0.008
5/9/2018	0.046	<0.0007	0.16	0.23
5/16/2019	0.038	<0.00072	0.12	0.007
6/24/2020	<0.092	<0.072	0.18	<0.18
8/17/2021	0.036	<0.0014	0.21	0.014

Notes:

Results are provided in parts per million (ppm)

Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.

If "<" value, the listed value is the higher of the two method detection limits.

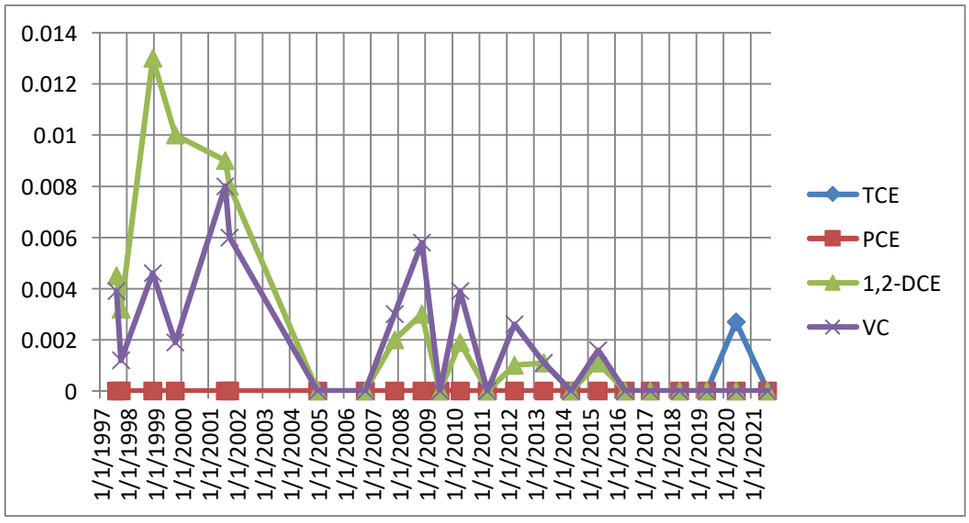


MW-11 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

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
5/5/2016	<0.00046	<0.00036	<0.0009	<0.0009
4/28/2017	<0.00046	<0.00036	<0.00090	<0.0009
5/10/2018	<0.00046	<0.00036	<0.00090	<0.0009
5/17/2019	< 0.0005	<0.0004	<0.0009	<0.0009
6/25/2020	0.0027	<0.00036	<0.0009	<0.0009
8/19/2021	<0.00046	<0.00036	<0.0009	<0.0009

Notes:
Results are provided in parts per million (ppm)
Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.
If "<" value, the listed value is the higher of the two method detection limits.

Duplicate samples were collected from this location on 10/10/97. The higher of the two concentrations were recorded in this graph.

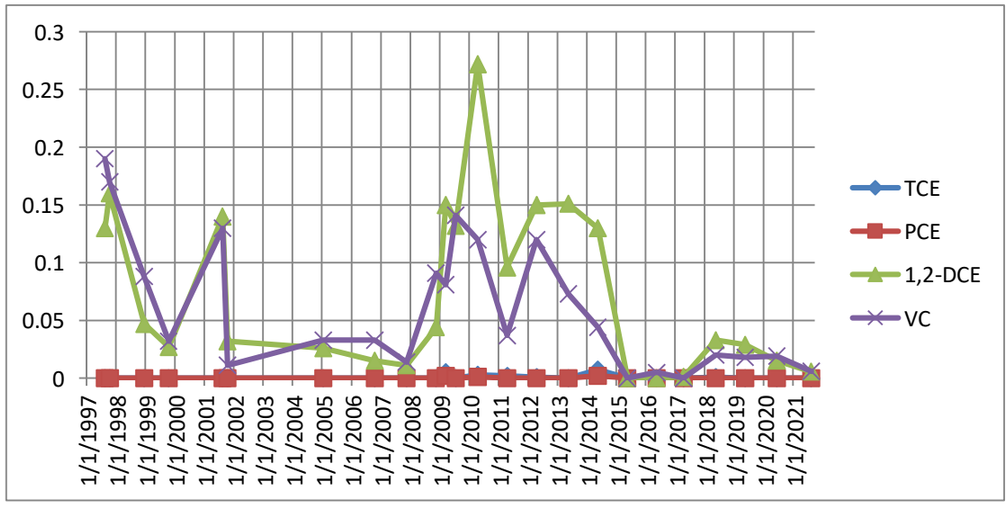


MW-12 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

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
5/6/2016	<0.00046	<0.00036	<0.0051	0.0049
4/28/2017	<0.00046	<0.00036	0.001	<0.0009
5/9/2018	0.0007	<0.00036	0.033	0.02
5/17/2019	<0.00092	<0.00072	0.029	0.018
6/26/2020	<0.00092	<0.00072	0.015	0.019
8/20/2021	<0.00092	<0.00072	0.0056	0.0059

Notes:
Results are provided in parts per million (ppm)
Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.
If "<" value, the listed value is the higher of the two method detection limits.

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.

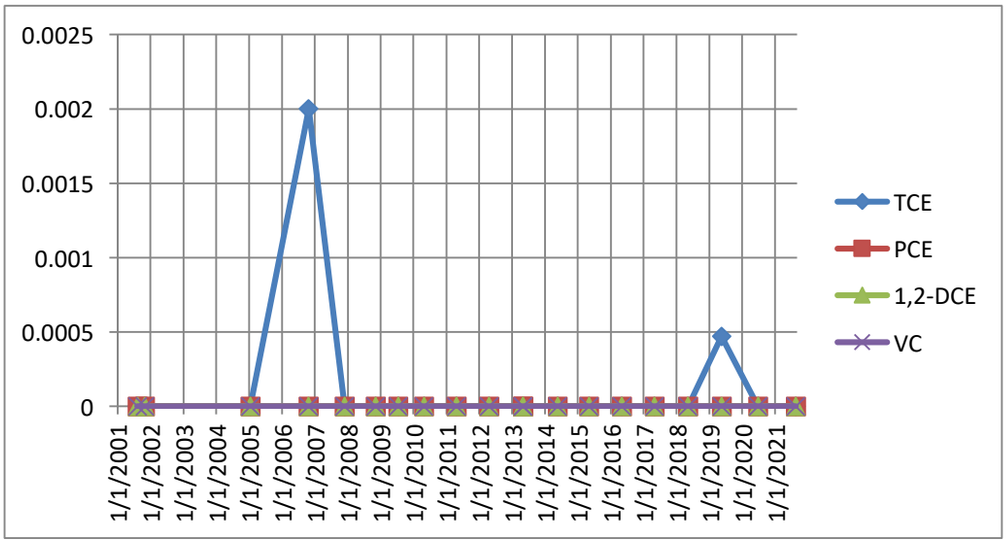


MW-13 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

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
5/5/2016	<0.00046	<0.00036	<0.0009	<0.0009
5/3/2017	<0.00046	<0.00036	<0.0009	<0.0009
5/10/2018	<0.00046	<0.00036	<0.0009	<0.0009
5/17/2019	0.00047	<0.00036	<0.0009	<0.0009
6/25/2020	<0.00046	<0.00036	<0.0009	<0.0009
8/19/2021	<0.00046	<0.00036	<0.0009	<0.0009

Notes:
Results are provided in parts per million (ppm)
Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.
If "<" value, the listed value is the higher of the two method detection limits.

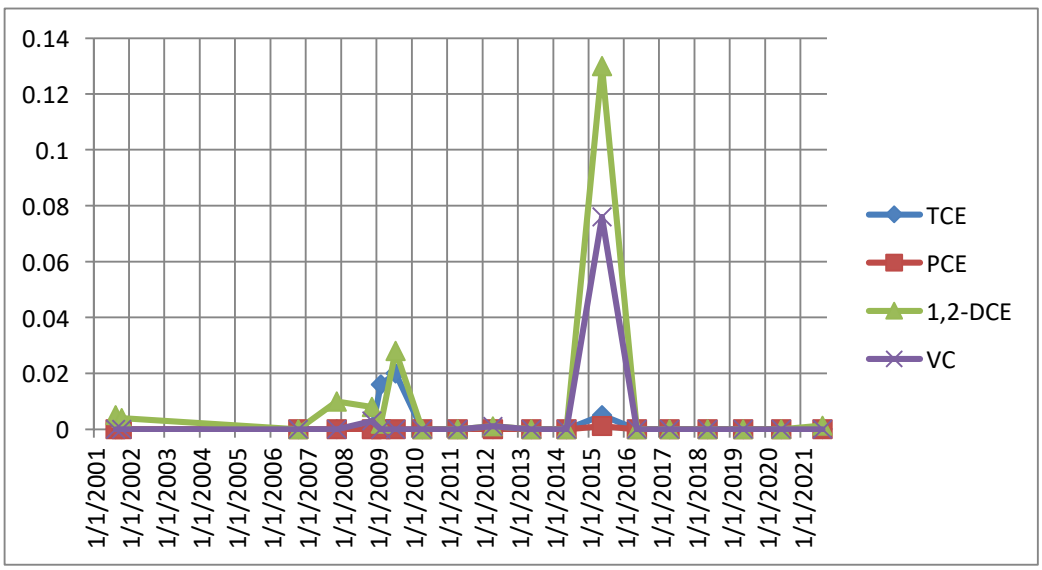
A duplicate sample was collected from this location on 4/19/2012.
The higher of the two concentrations were recorded in this graph.



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
5/6/2016	<0.00046	<0.00036	<0.0009	<0.0009
4/28/2017	<0.00046	<0.00036	<0.0009	<0.0009
5/11/2018	<0.00046	<0.00036	<0.0009	<0.0009
5/21/2019	<0.00046	<0.00036	<0.0009	<0.0009
6/26/2020	<0.00046	<0.00036	<0.0009	<0.0009
8/20/2021	<0.00046	<0.00036	0.0013	<0.0009

Notes:
Results are provided in parts per million (ppm)
Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.
If "<" value, the listed value is the higher of the two method detection limits.

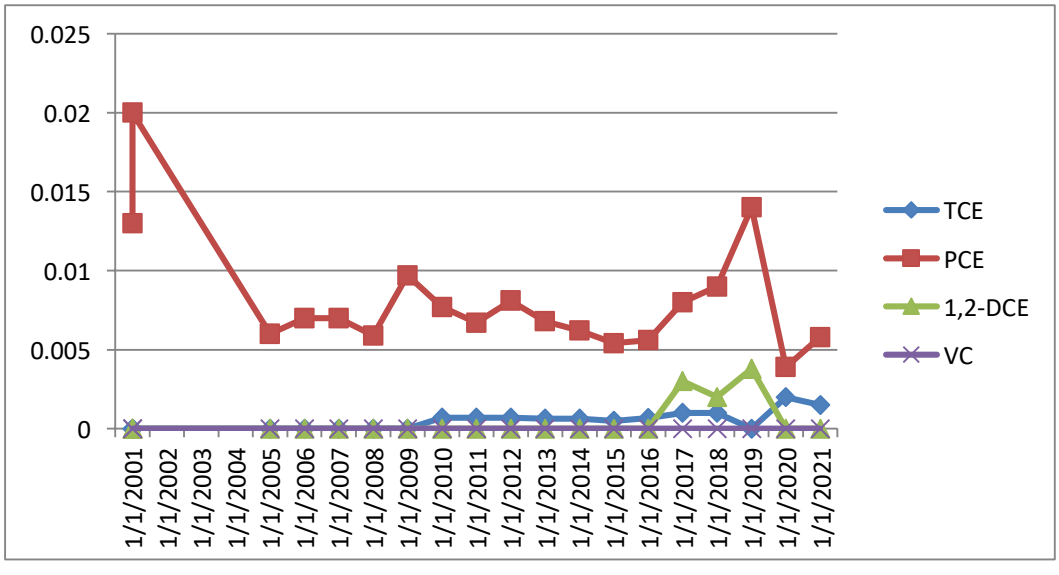


MW-15 Groundwater Data
Delphi Harrison Thermal Systems Site
GM Components Holdings, LLC
Lockport, New York

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
5/5/2016	0.00068	0.0056	<0.0009	<0.0009
4/27/2017	0.001	0.008	0.003	<0.0009
5/9/2018	0.001	0.009	0.002	<0.0009
5/16/2019	< 0.0026	0.014	0.0038	<0.0009
6/25/2020	0.002	0.0039	<0.0009	<0.0009
8/19/2021	0.0015	0.0058	<0.0009	<0.0009

Notes:
Results are provided in parts per million (ppm)
Non Detect values expressed with "<" and MDL. 1,2 DCE value includes total cis-1,2 DCE and trans 1,2 DCE.
If "<" value, the listed value is the higher of the two method detection limits.

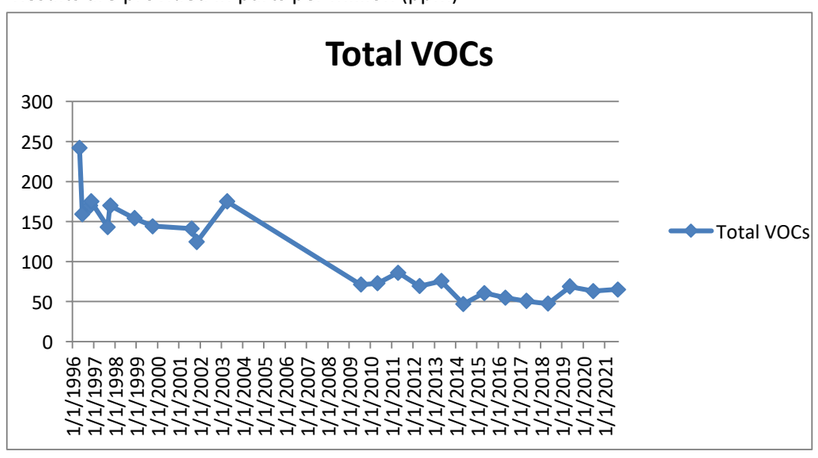
Duplicate samples were collected from this location on 10/30/01. The higher of the two concentrations were recorded in this graph.



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

Date	Total VOCs
4/30/1996	242
6/20/1996	159
10/30/1996	170
11/21/1996	175
8/28/1997	143
10/10/1997	170
12/2/1998	154
10/7/1999	144.14
8/9/2001	141.283
10/31/2001	124.25
4/7/2003	175.08
7/20/2009	71.2
4/29/2010	72.8012
4/22/2011	86.0018
4/20/2012	69.2614
5/1/2013	75.6
5/13/2014	46.9
5/8/2015	60.8
5/5/2016	54.9
5/2/2017	50.8
5/8/2018	47.4
5/16/2019	68.905
6/24/2020	63.2
8/17/2021	65.1

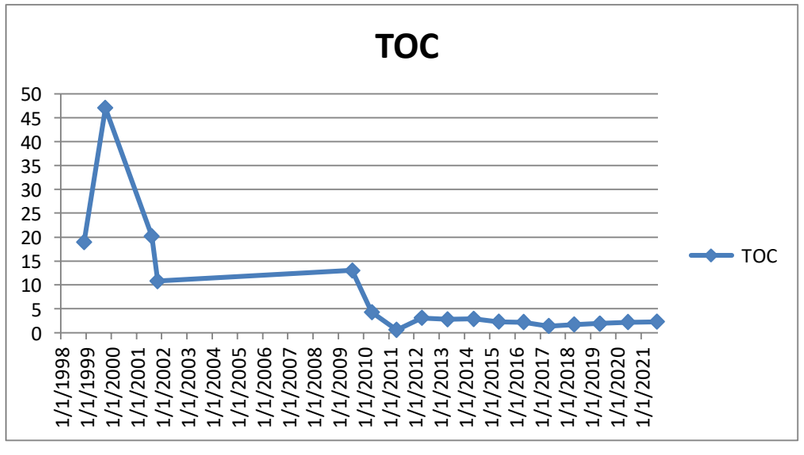
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
12/2/1998	19
10/7/1999	47
8/9/2001	20.2
10/31/2001	10.8
7/20/2009	13
4/29/2010	4.3
4/22/2011	0.6
4/20/2012	3.1
5/1/2013	2.8
5/13/2014	2.9
5/8/2015	2.3
5/5/2016	2.2
5/2/2017	1.4
5/8/2018	1.7
5/16/2019	1.9
5/16/2019	1.9
6/24/2020	2.2
8/17/2021	2.3

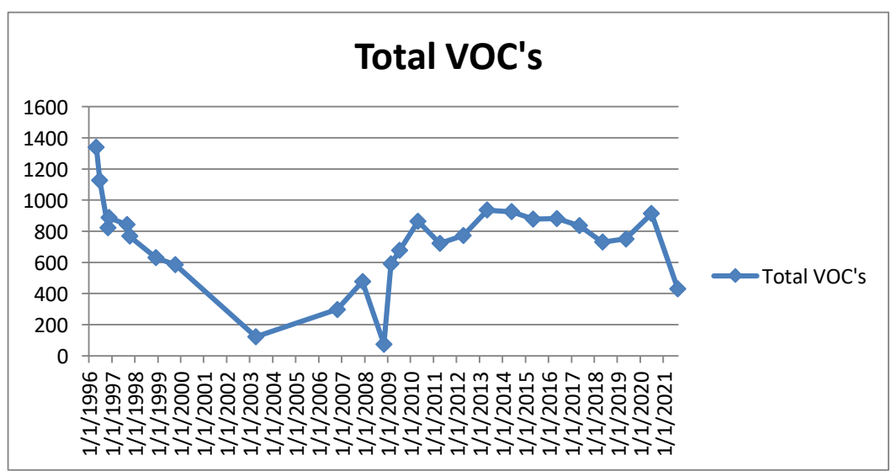
Notes:
Results are provided in parts per million (ppm)



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

Date	Total VOC's
4/30/1996	1338.8
6/20/1996	1126.4
10/30/1996	824.3
11/21/1996	888.1
8/28/1997	843.1
10/10/1997	767.8
12/3/1998	629.2
10/7/1999	584.5
4/7/2003	123
10/25/2006	297.777
11/29/2007	477.249
11/5/2008	73.7
2/24/2009	589.671
7/15/2009	678.912
4/29/2010	864.34
4/11/2011	722
4/20/2012	773
5/3/2013	935
5/30/2014	926
5/7/2015	878.14
5/17/2016	881
5/11/2017	835
5/10/2018	730
5/17/2019	751
6/26/2020	913
8/19/2021	431

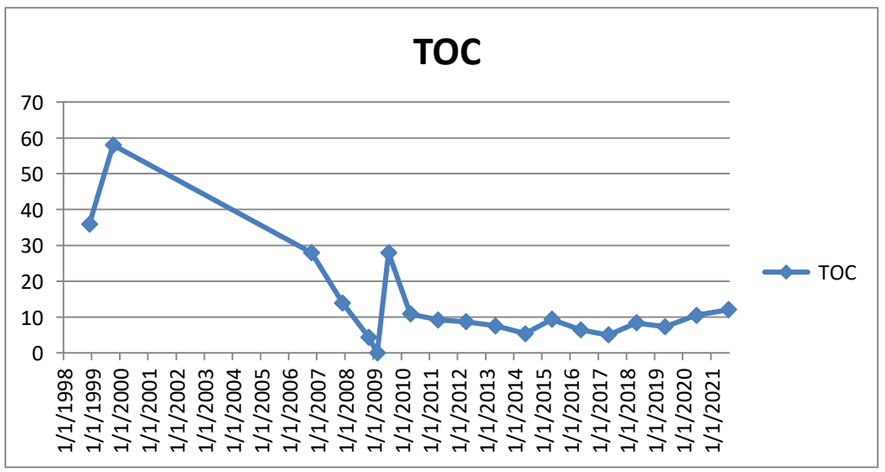
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
12/3/1998	36
10/7/1999	58
10/25/2006	28
11/29/2007	14
11/4/2008	4.4
2/24/2009	NM
7/20/2009	28
4/29/2010	10.9
4/22/2011	9.2
4/20/2012	8.7
5/3/2013	7.6
5/30/2014	5.4
5/7/2015	9.4
5/17/2016	6.5
5/11/2017	5
5/10/2018	8.4
5/17/2019	7.3
6/26/2020	10.5
8/19/2021	12.1

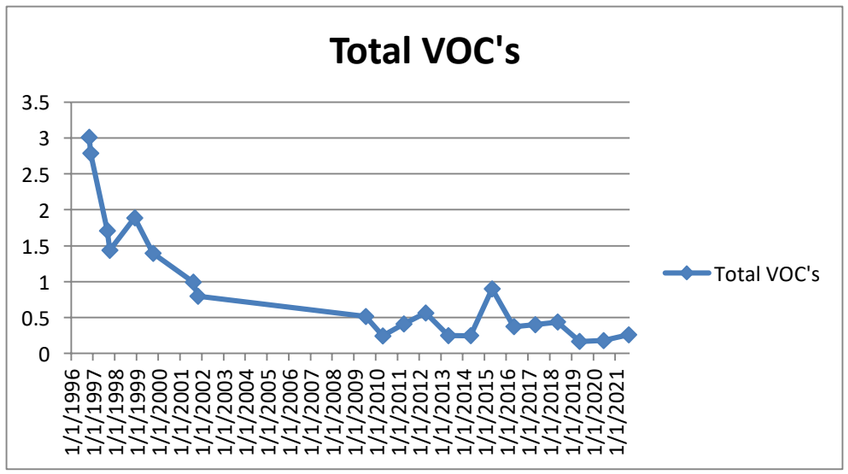
Notes:
Results are provided in parts per million (ppm)



