O'neill, Christopher (DEC)

From: O'neill, Christopher (DEC)
Sent: Monday, July 8, 2024 9:30 AM
To: Hitt, Cody; Pederson, Deborah S (DEC); Graham, Stephen; smiller@chacompanies.com; tbakner@woh.com; rstout@woh.com; Selmer, Stephanie L (HEALTH); Deming, Justin H (HEALTH); Murphy, Michael C (DEC)
Subject: RE: Emailing: 2024-5-30-Approval With Mods for GW Report on Oct 2023 Sampling , HW#442009

Categories: AMRI

Thanks

Chris O'Neill
NYSDEC -- Schenectady
518-357-2394

-----Original Message-----
From: Hitt, Cody <Cody.Hitt@curiaglobal.com>
Sent: Monday, July 8, 2024 9:27 AM
To: Pederson, Deborah S (DEC) <deborah.pederson@dec.ny.gov>; Graham, Stephen <Stephen.Graham@curiaglobal.com>; smiller@chacompanies.com; tbakner@woh.com; rstout@woh.com; Selmer, Stephanie L (HEALTH) <stephanie.selmer@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Murphy, Michael C (DEC) <michael.murphy1@dec.ny.gov>; O'neill, Christopher (DEC) <christopher.oneill@dec.ny.gov>
Subject: RE: Emailing: 2024-5-30-Approval With Mods for GW Report on Oct 2023 Sampling

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Good Morning Chris,

Following up with our conversation last week.

Curia accepts the Approval with Modifications for the Biannual Groundwater Sampling and Analysis Report for October 2023.

Thank you,

Cody Hitt
Associate Environmental Health & Safety Specialist

518.488.4269
curiaglobal.com

-----Original Message-----

From: Pederson, Deborah S (DEC) <deborah.pederson@dec.ny.gov>
Sent: Thursday, May 30, 2024 10:35 AM
To: Graham, Stephen <Stephen.Graham@curiaglobal.com>; Hitt, Cody <Cody.Hitt@curiaglobal.com>; SMiller@chacompanies.com; tbakner@woh.com; rstout@woh.com; Selmer, Stephanie L (HEALTH) <stephanie.selmer@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Murphy, Michael C (DEC) <michael.murphy1@dec.ny.gov>; O'neill, Christopher (DEC) <christopher.oneill@dec.ny.gov>
Subject: Emailing: 2024-5-30-Approval With Mods for GW Report on Oct 2023 Sampling

External: This message originated outside of the organization from deborah.pederson@dec.ny.gov. Do not click links or open attachments unless you recognize the sender or know the content is safe.

Good morning,

The above attachment is being sent to you on behalf of Chris O'neill.

Thank you,

Deborah Pederson
Administrative Assistant 1
Region 4
she/her/hers

New York State Department of Environmental Conservation
1130 N. Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2443 | F: (518) 357-2398 | deborah.pederson@dec.ny.gov

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O'neill, Christopher (DEC)

From: Hitt, Cody <Cody.Hitt@curiaglobal.com>
Sent: Monday, July 8, 2024 9:27 AM
To: Pederson, Deborah S (DEC); Graham, Stephen; smiller@chacompanies.com; tbakner@woh.com; rstout@woh.com; Selmer, Stephanie L (HEALTH); Deming, Justin H (HEALTH); Murphy, Michael C (DEC); O'neill, Christopher (DEC)
Subject: RE: Emailing: 2024-5-30-Approval With Mods for GW Report on Oct 2023 Sampling

Categories: AMRI

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Good Morning Chris,

Following up with our conversation last week.

Curia accepts the Approval with Modifications for the Biannual Groundwater Sampling and Analysis Report for October 2023.

Thank you,

Cody Hitt
Associate Environmental Health & Safety Specialist

518.488.4269
curiaglobal.com

-----Original Message-----
From: Pederson, Deborah S (DEC) <deborah.pederson@dec.ny.gov>
Sent: Thursday, May 30, 2024 10:35 AM
To: Graham, Stephen <Stephen.Graham@curiaglobal.com>; Hitt, Cody <Cody.Hitt@curiaglobal.com>; SMiller@chacompanies.com; tbakner@woh.com; rstout@woh.com; Selmer, Stephanie L (HEALTH) <stephanie.selmer@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Murphy, Michael C (DEC) <michael.murphy1@dec.ny.gov>; O'neill, Christopher (DEC) <christopher.oneill@dec.ny.gov>
Subject: Emailing: 2024-5-30-Approval With Mods for GW Report on Oct 2023 Sampling

External: This message originated outside of the organization from deborah.pederson@dec.ny.gov. Do not click links or open attachments unless you recognize the sender or know the content is safe.

Good morning,

The above attachment is being sent to you on behalf of Chris O'neill.

Thank you,

Deborah Pederson
Administrative Assistant 1
Region 4
she/her/hers

New York State Department of Environmental Conservation
1130 N. Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2443 | F: (518) 357-2398 | deborah.pederson@dec.ny.gov

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 I F: (518) 357-2593
www.dec.ny.gov

May 30, 2024

Curia (formerly AMRI)
Attention: Stephen Graham
33 Riverside Avenue
Rensselaer, NY 12144
(Sent by email only Stephen.Graham@curiaglobal.com)

RE: Approval With Modifications
Biannual Groundwater Monitoring Report
for Oct2023 Sampling Event
Sterling Drug Site 1 (Curia), NYSDEC Site No. 442009

Dear Stephen Graham:

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have reviewed the revised "Biannual Groundwater Sampling and Analysis Report October 2023" (GW Report for Oct2023 Sampling) submitted on May 14, 2024, regarding the Curia (formerly AMRI) pharmaceutical plant (Sterling Drug Site 1, site #442009) in Rensselaer.

NYSDEC/NYSDOH have identified some errors or modifications needed in the GW Report for Oct2023 Sampling, as described below:

a. Table 2 – The Table 2 entry for monitoring well MW-12's Field Notes column indicates that the groundwater was tinted orange and contained iron floc as visible in the bailer. Since bailers were not used during the October 2023 sampling event, the report's text was corrected to indicate these observations were made with the low-flow sampling equipment, but the corresponding Table 2 text was not corrected.

b. Appendix A, Attachment 1 – The May 14, 2024 revised version contains a 'scrambled' (electronic error) version of the PFOS results figure produced by NYSDEC. A readable version of this figure is attached to this letter.

The NYSDEC/NYSDOH are issuing this letter as an Approved with Modifications letter for the May 14, 2024 revised version of the GW Report for Oct2023 Sampling in order to address some errors in the submitted report without a full re-submittal. If agreeable to Curia, this Approval with Modifications letter and its attachment will be used as a cover to the report. Otherwise, a full re-submittal that incorporates the identified modifications will need to be submitted for NYSDEC/NYSDOH review and approval.

Please reply by **June 10, 2024** if Curia accepts this Approval with Modifications for the "Biannual Groundwater Sampling and Analysis Report October 2023" with a letter or email to me as the NYSDEC Project Manager.

Please contact me at 518-357-2394 if there are any questions.

Sincerely,

Christopher O'Neill, P.E.
Professional Engineer 2

Attachment

ecc: C. Hitt, Curia
S. Miller, CHA
T. Bakner, Whiteman Osterman & Hanna
R. Stout, Whiteman Osterman & Hanna
S. Selmer, NYSDOH
J. Deming, NYSDOH
M. Murphy, NYSDEC



Notes:
DEC Standard/Action Limit:
PFOS: 2.7 ng/L or ppt
*Data not in EQuIS

C:\Users\tetreis\OneDrive - New York State Office of Information Technology Services\Documents\GIS\442009 Sterling Drug Site 1\442009 Sterling Drug Site 1 Wells\442009 Sterling Drug Site 1 Wells.aprx

From:	Hitt, Cody
To:	O"neill, Christopher (DEC)
Cc:	Graham, Stephen; Selmer, Stephanie L (HEALTH); Deming, Justin H (HEALTH); Murphy, Michael C (DEC)
Subject:	RE: Revised GW Report for Oct2023 Sampling Event, Sterling Drug Site 1 (Curia), HW#442009
Date:	Tuesday, May 14, 2024 3:00:33 PM
Attachments:	2024-05-14_2023 October Groundwater Monitoring Event_Final.pdf

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Good Afternoon Chris,

Please see attached revised Bi-annual Groundwater Report for the October 2023 sampling event. Please reach out with any questions or comments you may have.

Thank you,

Cody Hitt
Associate Environmental Health & Safety Specialist

518.488.4269
curiaglobal.com

curia

From: O'neill, Christopher (DEC) <christopher.oneill@dec.ny.gov>
Sent: Thursday, May 9, 2024 11:32 AM
To: Hitt, Cody <Cody.Hitt@curiaglobal.com>
Cc: Graham, Stephen <Stephen.Graham@curiaglobal.com>; Selmer, Stephanie L (HEALTH) <stephanie.selmer@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Murphy, Michael C (DEC) <michael.murphy1@dec.ny.gov>
Subject: Revised GW Report for Oct2023 Sampling Event, Sterling Drug Site 1 (Curia), HW#442009

External: This message originated outside of the organization from christopher.oneill@dec.ny.gov. Do not click links or open attachments unless you recognize the sender or know the content is safe.

As per our recent conference call discussion and email exchange regarding the Bi-annual Groundwater Report for the October 2023 sampling event, the revisions submitted to NYSDEC on March 12, 2024, and the additional revisions submitted to NYSDEC on April 24, 2024 are acceptable, so please have your consultant combine those revisions into a complete, full approve-able version of the report, and submit as such.

I can be reached at 518-357-2394 if there are any questions.

Chris O'Neill
NYSDEC – Schenectady
518-357-2394

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CURIA

May 14, 2024

New York State Department of Environmental Conservation
Division of Environmental Remediation – Region 4
1130 North Westcott Road
Schenectady, New York 12306
Attn: Mr. Christopher O'Neill, P.E.

RE: Comment Response – Biannual Groundwater Sampling and Analysis Report for October 2023 Sampling Event
Curia New York, 33 Riverside Avenue, Rensselaer, New York
Sterling Drug Site #1 NYSDEC Inactive Hazardous Waste Site Number 442009
CHA Project Number: 075104

Dear Mr. O'Neill:

On behalf of Curia New York (Curia), please find an enclosed copy of the Revised Biannual Groundwater Sampling and Analysis Report for the October 2023 Sampling Event. The document has been revised in accordance with the comments provided in the New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) comment letter dated January 22, 2024 and subsequent email April 19, 2024. The NYSDEC/NYSDOH comments and CHA responses are summarized below:

a. The March 12, 2024 Response to Comments letter from CHA which accompanied the March 2024 Revised GW Report indicates in General Comments E.c. that Table 1 has groundwater measurements for the non-sampled TPZ piezometers, and that Table 2 has a footnote that states that as well. The question is that there seems to be no record on field data sheets or in Table 1 or Table 2 of the actual Depth to Water measurements for the TPZ piezometers. Table 1 shows groundwater elevation and top of riser elevation, not the measured depth to water, whereas Table 2 includes the measured depth to water initial measurement for each sampled well point, which is then used to determine the groundwater elevation number for Table 1 entry. **The revised Table 1 is included with the report which shows the Depth to Groundwater for all locations measured (including the piezometers), as well as the corresponding elevations.**
b. The March 12, 2024 Response to Comments letter from CHA which accompanied the March 2024 Revised GW Report has detailed comments Comment 12/Response 12 regarding Figure 1 and deep wells. Monitoring wells MW-10 and MW-16 have been described by Curia/CHA as being 'deep' wells, wells installed in the deep water-bearing zone rather than the shallow water-bearing zone in which the rest of the monitoring wells are installed. MW-10 and MW-16 were added to Figure 1 but there is no footnote or other labeling to identify them as deep wells. **Please see the revised Figure 1 which includes a different identifier and a note for the two deep water-bearing zone wells.**
c. The March 12, 2024 Response to Comments letter from CHA which accompanied the March 2024 Revised GW Report has detailed comments Comment 17/Response 17 regarding the waste characterization samples WC-1. The response indicates that

Appendix C contains the lab results for both WC-1 samples, but it seems that Appendix C contains the same lab report twice for the 10/6/2023 11:30am WC-1 samples (~page 258 of 759 and ~page 421 of 759) but no lab report for a follow-up WC-1 sample for VOC lab analyses. **The correct lab report (L2368808) has now been added to Appendix C.**

General Comments:

A. In accordance with the NYSDEC comment letter dated June 15, 2023, emerging contaminants need to remain part of the groundwater sampling program for the April 2024 groundwater sampling event. **Emerging contaminant sampling will remain part of the April 2024 groundwater sampling event.**
B. In accordance with several meetings and comment letters, considerations for reducing the groundwater monitoring program well network and/or frequency are premature unless and until additional groundwater quality data has been collected and evaluated, especially for emerging contaminants and monitoring points near well MW-3. **The request for reduction/removal has been focused on MW-8, MW-11A and off-site wells in light of the sampling history at these specific locations, which have a history of non-detect and low concentrations and are below TOGS 1.1.1 going back over five years for the routine parameter list. It is understood that other wells, particularly MW-3, must remain in the network and that further investigation will occur. It is not anticipated that such further investigations will influence the need to continue sampling these specific wells.**
C. The groundwater well purging and sampling method was changed from hand-bailing to low flow pumping for the first time at this site. The groundwater sampling observations and results should be noted in comparison to historical findings, especially that the only sampled well to be purged dry in October 2023 was the fluids extraction (TFE) well (which was added specifically for emerging contaminants sampling). **This observation has been noted in Section 4.1 of the report.**
D. During the site meeting of August 30, 2023, Curia (and CHA) agreed with NYSDEC's request to change from hand-bailing to low flow purging and sampling, and NYSDEC agreed with Curia (and CHA) to add the 4 'deep' wells MW-1, MW-2, MW-10 and MW-16 to the October 2023 sampling event. The low flow method change was made for the October 2023 event, but the dep well sampling apparently did not. Please explain why the deep wells were not sampled and their results included in the Oct2023 GW Report. **A draft Stipulation Agreement was prepared by Curia counsel and sent to NYSDEC counsel on October 18, 2023 to memorialize the discussions from the meeting August 30, 2023. As of the date of this letter, Curia has not received comments from the Department on the draft Stipulation Agreement, despite repeated follow up. To ensure such sampling is performed pursuant to Department expectations, Curia will await execution of the Stipulation Agreement prior to proceeding. Note also that the parties did not agree to add MW-1 and MW-2 to a future sampling event, but rather to investigate if such off-site wells still existed. CHA did walk the Site to verify the location of the wells, MW-10 and MW-16 were located, however MW-1 and MW-2 could not be located and are believed to have likely been paved over by the current neighboring property owner.**

E. The NYSDEC comment letter dated October 3, 2022 contained a section that presented comments on the groundwater monitoring program and the Groundwater Monitoring Report that was submitted to NYSDEC in January 2022. Several of those comments also apply to the Oct2023 GW Report, including the following:
   a. Section 1.0 Introduction should include a statement regarding the existence and operation of the groundwater collection trench northerly from Building 30 and the treated groundwater re-injection area southerly from Building 30. **Paragraph 4 has been added to Section 1.0 Introduction.**
   b. Section 4.0 Field Observations discusses the groundwater flow directions and groundwater divide at the site. The groundwater divide is not illustrated by the October 2023 groundwater elevation figure as extending northeasterly from the MW-9 area to the MW-3 area. There is insufficient groundwater data to illustrate or determine groundwater flow directions northeasterly, easterly, southeasterly and southerly from MW-3 (reinforcing the need for additional groundwater monitoring wells outward from MW-3). **Figure 1 has been updated to provide a more accurate representation of groundwater contours. Three additional groundwater monitoring wells were proposed in the vicinity of MW-3 pursuant to the SRIWP upon execution of a Stipulation Agreement providing the same.**
   c. The Field Data Summary table needs to include the measurements collected for the piezometers used for groundwater elevations, namely TPZ-1, TPZ-3, TPZ-4, and TPZ-6. **Groundwater elevations and levels are recorded on Table 1. The Field Data Summary Table (Table 2) provides water quality data for wells that are purged and sampled. Since the piezometers are not sampled they are not included on this table, however a note has been added to the bottom which states that this information is available on Table 1.**
   d. The groundwater elevation contour map needs to include the correct site name and site number in the title box. **Figure 1 has been revised to include the correct site name and number.**
   e. The groundwater elevation contour map needs to illustrate and label both the groundwater collection trench and the treated groundwater re-injection area/trench/point. **Figure 1 has been revised to include the approximate location of the groundwater collection and re-injection trenches.**
   f. Figure 1 of the Oct2023 GW Report is labeled "Monitoring Data: April 2023". **Figure 1 has been revised to correctly state October 2023.**

Comment 1: List of Acronyms & Abbreviations –
   g. Please change "PFAs" to "PFAS" in the acronyms list.
   h. Please remove SRIWP from the acronyms list since this term is not used in the Oct 2023 GW Report.