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

Date	Total VOC's
10/30/1996	3.01
11/21/1996	2.79
8/28/1997	1.71
10/10/1997	1.437
12/1/1998	1.886
10/6/1999	1.392
8/9/2001	0.991
10/31/2001	0.799
7/15/2009	0.516
4/28/2010	0.245
4/21/2011	0.414
4/19/2012	0.562
5/1/2013	0.25
5/14/2014	0.247
5/8/2015	0.9
5/5/2016	0.371
5/2/2017	0.401
5/9/2018	0.436
5/16/2019	0.165
6/24/2020	0.18
8/17/2021	0.26

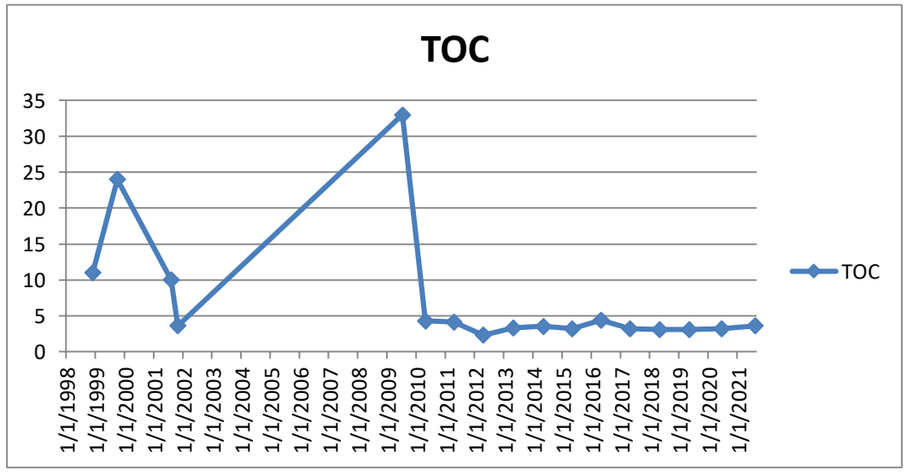
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
12/1/1998	11
10/5/1999	24
8/9/2001	10
10/31/2001	3.6
7/15/2009	33
4/28/2010	4.3
4/21/2011	4.1
4/19/2012	2.3
5/1/2013	3.3
5/14/2014	3.5
5/8/2015	3.2
5/5/2016	4.4
5/2/2017	3.2
5/9/2018	3.1
5/16/2019	3.1
6/24/2020	3.2
8/17/2021	3.6

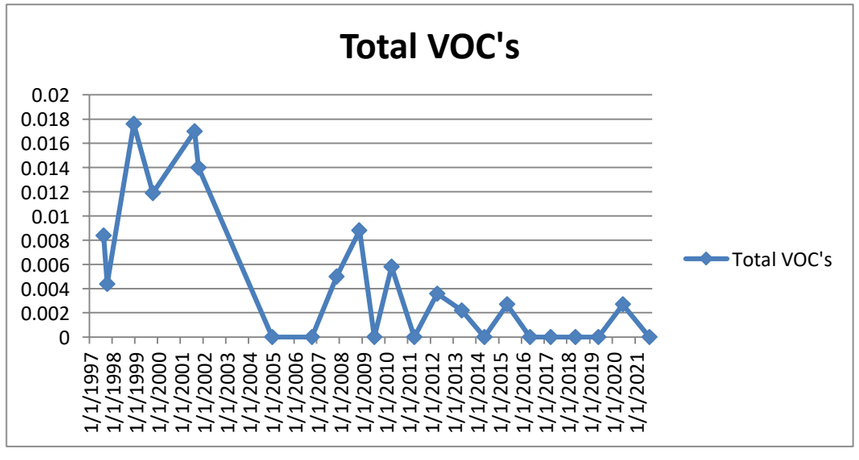
Notes:
Results are provided in parts per million (ppm)



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

Date	Total VOC's
8/28/1997	0.0084
10/10/1997	0.0044
12/1/1998	0.0176
10/5/1999	0.0119
8/8/2001	0.017
10/30/2001	0.014
1/12/2005	0
10/24/2006	0
11/28/2007	0.005
11/4/2008	0.0088
7/16/2009	0
4/28/2010	0.0058
4/21/2011	0
4/19/2012	0.0036
5/2/2013	0.0022
5/20/2014	0
5/6/2015	0.0027
5/5/2016	0
4/28/2017	0
5/10/2018	0
5/17/2019	0
6/25/2020	0.0027
8/19/2021	0

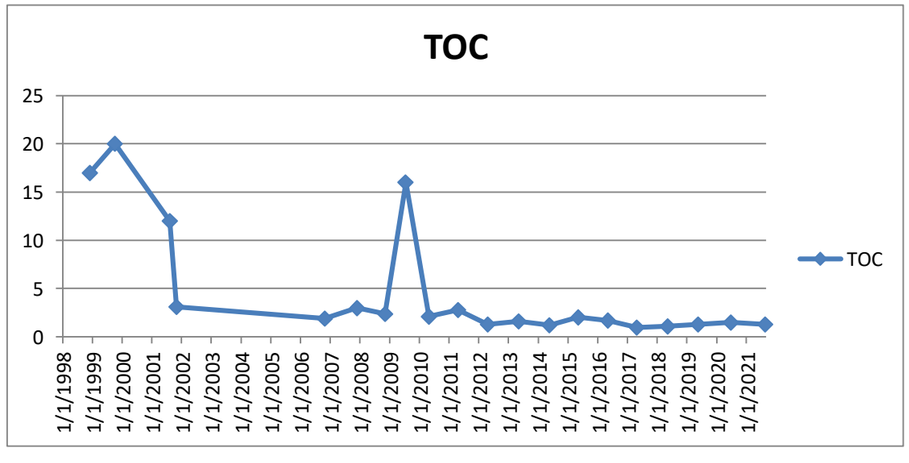
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
12/1/1998	17
10/5/1999	20
8/8/2001	12
10/30/2001	3.1
10/24/2006	1.9
11/28/2007	3
11/4/2008	2.38
7/16/2009	16
4/28/2010	2.1
4/21/2011	2.8
4/18/2012	1.3
5/2/2013	1.6
5/20/2014	1.2
5/6/2015	2
5/5/2016	1.7
4/28/2017	0.96
5/10/2018	1.1
5/17/2019	1.3
6/25/2020	1.5
8/19/2021	1.3

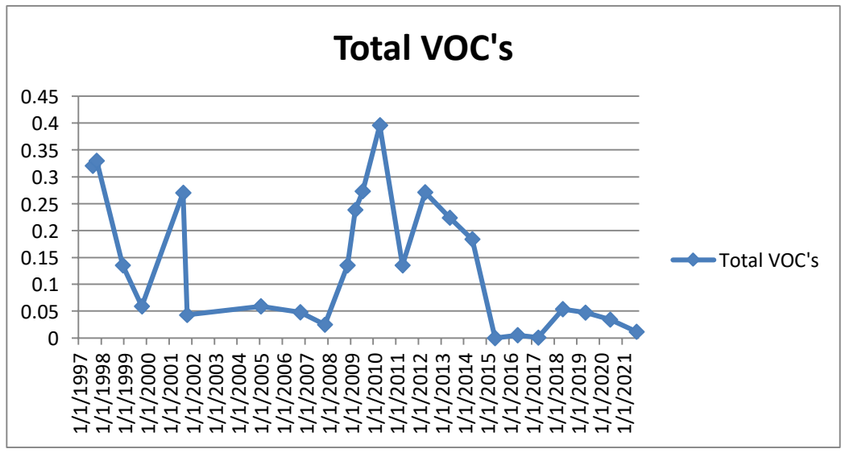
Notes:
Results are provided in parts per million (ppm)



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

Date	Total VOC's
8/28/1997	0.32
10/10/1997	0.33
12/1/1998	0.135
10/6/1999	0.059
8/8/2001	0.27
10/30/2001	0.043
1/12/2005	0.059
10/25/2006	0.048
11/28/2007	0.025
11/14/2008	0.135
3/16/2009	0.238
7/16/2009	0.273
4/28/2010	0.3959
4/20/2011	0.1351
4/18/2012	0.27083
5/3/2013	0.224
5/19/2014	0.1834
5/7/2015	0
5/6/2016	0.0049
4/28/2017	0.001
5/9/2018	0.0537
5/17/2019	0.047
6/26/2020	0.034
8/20/2021	0.0115

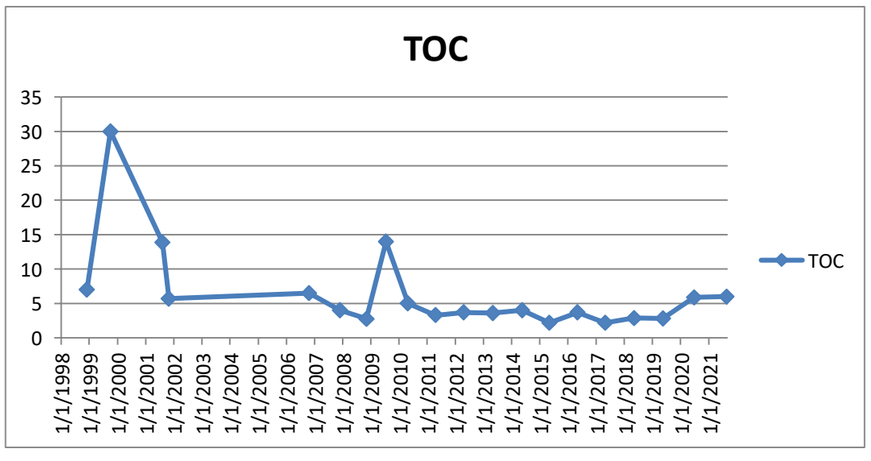
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
12/1/1998	7
10/5/1999	30
8/8/2001	13.9
10/30/2001	5.7
10/25/2006	6.5
11/28/2007	4
11/4/2008	2.74
7/16/2009	14
4/28/2010	5
4/20/2011	3.3
4/18/2012	3.7
5/3/2013	3.6
5/19/2014	4
5/7/2015	2.2
5/6/2016	3.7
4/28/2017	2.2
5/9/2018	2.9
5/17/2019	2.8
6/26/2020	5.9
8/20/2021	6

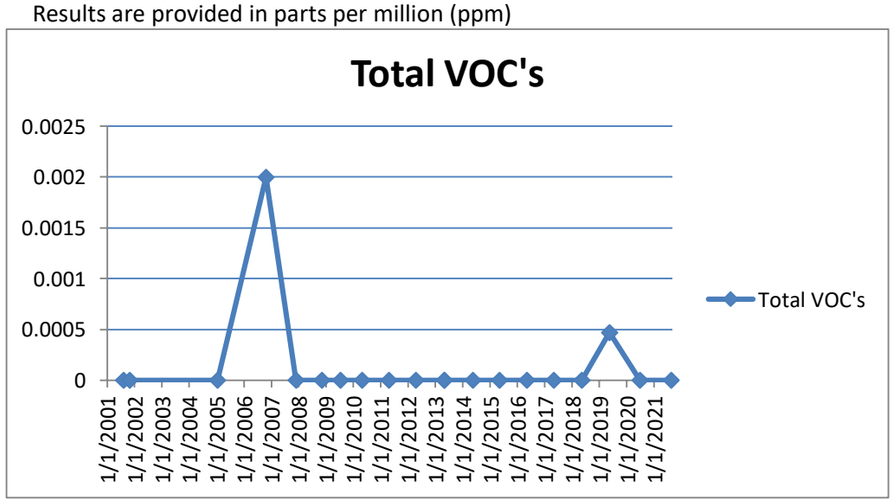
Notes:
Results are provided in parts per million (ppm)



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

Date	Total VOC's
8/8/2001	0
10/29/2001	0
1/12/2005	0
10/24/2006	0.002
11/28/2007	0
11/5/2008	0
7/16/2009	0
4/28/2010	0
4/21/2011	0
4/19/2012	0
5/2/2013	0
5/2/2013	0
5/20/2014	0
5/7/2015	0
5/5/2016	0
5/3/2017	0
5/10/2018	0
5/17/2019	0.00047
6/25/2020	0
8/19/2021	0

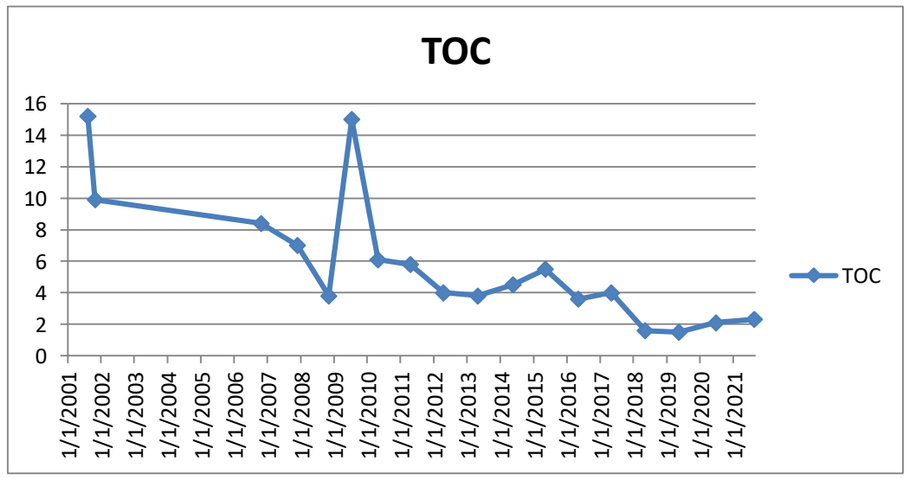
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
8/8/2001	15.2
10/29/2001	9.9
10/24/2006	8.4
11/28/2007	7
11/5/2008	3.8
7/16/2009	15
4/28/2010	6.1
4/21/2011	5.8
4/19/2012	4
5/2/2013	3.8
5/20/2014	4.5
5/13/2015	5.5
5/5/2016	3.6
5/3/2017	4
5/10/2018	1.6
5/17/2019	1.5
6/25/2020	2.1
8/19/2021	2.3

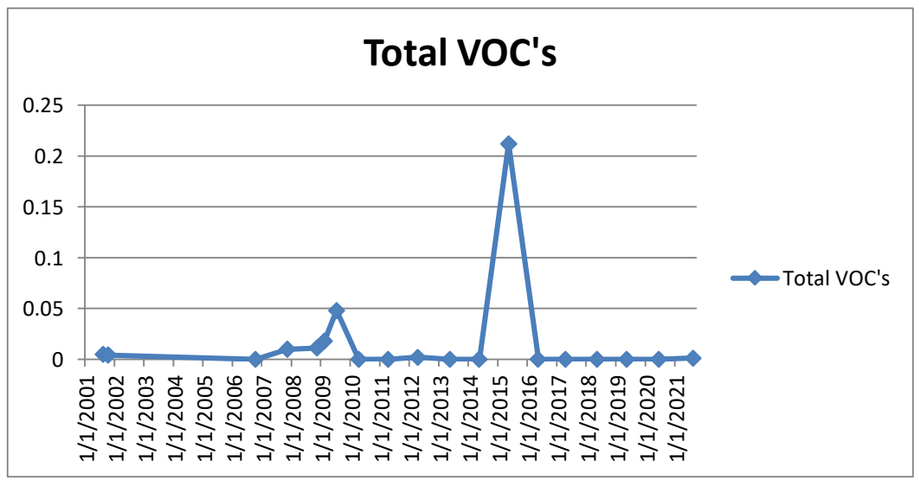
Notes:
Results are provided in parts per million (ppm)



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

Date	Total VOC's
8/10/2001	0.005
10/30/2001	0.004
10/24/2006	0
11/29/2007	0.01
11/4/2008	0.011
2/24/2009	0.018
7/19/2009	0.048
4/27/2010	0
4/21/2011	0
4/19/2012	0.002
5/3/2013	0
5/23/2014	0
5/7/2015	0.2122
5/6/2016	0
4/28/2017	0
5/11/2018	0
5/21/2019	0
6/26/2020	0
8/20/2021	0.0013

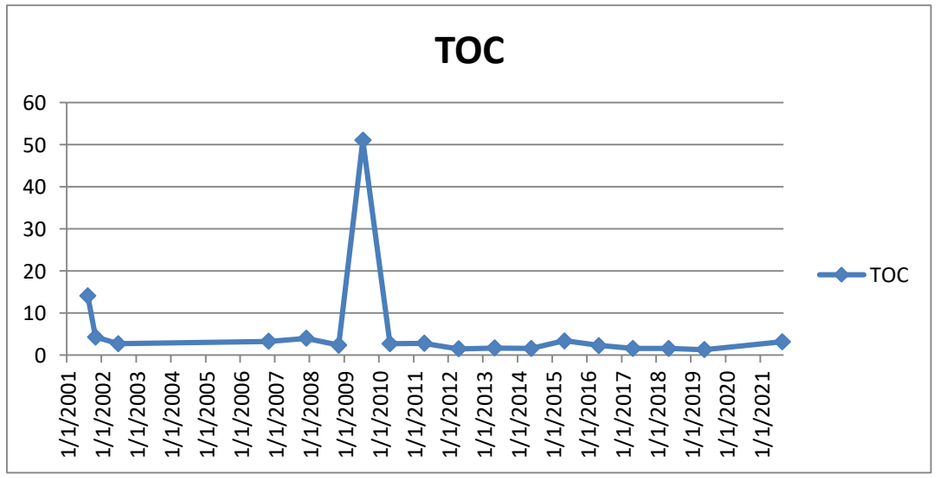
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
8/9/2001	14.1
10/30/2001	4.3
10/24/2006	3.3
11/29/2007	4
11/4/2008	2.4
7/16/2009	51
4/27/2010	2.7
4/21/2011	2.8
4/19/2012	1.5
5/3/2013	1.7
5/23/2014	1.6
5/7/2015	3.4
5/6/2016	2.3
4/28/2017	1.6
5/11/2018	1.6
5/21/2019	1.3
6/26/2002	2.7
8/20/2021	3.2

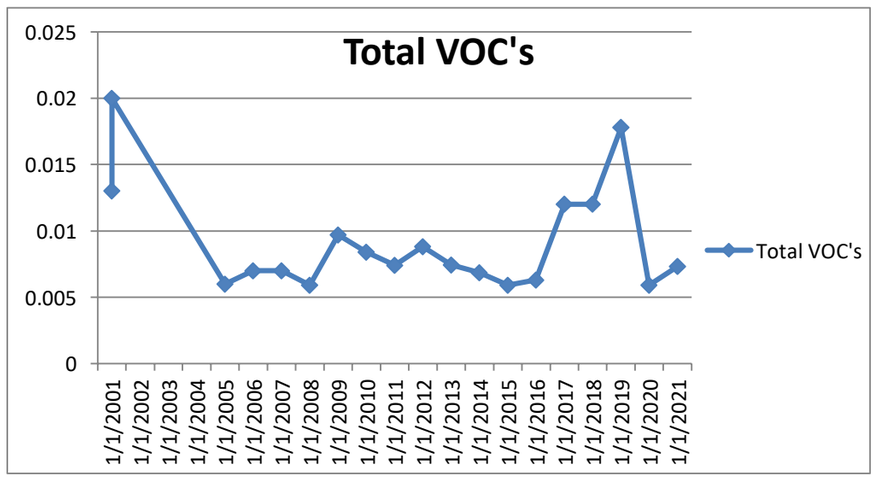
Notes:
Results are provided in parts per million (ppm)



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

Date	Total VOC's
8/8/2001	0.013
10/30/2001	0.02
1/12/2005	0.006
10/24/2006	0.007
11/28/2007	0.007
11/4/2008	0.0059
7/16/2009	0.0097
4/28/2010	0.0084
4/21/2011	0.0074
4/18/2012	0.0088
5/1/2013	0.00744
5/19/2014	0.00684
5/6/2015	0.0059
5/5/2016	0.00628
4/27/2017	0.012
5/9/2018	0.012
5/16/2019	0.0178
6/25/2020	0.0059
8/19/2021	0.0073

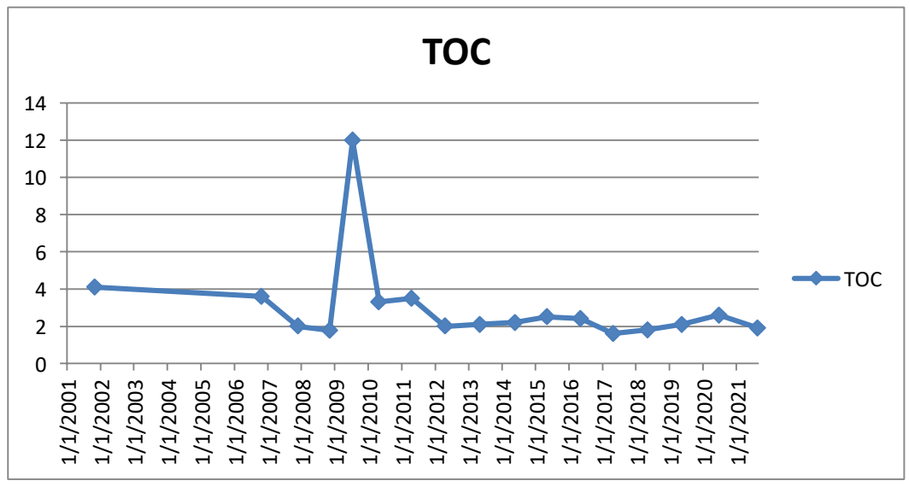
Notes:
Results are provided in parts per million (ppm)



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

Date	TOC
10/30/2001	4.1
10/24/2006	3.6
11/28/2007	2
11/4/2008	1.77
7/16/2009	12
4/28/2010	3.3
4/21/2011	3.5
4/18/2012	2
5/1/2013	2.1
5/19/2014	2.2
5/6/2015	2.5
5/4/2016	2.4
4/27/2017	1.6
5/9/2018	1.8
5/16/2019	2.1
6/25/2020	2.6
8/19/2021	1.9

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



APPENDIX C

RESULTS EPA CVOC MONITORED NATURAL ATTENUATION RANKING SYSTEM

EPA cVOC MONITORED NATURAL ATTENUATION RANKING SYSTEM

2021 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	0	3	3	3	0	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		2	0	0	0	2	0	2	0
Sulfate	<20 mg/L	2	243		0	0	0	0	0	0	0	0
Sulfide	>1 mg/L	3	0.6		NT	NT	NT	NT	NT	NT	NT	NT
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	0	2	1	0	1	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	1	1	0
Carbon Dioxide	>2 times background (4.2)	1	6.8		1	1	1	1	1	1	1	1
Alkalinity	>2 times background (200)	1	372		1	1	1	1	1	1	1	1
Chloride	>2 times background (1440)	2	338		2	0	2	0	2	2	2	0
Hydrogen	>1 nM	3	NT		3	NT	3	3	3	3	3	3
Hydrogen	<1nM	0	NT									
Volatile Fatty Acids	>0.1 mg/L	2	ND		NT	NT	NT	NT	NT	NT	NT	NT
BTEX	>0.1 mg/L	2	ND		NT	NT	NT	NT	NT	NT	NT	NT
PCE		0	ND		0	0	0	0	0	0	0	0
TCE	If Daughter Product	2	190		2	2	2	0	2	0	0	0
DCE	If Daughter Product	2	10,034	2	2	2	2	0	2	0	0	0
VC	If Daughter Product	2	380.00	2	2	0	2	0	2	0	0	0
1,1,1-TCA		0	ND		NT	NT	NT	NT	NT	NT	NT	NT
DCA	If Daughter Product	2	ND		NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride		0	ND		NT	NT	NT	NT	NT	NT	NT	NT
Chloroethane	If Daughter Product	2	ND		NT	NT	NT	NT	NT	NT	NT	NT
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		NT	NT	NT	NT	NT	NT	NT	NT
Dichloromethane	If Daughter Product	2	ND		NT	NT	NT	NT	NT	NT	NT	NT
				8	**27**	**12**	**18**	**12**	**21**	**10**	**16**	**10**

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

APPENDIX D

DATA VALIDATION AND ANALYTICAL LABORATORY REPORTS

Technical Memorandum

November 08, 2021

To	Denis Conley [dconley@haleyaldrich.com]	**Tel**	773-380-9241
Copy to	Claire Mondello [cmondello@haleyaldrich.com] Tom Bohlen [Thomas.bohlen@gza.com] Kathy Willy	**Email**	nancy.bergstrom@ghd.com
From	Nancy Bergstrom/cs/298-NF	**Ref. No.**	058507-256043
Subject	Analytical Results and Reduced Validation Annual Groundwater Monitoring Delphi Harrison Thermal Systems Site NYSDEC Site No. 9-32-113 Lockport, New York August 2021		

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in support of the Annual Groundwater Monitoring at the Delphi Harrison Thermal Systems Site, NYSDEC Site No. 9-32-113 during August 2021. Samples were submitted to Eurofins TestAmerica located in Amherst, New York. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, duplicate data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS), and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", United States Environmental Protection Agency (USEPA)-540-R-10-011, January 2010.

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008.

These items will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Manganese and sodium were detected in one metal method blank. The investigative samples associated with the low−level detections reported concentrations significantly greater than the associated laboratory blank concentrations for the analytes of interest. These sample results were not impacted by the contamination detected. The remaining method blank results were non-detect, indicating laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries were within the laboratory control limits.

5. Laboratory Control Sample Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. If only the MS or MSD recovery was outside of control limits, no qualification of the data was performed based on the acceptable recovery of the companion spike and the acceptable RPD.

The laboratory performed site-specific MS/MSD analyses internally.

Organic Analyses

No project samples were used for organic MS/MSD analyses; therefore, they were not used to assess project accuracy or precision.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". With the exception of chloride, all percent recoveries and RPD values were within the laboratory control limits. Table 4 lists outlying MS/MSD recoveries. Associated data are qualified as noted in the table.

7. Matrix Spike Analyses

To evaluate the effects of sample matrices on the preparation, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS samples. For this study, MS samples for inorganic analyses were prepared and analyzed by the laboratory.

The MS results were evaluated per the "Guidelines".

With the exception of alkalinity and ammonia, all MS analyses performed were acceptable, demonstrating acceptable analytical accuracy. Table 5 lists outlying MS recoveries. Associated sample data are qualified as noted in the table.

8. Duplicate Sample Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory for inorganic analyses. The duplicate results were evaluated per the "Guidelines". All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

9. Field QA/QC Samples

The field QA/QC consisted of three trip blank samples.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, three trip blank samples were submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

10. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

11. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Regards,

Nancy Bergstrom
Digital Intelligence - Data Management - Data Validator

Table 1

Sample Collection and Analysis Summary
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

					Analysis/Parameters											
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Select VOC**	**Dissolved Gases**	**Select Metals**	**Chloride, Sulfate**	**Ammonia**	**Nitrate, Nitrite**	**TOC**	**Alkalinity**	**Sulfide**	**VFA**	**Hydrogen**	**Comments**
MW-4-081721	MW-4	Water	08/17/2021	12:00	X	X	X	X	X	X	X	X	X	X	X	
MW-10-081721	MW-10	Water	08/17/2021	15:30	X	X	X	X	X	X	X	X	X	X	X	
TRIP BLANK-081721	-	Water	08/17/2021	-	X											Trip Blank
MW-11-081921	MW-11	Water	08/19/2021	12:30	X	X	X	X	X	X	X	X	X	X	X	
MW-13-081921	MW-13	Water	08/19/2021	15:35	X	X	X	X	X	X	X	X	X	X	X	
MW-15-081921	MW-15	Water	08/19/2021	10:20	X	X	X	X	X	X	X	X	X	X	X	
TRIP BLANK-081921	-	Water	08/19/2021	-	X											Trip Blank
MW-12-082021	MW-12	Water	08/20/2021	08:20	X	X	X	X	X	X	X	X	X	X	X	
MW-14-082021	MW-14	Water	08/20/2021	10:57	X	X	X	X	X	X	X	X	X	X	X	
MW-7-082021	MW-7	Water	08/20/2021	13:16	X	X	X	X	X	X	X	X	X	X		
TRIP BLANK-082021	-	Water	08/20/2021	-	X											Trip Blank

Notes:

VOC - Volatile Organic Compounds
TOC - Total Organic Carbon
VFA - Volatile Fatty Acids
\- - Not applicable

Table 2

Validated Analytical Results Summary
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

Location ID:		**MW-4**	**MW-7**	**MW-10**	**MW-11**	**MW-12**	**MW-13**
Sample Name:		**MW-4-081721**	**MW-7-082021**	**MW-10-081721**	**MW-11-081921**	**MW-12-082021**	**MW-13-081921**
Sample Date:		**08/17/2021**	**08/20/2021**	**08/17/2021**	**08/19/2021**	**08/20/2021**	**08/19/2021**
Depth:		**--**	**--**	**--**	**--**	**--**	**--**
Parameters	**Unit**						
Volatile Organic Compounds							
cis-1,2-Dichloroethene	µg/L	27000	31000	210	1.0 U	5.6	1.0 U
Tetrachloroethene	µg/L	800 U	20000 U	4.0 U	1.0 U	2.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	800 U	20000 U	4.0 U	1.0 U	2.0 U	1.0 U
Trichloroethene	µg/L	36000	400000	36	1.0 U	2.0 U	1.0 U
Vinyl chloride	µg/L	2100	20000 U	14	1.0 U	5.9	1.0 U
Dissolved Gases							
Carbon dioxide	µg/L	39000	16000	36000	16000	74000	56000
Ethane	µg/L	33 J	46 J	7.5 U	7.5 U	170 U	7.5 U
Ethene	µg/L	350	820	7.0 U	7.0 U	150 U	7.0 U
Methane	µg/L	1100	77	86	29	260	4.0 U
Metals							
Iron	mg/L	1.2	0.050 U	0.071	0.38	10.8	0.24
Magnesium	mg/L	91.3	46.6	35.3	33.4	58.8	40.6
Manganese	mg/L	0.51	0.012	0.75	0.15	6.8	0.38
Potassium	mg/L	20.7	11.6	3.1	8.0	5.1	10.2
Sodium	mg/L	1480	229	1140	118	1570	1010

Table 2

Validated Analytical Results Summary
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

Location ID:		**MW-4**	**MW-7**	**MW-10**	**MW-11**	**MW-12**	**MW-13**
Sample Name:		**MW-4-081721**	**MW-7-082021**	**MW-10-081721**	**MW-11-081921**	**MW-12-082021**	**MW-13-081921**
Sample Date:		**08/17/2021**	**08/20/2021**	**08/17/2021**	**08/19/2021**	**08/20/2021**	**08/19/2021**
Depth:		**--**	**--**	**--**	**--**	**--**	**--**
Parameters	**Unit**						
General Chemistry							
2-Hydroxypropanoic acid	mg/L	50.0 U	5.0 U	20.0 U	5.0 U	50.0 U	20.0 U
Acetic acid	mg/L	50.0 U	1.6 J	20.0 U	5.0 U	50.0 U	20.0 U
Alkalinity, total (as CaCO3)	mg/L	309	253 J	356	260 J	373 J	460 J
Ammonia-N	mg/L	1.5	0.51 J	0.020 U	0.16 J	1.5 J	0.061 J
Butanoic acid	mg/L	50.0 U	5.0 U	20.0 U	5.0 U	50.0 U	20.0 U
Chloride	mg/L	4030 J	391	1810 J	189	2910	1700
Formic acid	mg/L	50.0 U	5.0 U	20.0 U	5.0 U	50.0 U	20.0 U
Nitrate (as N)	mg/L	0.050 U	0.050 U	0.13	0.050 U	0.050 U	0.53
Nitrite (as N)	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Propionic acid	mg/L	50.0 U	5.0 U	20.0 U	5.0 U	50.0 U	20.0 U
Pyruvic acid	mg/L	75.0 U	7.5 U	30.0 U	7.5 U	75.0 U	30.0 U
Sulfate	mg/L	777	201	316	104	131	114
Sulfide	mg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Total organic carbon (TOC)	mg/L	2.3	12.1	3.6	1.3	6.0	2.3

Table 2

Validated Analytical Results Summary
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

Location ID:		**MW-14**	**MW-15**	**TRIP BLANK**	**TRIP BLANK**	**TRIP BLANK**
Sample Name:		**MW-14-082021**	**MW-15-081921**	**TRIP BLANK-081721**	**TRIP BLANK-081921**	**TRIP BLANK-082021**
Sample Date:		**08/20/2021**	**08/19/2021**	**08/17/2021**	**08/19/2021**	**08/20/2021**
Depth:		**--**	**--**	**--**	**--**	**--**
Parameters	**Unit**					
Volatile Organic Compounds						
cis-1,2-Dichloroethene	µg/L	1.3	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	1.0 U	5.8	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	1.0 U	1.5	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dissolved Gases						
Carbon dioxide	µg/L	47000	60000	--	--	--
Ethane	µg/L	7.5 U	7.5 U	--	--	--
Ethene	µg/L	7.0 U	7.0 U	--	--	--
Methane	µg/L	200	4.0 U	--	--	--
Metals						
Iron	mg/L	1.1	0.050 U	--	--	--
Magnesium	mg/L	98.7	44.7	--	--	--
Manganese	mg/L	0.67	0.36	--	--	--
Potassium	mg/L	7.4	4.3	--	--	--
Sodium	mg/L	1310	369	--	--	--

Table 2

Validated Analytical Results Summary
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

Location ID:		**MW-14**	**MW-15**	**TRIP BLANK**	**TRIP BLANK**	**TRIP BLANK**
Sample Name:		**MW-14-082021**	**MW-15-081921**	**TRIP BLANK-081721**	**TRIP BLANK-081921**	**TRIP BLANK-082021**
Sample Date:		**08/20/2021**	**08/19/2021**	**08/17/2021**	**08/19/2021**	**08/20/2021**
Depth:		**--**	**--**	**--**	**--**	**--**
Parameters	**Unit**					
General Chemistry						
2-Hydroxypropanoic acid	mg/L	20.0 U	10.0 U	--	--	--
Acetic acid	mg/L	20.0 U	10.0 U	--	--	--
Alkalinity, total (as CaCO3)	mg/L	355 J	399 J	--	--	--
Ammonia-N	mg/L	0.30 J	0.020 UJ	--	--	--
Butanoic acid	mg/L	20.0 U	10.0 U	--	--	--
Chloride	mg/L	2680	716	--	--	--
Formic acid	mg/L	20.0 U	10.0 U	--	--	--
Nitrate (as N)	mg/L	0.045 J	0.65	--	--	--
Nitrite (as N)	mg/L	0.050 U	0.050 U	--	--	--
Propionic acid	mg/L	20.0 U	10.0 U	--	--	--
Pyruvic acid	mg/L	30.0 U	15.0 U	--	--	--
Sulfate	mg/L	77.3	68.4	--	--	--
Sulfide	mg/L	1.0 U	1.0 U	--	--	--
Total organic carbon (TOC)	mg/L	3.2	1.9	--	--	--

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
UJ - Not detected, associated reporting limit is estimated
-- - Not applicable
N - Nitrogen

Table 3

Analytical Methods
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

Parameter	Method	Matrix	Holding Time Collection to Analysis (Days)
Select Volatile Organic Compounds (VOCs)	SW-846 8260C	Water	14
Methane, Ethane, Ethene, Carbon dioxide	RSK 175	Water	14
Select Metals	SW-846 6010C	Water	180
Chloride, Sulfate	EPA 300.0	Water	28
Ammonia -N	EPA 350.1	Water	28
Nitrate, Nitrite	EPA 353.2	Water	48 hours
Total Organic Carbon (TOC)	SW 846 9060A	Water	28
Alkalinity	SM 2320B	Water	14
Sulfide	SM 4500 S2 F	Water	7
Volatile Fatty Acids (VFA)	VFA-IC	Water	7
Hydrogen	AM20GAX	Water	14

Notes:

N - Nitrogen

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
SM - "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, with subsequent revisions
EPA - "Methods for Chemical Analysis of Water and Wastes", USEPA-600/4-79-020, March 1983 with subsequent revisions
USEPA - United States Environmental Protection Agency
RSK 175 - 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
VFA-IC - Eurofins TestAmerica In-house Method for Volatile Fatty Acids, Ion Chromatography
AM20GAX - Pace Analytical In-house Method for Dissolved Gases

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Qualified Result	Units
General Chemistry	MW-4-081721	Chloride	71	52	8	81-120	15	4030 J	mg/L
	MW-10-081721							1810 J	mg/L

Notes:

MS - Matrix Spike
MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated concentration

Table 5

Qualified Sample Results Due to Outlying MS Results
Annual Groundwater Monitoring
Delphi Harrison Thermal Systems Site
NYSDEC Site No. 9-32-113
Lockport, New York
August 2021

Parameter	Spiked Sample ID	Analyte	MS % Recovery	Control Limits % Recovery	Associated Sample IDs	Qualified Result	Units
General Chemistry	MW-13-081921	Ammonia-N	79	90 - 110	MW-11-081921	0.16 J	mg/L
					MW-13-081921	0.061 J	mg/L
					MW-15-081921	0.020 UJ	mg/L
General Chemistry	MW-7-082021	Ammonia-N	87	90 - 110	MW-12-082021	1.5 J	mg/L
					MW-14-082021	0.30 J	mg/L
					MW-7-082021	0.51 J	mg/L
General Chemistry	MW-10-081721	Alkalinity	58	90 - 110	MW-4-081721	309 J	mg/L
					MW-10-081721	356 J	mg/L
General Chemistry	MW-13-081921	Alkalinity	44	90 - 110	MW-11-081921	260 J	mg/L
	MW-7-082021	Alkalinity	28	90 - 110	MW-13-081921	460 J	mg/L
					MW-15-081921	399 J	mg/L
					MW-12-082021	373 J	mg/L
					MW-14-082021	355 J	mg/L
					MW-7-082021	253 J	mg/L

Notes:

MS - Matrix Spike
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated
N - Nitrogen

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 480-188404-1
Laboratory Sample Delivery Group: Delphi Harrison
Client Project/Site: 058507, GM Lockport SSOW 256043

For:
GHD Services Inc.
2055 Niagara Falls Blvd., Suite 3
Niagara Falls, New York 14304

Attn: Kathleen Willy

Denise D Heckler

Authorized for release by:
9/12/2021 2:55:16 PM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@Eurofinset.com

Table of Contents

Qualifiers

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
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.
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.

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.
F1	MS and/or MSD recovery exceeds control 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
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
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)
TNTC	Too Numerous To Count

Job ID: 480-188404-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-188404-1

Comments
No additional comments.

Receipt
The samples were received on 8/17/2021 5:00 PM, 8/19/2021 5:37 PM and 8/20/2021 3:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.8º C, 3.5º C and 5.4º C.

Receipt Exceptions
No VFA volume received for sample point "MW-7". Method not assigned.

GC/MS VOA
Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-4-081721 (480-188404-1). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-10-081721 (480-188404-2). Elevated reporting limits (RLs) are provided.

Method 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-12-082021 (480-188572-1). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-7-082021 (480-188572-3). 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 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-4-081721 (480-188404-1) and MW-10-081721 (480-188404-2). Elevated reporting limits (RLs) are provided.

Method VFA-IC: The following samples were diluted due to sample matrix interference: MW-4-081721 (480-188404-1) and MW-10-081721 (480-188404-2). Elevated reporting limits (RLs) are provided.

Method VFA-IC: The following samples were diluted due to sample matrix interference: MW-11-081921 (480-188531-1), MW-13-081921 (480-188531-2), MW-15-081921 (480-188531-3), MW-12-082021 (480-188572-1), MW-14-082021 (480-188572-2) and MW-7-082021 (480-188572-3). Elevated reporting limits (RLs) are provided.

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-11-081921 (480-188531-1), MW-13-081921 (480-188531-2), MW-15-081921 (480-188531-3), MW-12-082021 (480-188572-1), MW-14-082021 (480-188572-2) and MW-7-082021 (480-188572-3). 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
Method RSK-175: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-4-081721 (480-188404-1). Elevated reporting limits (RLs) are provided.

Method RSK-175: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-12-082021 (480-188572-1) and MW-7-082021 (480-188572-3). 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.