Response 1: *PFAS has been updated and SRIWP has been removed from the Table of Contents.*

Comment 2: Section 1.0 Introduction – Please revise the second paragraph to state that the 1983 Agreement/Determination between NYSDEC and Curia predecessor Sterling Drug Inc.

serves as the basis for groundwater sampling and analyses for the site, and that the sampling and analyses program has evolved over the past 40 years as investigative and remedial efforts and requirements have progressed at the site.

Response 2: *Paragraph 2 of Section 1.0 Introduction has been revised to include that the sampling and analysis program has evolved as investigative and remedial efforts and requirements have progressed.*

Comment 3: Section 2.0 Objectives –

a. Please revise the paragraph to indicate when monitoring wells MW-11A and MW-17 were first added "voluntarily" to the groundwater monitoring program, and that these 2 wells have become standard parts of the on-going monitoring program well network for the site.
b. Please revise the paragraph to insert that the former groundwater well used for seasonal total fluids extraction, designated TFE, has been added to the groundwater monitoring program for emerging contaminants sampling (as requested by NYSDEC's comment letter dated June 15, 2023).

Response 3:

a. A specific report/date could not be located, however Groundwater Sampling and Analysis Reports dating back to at least 1998 state that the bi-annual sampling program includes on-site monitoring wells MW-3, MW-5, MW-6A, MW-8, MW-12A, and MW-14A, and off-site monitoring wells OS-1A, OS-3, OS-4A, and OS-5A. The various reports also state that "additional groundwater analyses were performed beyond the standard bi-annual sampling program" and include MW-11/11A and MW-17. The report has been revised to include the following statement, "Since at least 1998 groundwater samples have been collected from monitoring wells MW-11 and MW-17. Since that time, the wells have continued to be sampled voluntarily as part of the routine groundwater monitoring events. MW-11 was decommissioned and replaced with MW-11A in accordance with NYSDEC requirements and oversight."

b. A sentence has been added to the end of the paragraph in Section 2.0 Objectives which explains that the TFE was also added to the groundwater event.

Comment 4: Section 4.1 Field Notes and Water Quality Data –

a. Please explain, or correct, the statement for MW-12 that says that orange coloring and iron floc were visible in the bailer. The groundwater sampling text in section 3.0 states that HDPE tubing and low flow pump, not bailers, were used for purging and sampling the groundwater wells.
b. Please explain the choice of monitoring well OS-4A for the duplicate sample "CHA-1", given that this well is historically dry or generates Non-Detect sampling results. The Data Usability Summary Report (DUSR)for that sample set states that some of the Quality Assurance/Quality Control evaluation cannot be performed due to the OS-4A and Duplicate samples generating Non-Detect results.
c. Please revise the last paragraph as indicated in general comment E.b. above.

Response 4:

a. *The statement has been corrected. Orange coloring and iron floc were visible in the HDPE tubing.*
b. *There are limited options from which sample results for site contaminants of concern are greater than non-detect at locations that historically did not go dry during the purging process. Therefore, as a conservative measure to verify off-site analytical data we have historically sampled from the off-site wells where the wells do not go dry. Sample records dating back to at least 2017 indicate that OS-4A typically yields approximately 8 gallons of water prior to sampling and dry conditions are not encountered. The October 2023 event was the first event in recent history where the majority of on-site wells did not go dry during purging. However, because we did not know this would be the case, the sample was collected from the off-site location.*
c. *This paragraph has been revised to clarify that groundwater flow west of MW-3 flows in a west/northwest direction and that groundwater flow direction east of MW-3 cannot be definitively determined.*

Comment 5: Section 5.0 Comparison of Analytical Results –

a. Please add a new paragraph between the first and second paragraph to state that the October 2023 groundwater sampling event was the first time for the use of low flow pumping for well purging and sampling, instead of hand-bailing, for this site, so comparison of historical results to the October 2023 results may be affected by the purging/sampling methodology change.
b. The MW-17 tabulated result for Benzene needs to be revised to 5.9 J, based on the bulleted item on page 9 of the Oct2023 GW Report and the related DUSR findings for that sample set.
c. Please explain the inconsistency in the last paragraph regarding the one waste characterization sample, WC-1 being sampled and analyzed for VOCs, etc., but the related laboratory report indicates that the VOC sample was delivered with open headspace so Curia/CHA instructed the lab not to analyze that sample. In addition, this paragraph states that a Contained-In Determination is being prepared for wastewater disposal, but aren't VOC laboratory results needed for a Contained-In Determination for the waste water represented by WC-1?

Response 5:

a. *A paragraph was added in section 5.0 that states, This event was the first time low-flow sampling methods were utilized for purging and sampling the groundwater monitoring wells, instead of hand bailing, for this Site. Comparison of historical results to the October 2023 results may be affected by the purging/sampling methodology change, however results from this event compared to previous events are mostly consistent.*
b. *The J qualifier has been added to the benzene sample result for MW-17.*
c. *This paragraph has been revised for clarity. The new sample methodology resulted in additional decontamination measures (distilled water and Alconox® rinsate) which created a layer of suds on top of the purged water drum. The introduction of the suds impacted the ability to collect a representative sample and open headspace. The drum was sealed and allowed to sit before CHA returned to the site to collect a new VOC sample for laboratory analysis. The additional sampling has been included with this revision. During the holidays a letter was prepared requesting a Contained-In*

Determination for the purged groundwater. However, with the holidays there was a miscommunication and a new request was sent in. On March 4, 2024 a response was received which approved the Contained-In request. The drum was shipped off-site on March 5, 2024 by Tradebe Transportation LLC. A copy of the letter and the manifest have been included as attachments to the report.

Comment 6: Section 6.0 Conclusions –

a. Please revise the first sentence to include the data comparison caveat discussed in detailed comment 5.a. above.
b. Please add as the first bullet that only the TFE well was purged dry, as compared to previous sampling events whereas 3 to 7 monitoring wells being purged dry during hand-bailing purging practices.
c. Please revise the last bulleted item to indicate that the groundwater AWQS criteria for groundwater were revised in 2023 (as provided in the NYSDEC's April 2023 guidance document for PFAS data evaluations at 6NYCRR Part 375 remedial sites), with PFOS limit of 2.7 ng/L (2.7 parts per trillion, 2.7ppt) and PFOA limit of 6.7 ppt. These groundwater limits are not applicable to PFOS and PFOA drinking water limits, which remained at 10 ppt, so the site's groundwater not being used for drinking water is not pertinent to the data evaluation.

Response 6:

a. A second bullet has been added to include the data comparison caveat.
b. The first bullet states that sampling with low flow methodology was successful during this event. Historically many monitoring wells were purged dry utilizing hand bailing methods, however during this event only the TFE was purged dry.
c. The sentence which referred to drinking water has been removed from this bullet. Additionally, the AWQS for PFOS and PFOA have been added.

Comment 7: Section 7.0 Recommendations –

a. Please revise the first paragraph in describing the flow of groundwater at/near MW-3. Given that the October 2023 groundwater elevation data eastward (northeastward, southeastward and southward) of MW-3, the data illustrated by Figure 1 is inconclusive for groundwater flow direction at/near MW-3.
b. Please revise the second paragraph to reflect the NYSDEC requests of the past few years for additional groundwater data before considering reductions in the groundwater monitoring program. (See General Comments A. and B. above)

Response 7:

a. The sentence has been revised to state that groundwater flow direction west of MW-3 flows to the northwest. Additionally, a clarifying sentence was added to the end of the paragraph which states that there are no groundwater monitoring points on-site eastward (northeastward, southeastward, and southward) of MW-3 from which groundwater flow direction can be definitely determined.
b. CHA acknowledges the Department's requests for additional Site data, which requests culminated in the negotiation and preparation of a draft Stipulation Agreement, which remains under Department Review. Notwithstanding the results of such future sampling events, it is not anticipated that further investigation will influence the need to continue

sampling these wells. The request for emerging contaminant sample reduction has been removed for this event and will be re-evaluated after the sample data is received from the April 2024 event.

Comment 8: Table 2 – As stated in General Comment E.c. above, please revise Table 2 to include the well and water depths measured for the piezometers TPZ-1, TPZ-3, TPZ-4 and TPS-6.

Response 8: *Groundwater elevations and levels are recorded on Table 1. The Field Data Summary Table (Table 2) provides water quality data for wells that are purged and sampled. Since the piezometers are not sampled they are not included on this table, however a note has been added to the bottom which states that this information is available on Table 1.*

Comment 9: Table 3 – Please revise the tabulated entries to reflect the laboratory results reports and DUSR findings as follows:

a. MW-5A result for Chlorobenzene should be <2.5
b. MW-5A result for Arsenic should be 0.0172
c. MW-6A result for Arsenic should be 0.056
d. MW-6A result for Sodium should be 277
e. MW-11A result for Arsenic should be 0.857 J
f. OS-5A result for Arsenic should be 0.0045 J
g. OS-5A result for Sodium should be 23.6

Response 9: *Table 3 has been updated to incorporate the findings of the DUSR. MW-11A referenced as Comment 11E should be MW-14A and has been updated in the table accordingly.*

Comment 10: Table 5 – Please revise the tabulated entries to reflect the findings of the DUSR as follows:

a. MW-3 result for PFPeA should be 13.4 J
b. MW-11A result for PFBS should be 3.74 J
c. MW-14A result for PFBS should be 29.3 J

Response 10: *Table 5 has been updated to incorporate the findings of the DUSR.*

Comment 11: Tables – Please add a table (for example, Table 6) to present in tabular format the laboratory results for the waste characterization (WC1) samples.

Response 11: *Table 6 has been added to provide a summary of the detected waste characterization compounds in comparison with the Contained-In criteria.*

Comment 12: Figure 1 – In addition to General Comments E. and F. above, please revise this figure to include, and label as 'deep' wells, MW-1, MW-2, MW-10, and MW-16

Response 12: *Figure 1 has been revised to include monitoring wells MW-10 and MW-16. As mentioned above, MW-1 and MW-2 could not be located.*

Comment 13: Figure 2 – Please revise this figure to include the non-detect result for OS-3 as has been done for well TFE.

Response 13: *Figure 2 has been revised to provide a non-detect result for OS-3.*

Comment 14: Graph 2 – Please add Graph 2A to the reporting format, similar to the graph in the Attachment to this letter) to illustrate the more recent MW-3 chlorobenzene data. The graph demonstrates a cyclical/seasonal fluctuation in chlorobenzene concentrations, with all the graphical 'peaks' occurring in the Spring/April sampling events except for the October 2021 sampling event.

Response 14: *Graph 2A has been prepared and is included in the Graphs section of the report.*

Comment 15: Appendix A, Attachment 2 – Please revise the April 2023 NYSDEC guidance document so as to include proper pages 15 to 21.

Response 15: *The full NYSDEC guidance document has been included as Appendix A, Attachment 2.*

Comment 16: Appendix B – Please explain the well inspection sheet for well OS-1A. The hand-written comments seem to be "N/A" for the integrity of the surface seal/apron and integrity of the surface casing. Were those items acceptable, unacceptable, needing repair, or something else?

Response 16: *The surface seal/apron and surface casing were marked N/A because no repairs were needed. The monitoring well is in acceptable condition. The monitoring well form has been updated accordingly.*

Comment 17: Appendix C – Please explain the status of sample WC-1 Volatile Organics sampling and analytical results since the laboratory report (page 250 of the 653 page Oct2023 GW Report) indicates that headspace was noted and the analysis was cancelled at the client's request.

Response 17: *A second sample was collected and sent for analysis of VOCs. The report with this information has been added to Appendix C and the detections are shown on Table 6.*

Comment 18: Appendix D –

a. As described in Detailed Comment 4.b. above, the DUSR states on page 447 of the 653 Oct2023 GW Report that selecting a Non-Detect sampling location as a field duplicate hinders the data validation for relative percent difference evaluations.
b. As described in Detailed Comment 10 above, the DUSR states on page 503 of the 653 Oct2023GW Report that the PFBS results for some wells needs to be qualified with "J" to indicate an estimated value.
c. The DUSR evaluation page 644 of the 653 page Oct2023 GW Report discusses a Spike Sample Recovery item for batch spike sample number L2359497-01, but the laboratory

reports pages do not seem to include this batch number. Please explain the discrepancy and add the laboratory reports for any missing analytical work on samples from the site.

Response 18:

a. *Please refer to the response to Comment 4.b. above.*
b. *The PFBS result has been qualified in Table 3 in accordance with the DUSR.*
c. *The analytical laboratory is required to perform a matrix spike (MS) and matrix spike duplicate sample (MSD) on samples provided from the field for each batch of 20 samples. Typically, a project specific MS/MSD will be provided to the lab. However, in the case where a project specific MS/MSD are not provided for a given batch, the laboratory will utilize a laboratory control spike (LCS). Regarding the sample delivery group (SDG) referenced within the laboratory report, another client of the laboratory provided a project specific MS/MSD set which was utilized to satisfy the batch QAQC requirement. Since the project specific MS/MSD were supplied by another client to fulfill the Batch QAQC requirements, the original results or base sample cannot be provided as CHA does not own the data. Any issues with the Batch MS/MSD would be noted in the Report's case narrative. There are no project specific MS/MSD samples collected as part of the routing groundwater events at Curia, however, moving forward Curia has authorized the collection of site-specific MS/MSD samples to be collected during the groundwater events.*

If you have any questions or concerns, please feel free to contact me at (315) 257-7154.

Sincerely,

Samantha J. Miller

Samantha J. Miller, P.E.
Senior Engineer V

BIANNUAL GROUNDWATER SAMPLING AND ANALYSIS REPORT OCTOBER 2023

Curia New York
33 Riverside Avenue
Rensselaer, NY

Project Site #HW442009
CHA Project Number: 075104

November 2023
Revised March 2024
Revised May 2024

Prepared for:
Curia New York
33 Riverside Avenue
Rensselaer, New York 12144

Prepared by:
CHA Consulting, Inc.
III Winners Circle
Albany, New York 12205
Phone: (518) 453-4500

SIGNATURE PAGE

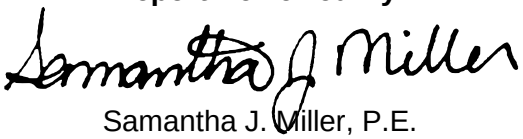
This report has been prepared and reviewed by the following qualified personnel employed by CHA Consulting, Inc.

Report Prepared By:



Caroline Hurlburt
Environmental Scientist II

Report Reviewed By:



Samantha J. Miller, P.E.
Senior Engineer/Project Manager

TABLE OF CONTENTS

1.0 INTRODUCTION 1
2.0 OBJECTIVES 1
3.0 GROUNDWATER SAMPLING 2
4.0 FIELD OBSERVATIONS 3
4.1 Field Notes and Water Quality Data 3
4.2 Monitoring Well Inspection 4
5.0 COMPARISON OF ANALYTICAL RESULTS 4
6.0 CONCLUSIONS 9
7.0 RECOMMENDATIONS 11

LIST OF TABLES

Table 1 Groundwater Sampling Field Parameters
Table 2 Groundwater Elevations
Table 3 Summary of Groundwater Analytical Results
Table 4 Historical Groundwater Analytical Results
Table 5 Emerging Contaminant Analytical Results
Table 6 Waste Characterization Analytical Results

LIST OF FIGURES

Figure 1 Groundwater Elevation Contour Map
Figure 2 Groundwater Concentrations 1,4-Dioxane
Figure 3 Groundwater Concentrations PFOA
Figure 4 Groundwater Concentrations PFOS

LIST OF APPENDICES

Appendix A Groundwater Monitoring Program Modifications Email
Appendix B Well Inspection Logs
Appendix C Laboratory Analytical Reports
Appendix D Data Usability Summary Reports
Appendix E Contained-In Approval and Waste Manifest

LIST OF ACRONYMS & ABBREVIATIONS

1,2-DCA	1,2-Dichloroethane
Alpha	Alpha Analytical
AMRI	AMRI Rensselaer, Inc.
AWQS	Ambient Water Quality Standards
CHA	CHA Consulting, Inc.
Curia	Curia New York, Inc.
DO	Dissolved Oxygen
ELAP	Environmental Laboratory Approval Program
HDPE	High Density Polyethylene
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	Oxidation Reduction Potential
PFAS	Per- and polyfluoroalkyl substances
QA	Quality Assurance
QC	Quality Control
TCL	Target Compound List
TFE	Total Fluids Extraction Well
TOGS	Technical and Operational Guidance Series
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
µg/L	Microgram per Liter
mg/L	Milligram per Liter

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1.0 INTRODUCTION

CHA Consulting, Inc. (CHA) was retained by Curia New York, Inc. (Curia), formerly AMRI Rensselaer, Inc. (AMRI) to perform the Biannual Groundwater Sampling and Analysis Program for Sterling Site #1, which is part of the New York State Department of Environmental Conservation (NYSDEC) as Hazardous Waste Site Number 442009. This report presents the results of the October 2023 groundwater sampling event, which was conducted October 2nd through October 6th, 2023.