Job ID: 480-188404-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

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: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Client Sample ID: MW-4-081721 — Lab Sample ID: 480-188404-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	27000		800	650	ug/L	800		8260C	Total/NA
Trichloroethene	36000		800	370	ug/L	800		8260C	Total/NA
Vinyl chloride	2100		800	720	ug/L	800		8260C	Total/NA
Carbon dioxide	39000		5000	5000	ug/L	1		RSK-175	Total/NA
Ethane	33	J	83	17	ug/L	11		RSK-175	Total/NA
Ethene	350		77	17	ug/L	11		RSK-175	Total/NA
Methane	1100		44	11	ug/L	11		RSK-175	Total/NA
Iron	1.2		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	91.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.51	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	20.7		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	1480		5.0	1.6	mg/L	5		6010C	Total/NA
Chloride	4030	F1	25.0	14.1	mg/L	50		300.0	Total/NA
Sulfate	777		100	17.5	mg/L	50		300.0	Total/NA
Ammonia	1.5		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	309		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-10-081721 — Lab Sample ID: 480-188404-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	210		4.0	3.2	ug/L	4		8260C	Total/NA
Trichloroethene	36		4.0	1.8	ug/L	4		8260C	Total/NA
Vinyl chloride	14		4.0	3.6	ug/L	4		8260C	Total/NA
Carbon dioxide	36000		5000	5000	ug/L	1		RSK-175	Total/NA
Methane	86		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.071		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	35.3		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.75	B	0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	3.1		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	1140		5.0	1.6	mg/L	5		6010C	Total/NA
Chloride	1810		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	316		40.0	7.0	mg/L	20		300.0	Total/NA
Nitrate	0.13		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	3.6		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	356	F1	5.0	0.79	mg/L	1		SM 2320B	Total/NA

Client Sample ID: TRIP BLANK-081721 — Lab Sample ID: 480-188404-3

No Detections.

Client Sample ID: MW-11-081921 — Lab Sample ID: 480-188531-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	16000		5000	5000	ug/L	1		RSK-175	Total/NA
Methane	29		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	0.38		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	33.4		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.15		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	8.0		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	118		1.0	0.32	mg/L	1		6010C	Total/NA
Chloride	189		2.5	1.4	mg/L	5		300.0	Total/NA
Sulfate	104		10.0	1.7	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample ID: MW-11-081921 (Continued) — Lab Sample ID: 480-188531-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia	0.16		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	1.3		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	260		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-13-081921 — Lab Sample ID: 480-188531-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon dioxide	56000		5000	5000	ug/L	1		RSK-175	Total/NA
Iron	0.24		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	40.6		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.38		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	10.2		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	1010		2.0	0.65	mg/L	2		6010C	Total/NA
Chloride	1700		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	114		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.061	F1	0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.53		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	2.3		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	460		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-15-081921 — Lab Sample ID: 480-188531-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.8		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	1.5		1.0	0.46	ug/L	1		8260C	Total/NA
Carbon dioxide	60000		5000	5000	ug/L	1		RSK-175	Total/NA
Magnesium	44.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.36		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	4.3		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	369		1.0	0.32	mg/L	1		6010C	Total/NA
Chloride	716		5.0	2.8	mg/L	10		300.0	Total/NA
Sulfate	68.4		20.0	3.5	mg/L	10		300.0	Total/NA
Nitrate	0.65		0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	1.9		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	399		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Client Sample ID: TRIP BLANK-081921 — Lab Sample ID: 480-188531-4

No Detections.

Client Sample ID: MW-12-082021 — Lab Sample ID: 480-188572-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	5.6		2.0	1.6	ug/L	2		8260C	Total/NA
Vinyl chloride	5.9		2.0	1.8	ug/L	2		8260C	Total/NA
Carbon dioxide	74000		5000	5000	ug/L	1		RSK-175	Total/NA
Methane	260		88	22	ug/L	22		RSK-175	Total/NA
Iron	10.8		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	58.8		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	6.8		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	5.1		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	1570		5.0	1.6	mg/L	5		6010C	Total/NA
Chloride	2910		25.0	14.1	mg/L	50		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-12-082021 (Continued) — Lab Sample ID: 480-188572-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	131		100	17.5	mg/L	50		300.0	Total/NA
Ammonia	1.5		0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	6.0		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	373		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-14-082021 — Lab Sample ID: 480-188572-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.3		1.0	0.81	ug/L	1		8260C	Total/NA
Carbon dioxide	47000		5000	5000	ug/L	1		RSK-175	Total/NA
Methane	200		4.0	1.0	ug/L	1		RSK-175	Total/NA
Iron	1.1		0.050	0.019	mg/L	1		6010C	Total/NA
Magnesium	98.7		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.67		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	7.4		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	1310		5.0	1.6	mg/L	5		6010C	Total/NA
Chloride	2680		10.0	5.6	mg/L	20		300.0	Total/NA
Sulfate	77.3		40.0	7.0	mg/L	20		300.0	Total/NA
Ammonia	0.30		0.020	0.0090	mg/L	1		350.1	Total/NA
Nitrate	0.045	J	0.050	0.020	mg/L	1		353.2	Total/NA
Total Organic Carbon	3.2		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	355		5.0	0.79	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-7-082021 — Lab Sample ID: 480-188572-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	31000		20000	16000	ug/L	20000		8260C	Total/NA
Trichloroethene	400000		20000	9200	ug/L	20000		8260C	Total/NA
Carbon dioxide	16000		5000	5000	ug/L	1		RSK-175	Total/NA
Ethane	46	J	83	17	ug/L	11		RSK-175	Total/NA
Ethene	820		77	17	ug/L	11		RSK-175	Total/NA
Methane	77		44	11	ug/L	11		RSK-175	Total/NA
Magnesium	46.6		0.20	0.043	mg/L	1		6010C	Total/NA
Manganese	0.012		0.0030	0.00040	mg/L	1		6010C	Total/NA
Potassium	11.6		0.50	0.10	mg/L	1		6010C	Total/NA
Sodium	229		1.0	0.32	mg/L	1		6010C	Total/NA
Chloride	391		2.5	1.4	mg/L	5		300.0	Total/NA
Sulfate	201		10.0	1.7	mg/L	5		300.0	Total/NA
Ammonia	0.51	F1	0.020	0.0090	mg/L	1		350.1	Total/NA
Total Organic Carbon	12.1		1.0	0.43	mg/L	1		9060A	Total/NA
Total Alkalinity	253	F1	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Acetic acid	1.6	J	5.0	1.5	mg/L	5		VFA-IC	Total/NA

Client Sample ID: TRIP BLANK-082021 — Lab Sample ID: 480-188572-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-4-081721

Lab Sample ID: 480-188404-1

Date Collected: 08/17/21 12:00
Matrix: Water
Date Received: 08/17/21 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	**27000**		800	650	ug/L			08/18/21 18:46	800
Tetrachloroethene	ND		800	290	ug/L			08/18/21 18:46	800
trans-1,2-Dichloroethene	ND		800	720	ug/L			08/18/21 18:46	800
Trichloroethene	**36000**		800	370	ug/L			08/18/21 18:46	800
Vinyl chloride	**2100**		800	720	ug/L			08/18/21 18:46	800

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*08/18/21 18:46*	*800*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*08/18/21 18:46*	*800*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/18/21 18:46*	*800*
Dibromofluoromethane (Surr)	*108*		*75 - 123*		*08/18/21 18:46*	*800*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**39000**		5000	5000	ug/L			08/24/21 10:11	1
Ethane	**33**	**J**	83	17	ug/L			08/18/21 15:05	11
Ethene	**350**		77	17	ug/L			08/18/21 15:05	11
Methane	**1100**		44	11	ug/L			08/18/21 15:05	11

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1.2**		0.050	0.019	mg/L		08/19/21 06:03	08/19/21 19:48	1
Magnesium	**91.3**		0.20	0.043	mg/L		08/19/21 06:03	08/19/21 19:48	1
Manganese	**0.51**	**B**	0.0030	0.00040	mg/L		08/19/21 06:03	08/19/21 19:48	1
Potassium	**20.7**		0.50	0.10	mg/L		08/19/21 06:03	08/20/21 15:52	1
Sodium	**1480**		5.0	1.6	mg/L		08/19/21 06:03	08/20/21 15:56	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4030**	**F1**	25.0	14.1	mg/L			08/18/21 15:55	50
Sulfate	**777**		100	17.5	mg/L			08/18/21 15:55	50
Ammonia	**1.5**		0.020	0.0090	mg/L			08/18/21 13:35	1
Nitrate	ND		0.050	0.020	mg/L			08/18/21 16:54	1
Nitrite	ND		0.050	0.020	mg/L			08/18/21 16:54	1
Total Organic Carbon	**2.3**		1.0	0.43	mg/L			08/20/21 22:41	1
Total Alkalinity	**309**		5.0	0.79	mg/L			08/19/21 12:46	1
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1
Acetic acid	ND		50.0	14.5	mg/L			08/19/21 00:01	50
Formic-acid	ND		50.0	13.0	mg/L			08/19/21 00:01	50
Lactic acid	ND		50.0	15.5	mg/L			08/19/21 00:01	50
n-Butyric Acid	ND		50.0	13.0	mg/L			08/19/21 00:01	50
Propionic acid	ND		50.0	17.5	mg/L			08/19/21 00:01	50
Pyruvic Acid	ND		75.0	18.5	mg/L			08/19/21 00:01	50

Client Sample ID: MW-10-081721

Lab Sample ID: 480-188404-2

Date Collected: 08/17/21 15:30
Matrix: Water
Date Received: 08/17/21 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	**210**		4.0	3.2	ug/L			08/19/21 14:23	4

Client Sample ID: MW-10-081721

Date Collected: 08/17/21 15:30
Date Received: 08/17/21 17:00

Lab Sample ID: 480-188404-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.0	1.4	ug/L			08/19/21 14:23	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			08/19/21 14:23	4
Trichloroethene	**36**		4.0	1.8	ug/L			08/19/21 14:23	4
Vinyl chloride	**14**		4.0	3.6	ug/L			08/19/21 14:23	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/19/21 14:23*	*4*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*08/19/21 14:23*	*4*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/19/21 14:23*	*4*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*08/19/21 14:23*	*4*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**36000**		5000	5000	ug/L			08/24/21 10:26	1
Ethane	ND		7.5	1.5	ug/L			08/18/21 17:54	1
Ethene	ND		7.0	1.5	ug/L			08/18/21 17:54	1
Methane	**86**		4.0	1.0	ug/L			08/18/21 17:54	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.071**		0.050	0.019	mg/L		08/19/21 06:03	08/19/21 19:52	1
Magnesium	**35.3**		0.20	0.043	mg/L		08/19/21 06:03	08/19/21 19:52	1
Manganese	**0.75**	**B**	0.0030	0.00040	mg/L		08/19/21 06:03	08/19/21 19:52	1
Potassium	**3.1**		0.50	0.10	mg/L		08/19/21 06:03	08/20/21 16:00	1
Sodium	**1140**		5.0	1.6	mg/L		08/19/21 06:03	08/20/21 16:03	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1810**		10.0	5.6	mg/L			08/18/21 17:42	20
Sulfate	**316**		40.0	7.0	mg/L			08/18/21 17:42	20
Ammonia	ND		0.020	0.0090	mg/L			08/18/21 13:36	1
Nitrate	**0.13**		0.050	0.020	mg/L			08/18/21 19:05	1
Nitrite	ND		0.050	0.020	mg/L			08/18/21 19:05	1
Total Organic Carbon	**3.6**		1.0	0.43	mg/L			08/20/21 23:44	1
Total Alkalinity	**356**	**F1**	5.0	0.79	mg/L			08/19/21 13:00	1
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1
Acetic acid	ND		20.0	5.8	mg/L			08/19/21 00:30	20
Formic-acid	ND		20.0	5.2	mg/L			08/19/21 00:30	20
Lactic acid	ND		20.0	6.2	mg/L			08/19/21 00:30	20
n-Butyric Acid	ND		20.0	5.2	mg/L			08/19/21 00:30	20
Propionic acid	ND		20.0	7.0	mg/L			08/19/21 00:30	20
Pyruvic Acid	ND		30.0	7.4	mg/L			08/19/21 00:30	20

Client Sample ID: TRIP BLANK-081721

Date Collected: 08/17/21 00:00
Date Received: 08/17/21 17:00

Lab Sample ID: 480-188404-3

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			08/18/21 19:31	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/18/21 19:31	1

Client Sample ID: TRIP BLANK-081721

Lab Sample ID: 480-188404-3
Date Collected: 08/17/21 00:00
Matrix: Water
Date Received: 08/17/21 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/18/21 19:31	1
Trichloroethene	ND		1.0	0.46	ug/L			08/18/21 19:31	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/18/21 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*08/18/21 19:31*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*08/18/21 19:31*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/18/21 19:31*	*1*
Dibromofluoromethane (Surr)	*107*		*75 - 123*		*08/18/21 19:31*	*1*

Client Sample ID: MW-11-081921

Lab Sample ID: 480-188531-1
Date Collected: 08/19/21 12:30
Matrix: Water
Date Received: 08/19/21 17:37

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			08/25/21 02:09	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/25/21 02:09	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/25/21 02:09	1
Trichloroethene	ND		1.0	0.46	ug/L			08/25/21 02:09	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/25/21 02:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/25/21 02:09*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*08/25/21 02:09*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/25/21 02:09*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*08/25/21 02:09*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**16000**		5000	5000	ug/L			08/26/21 19:44	1
Ethane	ND		7.5	1.5	ug/L			08/24/21 20:55	1
Ethene	ND		7.0	1.5	ug/L			08/24/21 20:55	1
Methane	**29**		4.0	1.0	ug/L			08/24/21 20:55	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.38**		0.050	0.019	mg/L		08/21/21 11:58	08/23/21 18:20	1
Magnesium	**33.4**		0.20	0.043	mg/L		08/21/21 11:58	08/23/21 18:20	1
Manganese	**0.15**		0.0030	0.00040	mg/L		08/21/21 11:58	08/23/21 18:20	1
Potassium	**8.0**		0.50	0.10	mg/L		08/21/21 11:58	08/23/21 18:20	1
Sodium	**118**		1.0	0.32	mg/L		08/21/21 11:58	08/23/21 18:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**189**		2.5	1.4	mg/L			08/23/21 17:38	5
Sulfate	**104**		10.0	1.7	mg/L			08/23/21 17:38	5
Ammonia	**0.16**		0.020	0.0090	mg/L			08/23/21 07:58	1
Nitrate	ND		0.050	0.020	mg/L			08/20/21 17:14	1
Nitrite	ND		0.050	0.020	mg/L			08/20/21 17:14	1
Total Organic Carbon	**1.3**		1.0	0.43	mg/L			08/27/21 00:34	1

Client Sample ID: MW-11-081921

Lab Sample ID: 480-188531-1

Date Collected: 08/19/21 12:30
Matrix: Water
Date Received: 08/19/21 17:37

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**260**		5.0	0.79	mg/L			08/24/21 16:03	1
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1
Acetic acid	ND		5.0	1.5	mg/L			08/23/21 18:31	5
Formic-acid	ND		5.0	1.3	mg/L			08/23/21 18:31	5
Lactic acid	ND		5.0	1.6	mg/L			08/23/21 18:31	5
n-Butyric Acid	ND		5.0	1.3	mg/L			08/23/21 18:31	5
Propionic acid	ND		5.0	1.8	mg/L			08/23/21 18:31	5
Pyruvic Acid	ND		7.5	1.9	mg/L			08/23/21 18:31	5

Client Sample ID: MW-13-081921

Lab Sample ID: 480-188531-2

Date Collected: 08/19/21 15:35
Matrix: Water
Date Received: 08/19/21 17:37

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			08/25/21 02:31	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/25/21 02:31	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/25/21 02:31	1
Trichloroethene	ND		1.0	0.46	ug/L			08/25/21 02:31	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/25/21 02:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*08/25/21 02:31*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*08/25/21 02:31*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/25/21 02:31*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*08/25/21 02:31*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**56000**		5000	5000	ug/L			08/26/21 19:53	1
Ethane	ND		7.5	1.5	ug/L			08/25/21 16:22	1
Ethene	ND		7.0	1.5	ug/L			08/25/21 16:22	1
Methane	ND		4.0	1.0	ug/L			08/25/21 16:22	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.24**		0.050	0.019	mg/L		08/21/21 11:58	08/23/21 18:35	1
Magnesium	**40.6**		0.20	0.043	mg/L		08/21/21 11:58	08/23/21 18:35	1
Manganese	**0.38**		0.0030	0.00040	mg/L		08/21/21 11:58	08/23/21 18:35	1
Potassium	**10.2**		0.50	0.10	mg/L		08/21/21 11:58	08/23/21 18:35	1
Sodium	**1010**		2.0	0.65	mg/L		08/21/21 11:58	08/25/21 15:41	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1700**		10.0	5.6	mg/L			08/23/21 17:56	20
Sulfate	**114**		40.0	7.0	mg/L			08/23/21 17:56	20
Ammonia	**0.061**	**F1**	0.020	0.0090	mg/L			08/23/21 08:00	1
Nitrate	**0.53**		0.050	0.020	mg/L			08/20/21 19:24	1
Nitrite	ND		0.050	0.020	mg/L			08/20/21 19:24	1
Total Organic Carbon	**2.3**		1.0	0.43	mg/L			08/27/21 01:05	1
Total Alkalinity	**460**		5.0	0.79	mg/L			08/24/21 16:17	1

Client Sample ID: MW-13-081921

Date Collected: 08/19/21 15:35
Date Received: 08/19/21 17:37

Lab Sample ID: 480-188531-2
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1
Acetic acid	ND		20.0	5.8	mg/L			08/23/21 19:00	20
Formic-acid	ND		20.0	5.2	mg/L			08/23/21 19:00	20
Lactic acid	ND		20.0	6.2	mg/L			08/23/21 19:00	20
n-Butyric Acid	ND		20.0	5.2	mg/L			08/23/21 19:00	20
Propionic acid	ND		20.0	7.0	mg/L			08/23/21 19:00	20
Pyruvic Acid	ND		30.0	7.4	mg/L			08/23/21 19:00	20

Client Sample ID: MW-15-081921

Date Collected: 08/19/21 10:20
Date Received: 08/19/21 17:37

Lab Sample ID: 480-188531-3
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			08/25/21 02:53	1
Tetrachloroethene	**5.8**		1.0	0.36	ug/L			08/25/21 02:53	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/25/21 02:53	1
Trichloroethene	**1.5**		1.0	0.46	ug/L			08/25/21 02:53	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/25/21 02:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*08/25/21 02:53*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*08/25/21 02:53*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/25/21 02:53*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*08/25/21 02:53*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**60000**		5000	5000	ug/L			08/26/21 20:02	1
Ethane	ND		7.5	1.5	ug/L			08/24/21 21:33	1
Ethene	ND		7.0	1.5	ug/L			08/24/21 21:33	1
Methane	ND		4.0	1.0	ug/L			08/24/21 21:33	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		08/21/21 11:58	08/23/21 18:39	1
Magnesium	**44.7**		0.20	0.043	mg/L		08/21/21 11:58	08/23/21 18:39	1
Manganese	**0.36**		0.0030	0.00040	mg/L		08/21/21 11:58	08/23/21 18:39	1
Potassium	**4.3**		0.50	0.10	mg/L		08/21/21 11:58	08/23/21 18:39	1
Sodium	**369**		1.0	0.32	mg/L		08/21/21 11:58	08/23/21 18:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**716**		5.0	2.8	mg/L			08/23/21 18:14	10
Sulfate	**68.4**		20.0	3.5	mg/L			08/23/21 18:14	10
Ammonia	ND		0.020	0.0090	mg/L			08/23/21 08:03	1
Nitrate	**0.65**		0.050	0.020	mg/L			08/20/21 19:26	1
Nitrite	ND		0.050	0.020	mg/L			08/20/21 19:26	1
Total Organic Carbon	**1.9**		1.0	0.43	mg/L			08/27/21 01:36	1
Total Alkalinity	**399**		5.0	0.79	mg/L			08/24/21 16:33	1
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1

Client Sample ID: MW-15-081921

Lab Sample ID: 480-188531-3
Date Collected: 08/19/21 10:20
Matrix: Water
Date Received: 08/19/21 17:37

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetic acid	ND		10.0	2.9	mg/L			08/23/21 19:29	10
Formic-acid	ND		10.0	2.6	mg/L			08/23/21 19:29	10
Lactic acid	ND		10.0	3.1	mg/L			08/23/21 19:29	10
n-Butyric Acid	ND		10.0	2.6	mg/L			08/23/21 19:29	10
Propionic acid	ND		10.0	3.5	mg/L			08/23/21 19:29	10
Pyruvic Acid	ND		15.0	3.7	mg/L			08/23/21 19:29	10

Client Sample ID: TRIP BLANK-081921

Lab Sample ID: 480-188531-4
Date Collected: 08/19/21 00:00
Matrix: Water
Date Received: 08/19/21 17:37

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			08/25/21 03:16	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/25/21 03:16	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/25/21 03:16	1
Trichloroethene	ND		1.0	0.46	ug/L			08/25/21 03:16	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/25/21 03:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/25/21 03:16*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*08/25/21 03:16*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/25/21 03:16*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*08/25/21 03:16*	*1*

Client Sample ID: MW-12-082021

Lab Sample ID: 480-188572-1
Date Collected: 08/20/21 08:20
Matrix: Water
Date Received: 08/20/21 15:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**5.6**		2.0	1.6	ug/L			08/26/21 02:18	2
Tetrachloroethene	ND		2.0	0.72	ug/L			08/26/21 02:18	2
trans-1,2-Dichloroethene	ND		2.0	1.8	ug/L			08/26/21 02:18	2
Trichloroethene	ND		2.0	0.92	ug/L			08/26/21 02:18	2
Vinyl chloride	**5.9**		2.0	1.8	ug/L			08/26/21 02:18	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*08/26/21 02:18*	*2*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*08/26/21 02:18*	*2*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/26/21 02:18*	*2*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*08/26/21 02:18*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**74000**		5000	5000	ug/L			08/26/21 19:18	1
Ethane	ND		170	33	ug/L			08/25/21 20:08	22
Ethene	ND		150	33	ug/L			08/25/21 20:08	22
Methane	**260**		88	22	ug/L			08/25/21 20:08	22

Client Sample ID: MW-12-082021

Date Collected: 08/20/21 08:20
Date Received: 08/20/21 15:00

Lab Sample ID: 480-188572-1

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	10.8		0.050	0.019	mg/L		08/21/21 12:09	08/23/21 20:18	1
Magnesium	58.8		0.20	0.043	mg/L		08/21/21 12:09	08/23/21 20:18	1
Manganese	6.8		0.0030	0.00040	mg/L		08/21/21 12:09	08/23/21 20:18	1
Potassium	5.1		0.50	0.10	mg/L		08/21/21 12:09	08/23/21 20:18	1
Sodium	1570		5.0	1.6	mg/L		08/21/21 12:09	08/26/21 15:46	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2910		25.0	14.1	mg/L			08/23/21 22:42	50
Sulfate	131		100	17.5	mg/L			08/23/21 22:42	50
Ammonia	1.5		0.020	0.0090	mg/L			08/24/21 08:44	1
Nitrate	ND		0.050	0.020	mg/L			08/20/21 18:38	1
Nitrite	ND		0.050	0.020	mg/L			08/20/21 18:38	1
Total Organic Carbon	6.0		1.0	0.43	mg/L			08/26/21 06:06	1
Total Alkalinity	373		5.0	0.79	mg/L			08/24/21 18:26	1
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1
Acetic acid	ND		50.0	14.5	mg/L			08/23/21 23:22	50
Formic-acid	ND		50.0	13.0	mg/L			08/23/21 23:22	50
Lactic acid	ND		50.0	15.5	mg/L			08/23/21 23:22	50
n-Butyric Acid	ND		50.0	13.0	mg/L			08/23/21 23:22	50
Propionic acid	ND		50.0	17.5	mg/L			08/23/21 23:22	50
Pyruvic Acid	ND		75.0	18.5	mg/L			08/23/21 23:22	50

Client Sample ID: MW-14-082021

Date Collected: 08/20/21 10:57
Date Received: 08/20/21 15:00

Lab Sample ID: 480-188572-2

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	1.3		1.0	0.81	ug/L			08/26/21 02:41	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/26/21 02:41	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/26/21 02:41	1
Trichloroethene	ND		1.0	0.46	ug/L			08/26/21 02:41	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/26/21 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*08/26/21 02:41*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*08/26/21 02:41*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/26/21 02:41*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*08/26/21 02:41*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	47000		5000	5000	ug/L			08/26/21 19:27	1
Ethane	ND		7.5	1.5	ug/L			08/26/21 17:27	1
Ethene	ND		7.0	1.5	ug/L			08/26/21 17:27	1
Methane	200		4.0	1.0	ug/L			08/26/21 17:27	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1.1		0.050	0.019	mg/L		08/21/21 12:09	08/23/21 20:38	1

Client Sample ID: MW-14-082021

Lab Sample ID: 480-188572-2

Date Collected: 08/20/21 10:57

Matrix: Water

Date Received: 08/20/21 15:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**98.7**		0.20	0.043	mg/L		08/21/21 12:09	08/23/21 20:38	1
Manganese	**0.67**		0.0030	0.00040	mg/L		08/21/21 12:09	08/23/21 20:38	1
Potassium	**7.4**		0.50	0.10	mg/L		08/21/21 12:09	08/23/21 20:38	1
Sodium	**1310**		5.0	1.6	mg/L		08/21/21 12:09	08/30/21 15:45	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2680**		10.0	5.6	mg/L			08/24/21 00:11	20
Sulfate	**77.3**		40.0	7.0	mg/L			08/24/21 00:11	20
Ammonia	**0.30**		0.020	0.0090	mg/L			08/24/21 08:45	1
Nitrate	**0.045**	**J**	0.050	0.020	mg/L			08/20/21 18:39	1
Nitrite	ND		0.050	0.020	mg/L			08/20/21 18:39	1
Total Organic Carbon	**3.2**		1.0	0.43	mg/L			08/26/21 06:35	1
Total Alkalinity	**355**		5.0	0.79	mg/L			08/24/21 18:58	1
Sulfide	ND		1.0	0.67	mg/L			08/26/21 13:09	1
Acetic acid	ND		20.0	5.8	mg/L			08/23/21 23:51	20
Formic-acid	ND		20.0	5.2	mg/L			08/23/21 23:51	20
Lactic acid	ND		20.0	6.2	mg/L			08/23/21 23:51	20
n-Butyric Acid	ND		20.0	5.2	mg/L			08/23/21 23:51	20
Propionic acid	ND		20.0	7.0	mg/L			08/23/21 23:51	20
Pyruvic Acid	ND		30.0	7.4	mg/L			08/23/21 23:51	20

Client Sample ID: MW-7-082021

Lab Sample ID: 480-188572-3

Date Collected: 08/20/21 13:16

Matrix: Water

Date Received: 08/20/21 15:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**31000**		20000	16000	ug/L			08/26/21 03:03	20000
Tetrachloroethene	ND		20000	7200	ug/L			08/26/21 03:03	20000
trans-1,2-Dichloroethene	ND		20000	18000	ug/L			08/26/21 03:03	20000
Trichloroethene	**400000**		20000	9200	ug/L			08/26/21 03:03	20000
Vinyl chloride	ND		20000	18000	ug/L			08/26/21 03:03	20000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*08/26/21 03:03*	*20000*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*08/26/21 03:03*	*20000*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/26/21 03:03*	*20000*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*08/26/21 03:03*	*20000*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	**16000**		5000	5000	ug/L			08/26/21 19:36	1
Ethane	**46**	**J**	83	17	ug/L			08/25/21 20:46	11
Ethene	**820**		77	17	ug/L			08/25/21 20:46	11
Methane	**77**		44	11	ug/L			08/25/21 20:46	11

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		08/21/21 12:09	08/23/21 20:53	1
Magnesium	**46.6**		0.20	0.043	mg/L		08/21/21 12:09	08/23/21 20:53	1

Client Sample ID: MW-7-082021

Lab Sample ID: 480-188572-3

Date Collected: 08/20/21 13:16
Matrix: Water
Date Received: 08/20/21 15:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.012**		0.0030	0.00040	mg/L		08/21/21 12:09	08/23/21 20:53	1
Potassium	**11.6**		0.50	0.10	mg/L		08/21/21 12:09	08/23/21 20:53	1
Sodium	**229**		1.0	0.32	mg/L		08/21/21 12:09	08/23/21 20:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**391**		2.5	1.4	mg/L			08/24/21 00:29	5
Sulfate	**201**		10.0	1.7	mg/L			08/24/21 00:29	5
Ammonia	**0.51**	**F1**	0.020	0.0090	mg/L			08/24/21 08:46	1
Nitrate	ND		0.050	0.020	mg/L			08/20/21 18:42	1
Nitrite	ND		0.050	0.020	mg/L			08/20/21 18:42	1
Total Organic Carbon	**12.1**		1.0	0.43	mg/L			08/26/21 07:03	1
Total Alkalinity	**253**	**F1**	5.0	0.79	mg/L			08/24/21 19:13	1
Sulfide	ND		1.0	0.67	mg/L			08/26/21 13:09	1
Acetic acid	**1.6**	**J**	5.0	1.5	mg/L			08/24/21 00:21	5
Formic-acid	ND		5.0	1.3	mg/L			08/24/21 00:21	5
Lactic acid	ND		5.0	1.6	mg/L			08/24/21 00:21	5
n-Butyric Acid	ND		5.0	1.3	mg/L			08/24/21 00:21	5
Propionic acid	ND		5.0	1.8	mg/L			08/24/21 00:21	5
Pyruvic Acid	ND		7.5	1.9	mg/L			08/24/21 00:21	5

Client Sample ID: TRIP BLANK-082021

Lab Sample ID: 480-188572-4

Date Collected: 08/20/21 00:00
Matrix: Water
Date Received: 08/20/21 15:00

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			08/26/21 03:25	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/26/21 03:25	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/26/21 03:25	1
Trichloroethene	ND		1.0	0.46	ug/L			08/26/21 03:25	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/26/21 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/26/21 03:25*	*1*
4-Bromofluorobenzene (Surr)	*94*		*73 - 120*		*08/26/21 03:25*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/26/21 03:25*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*08/26/21 03:25*	*1*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(77-120)	(73-120)	(80-120)	(75-123)
480-188404-1	MW-4-081721	101	100	101	108
480-188404-2	MW-10-081721	100	98	101	104
480-188404-3	TRIP BLANK-081721	102	100	101	107
480-188531-1	MW-11-081921	100	94	97	103
480-188531-2	MW-13-081921	98	93	97	102
480-188531-3	MW-15-081921	101	94	98	105
480-188531-4	TRIP BLANK-081921	100	94	97	104
480-188572-1	MW-12-082021	101	95	99	103
480-188572-2	MW-14-082021	101	93	96	104
480-188572-3	MW-7-082021	99	94	99	104
480-188572-4	TRIP BLANK-082021	100	94	98	103
LCS 480-593228/5	Lab Control Sample	98	105	103	106
LCS 480-593413/5	Lab Control Sample	104	103	100	103
LCS 480-593861/6	Lab Control Sample	99	99	99	104
LCS 480-594050/6	Lab Control Sample	97	100	99	100
LCSD 480-593413/6	Lab Control Sample Dup	100	102	100	102
MB 480-593228/7	Method Blank	100	101	104	105
MB 480-593413/8	Method Blank	100	99	100	106
MB 480-593861/8	Method Blank	99	93	96	102
MB 480-594050/8	Method Blank	101	96	98	104

Surrogate Legend

DCA = 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 480-593228/7
Matrix: Water
Analysis Batch: 593228

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			08/18/21 12:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/18/21 12:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/18/21 12:39	1
Trichloroethene	ND		1.0	0.46	ug/L			08/18/21 12:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/18/21 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/18/21 12:39*	*1*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*		*08/18/21 12:39*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/18/21 12:39*	*1*
Dibromofluoromethane (Surr)	*105*		*75 - 123*		*08/18/21 12:39*	*1*

Lab Sample ID: LCS 480-593228/5
Matrix: Water
Analysis Batch: 593228

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	25.6		ug/L		102	74 - 124
Tetrachloroethene	25.0	25.3		ug/L		101	74 - 122
trans-1,2-Dichloroethene	25.0	25.9		ug/L		103	73 - 127
Trichloroethene	25.0	25.3		ug/L		101	74 - 123
Vinyl chloride	25.0	23.2		ug/L		93	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*
4-Bromofluorobenzene (Surr)	*105*		*73 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 123*

Lab Sample ID: MB 480-593413/8
Matrix: Water
Analysis Batch: 593413

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			08/19/21 13:28	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/19/21 13:28	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/19/21 13:28	1
Trichloroethene	ND		1.0	0.46	ug/L			08/19/21 13:28	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/19/21 13:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/19/21 13:28*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*08/19/21 13:28*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/19/21 13:28*	*1*
Dibromofluoromethane (Surr)	*106*		*75 - 123*		*08/19/21 13:28*	*1*

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

Lab Sample ID: LCS 480-593413/5
Matrix: Water
Analysis Batch: 593413

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	26.3		ug/L		105	74 - 122		
trans-1,2-Dichloroethene			25.0	26.0		ug/L		104	73 - 127		
Trichloroethene			25.0	26.0		ug/L		104	74 - 123		
Vinyl chloride			25.0	21.8		ug/L		87	65 - 133		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*77 - 120*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*75 - 123*

Lab Sample ID: LCSD 480-593413/6
Matrix: Water
Analysis Batch: 593413

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
cis-1,2-Dichloroethene			25.0	24.8		ug/L		99	74 - 124	4	15
Tetrachloroethene			25.0	25.4		ug/L		102	74 - 122	4	20
trans-1,2-Dichloroethene			25.0	24.4		ug/L		98	73 - 127	7	20
Trichloroethene			25.0	24.3		ug/L		97	74 - 123	7	16
Vinyl chloride			25.0	19.5		ug/L		78	65 - 133	11	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*75 - 123*

Lab Sample ID: MB 480-593861/8
Matrix: Water
Analysis Batch: 593861

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			08/25/21 01:46	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/25/21 01:46	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/25/21 01:46	1
Trichloroethene	ND		1.0	0.46	ug/L			08/25/21 01:46	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/25/21 01:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*08/25/21 01:46*	*1*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*08/25/21 01:46*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*08/25/21 01:46*	*1*
Dibromofluoromethane (Surr)	*102*		*75 - 123*		*08/25/21 01:46*	*1*

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

Lab Sample ID: LCS 480-593861/6
Matrix: Water
Analysis Batch: 593861

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	23.9		ug/L		95	74 - 122
trans-1,2-Dichloroethene	25.0	24.6		ug/L		98	73 - 127
Trichloroethene	25.0	24.9		ug/L		100	74 - 123
Vinyl chloride	25.0	28.6		ug/L		114	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*75 - 123*

Lab Sample ID: MB 480-594050/8
Matrix: Water
Analysis Batch: 594050

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			08/26/21 01:55	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/26/21 01:55	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/26/21 01:55	1
Trichloroethene	ND		1.0	0.46	ug/L			08/26/21 01:55	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/26/21 01:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*77 - 120*		*08/26/21 01:55*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*08/26/21 01:55*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/26/21 01:55*	*1*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*08/26/21 01:55*	*1*

Lab Sample ID: LCS 480-594050/6
Matrix: Water
Analysis Batch: 594050

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	25.3		ug/L		101	74 - 124
Tetrachloroethene	25.0	25.2		ug/L		101	74 - 122
trans-1,2-Dichloroethene	25.0	25.9		ug/L		104	73 - 127
Trichloroethene	25.0	25.4		ug/L		101	74 - 123
Vinyl chloride	25.0	26.8		ug/L		107	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*77 - 120*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 123*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 200-170560/26
Matrix: Water
Analysis Batch: 170560

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		5000	5000	ug/L			08/24/21 09:25	1

Lab Sample ID: LCS 200-170560/24
Matrix: Water
Analysis Batch: 170560

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Carbon dioxide			40000	38500		ug/L		96	70 - 130		

Lab Sample ID: LCSD 200-170560/25
Matrix: Water
Analysis Batch: 170560

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
Carbon dioxide			40000	34500		ug/L		86	70 - 130	11	30

Lab Sample ID: MB 200-170716/4
Matrix: Water
Analysis Batch: 170716

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon dioxide	ND		5000	5000	ug/L			08/26/21 17:41	1

Lab Sample ID: LCS 200-170716/2
Matrix: Water
Analysis Batch: 170716

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Carbon dioxide			40000	39900		ug/L		100	70 - 130		

Lab Sample ID: LCSD 200-170716/3
Matrix: Water
Analysis Batch: 170716

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
Carbon dioxide			40000	36800		ug/L		92	70 - 130	8	30

Lab Sample ID: MB 480-593289/3
Matrix: Water
Analysis Batch: 593289

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			08/18/21 14:08	1
Ethene	ND		7.0	1.5	ug/L			08/18/21 14:08	1
Methane	ND		4.0	1.0	ug/L			08/18/21 14:08	1

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

Lab Sample ID: LCS 480-593289/4
Matrix: Water
Analysis Batch: 593289

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethane			36.8	39.8		ug/L		108	79 - 120		
Ethene			33.7	35.7		ug/L		106	85 - 120		
Methane			19.2	20.6		ug/L		107	85 - 120		

Lab Sample ID: LCSD 480-593289/5
Matrix: Water
Analysis Batch: 593289

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			36.8	41.1		ug/L		112	79 - 120	3	50
Ethene			33.7	36.2		ug/L		107	85 - 120	1	50
Methane			19.2	21.5		ug/L		111	85 - 120	4	50

Lab Sample ID: MB 480-593898/3
Matrix: Water
Analysis Batch: 593898

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			08/24/21 14:19	1
Ethene	ND		7.0	1.5	ug/L			08/24/21 14:19	1
Methane	ND		4.0	1.0	ug/L			08/24/21 14:19	1

Lab Sample ID: LCS 480-593898/4
Matrix: Water
Analysis Batch: 593898

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethane			36.8	36.3		ug/L		99	79 - 120		
Ethene			33.7	32.0		ug/L		95	85 - 120		
Methane			19.2	18.8		ug/L		98	85 - 120		

Lab Sample ID: LCSD 480-593898/5
Matrix: Water
Analysis Batch: 593898

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			36.8	37.8		ug/L		103	79 - 120	4	50
Ethene			33.7	32.9		ug/L		98	85 - 120	3	50
Methane			19.2	19.6		ug/L		102	85 - 120	4	50

Lab Sample ID: MB 480-594069/3
Matrix: Water
Analysis Batch: 594069

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			08/25/21 13:38	1
Ethene	ND		7.0	1.5	ug/L			08/25/21 13:38	1
Methane	ND		4.0	1.0	ug/L			08/25/21 13:38	1

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

Lab Sample ID: LCS 480-594069/4
Matrix: Water
Analysis Batch: 594069

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	36.8	38.0		ug/L		103	79 - 120
Ethene	33.7	33.6		ug/L		100	85 - 120
Methane	19.2	20.0		ug/L		104	85 - 120

Lab Sample ID: LCSD 480-594069/5
Matrix: Water
Analysis Batch: 594069

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	36.8	39.0		ug/L		106	79 - 120	3	50
Ethene	33.7	33.9		ug/L		100	85 - 120	1	50
Methane	19.2	20.7		ug/L		108	85 - 120	4	50

Lab Sample ID: MB 480-594286/3
Matrix: Water
Analysis Batch: 594286

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			08/26/21 14:49	1
Ethene	ND		7.0	1.5	ug/L			08/26/21 14:49	1
Methane	ND		4.0	1.0	ug/L			08/26/21 14:49	1

Lab Sample ID: LCS 480-594286/4
Matrix: Water
Analysis Batch: 594286

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	36.8	38.2		ug/L		104	79 - 120
Ethene	33.7	34.3		ug/L		102	85 - 120
Methane	19.2	20.3		ug/L		106	85 - 120

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-593321/1-A
Matrix: Water
Analysis Batch: 593569

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 593321

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		08/19/21 06:03	08/19/21 19:01	1
Magnesium	ND		0.20	0.043	mg/L		08/19/21 06:03	08/19/21 19:01	1
Manganese	0.000410	J	0.0030	0.00040	mg/L		08/19/21 06:03	08/19/21 19:01	1
Sodium	0.349	J	1.0	0.32	mg/L		08/19/21 06:03	08/19/21 19:01	1

Lab Sample ID: MB 480-593321/1-A
Matrix: Water
Analysis Batch: 593740

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 593321

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.10	mg/L		08/19/21 06:03	08/20/21 15:44	1

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

Lab Sample ID: LCS 480-593321/2-A
Matrix: Water
Analysis Batch: 593569

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 593321

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.03		mg/L		100	80 - 120
Magnesium	10.0	10.12		mg/L		101	80 - 120
Manganese	0.200	0.208		mg/L		104	80 - 120
Sodium	10.0	10.29		mg/L		103	80 - 120

Lab Sample ID: LCS 480-593321/2-A
Matrix: Water
Analysis Batch: 593740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 593321

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	10.37		mg/L		104	80 - 120

Lab Sample ID: MB 480-593648/1-A
Matrix: Water
Analysis Batch: 593822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 593648

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		08/21/21 11:58	08/23/21 17:35	1
Magnesium	ND		0.20	0.043	mg/L		08/21/21 11:58	08/23/21 17:35	1
Manganese	ND		0.0030	0.00040	mg/L		08/21/21 11:58	08/23/21 17:35	1
Potassium	ND		0.50	0.10	mg/L		08/21/21 11:58	08/23/21 17:35	1
Sodium	ND		1.0	0.32	mg/L		08/21/21 11:58	08/23/21 17:35	1

Lab Sample ID: LCS 480-593648/2-A
Matrix: Water
Analysis Batch: 593822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 593648

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.85		mg/L		98	80 - 120
Magnesium	10.0	9.53		mg/L		95	80 - 120
Manganese	0.200	0.198		mg/L		99	80 - 120
Potassium	10.0	10.19		mg/L		102	80 - 120
Sodium	10.0	10.32		mg/L		103	80 - 120