The Biannual Groundwater Sampling and Analysis Program is conducted in accordance with the existing Agreement and Determination dated 1983 between Sterling Drug, Inc. (former property owner) and NYSDEC, as modified. Curia continues to follow the Agreement and Determination, as modified, which serves as the sampling and analysis plan for the site. The October 2023 groundwater sampling event followed this plan with the subsequent modifications since the sampling and analyses program has evolved over the past 40 years as investigative and remedial efforts and requirements have progressed at the site.

In 2021 the Groundwater Sampling Plan included expanding the VOC list from the four VOCs; benzene, chlorobenzene, toluene, and 1,2-dichloroethane (1,2-DCA), to the full Target Compound List (TCL) VOCs. Additionally, in a letter dated June 15, 2023 (Appendix A), the NYSDEC requested the sampling and analysis of emerging contaminants from specific locations across the Site. Emerging contaminant sampling consisted of per- and polyfluoroalkyl substances (PFAS) (USEPA Method 1633) and 1,4 Dioxane (USEPA Method 8270 SIM).

CHA notes that a groundwater collection trench is operated along the northern border of the property to the north and northwest of monitoring well MW-3. The groundwater collection trench captures contaminated water north of building 30 and directs it to the on-site groundwater treatment system, where it is then recharged into the ground south of Building 30. The location of the collection and injection trenches are shown on Figure 1.

2.0 OBJECTIVES

The objective of the Biannual Groundwater Sampling and Analysis Program is to collect data from site-related groundwater monitoring wells and monitor the groundwater quality within and adjacent to the site. Wells monitored as part of this program include on-site wells MW-3, MW-5A, MW-6A, MW-8, MW-12 MW-14A, and off-site wells OS-1A, OS-3, OS-4A and OS-5A. Since at least 1998 groundwater samples have been collected from monitoring wells 11 and MW-17. Since that time, the wells have continued to be sampled voluntarily as part of the routine groundwater monitoring events. MW-11 was decommissioned and replaced with MW-11A in accordance with NYSDEC requirements and oversight Groundwater is typically also gauged from monitoring wells MW-7A,

MW-9, MW-10, and MW-18, however during the October 2023 event, emerging contaminants were sampled at these locations. Groundwater level was gauged at piezometers TPZ-1, TPZ-3, TPZ-4, and TPZ-6. Per the NYSDEC's comment letter dated June 15, 2023 the former groundwater well used for seasonal total fluids extraction, designated TFE, was added to the groundwater monitoring program for emerging contaminants sampling during this event.

3.0 GROUNDWATER SAMPLING

Prior to sampling, groundwater elevations at the Site were collected utilizing a Heron electronic water level meter capable of reading to 0.01-feet accuracy. Groundwater elevation at each location is recorded and included in Table 1. Each well was then purged utilizing a low-flow monsoon pump with disposable high-density polyethylene (HDPE) tubing dedicated to each well. During purging, groundwater from each well was monitored in the field for stabilization of turbidity, pH, specific conductance, oxidation-reduction potential (ORP), dissolved oxygen (DO) and temperature using a YSI Pro Plus Quatro water quality meter and a Lamotte 2020WE turbidimeter. The samples were purged until the parameters stabilized or until dry, to obtain representative groundwater samples.

After purging efforts were completed, CHA personnel collected groundwater samples using disposable HDPE tubing and nitrile gloves. Groundwater samples were transferred from the tubing to pre-preserved bottles provided by the selected environmental laboratory, Alpha Analytical located in Albany, New York. Alpha is an environmental laboratory accredited by the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) as Number 11148. Upon sample collection, the bottles were labeled and stored in a cooler with ice and transported by CHA to the Alpha Courier Center under proper chain of custody for analysis at their laboratory.

Alpha Analytical analyzed VOCs via United States Environmental Protection Agency (USEPA) Method 8260. Groundwater samples for monitoring wells MW-5A, MW-6A, MW-8, MW-11A, MW-12 MW-14A, MW-17, and off-site wells OS-1A, OS-3, OS-4A and OS-5A were analyzed for the site-specific VOCs; benzene, toluene, chlorobenzene and 1,2-DCA. Monitoring well MW-3 was analyzed for the full TCL VOC list. Groundwater samples from wells MW-5A, MW-6A, MW-12 and MW-14A were also analyzed for arsenic (EPA Method 200.7), and samples from monitoring wells MW-5A, MW-6A and MW-17 were analyzed for sodium (EPA Method 200.7). Additionally, all groundwater samples were analyzed for emerging contaminants PFAS via USEPA Method 1633 and 1,4 Dioxane via USEPA Method 8270 SIM.

Quality Assurance (QA)/Quality Control (QC) samples included a blind duplicate, a matrix spike (MS), and a matrix spike duplicate (MSD). A trip blank was also sent for VOC analysis each day

of the sampling event. An equipment blank was collected each day after the monsoon pump was decontaminated.

Purged groundwater was collected in new 55-gallon drums and sampled for waste characterization purposes (Sample ID WC-1). The waste characterization sample was transported by CHA to Alpha Analytical.

4.0 FIELD OBSERVATIONS

The following physical descriptions of groundwater were derived from field notes collected during the well purging and sampling activities at each monitoring well. Descriptions of field notes and a summary of water quality data collected during the purging process for each well are included in Table 2.

4.1 Field Notes and Water Quality Data

- **MW-3:** Groundwater from well MW-3 was clear with orange particles with a strong chemical odor. There was no sheen or effervescence.
- **MW-5A:** Groundwater from well MW-5A was grey and turbid. There was no odor, sheen or effervescence.
- **MW-6A:** Groundwater from well MW-6A was turbid. There was no odor, sheen, or effervescence. The water cleared up while purging.
- **MW-7A:** Groundwater from well MW-7A was turbid. There was no odor, sheen, or effervescence. The water cleared up while purging.
- **MW-8:** Groundwater from well MW-8 was grey and turbid with a slight effervescence. No odor or sheen was observed. The water cleared up while purging.
- **MW-9:** Groundwater from well MW-9 was clear. There was no odor, sheen, or effervescence.
- **MW-11A:** Groundwater from well MW-11A was clear with no odor, sheen, or effervescence.
- **MW-12:** Groundwater from well MW-12 was tinted orange and iron floc was visible in the HDPE tubing. There was no odor, sheen, or effervescence observed.
- **MW-14A:** Groundwater from well MW-14A was clear with an odor. There was no sheen or effervescence observed.
- **MW-17:** Groundwater from well MW-17 was gray with no odor, sheen, or effervescence. White floating particles were observed at this well.
- **MW-18:** Groundwater from well MW-18 was clear. There was no odor, sheen, or effervescence.

- **OS-1A:** Groundwater from well OS-1A was clear with no odor, sheen, or effervescence. The MS/MSD samples were taken at this location.

- **OS-3:** Groundwater from well OS-3 was clear with no odor, sheen, or effervescence.

- **OS-4A:** Groundwater from well OS-3 was clear with no sheen, odor, or effervescence. CHA-1 was taken at this location.

- **OS-5A:** Groundwater from well OS-5A was clear. No odor, sheen, or effervescence was observed.

- **TFE:** Groundwater from well TFE was tinted orange. There was no odor, sheen, or effervescence observed.

Figure 1 depicts monitoring well locations and the groundwater piezometric surface contours based on the groundwater elevation data recorded on October 2, 2023. Groundwater flow patterns across the site during the October 2023 monitoring event were generally consistent with those observed during previous monitoring events, exhibiting a groundwater divide trending southwest/northeast from the area of monitoring well MW-9 to the area west of monitoring well MW-3. Groundwater on the northwest side of the divide generally flows west/northwest. Groundwater on the southeast side of the divide is consistent with historic flow in the vicinity of well MW-12. There are no on-site monitoring wells east of MW-3 from which groundwater flow direction can be definitively determined.

Purging utilizing low flow methodology was successful and only one monitoring location, TFE, was purged dry during this event. Historically groundwater monitoring wells were purged and sampled via hand bailing methods that would often result in a well going dry before three well volumes could be purged.

4.2 Monitoring Well Inspection

The monitoring well inspection in October 2023 revealed that most of the monitoring wells and piezometers within the network were in good condition with casings, gripper plugs, and well labels present. The only well needing repair is OS-4A. This well casing needs a new cap and bolts. The metal casing cap is missing, and it is not the typical well cap sizing. Well inspection sheets are included in Appendix B.

5.0 COMPARISON OF ANALYTICAL RESULTS

Table 3 provides a summary of the analytical results for the site contaminants of concern for this monitoring event. Appendix C provides the complete laboratory analytical reports. Table 4 presents a summary of historical groundwater analytical data for the applicable contaminants of concern in on-site and off-site wells. Graphs 1 and 2 depict concentrations of benzene and

chlorobenzene at monitoring well MW-3 over time, and Graphs 3 and 4 depict concentrations of benzene and chlorobenzene at monitoring well MW-5/MW-5A over time, respectively.

This event was the first time low-flow sampling methods were utilized for purging and sampling the groundwater monitoring wells, instead of hand bailing, for this Site. There is the potential that comparison of historical results to the October 2023 results may be affected by the purging/sampling methodology change, however results from this event compared to previous events are mostly consistent.

VOC and inorganic analytical results from each monitoring well are presented below and are compared to results from the four most recent sampling events. The NYSDEC Ambient Water Quality Standards (AWQS), as published in the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, June 1998, are also shown for comparison purposes. Concentrations of VOCs are reported in micrograms per liter (µg/L). Concentrations of sodium and arsenic are reported in milligrams per liter (mg/L). Values in bold print exceed their respective AWQS.

For some VOC compounds prior to October 2020, the lab's Reporting Limit (RL) is equal to or greater than the standard/guidance value. However, the lab's RL was below the Method Limit or RL for USEPA Method 624.1.

MW-3:

Parameter	April 2022*	October 2022*	April 2023*	October 2023*	NYSDEC AWQS*
Benzene (µg/l)	**240**	**710**	**1,800**	**690**	1
Chlorobenzene (µg/l)	**6,900**	**6,500**	**32,000**	**15,000**	5
Toluene (µg/l)	<100	<50	<50	<250	5
1,2-Dichloroethane (µg/l)	<100	<50	<50	<50	0.6

MW-3 was analyzed for TCL VOCs in April 2022, October 2022, April 2023, and October 2023. Except for benzene and chlorobenzene, no other VOCs were detected, but the reporting limit typically ranged from 50 µg/L to 250 µg/L for most VOCs, with a dilution factor of 100.

MW-5A:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	**1.1**	**6.6**	<0.5	0.48 J	1
Chlorobenzene (µg/l)	<0.5	<0.5	<0.5	<0.5	5
Toluene (µg/l)	<0.5	**8.4**	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	**0.7**	<0.5	**1.1**	0.6
Arsenic (mg/l)	**12**	0.008 J	**6.81**	0.02	0.025
Sodium (mg/l)	**2,060,000**	**902**	**1,250,000**	**1,180**	20

MW-6A:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	0.7	<0.5	<0.5	1
Chlorobenzene (µg/l)	<0.5	0.5	0.6	<2.5	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	0.4 J	<0.5	0.5 J	<0.5	0.6
Arsenic (mg/l)	**23**	**0.059**	**40.9**	0.0	0.025
Sodium (mg/l)	**313,000**	**240**	**296,000**	2	20

MW-8:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	<0.5	<0.5	<0.5	1
Chlorobenzene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6

MW-11A:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	<0.5	<0.5	<0.5	1
Chlorobenzene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6

MW-12:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWOS
Benzene (µg/l)	<0.5	<0.5	**4**	<0.5	1
Chlorobenzene (µg/l)	<0.5	0.5 J	**110**	**6.9**	5
Toluene (µg/l)	<0.5	<0.5	0.7	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	**1**	**91**	**1.2**	0.6
Arsenic (mg/l)	<10	0.0215	**17.5**	**0.0777**	0.025

MW-14A:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	<0.5	<0.5	0.26 J	1
Chlorobenzene (µg/l)	0.6	2.8	0.9	2.8	5
Toluene (µg/l)	<0.5	0.4 J	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6
Arsenic (mg/l)	**0.173**	**0.936**	**1,230**	**0.857**	0.025

MW-17:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	**3.2**	**4.5**	**5**	**5.9 J**	1
Chlorobenzene (µg/l)	0.9	0.9	0.7	0.95 J	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6
Sodium (mg/l)	**56,200**	**128**	**10,200**	**215**	20

OS-1A:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	<0.5	<0.5	<0.5	1
Chlorobenzene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6

OS-3:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	<0.5	<0.5	<0.5	1
Chlorobenzene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6

OS-4A:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	<0.5	<0.5	<0.5	1
Chlorobenzene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6

The field duplicate (CHA-1) was collected at well OS-4A. None of these four compounds were detected in the field duplicate.

OS-5A:

Parameter	April 2022	October 2022	April 2023	October 2023	NYSDEC AWQS
Benzene (µg/l)	<0.5	<0.5	<0.5	<0.5	1
Chlorobenzene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
Toluene (µg/l)	<0.5	<0.5	<0.5	<2.5	5
1,2-Dichloroethane (µg/l)	<0.5	<0.5	<0.5	<0.5	0.6

The trip blanks from each sampling day did not detect any of these four VOC parameters.

Analytical results for emerging contaminants are summarized in Table 5; the complete laboratory analytical package is included in Appendix C. 1,4-dioxane concentrations are reported in ug/l. PFAS concentrations are reported in nanograms/liter (ng/l). NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS of 6.7 ng/l and 2.7 ng/l, respectively. The standard for 1,4-dioxane is 0.35 ug/L.

As discussed previously, all wells sampled during the October 2023 event were analyzed for emerging contaminants including MW-7A, MW-9, MW-11A, MW-17, and MW-18, and the Total

Fluids Extraction Well (TFE). Concentrations of emerging contaminants are displayed on Figure 2 in comparison to historic sampling events.

Data validation was completed for all samples collected as part of this monitoring event. The complete Data Usability Summary Reports (DUSR) are available in Appendix D. In summary, although there were some issues that were identified and discussed as part of the validation summaries, there were no data that were qualified rejected, unusable. One waste characterization sample, WC-1, was collected from the drum that contained purged water and decontamination water throughout the groundwater sampling event. The sample was analyzed for VOCs, semi volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and target analyte list (TAL) metals. Due to the new sample methodology requiring additional decontamination procedures, a layer of suds formed on the top of the drum and resulted in headspace within the VOC jars. The sample for VOCs was cancelled, but remaining parameters were analyzed. The drum was closed and allowed to sit/settle before another VOC sample was collected and submitted to the laboratory analysis. Both analytical reports are provided in Appendix C. Table 6 displays the detected compounds in comparison with the Contained-In Criteria.

A request for a Contained-In determination was sent to the NYSDEC. On March 4, 2024 a response was received which stated that the drum could be handled as non-hazardous. A copy of this letter is included in Appendix E. The drum was hauled off-site by Tradebe Transportation, LLC, and a copy of the manifest is also included in Appendix E.

6.0 CONCLUSIONS

In general, results were consistent with or less than previous groundwater sampling events. In summary:

- Sampling with low flow methodology was successful during this event. Historically many monitoring wells were purged dry utilizing hand bailing methods, however during this event only the TFE was purged dry.
- The October 2023 event was the first event in which low-flow sampling techniques were utilized for purging and sampling groundwater. Historically, hand bailing techniques had been utilized and therefore there is the potential that results may affected by the purging/sampling methodology change. Overall, the majority of data from each of the wells is consistent with previous events.
- Target VOCs were not detected at concentrations above the NYSDEC AWQS at on-site monitoring wells except for the concentration of benzene and chlorobenzene in the groundwater sample collected from monitoring well MW-3, the concentration chlorobenzene, and 1,2-Dichloroethane from monitoring well MW-12 and the concentration of benzene from monitoring well MW-17.

- Benzene and chlorobenzene were detected in the groundwater sample from monitoring well MW-3 at concentrations of 690 and 15,000 µg/L, respectively. Both compounds have decreased in concentration since the April 2023 sampling event. Concentration trends show an overall downward trend over time (Graphs 1 and 2) of these parameters in MW-3. It should be noted that well MW-3 is upgradient of the groundwater collection trench, and neither benzene nor chlorobenzene were detected in the groundwater sample collected from monitoring well OS-5A, which is downgradient of well MW-3 and on the opposite side of the collection trench, across Rensselaer Avenue.
- No other TCL VOCs were detected in the groundwater sample from well MW-3; however, the VOC data provided by the laboratory had a reporting limit ranging from 50 µg/L to 250 µg/L for most VOCs, with a dilution factor of 100.
- Benzene was detected in MW-5A at a concentration below the NYSDEC AWQS. Detection levels were lower than previous levels and are consistent with April 2023 concentrations. 1,2-Dichloroethane was detected at a concentration of 1.1 µg/L, which is the highest it's been since October 2010, with most results being less than the reporting limit within that timeframe.
- Target VOCs were not detected at any of the four off-site well locations.
- Chlorobenzene and 1,2-Dichloroethane were detected in the groundwater sample from monitoring well MW-12 at concentrations of 6.9 and 1.2 µg/L, respectively. These concentrations are lower than the concentrations this past April sampling event.
- Benzene and Chlorobenzene were detected in MW-14A at a concentration under the NYSDEC AWQS and comparable to historical concentrations, particularly those at the same time of year.
- In MW-17 benzene was detected at a concentration of 5.9 µg/L. Additionally, chlorobenzene was detected in MW-17 but at a concentration comparable to historical concentrations and was qualified with a 'J-value," which is an estimated value by the lab. The levels are consistent with historic concentrations.
- Arsenic was detected in groundwater in monitoring wells MW-12 and MW-14A, at concentrations of 0.0777 and 0.857 mg/l, respectively, exceeding the NYSDEC AWQS value of 0.025 mg/l.
- The parameter sodium was analyzed for and detected in groundwater samples from monitoring wells MW-5A and MW-17 at concentrations above the established NYSDEC AWQS value of 20 mg/L. However, the detected concentrations of sodium were comparable to historical concentrations. CHA also notes that the AWQS for sodium is based upon the New York State Department of Health's (NYSDOH's) Part 5 drinking water that is consumed by people on a severely restricted sodium diet. NYSDOH has a sodium concentration limit of 270 mg/L for supplies used for drinking by people on a moderately restricted sodium diet. The groundwater beneath the site is not utilized as a drinking water source.

- Emerging contaminants were present in groundwater samples from all of the wells sampled onsite. AWQS criteria for groundwater were revised in April 2023 and include a PFOS limit of 2.7 ng/L and PFOA limit of 6.7 ng/L. The highest concentrations of PFAS compounds have been detected in groundwater samples from well MW-14A. Groundwater from monitoring well OS-3 (located downgradient of well MW-14A) also had exceedances of the AWQS of human health criteria standard/screening levels, but at lower concentrations than well MW-14A. There were no exceedances of AWQS of human health criteria standard/screening levels at monitoring well OS-1A, located further downgradient from wells MW-14A and OS-3. The highest concentrations of 1,4-dioxane have been detected in groundwater from well MW-12. Concentrations for emerging contaminants were lowest in OS-5A and MW-7A.

7.0 RECOMMENDATIONS

The off-site monitoring well data and the groundwater elevation data indicate that the existing groundwater treatment system is maintaining hydraulic control of the impacted groundwater near Building 30. Based on the Groundwater Elevation Contour Map, impacted groundwater to the west of monitoring well MW-3, flows to the northwest toward the groundwater collection trench, which captures contaminated water and directs it to the on-site groundwater treatment system. There are no groundwater monitoring points on-site eastward (northeastward, southeastward, and southward) of MW-3 from which groundwater flow direction can be definitively determined.

CHA recommends that Curia continue to monitor groundwater quality at the site and continue operation of the groundwater treatment system near Building 30 in accordance with the 1983 Agreement and Determination, as modified. However, given the history of non-detect VOC concentrations in groundwater samples collected from wells MW-8, MW-11A, and OS-1A through OS-5A, these monitoring wells should be considered for reduction of sampling frequency or removal from the semiannual sampling program. While we recognize that the NYSDEC has requested additional Site data it is not anticipated that further investigation will influence the need to continue to sample these wells. The next groundwater sampling event is scheduled to occur in April 2024.

TABLES

Table 1
Field Data Summary
Site No. HW442009
October 2023 Biannual Report

DEPTH TO GROUNDWATER

Monitoring Well	Top of Riser Elevation (ft. asl)	Apr-18	Oct-18	Apr-19	Oct-19	Oct-20	Apr-21	Oct-21	Apr-22	Oct-22	Apr-23	Oct-23
MW-3	19.5	6.15	6.50	6.91	7.21	no sampling due to COVID-19 pandemic	7.10	7.03	6.91	7.31	6.99	6.72
MW-5A	16.91	5.01	6.20	6.23	6.10		6.49	6.15	6.18	6.30	6.14	6.13
MW-6A	19.13	10.72	10.25	10.13	10.37		10.18	10.34	10.02	10.55	9.77	10.28
MW-7A	21.13	7.18	8.60	7.78	8.22		7.71	8.21	7.82	8.33	7.47	8.36
MW-8	19.96	14.24	14.04	13.90	14.39		14.84	14.55	14.41	14.95	14.21	14.67
MW-9	19.59	7.66	7.84	7.56	7.61		13.18	5.56	7.55	9.29	7.72	7.85
MW-10										13.72	12.85	13.19
MW-11A	19.24	8.42	8.45	8.52	8.37		8.68	8.54	8.39	9.49	8.47	8.44
MW-12	18.85	10.01	10.48	10.50	10.44		10.52	10.30	10.38	10.56	10.40	10.43
MW-14A	19.89	7.42	8.51	7.80	7.10		8.28	7.55	7.95	8.53	8.24	8.40
MW-17	16.77	5.18	5.70	5.72	5.71		10.32	5.83	5.65	5.88	5.56	5.72
MW-18	17.56	7.19	7.45	7.30	7.38		6.70	7.59	7.21	8.13	7.36	7.38
OS-1A	20.28	12.81	13.11	12.16	13.13		13.35	12.98	12.84	13.72	13.50	13.23
OS-3	14.8	5.97	7.63	7.21	7.16		7.33	6.90	7.12	7.49	7.32	7.24
OS-4A	13.91	4.82	6.10	5.96	5.92		6.08	9.61	5.81	6.36	6.05	6.07
OS-5A	13.86	3.14	3.05	3.41	2.68		3.38	2.96	2.50	3.87	2.90	3.07
PZ-17-1	16.57	5.21	5.56	5.34	5.47		5.55	5.56	4.38	decomissioned	decomissioned	decomissioned
PZ-17-4	17.36	7.34	6.70	7.57	7.64		7.58	7.56	7.57	decomissioned	decomissioned	decomissioned
PZ-17-6	17.34	6.54	7.62	6.39	6.54		6.62	6.70		decomissioned	decomissioned	decomissioned
TPZ-1	16.26	6.23	6.74	5.38	5.56		6.92	5.48	4.94	5.44	5.30	6.51
TPZ-3	15.43	6.18	6.10	5.35	5.61		2.81	5.24	4.84	7.16	5.80	7.32
TPZ-4	15.61	NM	3.50	4.80	4.31		6.90	3.97	3.98	5.03	4.03	4.97
TPZ-6	16.08	4.88	5.08	4.42	4.63		7.82	4.98	4.30	5.82	4.82	5.15

GROUNDWATER ELEVATIONS

Monitoring Well	Top of Riser Elevation (ft. asl)	Apr-18	Oct-18	Apr-19	Oct-19	Oct-20	Apr-21	Oct-21	Apr-22	Oct-22	Apr-23	Oct-23
MW-3	19.5	13.35	13.00	12.59	12.29	no sampling due to COVID-19 pandemic	12.40	12.47	12.59	12.19	12.51	12.78
MW-5A	16.91	11.90	10.71	10.68	10.81		10.42	10.76	10.73	10.61	10.77	10.78
MW-6A	19.13	8.41	8.88	9.00	8.76		8.95	8.79	9.11	8.58	9.36	8.85
MW-7A	21.13	13.95	12.53	13.35	12.91		13.42	12.92	13.31	12.80	13.66	12.77
MW-8	19.96	5.72	5.92	6.06	5.57		5.12	5.41	5.55	5.01	5.75	5.29
MW-9	19.59	11.93	11.75	12.03	11.98		6.41	14.03	12.04	10.30	11.87	11.74
MW-11A	19.24	10.82	10.79	10.72	10.87		10.56	10.70	10.85	9.75	10.77	10.80
MW-12	18.85	8.84	8.37	8.35	8.41		8.33	8.55	8.47	8.29	8.45	8.42
MW-14A	19.89	12.47	11.38	12.09	12.79		11.61	12.34	11.94	11.36	11.65	11.49
MW-17	16.77	11.59	11.07	11.05	11.06		6.45	10.94	11.12	10.89	11.21	11.05
MW-18	17.56	10.37	10.11	10.26	10.18		10.86	9.97	10.35	9.43	10.20	10.18
OS-1A	20.28	7.47	7.17	8.12	7.15		6.93	7.30	7.44	6.56	6.78	7.05
OS-3	14.8	8.83	7.17	7.59	7.64		7.47	7.90	7.68	7.31	7.48	7.56
OS-4A	13.91	9.09	7.81	7.95	7.99		7.83	4.30	8.10	7.55	7.86	7.84
OS-5A	13.86	10.72	10.81	10.45	11.18		10.48	10.90	11.36	9.99	10.96	10.79
PZ-17-1	16.57	11.36	11.01	11.23	11.10		11.02	11.01	12.19	decomissioned	decomissioned	decomissioned
PZ-17-4	17.36	10.02	10.66	9.79	9.72		9.78	9.80	9.79	decomissioned	decomissioned	decomissioned
PZ-17-6	17.34	10.80	9.72	10.95	10.80		10.72	10.64		decomissioned	decomissioned	decomissioned
TPZ-1	16.26	10.03	9.52	10.88	10.70		9.34	10.78	11.32	10.82	10.96	9.75
TPZ-3	15.43	9.25	9.33	10.08	9.82		12.62	10.19	10.59	8.27	9.63	8.11
TPZ-4	15.61	NM	12.11	10.81	11.30		8.71	11.64	11.63	10.58	11.58	10.64
TPZ-6	16.08	11.20	11.00	11.66	11.45		8.26	11.10	11.78	10.26	11.26	10.93

NM - Well Not Measured
Data prior to 2018 can be provided upon request

Table 2
Field Data Summary
Site No. HW442009
October 2023 Biannual Report

Well ID	Date	Well Depth (ft.)	Water Depth (ft.)	Purge Method	Depth to Water	Temp. (°C)	Turbidity (NTU)	ORP/EH (mV)	Dissolved Oxygen (mg/L)	pH	Conductivity (mS/cm)	Field Notes
MW-3	10/6/2023	11.95	6.72	Low Flow	7.2	20.7	3.36	-164.9	0.8	7.33	1.93	Water was clear with orange particles with a strong chemical odor. No sheen or effervescence was observed.
					7.3	20.8	3.48	-187.2	0.5	7.34	1.92	
					7.3	21.0	4.59	-201.6	0.4	7.36	1.83	
					7.3	21.0	4.45	-205.3	0.4	7.36	1.75	
					7.3	21.1	4.1	-201.0	0.3	7.36	1.63	
					7.3	21.1	3.21	-192.3	0.3	7.34	1.57	
					7.4	21.1	2.77	-184.4	0.4	7.33	1.56	
					7.3	21.3	2.4	-181.2	0.4	7.32	1.56	
					7.4	21.4	2.2	-180.6	0.4	7.31	1.56	
MW-5A	10/5/2023	14.95	6.13	Low Flow	6.5	20.0	169.43	-164.6	0.7	7.20	5.85	Water was grey and turbid. There was no odor, sheen or effervescence.
					6.7	20.4	160.52	-168.7	0.4	7.19	5.85	
					6.9	20.6	124.23	-170.0	0.4	7.18	5.87	
					6.8	20.8	114.31	-170.0	0.3	7.19	5.86	
MW-6A	10/4/2023	13.28	10.28	Low Flow	10.5	20.5	608.32	265.0	3.4	7.26	1.15	Well was turbid with no odor, sheen or effervescence was observed. The water cleared up while purging
					10.5	20.0	462.87	262.3	2.9	7.21	1.14	
					10.6	20.2	381.44	260.2	2.8	7.20	1.14	
					10.6	20.1	276.84	258.1	2.5	7.21	1.14	
					10.7	20.1	190.44	256.3	2.3	7.22	1.16	
					10.8	20.1	136.86	246.8	1.8	7.24	1.19	
					10.8	20.0	75.6	240.6	1.8	7.25	1.20	
					10.9	19.9	45.32	233.8	1.5	7.28	1.27	
					11.0	19.7	24.61	212.2	1.0	7.30	1.29	
					11.0	19.7	18.02	199.2	1.0	7.31	1.29	
					11.0	19.9	14.91	198.6	1.0	7.31	1.30	
					11.0	19.7	12.02	198.6	1.0	7..31	1.30	
MW-7A	10/4/2023	13,.92	8.36	Low Flow	8.4	21.7	714.98	267.2	1.6	7.19	0.38	Well was turbid with no odor, sheen or effervescence was observed. The water cleared up while purging
					8.4	21.2	138.42	245.6	1.9	7.15	0.32	
					8.4	21.1	43.32	232.2	2.2	7.17	0.37	
					8.4	20.9	21.1	228.1	2.4	7.19	0.25	
					8.4	20.8	11.25	227.9	2.4	7.18	0.24	
					8.4	20.8	7.98	227.6	2.4	7.19	0.24	
MW-8	10/4/2023	17.70	14.67	Low Flow	14.9	19.3	211	230.7	1.7	6.55	4.52	Water was gray and turbid with a slight effervescence. No odor or sheen was observed.
					14.9	19.4	108	218.8	1.1	6.54	4.50	
					14.9	19.8	57	207.2	1.0	6.54	4.45	
					14.9	20.1	38	201.3	1.0	6.54	4.41	
					15.0	20.1	17	195.0	0.9	6.54	4.38	
					15.0	20.1	8	186.2	0.8	6.54	4.36	
					15.1	20.0	7	181.4	0.8	6.54	4.37	
					15.2	20.0	4	174.2	0.6	6.55	4.37	
					15.2	20.0	3	168.1	0.6	6.55	4.38	
					15.3	20.0	3	167.6	0.6	6.55	4.39	
					15.3	20.0	2.24	167.2	0.6	6.56	4.34	

Table 2
Field Data Summary
Site No. HW442009
October 2023 Biannual Report

Well ID	Date	Well Depth (ft.)	Water Depth (ft.)	Purge Method	Depth to Water	Temp. (°C)	Turbidity (NTU)	ORP/EH (mV)	Dissolved Oxygen (mg/L)	pH	Conductivity (mS/cm)	Field Notes
MW-9	10/4/2023	11.02	7.85	Low Flow	9.3	19.9	23	96.8	2.8	6.84	1.57	Water was clear with no odor, sheen, or effervescence.
					9.2	20.1	24	105.2	2.9	6.79	1.47	
					9.3	20.2	20	107.5	2.8	6.76	1.19	
					9.3	20.3	13	111.8	2.4	6.75	0.86	
					9.3	20.2	7	107.2	2.1	6.76	0.62	
					9.3	20.2	4	114.5	2.0	6.74	0.51	
					9.3	20.1	3	115.9	1.9	6.73	0.49	
					9.3	20.1	3	116.2	1.9	6.74	0.47	
					9.3	20.3	2	116.7	1.9	6.74	0.47	
					9.3	20.2	2	116.7	1.8	6.74	0.46	
MW-11A	10/5/2023	10.50	8.44	Low Flow	8.6	19.6	29.5	227.6	4.2	6.92	2.55	Water was clear with no odor, sheen, or effervescence.
					8.7	19.8	22.2	223.3	3.6	6.92	2.56	
					8.6	19.9	11.0	213.6	3.5	6.94	2.56	
					8.6	19.6	9.1	211.8	3.5	6.95	2.54	
					8.8	19.8	1.3	204.8	3.0	6.92	2.41	
					8.8	19.8	1.1	204.3	2.8	6.91	2.35	
					8.8	19.8	0.95	205.5	2.9	6.91	2.33	
					8.8	19.8	0.91	206.1	2.9	6.91	2.33	
MW-12	10/5/2023	13.10	10.43	Low Flow	10.66	25.1	809.17	-128.6	0.4	6.66	4.26	Water was tinted orange and iron floc was visible in the bailer. No odor, sheen or effervescence was observed.
					10.72	25.1	893.78	-146.2	0.3	6.66	4.24	
					10.78	25.3	600.13	-147.3	0.3	6.66	4.21	
					10.80	25.4	426.9	-145.1	0.2	6.65	4.15	
					10.81	25.4	52.81	-104.6	0.5	6.59	3.94	
					10.80	25.3	42.97	-92.7	0.6	6.59	3.91	
					10.81	25.3	31.37	-76.7	0.8	6.60	3.88	
					10.80	25.4	23.22	-63.2	1.2	6.62	3.86	
					10.8	25.5	32.4	-53.5	1.7	6.7	3.9	
					10.8	25.6	47.2	-53.3	1.7	6.7	3.9	
					10.8	25.6	45.4	-53.1	1.8	6.7	3.9	
MW-14A	10/5/2023	13.94	8.40	Low Flow	8.6	17.4	21	-58.7	1.8	6.70	2.79	Water was clear with no sheen, odor or effervescence observed.
					8.7	17.3	11	-56.8	1.3	6.54	2.85	
					8.7	17.2	7	-58.1	1.1	6.46	2.90	
					8.7	17.2	4	-65.0	0.6	6.34	2.98	
					8.8	17.3	3	-70.3	0.5	6.33	2.99	
					8.8	17.3	3.3	-75.1	0.5	6.32	2.987	
					8.8	17.3	3.1	-77.8	0.4	6.33	2.984	
MW-17	10/5/2023	14.30	5.72	Low Flow	5.9	20.1	93.7	-174.9	0.5	7.82	2.312	Water was gray with no odor, sheen or effervescence observed. White floating particles were observed at this well location.
					5.9	20.3	72.6	-173.7	0.3	7.78	2.308	
					5.9	20.4	44.7	-173.7	0.3	7.77	2.31	
					5.9	20.4	36.45	-173.1	0.2	7.78	2.32	