Lab Sample ID: MB 480-593650/1-A
Matrix: Water
Analysis Batch: 593823

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 593650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.050	0.019	mg/L		08/21/21 12:09	08/23/21 19:48	1
Magnesium	ND		0.20	0.043	mg/L		08/21/21 12:09	08/23/21 19:48	1
Manganese	ND		0.0030	0.00040	mg/L		08/21/21 12:09	08/23/21 19:48	1
Potassium	ND		0.50	0.10	mg/L		08/21/21 12:09	08/23/21 19:48	1
Sodium	ND		1.0	0.32	mg/L		08/21/21 12:09	08/23/21 19:48	1

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

Lab Sample ID: LCS 480-593650/2-A
Matrix: Water
Analysis Batch: 593823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 593650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.86		mg/L		99	80 - 120
Magnesium	10.0	9.36		mg/L		94	80 - 120
Manganese	0.200	0.196		mg/L		98	80 - 120
Potassium	10.0	10.34		mg/L		103	80 - 120
Sodium	10.0	10.48		mg/L		105	80 - 120

Lab Sample ID: 480-188572-1 MS
Matrix: Water
Analysis Batch: 593823

Client Sample ID: MW-12-082021
Prep Type: Total/NA
Prep Batch: 593650

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.8		10.0	20.35		mg/L		96	75 - 125
Magnesium	58.8		10.0	67.80	4	mg/L		90	75 - 125
Manganese	6.8		0.200	6.87	4	mg/L		55	75 - 125
Potassium	5.1		10.0	16.24		mg/L		111	75 - 125

Lab Sample ID: 480-188572-1 MS
Matrix: Water
Analysis Batch: 594381

Client Sample ID: MW-12-082021
Prep Type: Total/NA
Prep Batch: 593650

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	1570		10.0	1525	4	mg/L		-453	75 - 125

Lab Sample ID: 480-188572-1 MSD
Matrix: Water
Analysis Batch: 593823

Client Sample ID: MW-12-082021
Prep Type: Total/NA
Prep Batch: 593650

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.8		10.0	20.36		mg/L		96	75 - 125	0	20
Magnesium	58.8		10.0	69.60	4	mg/L		108	75 - 125	3	20
Manganese	6.8		0.200	7.04	4	mg/L		139	75 - 125	2	20
Potassium	5.1		10.0	16.02		mg/L		109	75 - 125	1	20

Lab Sample ID: 480-188572-1 MSD
Matrix: Water
Analysis Batch: 594381

Client Sample ID: MW-12-082021
Prep Type: Total/NA
Prep Batch: 593650

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	1570		10.0	1594	4	mg/L		237	75 - 125	4	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-593248/4
Matrix: Water
Analysis Batch: 593248

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			08/18/21 14:08	1
Sulfate	ND		2.0	0.35	mg/L			08/18/21 14:08	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 480-593248/3
Matrix: Water
Analysis Batch: 593248

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	50.71		mg/L		101	90 - 110		
Sulfate			50.0	51.46		mg/L		103	90 - 110		

Lab Sample ID: 480-188404-1 MS
Matrix: Water
Analysis Batch: 593248

Client Sample ID: MW-4-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	4030	F1	2500	5801	F1	mg/L		71	81 - 120		
Sulfate	777		2500	3193		mg/L		97	80 - 120		

Lab Sample ID: 480-188404-1 MSD
Matrix: Water
Analysis Batch: 593248

Client Sample ID: MW-4-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4030	F1	2500	5335	F1	mg/L		52	81 - 120	8	15
Sulfate	777		2500	2997		mg/L		89	80 - 120	6	15

Lab Sample ID: 480-188404-2 MS
Matrix: Water
Analysis Batch: 593248

Client Sample ID: MW-10-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1810		1000	2809		mg/L		100	81 - 120		
Sulfate	316		1000	1356		mg/L		104	80 - 120		

Lab Sample ID: MB 480-593728/28
Matrix: Water
Analysis Batch: 593728

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			08/23/21 20:55	1
Sulfate	ND		2.0	0.35	mg/L			08/23/21 20:55	1

Lab Sample ID: MB 480-593728/4
Matrix: Water
Analysis Batch: 593728

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			08/23/21 13:46	1
Sulfate	ND		2.0	0.35	mg/L			08/23/21 13:46	1

Lab Sample ID: LCS 480-593728/27
Matrix: Water
Analysis Batch: 593728

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	49.76		mg/L		100	90 - 110		
Sulfate			50.0	50.06		mg/L		100	90 - 110		

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 480-593728/3
Matrix: Water
Analysis Batch: 593728

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	49.65		mg/L		99	90 - 110		
Sulfate			50.0	49.88		mg/L		100	90 - 110		

Lab Sample ID: 480-188572-1 MS
Matrix: Water
Analysis Batch: 593728

Client Sample ID: MW-12-082021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	2910		2500	5173		mg/L		90	81 - 120		
Sulfate	131		2500	2546		mg/L		97	80 - 120		

Lab Sample ID: 480-188572-1 MSD
Matrix: Water
Analysis Batch: 593728

Client Sample ID: MW-12-082021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2910		2500	5191		mg/L		91	81 - 120	0	15
Sulfate	131		2500	2552		mg/L		97	80 - 120	0	15

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-593286/27
Matrix: Water
Analysis Batch: 593286

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			08/18/21 13:40	1

Lab Sample ID: MB 480-593286/3
Matrix: Water
Analysis Batch: 593286

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			08/18/21 13:19	1

Lab Sample ID: LCS 480-593286/28
Matrix: Water
Analysis Batch: 593286

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	0.994		mg/L		99	90 - 110		

Lab Sample ID: LCS 480-593286/4
Matrix: Water
Analysis Batch: 593286

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	0.984		mg/L		98	90 - 110		

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MB 480-593692/3
Matrix: Water
Analysis Batch: 593692

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			08/23/21 07:50	1

Lab Sample ID: MB 480-593692/51
Matrix: Water
Analysis Batch: 593692

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			08/23/21 08:31	1

Lab Sample ID: LCS 480-593692/4
Matrix: Water
Analysis Batch: 593692

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	0.985		mg/L		99	90 - 110		

Lab Sample ID: LCS 480-593692/52
Matrix: Water
Analysis Batch: 593692

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	0.978		mg/L		98	90 - 110		

Lab Sample ID: 480-188531-2 MS
Matrix: Water
Analysis Batch: 593692

Client Sample ID: MW-13-081921
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	0.061	F1	0.200	0.218	F1	mg/L		79	90 - 110		

Lab Sample ID: 480-188531-2 DU
Matrix: Water
Analysis Batch: 593692

Client Sample ID: MW-13-081921
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia	0.061	F1		0.0651		mg/L				7	20

Lab Sample ID: MB 480-593811/27
Matrix: Water
Analysis Batch: 593811

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			08/24/21 08:41	1

Lab Sample ID: LCS 480-593811/28
Matrix: Water
Analysis Batch: 593811

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	0.973		mg/L		97	90 - 110		

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: 480-188572-3 MS
Matrix: Water
Analysis Batch: 593811

Client Sample ID: MW-7-082021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	0.51	F1	0.200	0.687	F1	mg/L		87	90 - 110		

Lab Sample ID: 480-188572-3 DU
Matrix: Water
Analysis Batch: 593811

Client Sample ID: MW-7-082021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia	0.51	F1	0.500		mg/L				3	20

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-593342/3
Matrix: Water
Analysis Batch: 593342

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			08/18/21 19:03	1

Lab Sample ID: LCS 480-593342/4
Matrix: Water
Analysis Batch: 593342

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		

Lab Sample ID: 480-188404-2 MS
Matrix: Water
Analysis Batch: 593342

Client Sample ID: MW-10-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite	ND		1.00	1.00		mg/L		100	90 - 110		

Lab Sample ID: MB 480-593634/3
Matrix: Water
Analysis Batch: 593634

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			08/20/21 19:21	1

Lab Sample ID: LCS 480-593634/4
Matrix: Water
Analysis Batch: 593634

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	1.54		mg/L		103	90 - 110		

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: 480-188531-2 MS
Matrix: Water
Analysis Batch: 593634

Client Sample ID: MW-13-081921
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite	ND		1.00	0.975		mg/L		98	90 - 110

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

Lab Sample ID: MB 480-593873/52
Matrix: Water
Analysis Batch: 593873

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			08/20/21 21:39	1

Lab Sample ID: LCS 480-593873/53
Matrix: Water
Analysis Batch: 593873

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	61.64		mg/L		103	90 - 110

Lab Sample ID: 480-188404-1 MS
Matrix: Water
Analysis Batch: 593873

Client Sample ID: MW-4-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.3		23.3	26.13		mg/L		102	54 - 131

Lab Sample ID: 480-188404-2 DU
Matrix: Water
Analysis Batch: 593873

Client Sample ID: MW-10-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	3.6		3.58		mg/L		0.8	20

Lab Sample ID: MB 480-594391/4
Matrix: Water
Analysis Batch: 594391

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			08/25/21 22:29	1

Lab Sample ID: LCS 480-594391/5
Matrix: Water
Analysis Batch: 594391

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	59.69		mg/L		99	90 - 110

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

Lab Sample ID: MB 480-594403/27
Matrix: Water
Analysis Batch: 594403

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			08/26/21 16:19	1

Lab Sample ID: LCS 480-594403/28
Matrix: Water
Analysis Batch: 594403

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	60.82		mg/L		101	90 - 110

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-593535/4
Matrix: Water
Analysis Batch: 593535

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			08/19/21 12:33	1

Lab Sample ID: LCS 480-593535/5
Matrix: Water
Analysis Batch: 593535

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	104.1		mg/L		104	90 - 110

Lab Sample ID: 480-188404-2 MS
Matrix: Water
Analysis Batch: 593535

Client Sample ID: MW-10-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	356	F1	100	414.0	F1	mg/L		58	60 - 140

Lab Sample ID: 480-188404-1 DU
Matrix: Water
Analysis Batch: 593535

Client Sample ID: MW-4-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	309		304.7		mg/L		1	20

Lab Sample ID: MB 480-594005/28
Matrix: Water
Analysis Batch: 594005

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			08/24/21 18:44	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 480-594005/4
Matrix: Water
Analysis Batch: 594005

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			08/24/21 15:50	1

Lab Sample ID: LCS 480-594005/29
Matrix: Water
Analysis Batch: 594005

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	95.68		mg/L		96	90 - 110		

Lab Sample ID: LCS 480-594005/5
Matrix: Water
Analysis Batch: 594005

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	96.64		mg/L		97	90 - 110		

Lab Sample ID: 480-188531-2 MS
Matrix: Water
Analysis Batch: 594005

Client Sample ID: MW-13-081921
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Alkalinity	460		100	503.5	4	mg/L		44	60 - 140		

Lab Sample ID: 480-188572-3 MS
Matrix: Water
Analysis Batch: 594005

Client Sample ID: MW-7-082021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Alkalinity	253	F1	100	281.4	F1	mg/L		28	60 - 140		

Lab Sample ID: 480-188531-1 DU
Matrix: Water
Analysis Batch: 594005

Client Sample ID: MW-11-081921
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	260			258.7		mg/L				0.5	20

Lab Sample ID: 480-188572-2 DU
Matrix: Water
Analysis Batch: 594005

Client Sample ID: MW-14-082021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	355			360.5		mg/L				1	20

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 480-594012/27
Matrix: Water
Analysis Batch: 594012

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1

Lab Sample ID: MB 480-594012/3
Matrix: Water
Analysis Batch: 594012

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.67	mg/L			08/24/21 16:45	1

Lab Sample ID: LCS 480-594012/28
Matrix: Water
Analysis Batch: 594012

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	8.80	9.20		mg/L		105	90 - 110

Lab Sample ID: LCS 480-594012/4
Matrix: Water
Analysis Batch: 594012

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	8.80	8.80		mg/L		100	90 - 110

Lab Sample ID: 480-188404-1 MS
Matrix: Water
Analysis Batch: 594012

Client Sample ID: MW-4-081721
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		2.00	2.00		mg/L		100	40 - 150

Lab Sample ID: 480-188404-2 DU
Matrix: Water
Analysis Batch: 594012

Client Sample ID: MW-10-081721
Prep Type: Total/NA

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

Lab Sample ID: MB 480-594298/3
Matrix: Water
Analysis Batch: 594298

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.67	mg/L			08/26/21 13:09	1

Lab Sample ID: LCS 480-594298/4
Matrix: Water
Analysis Batch: 594298

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	8.80	8.80		mg/L		100	90 - 110

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: 480-188572-2 MS
Matrix: Water
Analysis Batch: 594298

Client Sample ID: MW-14-082021
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	ND		2.00	2.00		mg/L		100	40 - 150

Lab Sample ID: 480-188572-3 DU
Matrix: Water
Analysis Batch: 594298

Client Sample ID: MW-7-082021
Prep Type: Total/NA

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

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

Lab Sample ID: MB 480-593255/6
Matrix: Water
Analysis Batch: 593255

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	0.29	mg/L			08/18/21 17:42	1
Formic-acid	ND		1.0	0.26	mg/L			08/18/21 17:42	1
Lactic acid	ND		1.0	0.31	mg/L			08/18/21 17:42	1
n-Butyric Acid	ND		1.0	0.26	mg/L			08/18/21 17:42	1
Propionic acid	ND		1.0	0.35	mg/L			08/18/21 17:42	1
Pyruvic Acid	ND		1.5	0.37	mg/L			08/18/21 17:42	1

Lab Sample ID: LCS 480-593255/5
Matrix: Water
Analysis Batch: 593255

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	9.33		mg/L		93	80 - 120
Formic-acid	10.0	9.36		mg/L		94	80 - 120
Lactic acid	10.0	9.42		mg/L		94	80 - 120
n-Butyric Acid	10.0	9.71		mg/L		97	80 - 120
Propionic acid	10.0	9.39		mg/L		94	80 - 120
Pyruvic Acid	10.0	9.83		mg/L		98	80 - 120

Lab Sample ID: MB 480-593769/6
Matrix: Water
Analysis Batch: 593769

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	0.29	mg/L			08/23/21 17:32	1
Formic-acid	ND		1.0	0.26	mg/L			08/23/21 17:32	1
Lactic acid	ND		1.0	0.31	mg/L			08/23/21 17:32	1
n-Butyric Acid	ND		1.0	0.26	mg/L			08/23/21 17:32	1
Propionic acid	ND		1.0	0.35	mg/L			08/23/21 17:32	1
Pyruvic Acid	ND		1.5	0.37	mg/L			08/23/21 17:32	1

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

Lab Sample ID: LCS 480-593769/5
Matrix: Water
Analysis Batch: 593769

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	9.93		mg/L		99	80 - 120
Formic-acid	10.0	9.79		mg/L		98	80 - 120
Lactic acid	10.0	9.23		mg/L		92	80 - 120
n-Butyric Acid	10.0	9.90		mg/L		99	80 - 120
Propionic acid	10.0	9.27		mg/L		93	80 - 120
Pyruvic Acid	10.0	9.80		mg/L		98	80 - 120

GC/MS VOA

Analysis Batch: 593228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	8260C	
480-188404-3	TRIP BLANK-081721	Total/NA	Water	8260C	
MB 480-593228/7	Method Blank	Total/NA	Water	8260C	
LCS 480-593228/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 593413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-2	MW-10-081721	Total/NA	Water	8260C	
MB 480-593413/8	Method Blank	Total/NA	Water	8260C	
LCS 480-593413/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-593413/6	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 593861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	8260C	
480-188531-2	MW-13-081921	Total/NA	Water	8260C	
480-188531-3	MW-15-081921	Total/NA	Water	8260C	
480-188531-4	TRIP BLANK-081921	Total/NA	Water	8260C	
MB 480-593861/8	Method Blank	Total/NA	Water	8260C	
LCS 480-593861/6	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 594050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-1	MW-12-082021	Total/NA	Water	8260C	
480-188572-2	MW-14-082021	Total/NA	Water	8260C	
480-188572-3	MW-7-082021	Total/NA	Water	8260C	
480-188572-4	TRIP BLANK-082021	Total/NA	Water	8260C	
MB 480-594050/8	Method Blank	Total/NA	Water	8260C	
LCS 480-594050/6	Lab Control Sample	Total/NA	Water	8260C	

GC VOA

Analysis Batch: 170560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	RSK-175	
480-188404-2	MW-10-081721	Total/NA	Water	RSK-175	
MB 200-170560/26	Method Blank	Total/NA	Water	RSK-175	
LCS 200-170560/24	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 200-170560/25	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 170716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	RSK-175	
480-188531-2	MW-13-081921	Total/NA	Water	RSK-175	
480-188531-3	MW-15-081921	Total/NA	Water	RSK-175	
480-188572-1	MW-12-082021	Total/NA	Water	RSK-175	
480-188572-2	MW-14-082021	Total/NA	Water	RSK-175	
480-188572-3	MW-7-082021	Total/NA	Water	RSK-175	
MB 200-170716/4	Method Blank	Total/NA	Water	RSK-175	
LCS 200-170716/2	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 200-170716/3	Lab Control Sample Dup	Total/NA	Water	RSK-175	

GC VOA

Analysis Batch: 593289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	RSK-175	
480-188404-2	MW-10-081721	Total/NA	Water	RSK-175	
MB 480-593289/3	Method Blank	Total/NA	Water	RSK-175	
LCS 480-593289/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-593289/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 593898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	RSK-175	
480-188531-3	MW-15-081921	Total/NA	Water	RSK-175	
MB 480-593898/3	Method Blank	Total/NA	Water	RSK-175	
LCS 480-593898/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-593898/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 594069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-2	MW-13-081921	Total/NA	Water	RSK-175	
480-188572-1	MW-12-082021	Total/NA	Water	RSK-175	
480-188572-3	MW-7-082021	Total/NA	Water	RSK-175	
MB 480-594069/3	Method Blank	Total/NA	Water	RSK-175	
LCS 480-594069/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 480-594069/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 594286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-2	MW-14-082021	Total/NA	Water	RSK-175	
MB 480-594286/3	Method Blank	Total/NA	Water	RSK-175	
LCS 480-594286/4	Lab Control Sample	Total/NA	Water	RSK-175	

Metals

Prep Batch: 593321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	3005A	
480-188404-2	MW-10-081721	Total/NA	Water	3005A	
MB 480-593321/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-593321/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 593569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	6010C	593321
480-188404-2	MW-10-081721	Total/NA	Water	6010C	593321
MB 480-593321/1-A	Method Blank	Total/NA	Water	6010C	593321
LCS 480-593321/2-A	Lab Control Sample	Total/NA	Water	6010C	593321

Prep Batch: 593648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	3005A	
480-188531-2	MW-13-081921	Total/NA	Water	3005A	
480-188531-3	MW-15-081921	Total/NA	Water	3005A	
MB 480-593648/1-A	Method Blank	Total/NA	Water	3005A	

Metals (Continued)

Prep Batch: 593648 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-593648/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 593650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-1	MW-12-082021	Total/NA	Water	3005A	
480-188572-2	MW-14-082021	Total/NA	Water	3005A	
480-188572-3	MW-7-082021	Total/NA	Water	3005A	
MB 480-593650/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-593650/2-A	Lab Control Sample	Total/NA	Water	3005A	
480-188572-1 MS	MW-12-082021	Total/NA	Water	3005A	
480-188572-1 MSD	MW-12-082021	Total/NA	Water	3005A	

Analysis Batch: 593740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	6010C	593321
480-188404-1	MW-4-081721	Total/NA	Water	6010C	593321
480-188404-2	MW-10-081721	Total/NA	Water	6010C	593321
480-188404-2	MW-10-081721	Total/NA	Water	6010C	593321
MB 480-593321/1-A	Method Blank	Total/NA	Water	6010C	593321
LCS 480-593321/2-A	Lab Control Sample	Total/NA	Water	6010C	593321

Analysis Batch: 593822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	6010C	593648
480-188531-2	MW-13-081921	Total/NA	Water	6010C	593648
480-188531-3	MW-15-081921	Total/NA	Water	6010C	593648
MB 480-593648/1-A	Method Blank	Total/NA	Water	6010C	593648
LCS 480-593648/2-A	Lab Control Sample	Total/NA	Water	6010C	593648

Analysis Batch: 593823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-1	MW-12-082021	Total/NA	Water	6010C	593650
480-188572-2	MW-14-082021	Total/NA	Water	6010C	593650
480-188572-3	MW-7-082021	Total/NA	Water	6010C	593650
MB 480-593650/1-A	Method Blank	Total/NA	Water	6010C	593650
LCS 480-593650/2-A	Lab Control Sample	Total/NA	Water	6010C	593650
480-188572-1 MS	MW-12-082021	Total/NA	Water	6010C	593650
480-188572-1 MSD	MW-12-082021	Total/NA	Water	6010C	593650

Analysis Batch: 594227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-2	MW-13-081921	Total/NA	Water	6010C	593648