Table 2
Field Data Summary
Site No. HW442009
October 2023 Biannual Report

Well ID	Date	Well Depth (ft.)	Water Depth (ft.)	Purge Method	Depth to Water	Temp. (°C)	Turbidity (NTU)	ORP/EH (mV)	Dissolved Oxygen (mg/L)	pH	Conductivity (mS/cm)	Field Notes
MW-18	10/5/2023	14.15	7.38	Low Flow	7.7	21.7	2.2	58.9	0.8	7.19	4.39	Water was clear with no odor, sheen, or effervescence.
					7.7	21.0	1.72	45.6	0.4	7.09	4.40	
					7.7	21.0	1.55	35.0	0.4	7.05	4.40	
					7.7	21.1	1.51	32.2	0.3	7.00	4.40	
					7.7	21.0	1.11	31.2	0.3	6.98	4.41	
					7.7	21.0	1.03	31.3	0.3	6.97	4.41	
OS-1A	10/3/2023	15.50	13.23	Low Flow	14.9	17.5	3.1	190.7	1.8	7.09	2.03	Water was clear with no sheen, odor or effervescence. MS/MSD samples were taken at this location.
					14.8	17.4	4.46	192.4	1.4	8.05	2.17	
					15.0	17.4	4.36	193.3	1.2	7.03	2.22	
					15.1	17.6	8.56	192.5	1.5	7.03	2.30	
					15.1	17.7	8.61	190.5	1.2	7.02	2.30	
					15.1	17.7	7.19	189.4	1.1	7.02	2.31	
OS-3	10/3/2023	10.90	7.24	Low Flow	7.8	20.3	18.23	156.2	1.1	7.80	1.16	Water was clear with no odor, sheen, or effervescence.
					7.8	20.4	31.48	173.0	1.1	7.80	1.14	
					7.8	20.4	13.11	174.6	1.1	7.80	1.12	
					7.8	20.4	8.08	177.4	1.1	7.80	1.11	
OS-4A	10/3/2023	11.05	6.07	Low Flow	6.15	19.2	9.85	245.2	1.1	6.95	1.31	Water was clear with no sheen, odor, or effervescence. CHA-1 was taken at this location.
					6.18	19.5	4.16	228.1	1.1	6.78	1.19	
					6.17	19.7	2.64	220.9	1.1	6.69	1.13	
					6.14	19.9	1.96	217.2	1.1	6.63	1.06	
					6.14	20.0	1.85	215.6	1.1	6.61	1.04	
					6.15	19.9	1.54	212.8	1.1	6.60	1.03	
OS-5A	10/3/2023	12.53	3.07	Low Flow	3.4	18.4	159.74	-91.4	1.1	6.73	0.825	Water was clear with no odor, sheen or effervescence observed.
					3.4	18.1	110.67	-83.4	1.1	6.69	0.793	
					4.4	18.6	97.4	-79.8	1.1	6.68	0.788	
					4.3	18.1	75.15	-71.7	0.3	6.69	0.780	
					5.1	18.3	60.22	-66.0	0.3	6.69	0.775	
					5.2	19.0	43.17	-55.4	0.3	6.70	0.774	
					5.5	18.4	54.1	-40.3	0.3	6.72	0.771	
					5.2	18.8	55.6	-36.5	0.3	6.72	0.770	
					5.8	18.9	54.3	-35.1	0.3	6.7	0.8	
					5.4	19.7	30.6	-33.7	0.3	6.7	0.8	
TFE	10/6/2023	11.95	6.72	Low Flow	7.2	20.7	3.36	-164.9	0.8	7.33	1.928	Water was tinted orange with no odor, sheen or effervescence observed. The well was purged dry at 1 gallon.
					7.3	20.8	3.48	-187.2	0.5	7.34	1.918	
					7.3	21.0	4.59	-201.6	0.4	7.36	1.830	
					7.3	21.0	4.45	-205.3	0.4	7.36	1.745	
					7.3	21.1	4.1	-201.0	0.3	7.36	1.630	
					7.3	21.1	3.21	-192.3	0.3	7.34	1.569	
					7.4	21.1	2.77	-184.4	0.4	7.44	1.557	
					7.3	21.3	2.39	-181.2	0.4	7.32	1.560	
					7.4	21.4	2.2	-180.6	0.4	7.3	1.6	

Well and water depths for piezometers TPZ-1, TPZ-3, TPZ-4, and TPZ-6 are included on Table 1.

Table 3
Summary of Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

		Location	MW-3*	MW-5A	MW-6A	MW-8	MW-11A	MW-12	MW-14A	MW-17	OS-1A	OS-3	OS-4A	OS-5A
		Date	10/6/2023	10/5/2023	10/4/2023	10/4/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023
Compound	NYSDEC AWQS Method 8260	Units												
Volatiles														
Benzene	1	µg/L	690	0.48 J	< 0.5	< 0.5	< 0.5	<0.5	0.26 J	5.9	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	5	µg/L	15,000	< 2.5	< 2.5	< 2.5	< 2.5	6.9	2.8	0.95 J	< 2.5	< 2.5	< 2.5	< 2.5
1,2-Dichloroethane	0.6	µg/L	< 50	1.1	< 0.5	< 0.5	< 0.5	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	5	µg/L	< 250	< 2.5	< 2.5	< 2.5	< 2.5	<2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Metals														
Arsenic	0.025	mg/L	NA	0.0172	0.056	NA	NA	0.0777	0.857 J	NA	NA	NA	NA	0.0045 J
Sodium	20	mg/L	NA	1,180	277	NA	NA	NA	NA	215	NA	NA	NA	23.6

µg/L = micrograms per liter
mg/L = milligrams per liter
mS/cm = millisiemans per centimeter
< = Not detected at Laboratory Reporting Limit
J = Analyte detected below quantitation limits
NA = Sample was not analyzed for this parameter.
Values exceeding their respective AWQS values are bolded.
* MW-3 was analyzed for TCL VOCs in October 2021, April 2022, October 2022, April 2023, October 2023. No VOCs other than benzene and chlorobenzene were detected

Table 4
MW-3 Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Apr-90	910	5,600
Nov-90	840	15,000
May-91	600	< 300
Oct-91	2,400	44,000
Apr-92	740	22,000
Sep-92	960	34,000
Apr-93	5,000	92,000
Oct-93	2,600	65,000
Apr-94	3,400	74,000
Nov-94	340	51,000
Apr-95	7,000	172,000
Nov-95	2,500	34,000
May-96	< 5,000	28,000
Dec-96	5,200	40,000
May-97	6,000	48,000
Dec-97	3,500	30,000
Jun-98	11,000	21,000
Nov-98	8,000	54,000
Dec-98	9,000	94,500
Apr-99	1,400	23,000
Dec-99	1,500	18,000
Apr-00	2,900	50,000
Oct-00	6,000	30,000
Apr-01	3,600	< 50
Oct-01	9,500	55,000
Apr-02	3,500	30,000
Oct-02	2,500	18,500
Apr-03	3,000	25,000
Nov-03	5,500	35,000
May-04	3,400	46,000
Nov-04	1,900	16,000
May-05	3,000	27,000
Nov-05	11,000	37,000
May-06	1,200	17,000
Nov-06	8,200	66,000
Jun-07	6,900	31,000
Nov-07	17,000	100,000
May-08	4,200	68,000
Nov-08	1,800	28,000
May-09	6,700	81,000
Nov-09	11,000	51,000
Apr-10	930	14,000
Oct-10	460	9,100
Apr-11	1000	21,000
Oct-11	< 500	13,000
Apr-12	< 250	9,400
Oct-12	< 250	4,100
Apr-13	< 1,200	33,000
Oct-13	< 1,000	12,000
Apr-14	< 500	5,600
Oct-14	< 250	4,500
Apr-15	< 120	4,500
Oct-15	< 120	4,400
Apr-16	< 250	6,800
Oct-16	270	5,800
Apr-17	< 500	14,000
Oct-17	< 1000	8,800
Apr-18	1,400	30,000
Oct-18	< 1,000	8,800
Apr-19	<500	13,000
Oct-19	360	4,000
Apr-20	COVID	COVID
Oct-20	180	6,400
Apr-21	280	7,000
Oct-21	920	18,000
Apr-22	240	6,900
Oct-22	710	6,500
Apr-23	1800	32,000
Oct-23	690	15,000

< = Not Detected at Reporting Limit

Table 4
MW-5A Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/1)	Chlorobenzene (µg/l)	1,2 - Dichloroethane (µg/l)
Apr-90	< 5	< 5	NA
Nov-90	150	< 5	NA
May-91	71	< 5	NA
Oct-91	37	< 5	NA
May-92	13	< 5	NA
Sep-92	160	<25	NA
Apr-93	32	<25	NA
Oct-93	490	32	NA
Apr-94	< 50	<50	NA
Nov-94	500	<250	NA
Nov-94	270	12	NA
Apr-95	< 5	8	NA
Nov-95	160	<50	NA
May-96	< 5	< 5	NA
Dec-96	16	< 5	NA
May-97	23	< 5	NA
Dec-97	50	< 5	NA
Jun-98	l0	< 5	NA
Jul-98	24	1 J	NA
Aug-98	16	ND	NA
Aug-98	16	ND	NA
Sep-98	< 5	< 5	NA
Oct-98	71	35	NA
Nov-98	< 5	< 5	NA
Dec-98	< 5	9	NA
Apr-99	< 5	< 5	NA
Dec-99	< 5	< 5	NA
Apr-00	< 5	< 5	NA
Oct-00	< 5	< 5	NA
Apr-01	< 5	< 5	NA
Oct-01	120	< 50	NA
Apr-02	< 130	< 130	NA
Oct-02	80	< 50	NA
Apr-03	< 25	< 25	NA
Nov-03	53	< 10	NA
May-04	270	13	NA
Nov-04	92	< 5	NA
May-05	270	< 10	NA
Nov-05	95	9	NA
May-06	440	< 25	NA
Nov-06	< 10	< 10	NA
Jun-07	< 5	< 5	NA
Nov-07	5.2	< 5	NA
May-08	< 5	< 5	NA
Nov-08	< 5	< 5	NA
May-09	< 5	< 5	NA
Nov-09	< 5	< 5	NA
Apr-10	< 5	< 5	< 5
Oct-10	< 5	< 5	17
Apr-11	< 5	< 5	< 5
Oct-11	< 5	< 5	< 5
Apr-12	<5	8.4	< 5
May-12	< 5	< 5	< 5
Oct-12	< 5	6.3	< 5
Apr-13	< 5	< 5	< 5
Oct-13	< 5	< 5	< 5
Apr-14	< 5	< 5	< 5
Oct-14	< 5	< 5	< 5
Apr-15	< 5	< 5	< 5
Oct-15	< 5	< 5	< 5
Apr-16	< 5	< 5	< 5
Oct-16	< 5	< 5	< 5
Apr-17	< 5	< 5	< 5
Oct-17	< 5	< 5	< 5
Apr-18	< 5	< 5	< 5
Oct-18	< 5	< 5	< 5
Apr-19	< 5	< 5	< 5
Oct-19	< 5	< 5	< 5
Apr-20	COVID	COVID	COVID
Oct-20	<0.5	<0.5	<0.5
Apr-21	<0.5	<0.5	<0.5
Oct-21	15	<0.5	<0.5
Apr-22	1.1	<0.5	<0.5
Oct-22	6.6	<0.5	0.7
Apr-23	<0.5	<0.5	<0.5
Oct-23	0.48 J	<0.5	1.1

< = Not Detected at Reporting Limit

Table 4
MW-6A Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/1)	Chlorobenzene (µg/l)
Oct-91	78	30
Apr-92	29	17
Sep-92	33	39
Apr-93	< 5	< 5
Oct-93	< 5	6
Apr-94	19	< 5
Nov-94	350	59
Apr-95	290	41
Nov-95	100	33
May-96	190	32
Dec-96	240	42
May-97	7	< 5
Dec-97	97	17
Dec-97	120	17
Jun-98	92	11
Jul-98	66	14
Aug-98	78	15
Aug-98	88	15
Sep-98	< 5	< 5
Oct-98	ND	ND
Nov-98	100	21
Dec-98	71	14
Apr-99	15	<5
Dec-99	120	18
Dec-99 (dup)	75	11
Apr-00	51	6.3
Oct-00	41	7
Apr-01	30	< 5
Oct-01	<5	< 5
Apr-02	10	< 5
Oct-02	< 5	< 5
Apr-03	11	< 5
Nov-03	57	9.6
May-04	20	5.6
Nov-04	24	5.8
May-05	16	< 5
Nov-05	29	6.4
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	1.5
Apr-21	< 0.5	<0.5
Oct-21	<0.5	<0.5
Apr-22	< 0.5	1.0
Oct-22	0.7	0.5
Apr-23	< 0.5	0.6
Oct-23	< 0.5	<2.5

< = Not Detected at Reporting Limit

Table 4
MW-8 Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Apr-90	< 5	< 5
Nov-90	< 5	< 5
May-91	< 5	< 5
Oct-91	< 5	< 5
May-92	< 5	< 5
Sep-92	< 5	< 5
Apr-93	< 5	< 5
Oct-93	< 5	< 5
Apr-94	< 5	< 5
Nov-94	< 5	< 5
Apr-95	< 5	< 5
Nov-95	< 5	< 5
May-96	< 5	< 5
Dec-96	< 5	< 5
May-97	< 5	< 5
Dec-97	< 5	< 5
Jun-98	< 5	< 5
Nov-98	< 5	< 5
Dec-98	NS	NS
Apr-99	< 5	< 5
Dec-99	< 5	< 5
Apr-00	< 5	< 5
Oct-00	< 5	< 5
Apr-01	< 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	< 5	< 5
Apr-03	< 5	< 5
Nov-03	< 5	< 5
May-04	< 5	< 5
Nov-04	< 5	< 5
May-05	< 5	< 5
Nov-05	< 5	< 5
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Apr-11	< 5	< 5
Nov-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	< 0.5
Apr-21	< 0.5	< 0.5
Oct-21	<0.5	<0.5
Apr-22	< 0.5	< 0.5
Oct-22	< 0.5	< 0.5
Apr-23	< 0.5	< 0.5
Oct-23	< 0.5	< 2.5

< = Not Detected at Reporting Limit
NS = Not Sampled

Table 4
MW-11 | MW-11A Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Oct-93	< 5	< 5
Apr-94	< 5	< 5
Apr-95	< 5	< 5
Nov-95	< 5	< 5
May-96	< 5	< 5
Dec-96	NS	NS
May-97	< 5	< 5
Dec-97	< 5	< 5
Jun-98	< 5	< 5
Jul-98	< 5	< 5
Aug-98	< 5	< 5
Aug-98	< 5	< 5
Sep-98	< 5	< 5
Oct-98	< 5	< 5
Dec-99	< 5	< 5
Dec-99 (dup)	< 5	< 5
Apr-00	< 5	< 5
Oct-00	< 5	< 5
Apr-01	< 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	< 5	< 5
Apr-03	< 5	< 5
Nov-03	< 5	< 5
May-04	< 5	< 5
Nov-04	< 5	< 5
May-05	< 5	< 5
Nov-05	< 5	< 5
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	< 0.5
Apr-21	< 0.5	< 0.5
Oct-21	<0.5	<0.5
Apr-22	< 0.5	< 0.5
Oct-22	< 0.5	< 0.5
Apr-23	< 0.5	< 0.5
Oct-23	< 0.5	<2.5

< = Not Detected at Reporting Limit
NS = Not Sampled
MW-11 replaced with MW-11A July 1998

Table 4
MW-12 Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/1)	Chlorobenzene (µg/l)	1,2-Dichloroethane (µg/l)
Apr-90	< 5	< 5	NA
Nov-90	< 5	< 5	NA
May-91	< 5	< 5	NA
Oct-91	< 5	< 5	NA
May-92	< 5	< 5	NA
Sep-92	< 5	< 5	NA
Apr-93	< 5	< 5	NA
Oct-93	< 5	< 5	NA
Apr-94	< 5	< 5	NA
Nov-94	< 5	< 5	NA
Apr-95	< 5	< 5	NA
Nov-95	< 5	< 5	NA
May-96	< 5	< 5	NA
Dec-96	< 5	< 5	NA
May-97	< 5	< 5	NA
Dec-97	< 5	< 5	NA
Jun-98	< 5	< 5	NA
Jul-98	< 5	< 5	NA
Aug-98	< 5	< 5	NA
Aug-98	< 5	< 5	NA
Sep-98	< 5	< 5	NA
Oct-98	< 5	< 5	NA
Nov-98	< 5	< 5	NA
Nov-98	< 5	< 5	NA
Dec-98	< 5	2 J	NA
Dec-98	< 5	< 5	NA
Apr-99	< 5	< 5	NA
Dec-99	< 5	< 5	NA
Apr-00	< 5	< 5	NA
Oct-00	< 5	< 5	NA
Apr-01	< 50	< 50	NA
Oct-01	< 50	< 50	NA
Apr-02	< 5	< 5	NA
Oct-02	< 50	< 50	NA
Apr-03	< 5	< 5	NA
Nov-03	< 5	< 5	NA
May-04	< 5	< 5	NA
Nov-04	< 5	< 5	NA
May-05	< 5	< 5	NA
Nov-05	< 5	< 5	NA
May-06	< 5	< 5	NA
Nov-06	< 5	< 5	NA
Jun-07	< 5	< 5	NA
Nov-07	< 5	< 5	NA
May-08	< 5	< 5	NA
Nov-08	< 5	< 5	NA
May-09	< 5	< 5	NA
Oct-09	< 5	< 5	NA
Apr-10	< 5	< 5	< 5
Oct-10	< 5	< 5	14
Apr-11	< 5	< 5	< 5
Oct-11	< 5	< 5	6.2
Dec-11	< 5	< 5	< 5
Apr-12	< 5	< 5	< 5
Oct-12	< 5	< 5	< 5
Apr-13	< 5	< 5	< 5
Oct-13	< 5	< 5	< 5
Apr-14	< 5	< 5	< 5
Oct-14	< 5	< 5	< 5
Apr-15	< 5	< 5	< 5
Oct-15	< 5	< 5	< 5
Apr-16	< 5	< 5	< 5
Oct-16	< 5	< 5	< 5
Apr-17	< 5	< 5	5,000
Oct-17	< 250	< 250	< 250
Apr-18	< 5	< 5	75
Oct-18	< 5	< 5	8.6
Apr-19	< 5	< 5	< 5
Oct-19	< 5	< 5	< 5
Apr-20	COVID	COVID	COVID
Oct-20	< 0.5	1.7	2.4
Apr-21	< 0.5	0.4 J	0.7
Oct-21	<0.5	<0.5	<0.5
Apr-22	< 0.5	<0.5	<0.5
Oct-22	< 0.5	0.5	1.0
Apr-23	4	110.0	91.0
Oct-23	< 0.5	6.9	1.2
< = Not Detected at Reporting Limit			

Table 4
MW-14 | MW-14A Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Apr-90	< 5	< 5
Nov-90	< 5	< 5
May-91	< 5	< 5
Oct-91	< 5	< 5
May-92	< 5	< 5
Sep-92	9	< 5
Apr-93	< 5	< 5
Oct-93	11	< 5
Apr-94	86	< 5
Nov-94	35	< 5
Apr-95	19	6
Nov-95	9	7
May-96	< 5	5
Dec-96	36	8
May-97	< 5	< 5
Dec-97	46	< 5
Jun-98	< 5	< 5
Nov-98	280	8
Dec-98	NS	NS
Apr-99	33	7
Dec-99	12	6
Apr-00	< 5	< 5
Oct-00	< 5	< 5
Apr-01	< 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	< 5	< 5
Apr-03	< 5	< 5
Nov-03	< 5	< 5
May-04	< 5	< 5
Nov-04	< 5	< 5
May-05	< 5	< 5
Nov-05	< 5	< 5
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	1.6
Apr-21	< 0.5	1.0
Oct-21	<0.5	<0.5
Apr-22	< 0.5	0.6
Oct-22	< 0.5	2.8
Apr-23	< 0.5	0.9
Oct-23	0.26 J	< 2.5

< = Not Detected at Reporting Limit
NS = Not Sampled
MW-14 replaced with MW-14A May 1996

Table 4
MW-17 Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Dec-96	63	< 5
Feb-97	57	< 25
May-97	42	< 5
Dec-97	50	< 5
Jun-98	< 5	< 5
Jul-98	38	3 J
Aug-98	29	2 J
Aug-98	35	3 J
Sep-98	37	3 J
Oct-98	35	5 J
Nov-98	29	< 5
Dec-98	13	2 J
Apr-99	< 5	< 5
Dec-99	9	< 5
Oct-00	35	< 5
Apr-01	3 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	23	< 5
Apr-03	56	< 5
Nov-03	38	< 5
May-04	35	< 5
Nov-04	1 1	< 5
May-05	13	< 5
Nov-05	22	< 5
May-06	24	< 5
Nov-06	11	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	6.8	< 5
Oct-11	24	< 5
Apr-12	12	< 5
Oct-12	11	< 5
Apr-13	< 5	< 5
Oct-13	14	< 5
Apr-14	6.6	< 5
Oct-14	6.5	< 5
Apr-15	5.8	< 5
Oct-15	7.3	< 5
Apr-16	7.6	< 5
Oct-16	5.0	< 5
Apr-17	5.6	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	0.8
Apr-21	< 0.5	0.4 J
Oct-21	<0.5	<0.5
Apr-22	3.2	0.9
Oct-22	4.5	0.9
Apr-23	5	0.7
Oct-23	5.9	<2.5

< = Not Detected at Reporting Limit

J denotes a laboratory estimation

Table 4
OS-1A Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Dec-96	< 5	< 5
May-97	< 5	< 5
Dec-97	< 5	< 5
Jun-98	< 5	< 5
Nov-98	< 5	< 5
Apr-99	< 5	< 5
Dec-99	< 5	< 5
Apr-00	< 5	< 5
Oct-00	< 5	< 5
Apr-01	< 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	< 5	< 5
Apr-03	< 5	< 5
Nov-03	< 5	< 5
May-04	< 5	< 5
Nov-04	< 5	< 5
May-05	< 5	< 5
Nov-05	< 5	< 5
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-18	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	< 0.5
Apr-21	< 0.5	< 0.5
Oct-21	<0.5	<0.5
Apr-22	< 0.5	< 0.5
Oct-22	< 0.5	< 0.5
Apr-23	< 0.5	< 0.5
Oct-23	< 0.5	< 2.5

< = Not Detected at Reporting Limit

NA = Not Available

Table 4
OS-3 Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Apr-90	< 5	< 5
Nov-90	< 5	< 5
Feb-91	< 5	< 5
May-91	< 5	< 5
Oct-91	< 5	< 5
Apr-92	< 5	< 5
Sep-92	< 5	< 5
Apr-93	< 5	< 5
Oct-93	< 5	< 5
Apr-94	< 5	< 5
Nov-94	< 5	< 5
Apr-95	< 5	< 5
Nov-95	< 5	< 5
May-96	< 5	< 5
Dec-96	< 5	< 5
May-97	< 5	< 5
Dec-97	< 5	< 5
Jun-98	< 5	< 5
Nov-98	< 5	< 5
Apr-99	< 5	< 5
Dec-99	< 5	< 5
Apr-00	< 5	< 5
Oct-00	< 5	< 5
Apr-01	< 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	< 5	< 5
Apr-03	< 5	< 5
Nov-03	< 5	< 5
May-04	< 5	< 5
Nov-04	< 5	< 5
May-05	< 5	< 5
Nov-05	< 5	< 5
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	< 0.5
Apr-21	< 0.5	< 0.5
Oct-21	<0.5	<0.5
Apr-22	< 0.5	< 0.5
Oct-22	< 0.5	< 0.5
Apr-23	< 0.5	< 0.5
Oct-23	< 0.5	< 2.5

< = Not Detected at Reporting Limit

NA = Not Available

Table 4
OS-4 | OS-4A Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Apr-90	< 5	< 5
Nov-90	< 5	< 5
Oct-91	< 5	< 5
Apr-92	< 5	< 5
Sep-92	DRY	DRY
Apr-93	DRY	DRY
Oct-93	DRY	DRY
Apr-94	DRY	DRY
Nov-94	DRY	DRY
Apr-95	< 5	< 5
Nov-95	DRY	DRY
May-96	< 5	< 5
Dec-96	< 5	< 5
May-97	< 5	< 5
Dec-97	< 5	< 5
Jun-98	< 5	< 5
Nov-98	< 5	< 5
Apr-99	< 5	< 5
Dec-99	< 5	< 5
Apr-00	< 5	< 5
Oct-00	< 5	< 5
Apr-01	< 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	< 5	< 5
Apr-03	< 5	< 5
Nov-03	< 5	< 5
May-04	< 5	< 5
Nov-04	< 5	< 5
May-05	< 5	< 5
Nov-05	< 5	< 5
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	< 0.5
Apr-21	< 0.5	< 0.5
Oct-21	<0.5	<0.5
Apr-22	< 0.5	< 0.5
Oct-22	< 0.5	< 0.5
Apr-23	< 0.5	< 0.5
Oct-23	< 0.5	< 2.5

< = Not Detected at Reporting Limit

NA = Not Available

OS-4 replaced with OS-4A May 1996

Table 4
OS-5 | OS-5A Historical Groundwater Analytical Results
Site No. HW442009
October 2023 Biannual Report

Date	Benzene (µg/l)	Chlorobenzene (µg/l)
Apr-90	< 5	< 5
Nov-90	< 5	< 5
May-91	< 5	< 5
Oct-91	< 5	< 5
Apr-92	< 5	< 5
Sep-92	DRY	DRY
Apr-93	DRY	DRY
Apr-94	< 5	< 5
Nov-94	DRY	DRY
Apr-95	< 5	< 5
Nov-95	< 5	< 5
May-96	< 5	< 5
Dec-96	< 5	< 5
May-97	< 5	< 5
Dec-97	< 5	< 5
Jun-98	< 5	< 5
Nov-98	< 5	< 5
Apr-99	< 5	< 5
Dec-99	< 5	< 5
Apr-00	< 5	< 5
Oct-00	< 5	< 5
Apr-01	< 5	< 5
Oct-01	< 5	< 5
Apr-02	< 5	< 5
Oct-02	< 5	< 5
Apr-03	< 5	< 5
Nov-03	< 5	< 5
May-04	< 5	< 5
Nov-04	< 5	< 5
May-05	< 5	< 5
Nov-05	< 5	54
Dec-05	< 5	< 5
May-06	< 5	< 5
Nov-06	< 5	< 5
Jun-07	< 5	< 5
Nov-07	< 5	< 5
May-08	< 5	< 5
Nov-08	< 5	< 5
May-09	< 5	< 5
Oct-09	< 5	< 5
Apr-10	< 5	< 5
Oct-10	< 5	< 5
Apr-11	< 5	< 5
Oct-11	< 5	< 5
Apr-12	< 5	< 5
Oct-12	< 5	< 5
Apr-13	< 5	< 5
Oct-13	< 5	< 5
Apr-14	< 5	< 5
Oct-14	< 5	< 5
Apr-15	< 5	< 5
Oct-15	< 5	< 5
Apr-16	< 5	< 5
Oct-16	< 5	< 5
Apr-17	< 5	< 5
Oct-17	< 5	< 5
Apr-18	< 5	< 5
Oct-18	< 5	< 5
Apr-19	< 5	< 5
Oct-19	< 5	< 5
Apr-20	COVID	COVID
Oct-20	< 0.5	< 0.5
Apr-21	< 0.5	< 0.5
Oct-21	<0.5	<0.5
Apr-22	< 0.5	< 0.5
Oct-22	< 0.5	< 0.5
Apr-23	< 0.5	< 0.5
Oct-23	< 0.5	<2.5

< = Not Detected at Reporting Limit
NA = Not Available
OS-5 replaced with OS-5A May-1996

Table 5
Summary of Groundwater Emerging Contaminants Results
Site No. HW442009
October 2023 Biannual Report

			Location	MW-3	MW-5A	MW-6A	MW-7A	MW-8	MW-9	MW-11A	MW-12	MW-14A	MW-17	MW-18	TFE	OS-1A	OS-3	OS-4A	OS-5A
			Date	10/6/2023	10/5/2023	10/4/2023	10/4/2023	10/4/2023	10/4/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/5/2023	10/6/2023	10/3/2023	10/3/2023	10/3/2023	10/3/2023
Compound	**NYSDEC Standard**	**Units**																	
Semivolatiles																			
1,4-Dioxane	0.35	ng/L	**4.56**	**1.39**	**1.02**	ND	0.0605 J	ND	ND	**8.24**	**2.97**	**2.34**	0.991	ND	.0768 J	ND	.0482 J	**0.414**
Perfluroinated Alkyl Acids																			
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)		ng/l	ND	ND	ND	ND	ND	ND	ND	45.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Perfluoropropyl Propanoic Acid (3:3FTCA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-3-Methoxypropanoic Acid (PFMPA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-4-Methoxybutanoic Acid (PFMBA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorobutanesulfonic Acid (PFBS)		ng/l	4.7	ND	2.58	ND	2.3J	13.7	3.74 J	4.12J	29.3 J	3.68J	3.58	1.8	2.47	10.8	5.75	11.4
Perfluorobutanoic Acid (PFBA)		ng/l	23.5	6.12J	8.03	ND	10.2J	5.29J	11	12.1J	28.7	23J	10.4	9.55	ND	9.63J	4.41J	21.1
Perfluorodecanesulfonic Acid (PFDS)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorodecanoic Acid (PFDA)		ng/l	ND	ND	1.19J	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	1.05J
Perfluorododecanesulfonic Acid (PFDoS)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorododecanoic Acid (PFDoA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroheptanesulfonic Acid (PFHpS)		ng/l	ND	ND	0.531J	ND	ND	2.11	ND	ND	21.4	ND	1.34J	ND	ND	ND	0.424J	ND
Perfluoroheptanoic Acid (PFHpA)		ng/l	9.35	4.64J	2.35	0.96J	16.9	4.72	8.97	6.28J	31.9	11	10.2	10.6	0.454J	3.84J	1.29J	2.78
Perfluorohexanesulfonic Acid (PFHxS)		ng/l	2.57	14	12.5	2.84J	15.4	134	21.8	10	334	41.8	29.9	3.67	0.666J	5.52	1.19J	0.564J
Perfluorohexanoic Acid (PFHxA)		ng/l	16.3	11	6.62	ND	14.8	23.2	18.5	21.3	139	31.1	15.6	9.74	0.622J	5.2J	1.83	9.93
Perfluorononanesulfonic Acid (PFNS)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorononanoic Acid (PFNA)		ng/l	52.8	3.56J	1.54	ND	ND	0.507J	2.1	ND	5.08	2.6J	2.44	10.2	ND	ND	1.61	2.14
Perfluorooctanesulfonamide (PFOSA)		ng/l	ND	ND	0.93J	ND	ND	ND	ND	ND	2.13F	ND	0.72JF	ND	ND	ND	ND	ND
Perfluorooctanesulfonic Acid (PFOS)	2.7	ng/l	**23.8**	**22**	**27.6**	**4.2**	**38.7**	**85.3**	**9.17**	ND	**800**	**25**	**34.3**	**20.3**	2.25	**22.5**	**18**	**3.08**
Perfluorooctanoic Acid (PFOA)	6.7	ng/l	**36**	**9.8**	6.46	2.96J	**13.8**	**14.3**	**14.7**	**12.4**	**82.4**	**17.2**	**19.7**	**18.3**	1.25J	**14.9**	**8.26**	**6.99**
Perfluoropentanesulfonic Acid (PFPeS)		ng/l	0.44J	ND	1.84	ND	1.71J	20.1	2.57	ND	53.2	4.64J	2.76	ND	ND	ND	ND	ND
Perfluoropentanoic Acid (PFPeA)		ng/l	13.4 J	9.52J	15	ND	19	8.92	17.2	40.4	60.2	15.3J	16.8	9.77	ND	7.17J	2.07J	12.9
Perfluorotetradecanoic Acid (PFTeDA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorotridecanoic Acid (PFTrDA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroundecanoic Acid (PFUnA)		ng/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.01	ND	ND	ND	ND

Notes:
ND = not detected at laboratory reporting limit
J = Analyte detected below quantitation limits (estimated value)
Values exceeding their respective Emerging Contaminants Standard values are bolded.
NYSDEC Standard Guidance Criteria - April 2023

Table 6. Waste Characterization from October 2023 Groundwater Sampling
Detected Compounds Only