Analysis Batch: 594381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-1	MW-12-082021	Total/NA	Water	6010C	593650
480-188572-1 MS	MW-12-082021	Total/NA	Water	6010C	593650
480-188572-1 MSD	MW-12-082021	Total/NA	Water	6010C	593650

Metals

Analysis Batch: 594749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-2	MW-14-082021	Total/NA	Water	6010C	593650

General Chemistry

Analysis Batch: 593248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	300.0	
480-188404-2	MW-10-081721	Total/NA	Water	300.0	
MB 480-593248/4	Method Blank	Total/NA	Water	300.0	
LCS 480-593248/3	Lab Control Sample	Total/NA	Water	300.0	
480-188404-1 MS	MW-4-081721	Total/NA	Water	300.0	
480-188404-1 MSD	MW-4-081721	Total/NA	Water	300.0	
480-188404-2 MS	MW-10-081721	Total/NA	Water	300.0	

Analysis Batch: 593255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	VFA-IC	
480-188404-2	MW-10-081721	Total/NA	Water	VFA-IC	
MB 480-593255/6	Method Blank	Total/NA	Water	VFA-IC	
LCS 480-593255/5	Lab Control Sample	Total/NA	Water	VFA-IC	

Analysis Batch: 593286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	350.1	
480-188404-2	MW-10-081721	Total/NA	Water	350.1	
MB 480-593286/27	Method Blank	Total/NA	Water	350.1	
MB 480-593286/3	Method Blank	Total/NA	Water	350.1	
LCS 480-593286/28	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-593286/4	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 593342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-2	MW-10-081721	Total/NA	Water	353.2	
MB 480-593342/3	Method Blank	Total/NA	Water	353.2	
LCS 480-593342/4	Lab Control Sample	Total/NA	Water	353.2	
480-188404-2 MS	MW-10-081721	Total/NA	Water	353.2	

Analysis Batch: 593351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	353.2	
480-188404-2	MW-10-081721	Total/NA	Water	353.2	

Analysis Batch: 593352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	353.2	

Analysis Batch: 593535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	SM 2320B	
480-188404-2	MW-10-081721	Total/NA	Water	SM 2320B	
MB 480-593535/4	Method Blank	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 593535 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-593535/5	Lab Control Sample	Total/NA	Water	SM 2320B	
480-188404-2 MS	MW-10-081721	Total/NA	Water	SM 2320B	
480-188404-1 DU	MW-4-081721	Total/NA	Water	SM 2320B	

Analysis Batch: 593634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-2	MW-13-081921	Total/NA	Water	353.2	
480-188531-3	MW-15-081921	Total/NA	Water	353.2	
MB 480-593634/3	Method Blank	Total/NA	Water	353.2	
LCS 480-593634/4	Lab Control Sample	Total/NA	Water	353.2	
480-188531-2 MS	MW-13-081921	Total/NA	Water	353.2	

Analysis Batch: 593639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	353.2	
480-188531-2	MW-13-081921	Total/NA	Water	353.2	
480-188531-3	MW-15-081921	Total/NA	Water	353.2	
480-188572-1	MW-12-082021	Total/NA	Water	353.2	
480-188572-2	MW-14-082021	Total/NA	Water	353.2	
480-188572-3	MW-7-082021	Total/NA	Water	353.2	

Analysis Batch: 593640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	353.2	
480-188572-1	MW-12-082021	Total/NA	Water	353.2	
480-188572-2	MW-14-082021	Total/NA	Water	353.2	
480-188572-3	MW-7-082021	Total/NA	Water	353.2	

Analysis Batch: 593692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	350.1	
480-188531-2	MW-13-081921	Total/NA	Water	350.1	
480-188531-3	MW-15-081921	Total/NA	Water	350.1	
MB 480-593692/3	Method Blank	Total/NA	Water	350.1	
MB 480-593692/51	Method Blank	Total/NA	Water	350.1	
LCS 480-593692/4	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-593692/52	Lab Control Sample	Total/NA	Water	350.1	
480-188531-2 MS	MW-13-081921	Total/NA	Water	350.1	
480-188531-2 DU	MW-13-081921	Total/NA	Water	350.1	

Analysis Batch: 593728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	300.0	
480-188531-2	MW-13-081921	Total/NA	Water	300.0	
480-188531-3	MW-15-081921	Total/NA	Water	300.0	
480-188572-1	MW-12-082021	Total/NA	Water	300.0	
480-188572-2	MW-14-082021	Total/NA	Water	300.0	
480-188572-3	MW-7-082021	Total/NA	Water	300.0	
MB 480-593728/28	Method Blank	Total/NA	Water	300.0	
MB 480-593728/4	Method Blank	Total/NA	Water	300.0	
LCS 480-593728/27	Lab Control Sample	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 593728 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-593728/3	Lab Control Sample	Total/NA	Water	300.0	
480-188572-1 MS	MW-12-082021	Total/NA	Water	300.0	
480-188572-1 MSD	MW-12-082021	Total/NA	Water	300.0	

Analysis Batch: 593769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	VFA-IC	
480-188531-2	MW-13-081921	Total/NA	Water	VFA-IC	
480-188531-3	MW-15-081921	Total/NA	Water	VFA-IC	
480-188572-1	MW-12-082021	Total/NA	Water	VFA-IC	
480-188572-2	MW-14-082021	Total/NA	Water	VFA-IC	
480-188572-3	MW-7-082021	Total/NA	Water	VFA-IC	
MB 480-593769/6	Method Blank	Total/NA	Water	VFA-IC	
LCS 480-593769/5	Lab Control Sample	Total/NA	Water	VFA-IC	

Analysis Batch: 593811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-1	MW-12-082021	Total/NA	Water	350.1	
480-188572-2	MW-14-082021	Total/NA	Water	350.1	
480-188572-3	MW-7-082021	Total/NA	Water	350.1	
MB 480-593811/27	Method Blank	Total/NA	Water	350.1	
LCS 480-593811/28	Lab Control Sample	Total/NA	Water	350.1	
480-188572-3 MS	MW-7-082021	Total/NA	Water	350.1	
480-188572-3 DU	MW-7-082021	Total/NA	Water	350.1	

Analysis Batch: 593873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	9060A	
480-188404-2	MW-10-081721	Total/NA	Water	9060A	
MB 480-593873/52	Method Blank	Total/NA	Water	9060A	
LCS 480-593873/53	Lab Control Sample	Total/NA	Water	9060A	
480-188404-1 MS	MW-4-081721	Total/NA	Water	9060A	
480-188404-2 DU	MW-10-081721	Total/NA	Water	9060A	

Analysis Batch: 594005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	SM 2320B	
480-188531-2	MW-13-081921	Total/NA	Water	SM 2320B	
480-188531-3	MW-15-081921	Total/NA	Water	SM 2320B	
480-188572-1	MW-12-082021	Total/NA	Water	SM 2320B	
480-188572-2	MW-14-082021	Total/NA	Water	SM 2320B	
480-188572-3	MW-7-082021	Total/NA	Water	SM 2320B	
MB 480-594005/28	Method Blank	Total/NA	Water	SM 2320B	
MB 480-594005/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-594005/29	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-594005/5	Lab Control Sample	Total/NA	Water	SM 2320B	
480-188531-2 MS	MW-13-081921	Total/NA	Water	SM 2320B	
480-188572-3 MS	MW-7-082021	Total/NA	Water	SM 2320B	
480-188531-1 DU	MW-11-081921	Total/NA	Water	SM 2320B	
480-188572-2 DU	MW-14-082021	Total/NA	Water	SM 2320B	

General Chemistry

Analysis Batch: 594012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188404-1	MW-4-081721	Total/NA	Water	SM 4500 S2 F	
480-188404-2	MW-10-081721	Total/NA	Water	SM 4500 S2 F	
480-188531-1	MW-11-081921	Total/NA	Water	SM 4500 S2 F	
480-188531-2	MW-13-081921	Total/NA	Water	SM 4500 S2 F	
480-188531-3	MW-15-081921	Total/NA	Water	SM 4500 S2 F	
480-188572-1	MW-12-082021	Total/NA	Water	SM 4500 S2 F	
MB 480-594012/27	Method Blank	Total/NA	Water	SM 4500 S2 F	
MB 480-594012/3	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 480-594012/28	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
LCS 480-594012/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
480-188404-1 MS	MW-4-081721	Total/NA	Water	SM 4500 S2 F	
480-188404-2 DU	MW-10-081721	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 594298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-2	MW-14-082021	Total/NA	Water	SM 4500 S2 F	
480-188572-3	MW-7-082021	Total/NA	Water	SM 4500 S2 F	
MB 480-594298/3	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 480-594298/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
480-188572-2 MS	MW-14-082021	Total/NA	Water	SM 4500 S2 F	
480-188572-3 DU	MW-7-082021	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 594391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188572-1	MW-12-082021	Total/NA	Water	9060A	
480-188572-2	MW-14-082021	Total/NA	Water	9060A	
480-188572-3	MW-7-082021	Total/NA	Water	9060A	
MB 480-594391/4	Method Blank	Total/NA	Water	9060A	
LCS 480-594391/5	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 594403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188531-1	MW-11-081921	Total/NA	Water	9060A	
480-188531-2	MW-13-081921	Total/NA	Water	9060A	
480-188531-3	MW-15-081921	Total/NA	Water	9060A	
MB 480-594403/27	Method Blank	Total/NA	Water	9060A	
LCS 480-594403/28	Lab Control Sample	Total/NA	Water	9060A	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Client Sample ID: MW-4-081721

Date Collected: 08/17/21 12:00
Date Received: 08/17/21 17:00

Lab Sample ID: 480-188404-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		800	593228	08/18/21 18:46	CRL	TAL BUF
Total/NA	Analysis	RSK-175		1	170560	08/24/21 10:11	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		11	593289	08/18/21 15:05	DSC	TAL BUF
Total/NA	Prep	3005A			593321	08/19/21 06:03	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593740	08/20/21 15:52	LMH	TAL BUF
Total/NA	Prep	3005A			593321	08/19/21 06:03	DMN	TAL BUF
Total/NA	Analysis	6010C		5	593740	08/20/21 15:56	LMH	TAL BUF
Total/NA	Prep	3005A			593321	08/19/21 06:03	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593569	08/19/21 19:48	AMH	TAL BUF
Total/NA	Analysis	300.0		50	593248	08/18/21 15:55	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593286	08/18/21 13:35	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593351	08/18/21 16:54	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593352	08/18/21 16:54	ALT	TAL BUF
Total/NA	Analysis	9060A		1	593873	08/20/21 22:41	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	593535	08/19/21 12:46	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594012	08/24/21 16:45	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		50	593255	08/19/21 00:01	IMZ	TAL BUF

Client Sample ID: MW-10-081721

Date Collected: 08/17/21 15:30
Date Received: 08/17/21 17:00

Lab Sample ID: 480-188404-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		4	593413	08/19/21 14:23	CRL	TAL BUF
Total/NA	Analysis	RSK-175		1	170560	08/24/21 10:26	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		1	593289	08/18/21 17:54	DSC	TAL BUF
Total/NA	Prep	3005A			593321	08/19/21 06:03	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593740	08/20/21 16:00	LMH	TAL BUF
Total/NA	Prep	3005A			593321	08/19/21 06:03	DMN	TAL BUF
Total/NA	Analysis	6010C		5	593740	08/20/21 16:03	LMH	TAL BUF
Total/NA	Prep	3005A			593321	08/19/21 06:03	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593569	08/19/21 19:52	AMH	TAL BUF
Total/NA	Analysis	300.0		20	593248	08/18/21 17:42	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593286	08/18/21 13:36	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593342	08/18/21 19:05	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593351	08/18/21 19:05	ALT	TAL BUF
Total/NA	Analysis	9060A		1	593873	08/20/21 23:44	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	593535	08/19/21 13:00	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594012	08/24/21 16:45	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		20	593255	08/19/21 00:30	IMZ	TAL BUF

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Client Sample ID: TRIP BLANK-081721

Lab Sample ID: 480-188404-3
Matrix: Water
Date Collected: 08/17/21 00:00
Date Received: 08/17/21 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593228	08/18/21 19:31	CRL	TAL BUF

Client Sample ID: MW-11-081921

Lab Sample ID: 480-188531-1
Matrix: Water
Date Collected: 08/19/21 12:30
Date Received: 08/19/21 17:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593861	08/25/21 02:09	AXK	TAL BUF
Total/NA	Analysis	RSK-175		1	170716	08/26/21 19:44	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		1	593898	08/24/21 20:55	DSC	TAL BUF
Total/NA	Prep	3005A			593648	08/21/21 11:58	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593822	08/23/21 18:20	LMH	TAL BUF
Total/NA	Analysis	300.0		5	593728	08/23/21 17:38	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593692	08/23/21 07:58	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593639	08/20/21 17:14	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593640	08/20/21 17:14	ALT	TAL BUF
Total/NA	Analysis	9060A		1	594403	08/27/21 00:34	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	594005	08/24/21 16:03	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594012	08/24/21 16:45	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		5	593769	08/23/21 18:31	IMZ	TAL BUF

Client Sample ID: MW-13-081921

Lab Sample ID: 480-188531-2
Matrix: Water
Date Collected: 08/19/21 15:35
Date Received: 08/19/21 17:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593861	08/25/21 02:31	AXK	TAL BUF
Total/NA	Analysis	RSK-175		1	170716	08/26/21 19:53	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		1	594069	08/25/21 16:22	DSC	TAL BUF
Total/NA	Prep	3005A			593648	08/21/21 11:58	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593822	08/23/21 18:35	LMH	TAL BUF
Total/NA	Prep	3005A			593648	08/21/21 11:58	DMN	TAL BUF
Total/NA	Analysis	6010C		2	594227	08/25/21 15:41	AMH	TAL BUF
Total/NA	Analysis	300.0		20	593728	08/23/21 17:56	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593692	08/23/21 08:00	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593639	08/20/21 19:24	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593634	08/20/21 19:24	ALT	TAL BUF
Total/NA	Analysis	9060A		1	594403	08/27/21 01:05	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	594005	08/24/21 16:17	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594012	08/24/21 16:45	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		20	593769	08/23/21 19:00	IMZ	TAL BUF

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Client Sample ID: MW-15-081921

Lab Sample ID: 480-188531-3

Date Collected: 08/19/21 10:20
Matrix: Water
Date Received: 08/19/21 17:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593861	08/25/21 02:53	AXK	TAL BUF
Total/NA	Analysis	RSK-175		1	170716	08/26/21 20:02	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		1	593898	08/24/21 21:33	DSC	TAL BUF
Total/NA	Prep	3005A			593648	08/21/21 11:58	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593822	08/23/21 18:39	LMH	TAL BUF
Total/NA	Analysis	300.0		10	593728	08/23/21 18:14	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593692	08/23/21 08:03	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593639	08/20/21 19:26	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593634	08/20/21 19:26	ALT	TAL BUF
Total/NA	Analysis	9060A		1	594403	08/27/21 01:36	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	594005	08/24/21 16:33	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594012	08/24/21 16:45	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		10	593769	08/23/21 19:29	IMZ	TAL BUF

Client Sample ID: TRIP BLANK-081921

Lab Sample ID: 480-188531-4

Date Collected: 08/19/21 00:00
Matrix: Water
Date Received: 08/19/21 17:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593861	08/25/21 03:16	AXK	TAL BUF

Client Sample ID: MW-12-082021

Lab Sample ID: 480-188572-1

Date Collected: 08/20/21 08:20
Matrix: Water
Date Received: 08/20/21 15:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	594050	08/26/21 02:18	CRL	TAL BUF
Total/NA	Analysis	RSK-175		1	170716	08/26/21 19:18	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		22	594069	08/25/21 20:08	DSC	TAL BUF
Total/NA	Prep	3005A			593650	08/21/21 12:09	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593823	08/23/21 20:18	LMH	TAL BUF
Total/NA	Prep	3005A			593650	08/21/21 12:09	DMN	TAL BUF
Total/NA	Analysis	6010C		5	594381	08/26/21 15:46	LMH	TAL BUF
Total/NA	Analysis	300.0		50	593728	08/23/21 22:42	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593811	08/24/21 08:44	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593639	08/20/21 18:38	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593640	08/20/21 18:38	ALT	TAL BUF
Total/NA	Analysis	9060A		1	594391	08/26/21 06:06	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	594005	08/24/21 18:26	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594012	08/24/21 16:45	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		50	593769	08/23/21 23:22	IMZ	TAL BUF

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Client Sample ID: MW-14-082021
Date Collected: 08/20/21 10:57
Date Received: 08/20/21 15:00

Lab Sample ID: 480-188572-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	594050	08/26/21 02:41	CRL	TAL BUF
Total/NA	Analysis	RSK-175		1	170716	08/26/21 19:27	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		1	594286	08/26/21 17:27	DSC	TAL BUF
Total/NA	Prep	3005A			593650	08/21/21 12:09	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593823	08/23/21 20:38	LMH	TAL BUF
Total/NA	Prep	3005A			593650	08/21/21 12:09	DMN	TAL BUF
Total/NA	Analysis	6010C		5	594749	08/30/21 15:45	LMH	TAL BUF
Total/NA	Analysis	300.0		20	593728	08/24/21 00:11	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593811	08/24/21 08:45	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593639	08/20/21 18:39	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593640	08/20/21 18:39	ALT	TAL BUF
Total/NA	Analysis	9060A		1	594391	08/26/21 06:35	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	594005	08/24/21 18:58	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594298	08/26/21 13:09	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		20	593769	08/23/21 23:51	IMZ	TAL BUF

Client Sample ID: MW-7-082021
Date Collected: 08/20/21 13:16
Date Received: 08/20/21 15:00

Lab Sample ID: 480-188572-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20000	594050	08/26/21 03:03	CRL	TAL BUF
Total/NA	Analysis	RSK-175		1	170716	08/26/21 19:36	MJZ	TAL BUR
Total/NA	Analysis	RSK-175		11	594069	08/25/21 20:46	DSC	TAL BUF
Total/NA	Prep	3005A			593650	08/21/21 12:09	DMN	TAL BUF
Total/NA	Analysis	6010C		1	593823	08/23/21 20:53	LMH	TAL BUF
Total/NA	Analysis	300.0		5	593728	08/24/21 00:29	IMZ	TAL BUF
Total/NA	Analysis	350.1		1	593811	08/24/21 08:46	CLT	TAL BUF
Total/NA	Analysis	353.2		1	593639	08/20/21 18:42	ALT	TAL BUF
Total/NA	Analysis	353.2		1	593640	08/20/21 18:42	ALT	TAL BUF
Total/NA	Analysis	9060A		1	594391	08/26/21 07:03	CLA	TAL BUF
Total/NA	Analysis	SM 2320B		1	594005	08/24/21 19:13	JPS	TAL BUF
Total/NA	Analysis	SM 4500 S2 F		1	594298	08/26/21 13:09	SRA	TAL BUF
Total/NA	Analysis	VFA-IC		5	593769	08/24/21 00:21	IMZ	TAL BUF

Client Sample ID: TRIP BLANK-082021
Date Collected: 08/20/21 00:00
Date Received: 08/20/21 15:00

Lab Sample ID: 480-188572-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	594050	08/26/21 03:25	CRL	TAL BUF

Laboratory References:

= , , ,

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

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

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: Eurofins TestAmerica, Burlington

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2336	02-25-23
Connecticut	State	PH-0751	09-30-21
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	05-17-22
Florida	NELAP	E87467	06-30-22
Minnesota	NELAP	050-999-436	12-31-21
New Hampshire	NELAP	2006	12-18-21
New Jersey	NELAP	VT972	06-30-22
New York	NELAP	10391	04-01-22
Pennsylvania	NELAP	68-00489	04-30-22
Rhode Island	State	LAO00298	12-30-21
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00272	10-30-23
Vermont	State	VT4000	02-10-22
Virginia	NELAP	460209	12-14-21
Wisconsin	State	399133350	08-31-22

Method Summary

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
AM20GAX	Dissolved Gases (GC)	None	
RSK-175	Dissolved Gases (GC)	RSK	TAL BUF
RSK-175	Dissolved Gases (GC)	RSK	TAL BUR
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 F	Sulfide, Total	SM	TAL BUF
VFA-IC	Volatile Fatty Acids, Ion Chromatography	TestAmerica SOP	TAL BUF
3005A	Preparation, Total Metals	SW846	TAL BUF
5030C	Purge and Trap	SW846	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:

= , , ,

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

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: GHD Services Inc.
Project/Site: 058507, GM Lockport SSOW 256043