Curia Rensselaer
33 Riverside Avenue
Rensselaer, New York

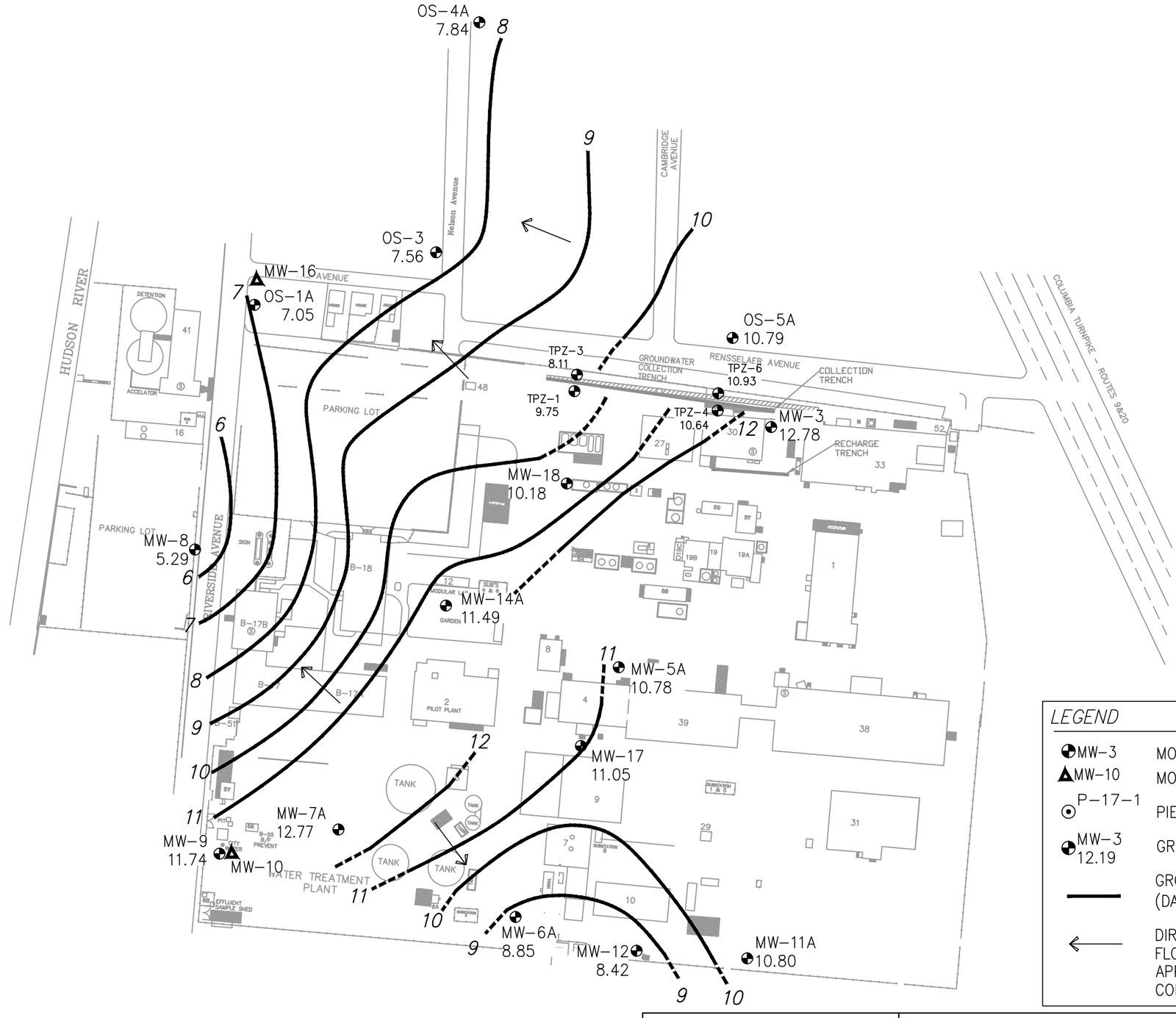
				WC-1	
		TAGM 3028 Contained-In Groundwater Action Level	**Units**		
Percent Moisture					
Percent Solids					
VOCs					
Acetone	67-64-1	50	µg/L	41	J
Benzene	71-43-2	1	µg/L	18	
Chlorobenzene	108-90-7	5	µg/L	270	
SVOCs					
Anthracene	120-12-7	50	µg/L	0.01	J
Benzo[a]anthracene	56-55-3	0.002	µg/L	0.03	J
Benzo[a]pyrene	50-32-8	ND	µg/L	0.03	J
Benzo[b]fluoranthene	205-99-2	0.002	µg/L	0.03	J
Benzo[k]fluoranthene	207-08-9	0.002	µg/L	0.02	J
Chrysene	218-01-9	0.2	µg/L	0.02	J
Fluoranthene	206-44-0	50	µg/L	0.03	J
Naphthalene	91-20-3	10	µg/L	0.06	J
Phenanthrene	85-01-8	0.5	µg/L	0.05	J
Phenol	108-95-2	3	µg/L	2.1	J
Pyrene	129-00-0	0.2	µg/L	0.04	J
Pesticides					
No Detections					
Herbicides					
No Detections					
Polychlorinated Biphenyls					
No Detections					
Metals					
Arsenic	7440-38-2	25	µg/L	147	
Sodium	7440-23-5	<20,000	µg/L	568,000	

Notes:

Sample was collected by CHA Consulting, Inc. oand transmitted to Alpha Analytical.
Samples are compared to the NYSDEC Contained-In Parameter, Groundwater Action Level.

J - Estimated value. Concentration identified above the Method Detection Limit but below the Reporting Limit.

FIGURES



LEGEND

MW-3	MONITORING WELL LOCATION (SHALLOW)
MW-10	MONITORING WELL LOCATION (DEEP)
P-17-1	PIEZOMETER LOCATION
MW-3 12.19	GROUNDWATER ELEVATION (FT)
	GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
	DIRECTION OF GROUNDWATER FLOW APPROX. LOCATION OF GROUNDWATER COLLECTION AND REINJECTION

0 160 320
Scale in feet

N

SOURCE: PLANT SITE MAP, DATED OCTOBER 27, 2009 BY SAIC

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Albany, NY 12205-0269
518.453.4500 . www.chacompanies.com

GROUNDWATER ELEVATION CONTOUR MAP
MONITORING DATE: OCTOBER 2023

CURIA NEW YORK, NYSDEC Site No. 442009
33 RIVERSIDE AVENUE
RENSSELAER, NEW YORK

PROJECT NO. 075104

DATE: 04/2024

FIGURE 1

File: V:\PROJECTS\ANY\K6\075104.000\09_DESIGN\DRAWINGS\ENV\2023 OCT CONTOUR MAP.DWG
Saved: 2/29/2024 5:08:58 PM Plotted: 4/24/2024 11:10:08 AM User: Miller, Samantha LastSavedBy: 4187

OS-4A		
1,-4-Dioxane (P-Dioxane)(ug/L)		
4/5/2018	10/3/2023	
0.29	0.0482	

OS-3		
1,-4-Dioxane (P-Dioxane)(ug/L)		
4/5/2018	4/29/2021	10/3/2023
0.05	<0.35	<0.139

TFE		
1,-4-Dioxane (P-Dioxane)(ug/L)		
10/6/2023		
<0.144		

OS-5A		
1,-4-Dioxane (P-Dioxane)(ug/L)		
4/5/2018	10/3/2023	
0.66	0.414	

OS-1A		
1,-4-Dioxane (P-Dioxane)(ug/L)		
4/5/2018	4/29/2021	10/3/2023
0.06	0.28	0.0768

MW-18		
1,-4-Dioxane (P-Dioxane)(ug/L)		
10/5/2023		
0.991		

MW-3				
1,-4-Dioxane (P-Dioxane)(ug/L)				
4/5/2018	10/31/2019	10/6/2020	4/2/2021	10/6/2023
550	15	103	11.4	4.56

MW-14A				
1,-4-Dioxane (P-Dioxane)(ug/L)				
4/4/2018	10/31/2019	10/6/2020	4/2/2021	10/5/2023
0.86	0.89	1.35	1.14	2.97

MW-5A				
1,-4-Dioxane (P-Dioxane)(ug/L)				
4/4/2018	10/31/2019	10/6/2020	4/2/2021	10/5/2023
1.2	1.3	0.74	0.65	1.39

MW-8				
1,-4-Dioxane (P-Dioxane)(ug/L)				
4/5/2018	10/31/2019	10/6/2020	4/2/2021	10/4/2023
0.08	0.11	<0.35	ND	0.06

MW-6A		
1,-4-Dioxane (P-Dioxane)(ug/L)		
4/4/2018	10/4/2023	
11	1.02	

MW-17		
1,-4-Dioxane (P-Dioxane)(ug/L)		
4/12/2023	10/5/2023	
0.18	2.34	

MW-12				
1,-4-Dioxane (P-Dioxane)(ug/L)				
4/4/2018	10/31/2019	10/6/2020	4/2/2021	10/5/2023
14	9.2	8.42	4.32	8.24

MW-7A		
1,-4-Dioxane (P-Dioxane)(ug/L)		
10/4/2023		
0.142		

MW-9		
1,-4-Dioxane (P-Dioxane)(ug/L)		
10/4/2023		
0.142		

MW-11A		
1,-4-Dioxane (P-Dioxane)(ug/L)		
4/4/2018	10/5/2023	
14	0.1470	

OS-4A, OS-3, TFE, OS-5A, OS-1A, MW-16, TPZ-3, TPZ-6, TPZ-1, TPZ-4, MW-3, MW-18, MW-4, MW-14A, MW-5A, MW-1, MW-8, MW-17, MW-6A, MW-7A, MW-12, MW-9, MW-10, MW-2, MW-13, MW-15, MW-11A

0 150 300
Scale in feet

NYSDEC STANDARD/ACTION LIMIT: 0.35 UG/L OR PPB

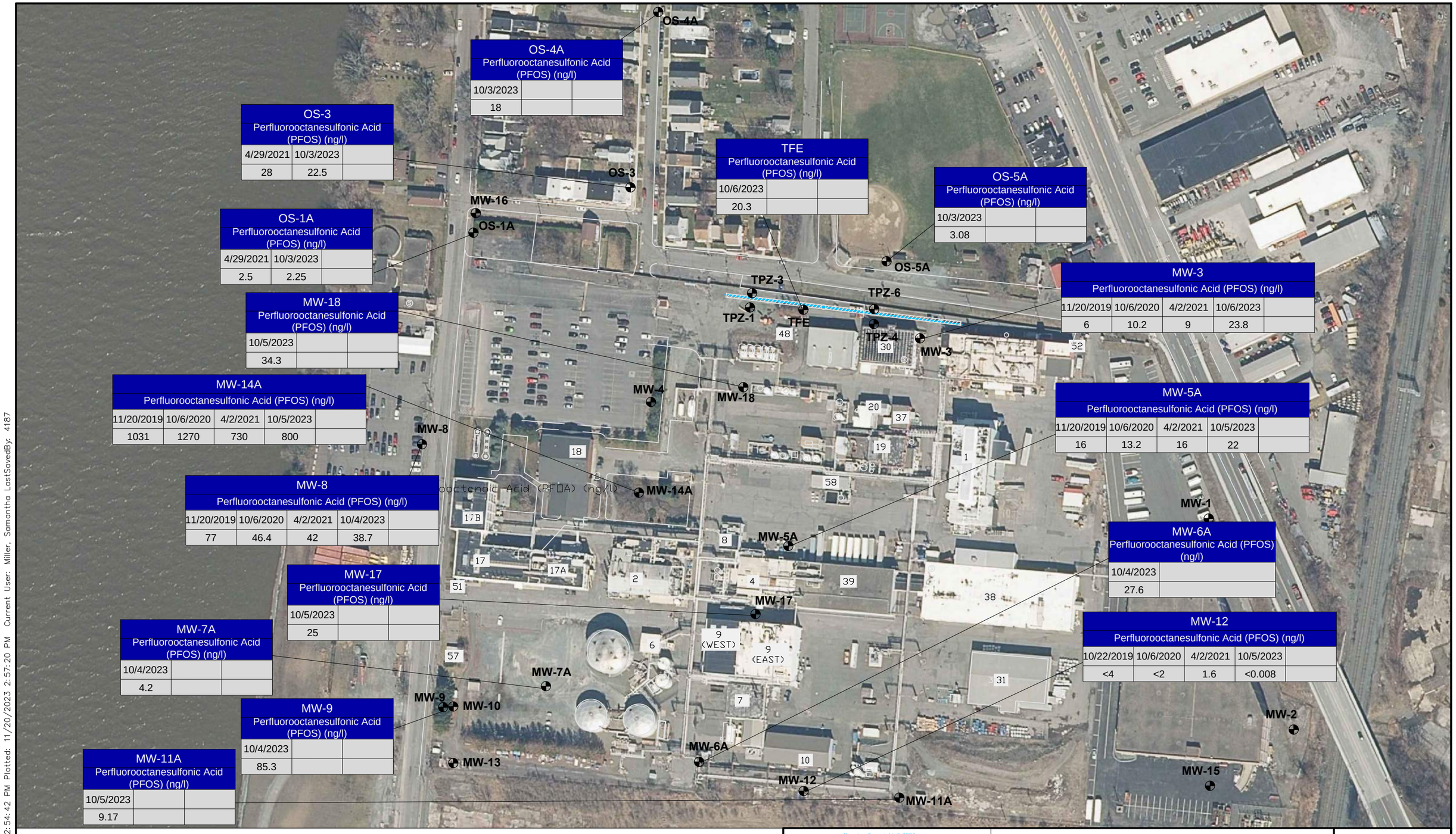
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1,4-DIOXANE RESULTS – OCTOBER 2023
CURIA NEW YORK
STERLING DRUG SITE #1
33 RIVERSIDE AVENUE
RENSSELAER, NEW YORK

PROJECT NO. 075104
DATE: 11/2023
FIGURE 2

File: V:\PROJECTS\ANY\K6\075104.000\09_DESIGN\DRAWINGS\ENV\2023-11-16_PFAS SAMPLE DATA.DWG
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OS-4A Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/3/2023		
18		

OS-3 Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
4/29/2021	10/3/2023	
28	22.5	

TFE Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/6/2023		
20.3		

OS-5A Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/3/2023		
3.08		

OS-1A Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
4/29/2021	10/3/2023	
2.5	2.25	

MW-3 Perfluorooctanesulfonic Acid (PFOS) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/6/2023	
6	10.2	9	23.8	

MW-18 Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/5/2023		
34.3		

MW-14A Perfluorooctanesulfonic Acid (PFOS) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/5/2023	
1031	1270	730	800	

MW-5A Perfluorooctanesulfonic Acid (PFOS) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/5/2023	
16	13.2	16	22	

MW-8 Perfluorooctanesulfonic Acid (PFOS) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/4/2023	
77	46.4	42	38.7	

MW-6A Perfluorooctanesulfonic Acid (PFOS) (ng/l)	
10/4/2023	
27.6	

MW-17 Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/5/2023		
25		

MW-12 Perfluorooctanesulfonic Acid (PFOS) (ng/l)				
10/22/2019	10/6/2020	4/2/2021	10/5/2023	
<4	<2	1.6	<0.008	

MW-7A Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/4/2023		
4.2		

MW-9 Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/4/2023		
85.3		

MW-11A Perfluorooctanesulfonic Acid (PFOS) (ng/l)		
10/5/2023		
9.17		

0 150 300
Scale in feet

NYSDEC STANDARD/ACTION LIMIT: 2.7NG/L OR PPT (APRIL 2023)

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PFOS RESULTS – OCTOBER 2023

CURIA NEW YORK
STERLING DRUG SITE #1
33 RIVERSIDE AVENUE
RENSSELAER, NEW YORK

PROJECT NO. 075104

DATE: 11/2023

FIGURE 3

File: V:\PROJECTS\ANY\K6\075104.000\09_DESIGN\DRAWINGS\ENV\2023-11-16_PFAS SAMPLE DATA.DWG
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OS-4A Perfluorooctanoic Acid (PFOA) (ng/l)		
10/3/2023		
8.26		

OS-3 Perfluorooctanoic Acid (PFOA) (ng/l)		
4/29/2021	10/3/2023	
21	14.9	

OS-1A Perfluorooctanoic Acid (PFOA) (ng/l)		
4/29/2023	10/3/2023	
1.5	1.25	

MW-18 Perfluorooctanoic Acid (PFOA) (ng/l)		
10/5/2023		
19.7		

MW-14A Perfluorooctanoic Acid (PFOA) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/5/2023	
17	18.4	28	82.4	

MW-8 Perfluorooctanoic Acid (PFOA) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/4/2023	
13	10.3	7.5	13.8	

MW-17 Perfluorooctanoic Acid (PFOA) (ng/l)		
10/5/2023		
17.2		

MW-7A Perfluorooctanoic Acid (PFOA) (ng/l)		
10/4/2023		
2.96		

MW-9 Perfluorooctanoic Acid (PFOA) (ng/l)		
10/4/2023		
14.3		

MW-11A Perfluorooctanoic Acid (PFOA) (ng/l)		
10/5/2023		
14.7		

TFE Perfluorooctanoic Acid (PFOA) (ng/l)		
10/6/2023		
20.3		

OS-5A Perfluorooctanoic Acid (PFOA) (ng/l)		
10/3/2023		
6.99		

MW-3 Perfluorooctanoic Acid (PFOA) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/6/2023	
21	25	30	36	