Job ID: 480-188404-1
SDG: Delphi Harrison

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-188404-1	MW-4-081721	Water	08/17/21 12:00	08/17/21 17:00
480-188404-2	MW-10-081721	Water	08/17/21 15:30	08/17/21 17:00
480-188404-3	TRIP BLANK-081721	Water	08/17/21 00:00	08/17/21 17:00
480-188531-1	MW-11-081921	Water	08/19/21 12:30	08/19/21 17:37
480-188531-2	MW-13-081921	Water	08/19/21 15:35	08/19/21 17:37
480-188531-3	MW-15-081921	Water	08/19/21 10:20	08/19/21 17:37
480-188531-4	TRIP BLANK-081921	Water	08/19/21 00:00	08/19/21 17:37
480-188572-1	MW-12-082021	Water	08/20/21 08:20	08/20/21 15:00
480-188572-2	MW-14-082021	Water	08/20/21 10:57	08/20/21 15:00
480-188572-3	MW-7-082021	Water	08/20/21 13:16	08/20/21 15:00
480-188572-4	TRIP BLANK-082021	Water	08/20/21 00:00	08/20/21 15:00

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/03/2021

Report # 221082049

Project 480-188404-1 GM-Lockport

Samples Collected 8/17/21

Deliver To	***Additional Recipients***
Denise Heckler Test America, Inc 4101 Shuffel St NW North Canton, OH 44720 330-966-9477	Melissa Deyo, Test America

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics **-** The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 221082049

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: TestAmerica - New York **Report:** 221082049

Pace Analytical Gulf Coast received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22108204901	MW-4-081721 (480-188404-1)	Bubble Strip	8/17/21 12:00	8/19/21 10:11
22108204902	MW-10-081721 (480-188404-2)	Bubble Strip	8/17/21 15:30	8/19/21 10:11

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22108204901	MW-4-081721 (480-188404-1)	Hydrogen	nM	16	1	NA
22108204902	MW-10-081721 (480-188404-2)	Hydrogen	nM	2.9	1	NA

Sample Results

MW-4-081721 (480-188404-1)				
	Collect Date	08/17/2021 12:00	Lab ID	22108204901
	Receive Date	08/19/2021 10:11	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	08/27/21 14:26	719879	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	16	0.49	1.9	nM

MW-10-081721 (480-188404-2)				
	Collect Date	08/17/2021 15:30	Lab ID	22108204902
	Receive Date	08/19/2021 10:11	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	08/27/21 14:42	719879	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	2.9	0.49	1.9	nM

General Chromatography QC Summary

Analytical Batch		Client ID	MB719879		LCS719879				LCSD719879				
719879		Lab ID	2232823		2232824				2232825				
		Sample Type	MB		LCS				LCSD				
		Prep Date	NA		NA				NA				
		Analysis Date	08/27/21 10:54		08/27/21 11:38				08/27/21 12:42				
		Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX			Units Result	nM LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0		1.9U	1.9	12	11	94	70 - 130	12	12	98	4	20

Eurofins TestAmerica, Buffalo
Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

Client ID: Test-Amherst - TestAmerica - New York
SDG: 221082049
PM: RWe

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: Pace Analytical Gulf Coast
Address: 7979 Innovation Park Drive,
City: Baton Rouge
State, Zip: LA, 70820
Phone:
Email:
Project Name: 058507, GM Lockport SSOW 256041
Site:

Sampler:
Phone:
Lab PM: Heckler, Denise D
E-Mail: Denise.Heckler@Eurofinset.com
State of Origin: New York
Accreditations Required (See note): NELAP - New York
Due Date Requested: 8/27/2021
TAT Requested (days):
PO #:
WO #:
Project #: 48004014
SSOW#:

Page: Page 1 of 1
Job #: 480-188404-1

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 - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Analysis Requested

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-4-081721 (480-188404-1)	8/17/21	12:00 Eastern		Water			X	1	
MW-10-081721 (480-188404-2)	8/17/21	15:30 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification
Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

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

Special Instructions/QC Requirements:

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

Relinquished by: Date/Time: 8/18/21 1700 Company
Relinquished by: FedEx Date/Time: 8/19/21 1011 Company
Relinquished by: Date/Time: Company

Received by: Date/Time: Company
Received by: Date/Time: 8/19/21 1011 Company Pace
Received by: Date/Time: Company

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

Cooler Temperature(s) °C and Other Remarks:

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 221082049	
Client **PM** RWe Test-Amherst - TestAmerica - New York	**Transport Method** FEDEX
Profile Number 284571	**Received By** Jenkins, Mark A.
Line Item(s) 1 - Hydrogen	**Receive Date(s)** 08/19/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: N/A	Temp °C
		N/A

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

Page 1 of 1

LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/09/2021

Report # 221082692

Project GM-Lockport 460-188531-1

Samples Collected 8/19/21

Deliver To	***Additional Recipients***
Denise Heckler Test America, Inc 4101 Shuffel St NW North Canton, OH 44720 330-966-9477	Melissa Deyo, Test America

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics **-** The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 221082692

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: TestAmerica - New York **Report:** 221082692

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES GAS CHROMATOGRAPHY

The bubble strip/H2 analysis for the referenced work orders was delayed due to Hurricane Ida, and samples were ran and analyzed out of hold as a result of an extended power outage

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22108269201	MW-11-081921 (480-188531-1)	Bubble Strip	8/19/21 12:30	8/26/21 08:52
22108269202	MW-13-081921 (480-188531-2)	Bubble Strip	8/19/21 15:35	8/26/21 08:52
22108269203	MW-15-081921 (480-188531-3)	Bubble Strip	8/19/21 10:20	8/26/21 08:52

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22108269201	MW-11-081921 (480-188531-1)	Hydrogen	nM	4.4	1	NA
22108269202	MW-13-081921 (480-188531-2)	Hydrogen	nM	3.6	1	NA
22108269203	MW-15-081921 (480-188531-3)	Hydrogen	nM	4.0	1	NA

Sample Results

MW-11-081921 (480-188531-1)				
	Collect Date	08/19/2021 12:30	Lab ID	22108269201
	Receive Date	08/26/2021 08:52	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/08/21 15:06	720343	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	4.4	0.49	1.9	nM

MW-13-081921 (480-188531-2)				
	Collect Date	08/19/2021 15:35	Lab ID	22108269202
	Receive Date	08/26/2021 08:52	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/08/21 15:22	720343	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.6	0.49	1.9	nM

MW-15-081921 (480-188531-3)				
	Collect Date	08/19/2021 10:20	Lab ID	22108269203
	Receive Date	08/26/2021 08:52	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/08/21 15:36	720343	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	4.0	0.49	1.9	nM

General Chromatography QC Summary

Analytical Batch		Client ID	MB720343		LCS720343				LCSD720343				
720343		Lab ID	2235422		2235423				2235424				
		Sample Type	MB		LCS				LCSD				
		Prep Date	NA		NA				NA				
		Analysis Date	09/08/21 10:18		09/08/21 10:33				09/08/21 10:45				
		Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX			Units Result	nM LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0		1.9U	1.9	12	9.9	83	70 - 130	12	10	89	6	20

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

Chain of Custody Record

Client ID: Test-Amherst - TestAmerica - New York
SDG: 221082692
PM: RWe

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Heckler, Denise D	State of Origin:	Page:
Client Contact: Shipping/Receiving	Phone:	E-Mail: Denise.Heckler@Eurofinset.com	New York	Page 1 of 1
Company: Pace Analytical Gulf Coast		Accreditations Required (See note): NELAP - New York		Job #: 480-188531-1
Address: 7979 Innovation Park Drive, ,	Due Date Requested: 8/31/2021			
City: Baton Rouge	TAT Requested (days):			
State, Zip: LA, 70820				
Phone:	PO #:			
Email:	WO #:			
Project Name: 058507, GM Lockport SSOW 256043	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 - Na2S2O3
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-11-081921 (480-188531-1)	8/19/21	12:30 Eastern		Water			X	1	1
MW-13-081921 (480-188531-2)	8/19/21	15:35 Eastern		Water			X	1	2
MW-15-081921 (480-188531-3)	8/19/21	10:20 Eastern		Water			X	1	3

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Unknown Courier	8/24/21 1700	TA			
2	FedEx	8/26/21 852		Jacob Hawkins	8/26/21 08:52	
3						

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

1888 3864 9335

Ver: 06/08/2021

Pace Analytical®

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP 221082692	
Client **PM** RWe Test-Amherst - TestAmerica - New York	**Transport Method** FEDEX
Profile Number 284571	**Received By** Jenkins, Mark A.
Line Item(s) 1 - Hydrogen	**Receive Date(s)** 08/26/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: N/A	Temp °C
1888 3864 9335		N/A

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

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LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 09/04/2021

Report # 221082704

Project GM-Lockport 480-188572-1

Samples Collected 8/20/21

Deliver To	***Additional Recipients***
Denise Heckler Test America, Inc 4101 Shuffel St NW North Canton, OH 44720 330-966-9477	Melissa Deyo, Test America

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics **-** The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 221082704

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234

Case Narrative

Client: TestAmerica - New York **Report:** 221082704

Pace Analytical Gulf Coast received and analyzed the sample(s) listed
on the Report Sample Summary page of this report. Receipt of the sample(s) is documented
by the attached chain of custody. This applies only to the sample(s) listed in this report.
No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Sample Summary

Lab ID	Client ID	Matrix	Collect Date	Receive Date
22108270401	MW-12-082021 (480-188572-1)	Bubble Strip	8/20/21 08:20	8/26/21 08:52
22108270402	MW-14-082021 (480-188572-2)	Bubble Strip	8/20/21 10:57	8/26/21 08:52

Detect Summary

Results and Detection Limits are adjusted for dilution and moisture when applicable

AM20GAX						
Lab ID	**Client ID**	**Parameter**	**Units**	**Result**	**Dil.**	**%Moist**
22108270401	MW-12-082021 (480-188572-1)	Hydrogen	nM	3.4	1	NA
22108270402	MW-14-082021 (480-188572-2)	Hydrogen	nM	4.6	1	NA

Sample Results

MW-12-082021 (480-188572-1)				
	Collect Date	08/20/2021 08:20	Lab ID	22108270401
	Receive Date	08/26/2021 08:52	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/03/21 17:12	720054	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	3.4	0.49	1.9	nM

MW-14-082021 (480-188572-2)				
	Collect Date	08/20/2021 10:57	Lab ID	22108270402
	Receive Date	08/26/2021 08:52	Matrix	Bubble Strip

AM20GAX

Prep Date	Prep Batch	Prep Method	Dilution	Run Date	Run Batch	Analyst	%Moisture
NA	NA	NA	1	09/03/21 17:24	720054	TJT	

CAS#	Parameter	Result	DL	LOQ	Units
1333-74-0	Hydrogen	4.6	0.49	1.9	nM

General Chromatography QC Summary

Analytical Batch		Client ID	MB720054		LCS720054				LCSD720054				
720054		Lab ID	2233987		2233988				2233989				
		Sample Type	MB		LCS				LCSD				
		Prep Date	NA		NA				NA				
		Analysis Date	09/03/21 11:43		09/03/21 12:08				09/03/21 12:21				
		Matrix	Bubble Strip		Bubble Strip				Bubble Strip				
AM20GAX			Units Result	nM LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Hydrogen	1333-74-0		1.9U	1.9	12	11	94	70 - 130	12	11	96	2	20

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

Chain of Custody Record

Client ID: Test-Amherst - TestAmerica - New York
SDG: 221082704
PM: RWe

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Heckler, Denise D	Carrier Tracking No(s):
Client Contact: Shipping/Receiving	Phone:	E-Mail: Denise.Heckler@Eurofinset.com	Page 1 of 1
Company: Pace Analytical Gulf Coast		Accreditations Required (See note): NELAP - New York	Job #: 480-188572-1
Address: 7979 Innovation Park Drive, ,	Due Date Requested: 9/1/2021		
City: Baton Rouge	TAT Requested (days):		
State, Zip: LA, 70820			
Phone:	PO #:		
Email:	WO #:		
Project Name: 058507, GM Lockport SSOW 256043	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 - Na2S2O3
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-12-082021 (480-188572-1)	8/20/21	08:20 Eastern		Water			X	1	
MW-14-082021 (480-188572-2)	8/20/21	10:57 Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:	Method of Shipment:	
Relinquished by: [illegible]	Date/Time: 8/24/21 1700	Company TA	Received by:	Date/Time:	Company	
Relinquished by: FedEx	Date/Time: 8/26/21 8:52	Company	Received by: [signature]	Date/Time: 8/26/21 0852	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:	

1888 3864 9335

Ver: 06/08/2021

Pace Analytical®

SAMPLE RECEIVING CHECKLIST

* 2 2 1 0 8 2 7 0 4 *

SAMPLE DELIVERY GROUP 221082704	
Client **PM** RWe Test-Amherst - TestAmerica - New York	**Transport Method** FEDEX
Profile Number 284571	**Received By** Jenkins, Mark A.
Line Item(s) 1 - Hydrogen	**Receive Date(s)** 08/26/21

CHECKLIST	YES	NO
Samples received with proper thermal preservation?	☑	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐
COC relinquished and complete (including sampleIDs, collect times, and sampler)?	☑	☐
All containers received in good condition and within hold time?	☑	☐
All sample labels and containers received match the chain of custody?	☑	☐
Preservative added to any containers?	☐	☑
If received, was headspace for VOC water containers < 6mm?	☑	☐
Samples collected in containers provided by Pace Gulf Coast?	☑	☐

COOLERS

Airbill	Thermometer ID: N/A	Temp °C
		N/A

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Morgan Brown	Lab PM: Heckler, Denise D	Carrier Tracking No(s):	COC No: 480-164113-32642.1
Client Contact: Mr. Tom Bohlen	Phone: 716-803-5717	E-Mail: Denise.Heckler@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.	PWSID:			Job #:
Address: 300 Pearl St. Suite 700	Due Date Requested:			
City: Buffalo	TAT Requested (days): STD			
State, Zip: NY, 14202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: thomas.bohlen@gza.com	WO #: 256041			
Project Name: 058507, GM Lockport SSOW 256041	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 - Na2S2O3, 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)	8260C - PCE, TCE, DCE (trans and cis) & VC	VFA_IC - VFAs	300.0_28D - Anions (Chloride & Sulfate)	350.1 - Ammonia	6010C - Metals - Fe, Mn, Mg, K & Na	RSK_175 - Methane, Ethane & Ethene	9060A - TOC	SM4500_S2_F - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Alkalinity	Dissolved hydrogen	Total Number of containers	Special Instructions/Note:
Preservation Code:							A	N	N	S	D	A	A	CB	N	N			
MW-4-081721	08/17/21	1200	G	Water	N		X	X	X	X	X	X	X	X	X	X	*		DELPHT HARRISON THERMAL SYSTEMS SITE
MW-10-081721	08/17/21	1530	G	Water	N		X	X	X	X	X	X	X	X	X	X	*		
				Water															
Trip Blank	—	—		Water			X												
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															
				Water															

*-Pace H_2 air -See Dr. Hecker for reporting & H_2 questions

480-188404 Chain of Custody

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

Sample Disposal (A fee may be assessed if samples a
☐ Return To Client ☐ Disposal By Lab

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: 8/17/21 1747	Company: GZA	Received by:	Date/Time: 5/17/21 1700	Company: TAB
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: 2.8 ICE

Ver: 06/08/2021

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Morgan Brown	Lab PM: Heckler, Denise D	Carrier Tracking No(s):	COC No: 480-164113-32642.2
Client Contact: Mr. Tom Bohlen	Phone: 716-803-5717	E-Mail: Denise.Heckler@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: GZA GeoEnvironmental, Inc.	PWSID:			Job #:
Address: 300 Pearl St. Suite 700	Due Date Requested:			
City: Buffalo	TAT Requested (days): STD			
State, Zip: NY, 14202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: thomas.bohlen@gza.com	WO #: 256041			
Project Name: 058507, GM Lockport SSOW 256041	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 - Na2S2O3, 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)	8260C - PCE, TCE, DCE (trans and cis) & VC	VFA_IC - VFAs	8270D - PAH Semivolatiles	RSK_175_CO2 - Carbon dioxide	300.0_28D - Anions (Chloride & Sulfate)	350.1 - Ammonia	6010C - Metals - Fe, Mn, Mg, K & Na	RSK_175 - Methane, Ethane & Ethene	9060A - TOC	SM4500_S2_F - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Alkalinity	Dissolved Hydrogen	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	N	N	N	S	D	A	A	CB	N	N			
MW-11-081921	8-19-21	1230	G	Water	W		X	X		X	X	X	X	X	X	X	X	X	*		DELPHI HARRISON THERMAL SYSTEMS SITE
MW-13-081921	8-19-21	1535	G	Water	W		X	X		X	X	X	X	X	X	X	X	X	*		
MW-15-081921	8-19-21	1020	G	Water	W		X	X		X	X	X	X	X	X	X	X	X	*		
				Water																	
Trip Blank	-	-		Water			X														* Pace H2 air see D. Hecker for reporting [illegible]
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	
				Water																	

480-188531 Chain of Custody

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

Sample Disposal (A fee may be assessed i.
☐ Return To Client ☐ Disposal By Lab ☐ Archive For [illegible]

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
	Morgan Brown	8-19-21 1730	GZA		8/19/21 17:37	
	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: 3.5 TCE

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Morgan Brown	Lab PM: Heckler, Denise D	Carrier Tracking No(s):	COC No: 480-164113-32642.2
Client Contact: Mr. Tom Bohlen	Phone: 716-803-5707	E-Mail: Denise.Heckler@Eurofinset.com	State of Origin:	Page: Page ~~2 of 11~~ 1 of 1
Company: GZA GeoEnvironmental, Inc.	PWSID:			Job #:
Address: 300 Pearl St. Suite 700	Due Date Requested:			
City: Buffalo	TAT Requested (days): STD			
State, Zip: NY, 14202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: thomas.bohlen@gza.com	WO #: 256041			
Project Name: 058507, GM Lockport SSOW 256041	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 - Na2S2O3
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)	8260C - PCE, TCE, DCE (trans and cis) & VC	VFA_IC - VFAs	8270D - PAH Semivolatiles	RSK_175_CO2 - Carbon dioxide	300.0_28D - Anions (Chloride & Sulfate)	350.1 - Ammonia	6010C - Metals - Fe, Mn, Mg, K & Na	RSK_175 - Methane, Ethane & Ethene	9060A - TOC	SM4500_S2_F - Sulfide	353.2, 353.2_Nitrite, Nitrate_Calc	2320B - Alkalinity	Dissolved Hydrogen	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	N	N	N	S	D	A	A	CB	N	N			
MW-12-082021	8-20-21	0820	G	Water	N		X	X		X	X	X	X	X	X	X	X	X	*		DELPHI HARRISON
MW-14-082021	8-20-21	1057	G	Water	N		X	X		X	X	X	X	X	X	X	X	X	*		THERMAL SYSTEMS
MW-7-082021	8-20-21	1316	G	Water	N		X	X		X	X	X	X	X	X	X	X	X			SITE
				Water																	
Trip Blank	-	-		Water																	
																					* Pace H_2 air - See D. Heckler for reporting H_2 questions
				Water																	
				Water																	

480-188572 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: Morgan Brown	Date/Time: 08-20-21 1500	Company: GZA	Received by:
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by: Date/Time: 8/20/21 1500 Company: TMB

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

Cooler Temperature(s) °C and Other Remarks: 5.4 #1 ice

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-188404-1
SDG Number: Delphi Harrison

Login Number: 188404
List Number: 1
Creator: Yeager, Brian A

List Source: Eurofins 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 (Excluding tests with immediate HTs)..	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: GHD Services Inc.

Job Number: 480-188404-1
SDG Number: Delphi Harrison

Login Number: 188404
List Number: 2
Creator: Beane, John P

List Source: Eurofins TestAmerica, Burlington
List Creation: 08/19/21 02:11 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1512509
Sample custody seals, if present, are intact.	N/A	Not Present
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	2.5 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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-188404-1
SDG Number: Delphi Harrison

Login Number: 188531
List Number: 1
Creator: Yeager, Brian A

List Source: Eurofins 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 (Excluding tests with immediate HTs)..	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: GHD Services Inc.

Job Number: 480-188404-1
SDG Number: Delphi Harrison

Login Number: 188531
List Number: 2
Creator: Beane, John P

List Source: Eurofins TestAmerica, Burlington
List Creation: 08/21/21 12:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1512522, 1512523
Sample custody seals, if present, are intact.	N/A	Not Present
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	1.0 C, 1.8 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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-188404-1
SDG Number: Delphi Harrison

Login Number: 188572
List Number: 1
Creator: Sabuda, Brendan D

List Source: Eurofins 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	5.4 #1 ICE
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 (Excluding tests with immediate HTs)..	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	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 480-188404-1
SDG Number: Delphi Harrison

Login Number: 188572
List Number: 2
Creator: Beane, John P

List Source: Eurofins TestAmerica, Burlington
List Creation: 08/21/21 12:20 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1512522, 1512523
Sample custody seals, if present, are intact.	N/A	Not Present
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	1.0 C, 1.8 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?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	

GZA GeoEnvironmental, Inc.