MW-5A Perfluorooctanoic Acid (PFOA) (ng/l)				
11/20/2019	10/6/2020	4/2/2021	10/5/2023	
6	4	7.6	9.8	

MW-6A Perfluorooctanoic Acid (PFOA) (ng/l)	
10/4/2023	
6.46	

MW-12 Perfluorooctanoic Acid (PFOA) (ng/l)				
10/22/2019	10/6/2020	4/2/2021	10/5/2023	
9	6.39	10	12.4	

OS-4A, OS-3, OS-1A, MW-16, MW-18, MW-14A, MW-8, MW-17, MW-7A, MW-9, MW-10, MW-11A, MW-13, TFE, TPZ-3, TPZ-1, TPZ-6, TPZ-4, OS-5A, MW-3, MW-4, MW-5A, MW-6A, MW-12, MW-1, MW-2, MW-15

0 150 300
Scale in feet

NYSDEC STANDARD/ACTION LIMIT: 6.7NG/L OR PPT (APRIL 2023)

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PFAS RESULTS – OCTOBER 2023

CURIA NEW YORK
STERLING DRUG SITE #1
33 RIVERSIDE AVENUE
RENSSELAER, NEW YORK

PROJECT NO. 075104

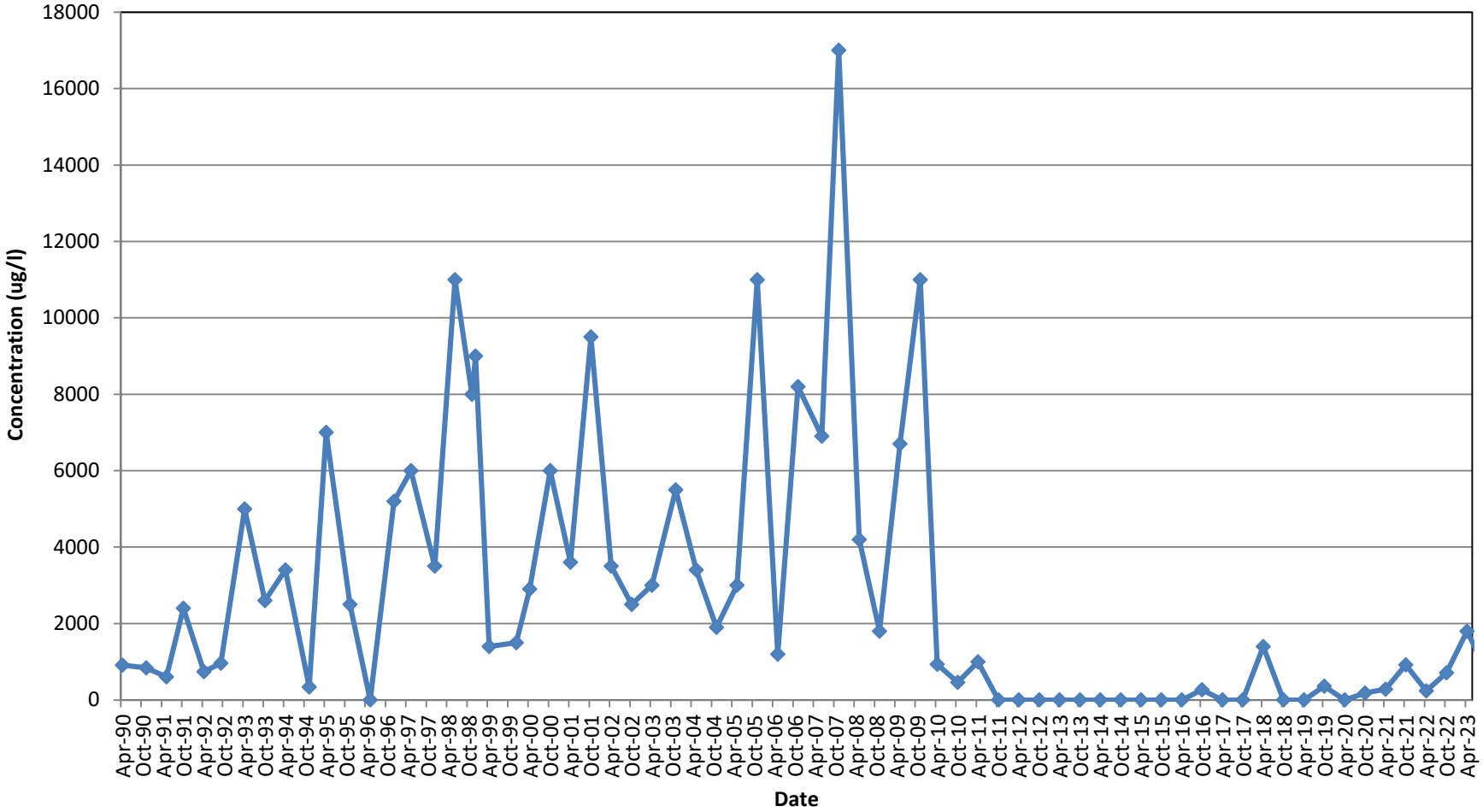
DATE: 11/2023

FIGURE 4

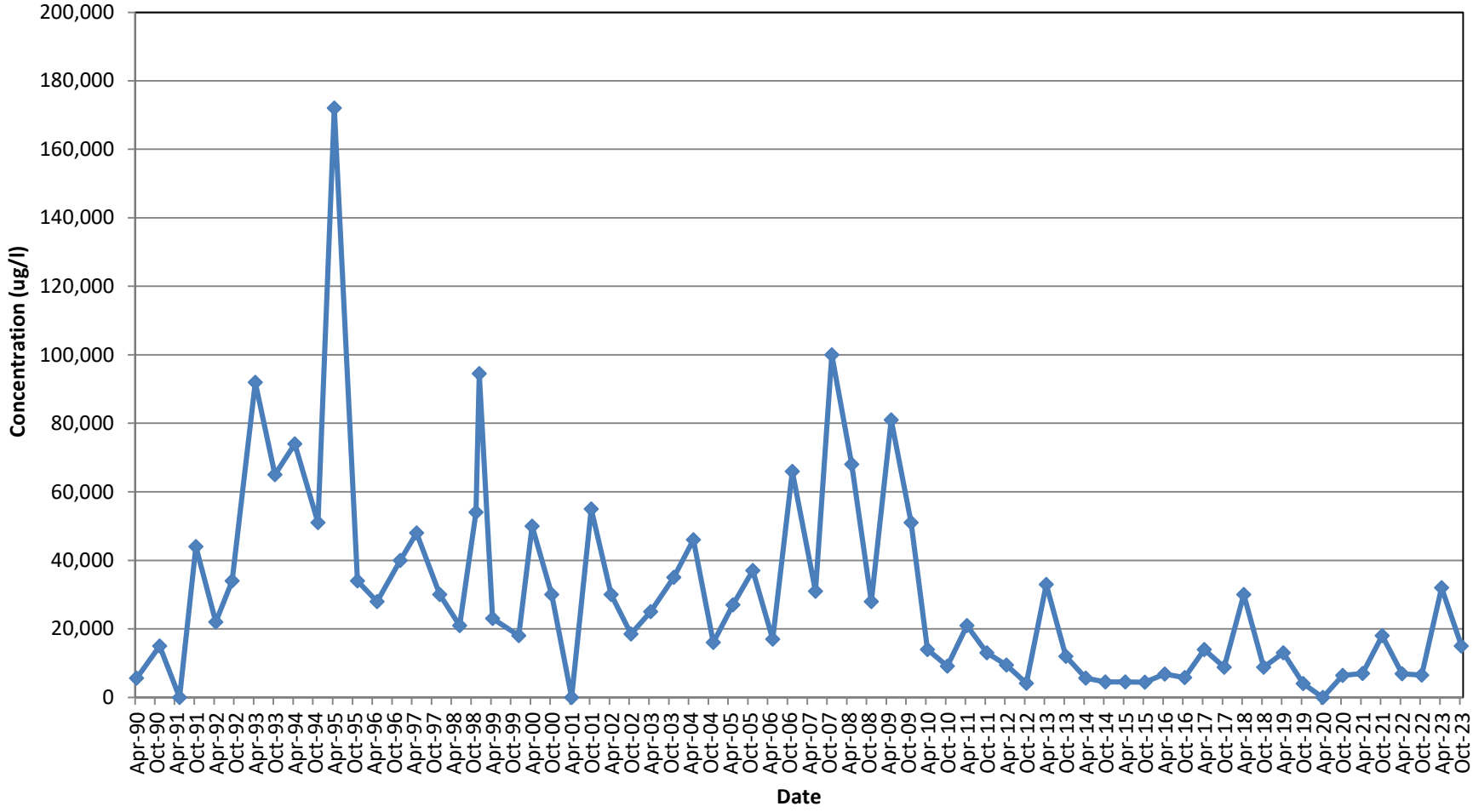
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GRAPHS

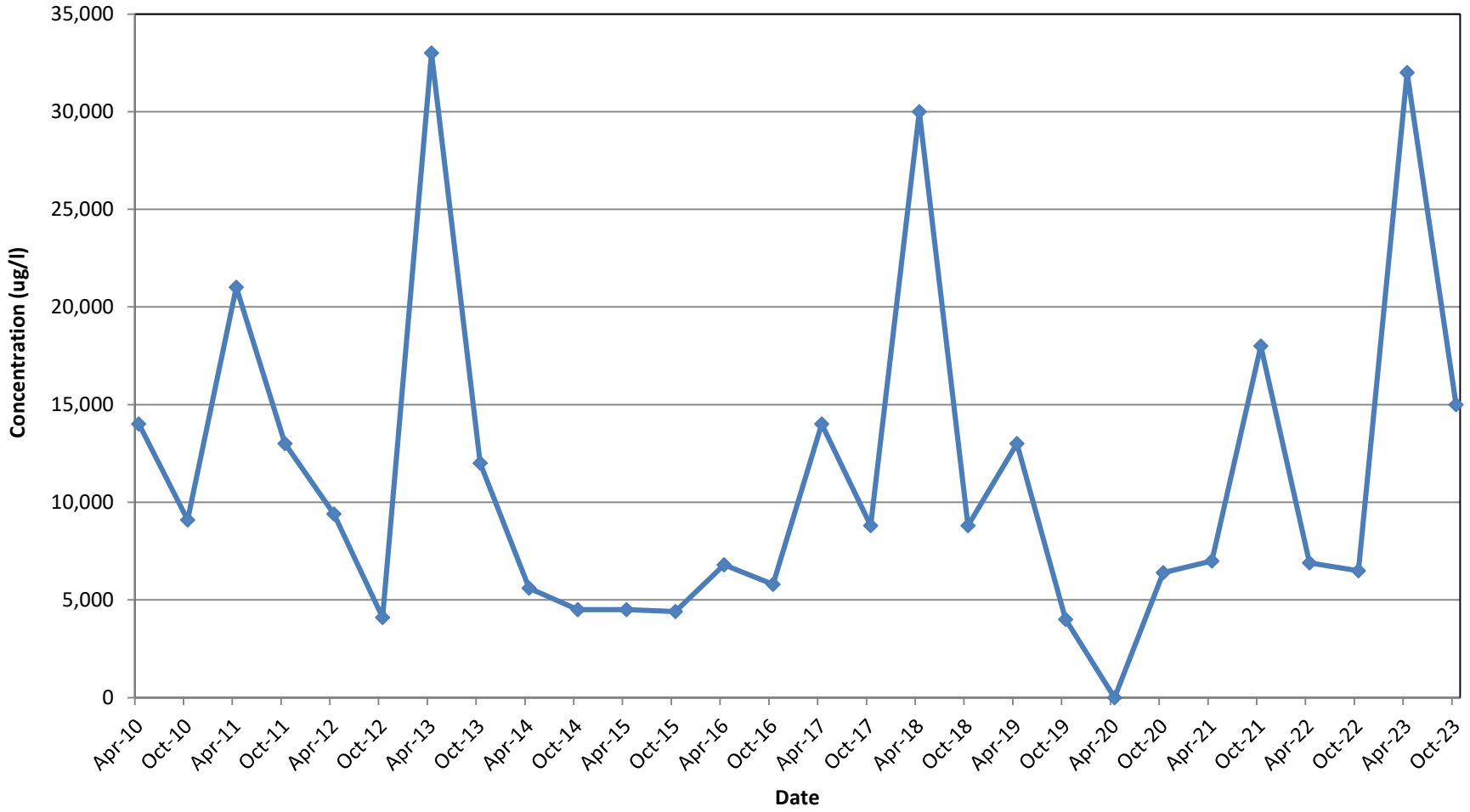
Graph 1
MW-3 Benzene Concentrations vs. Time
Site No. HW442009
October 2023 Biannual Report



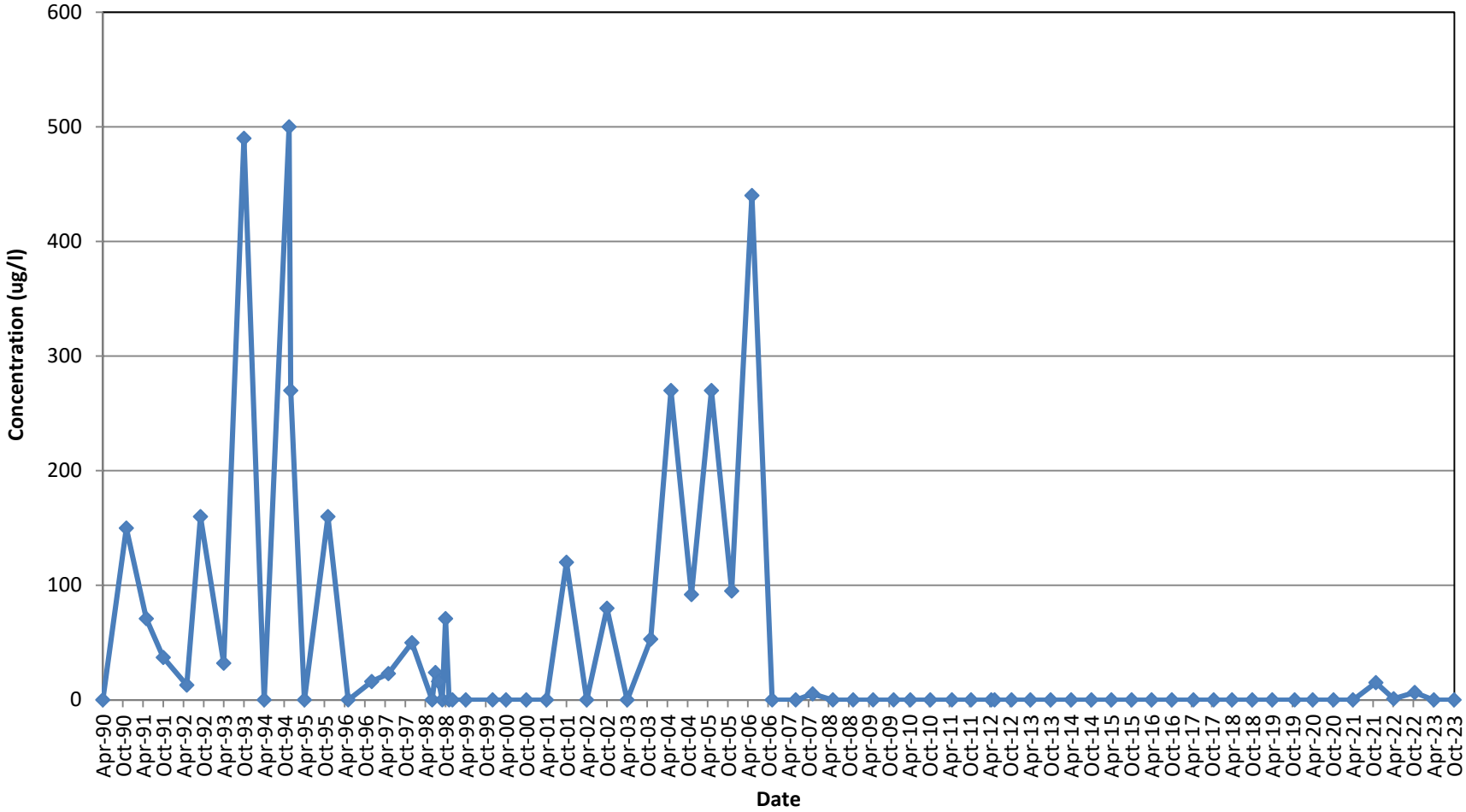
Graph 2
MW-3 Chlorobenzene Concentrations vs. Time (April 1990 - October 2023)
Site No. HW442009
October 2023 Biannual Report



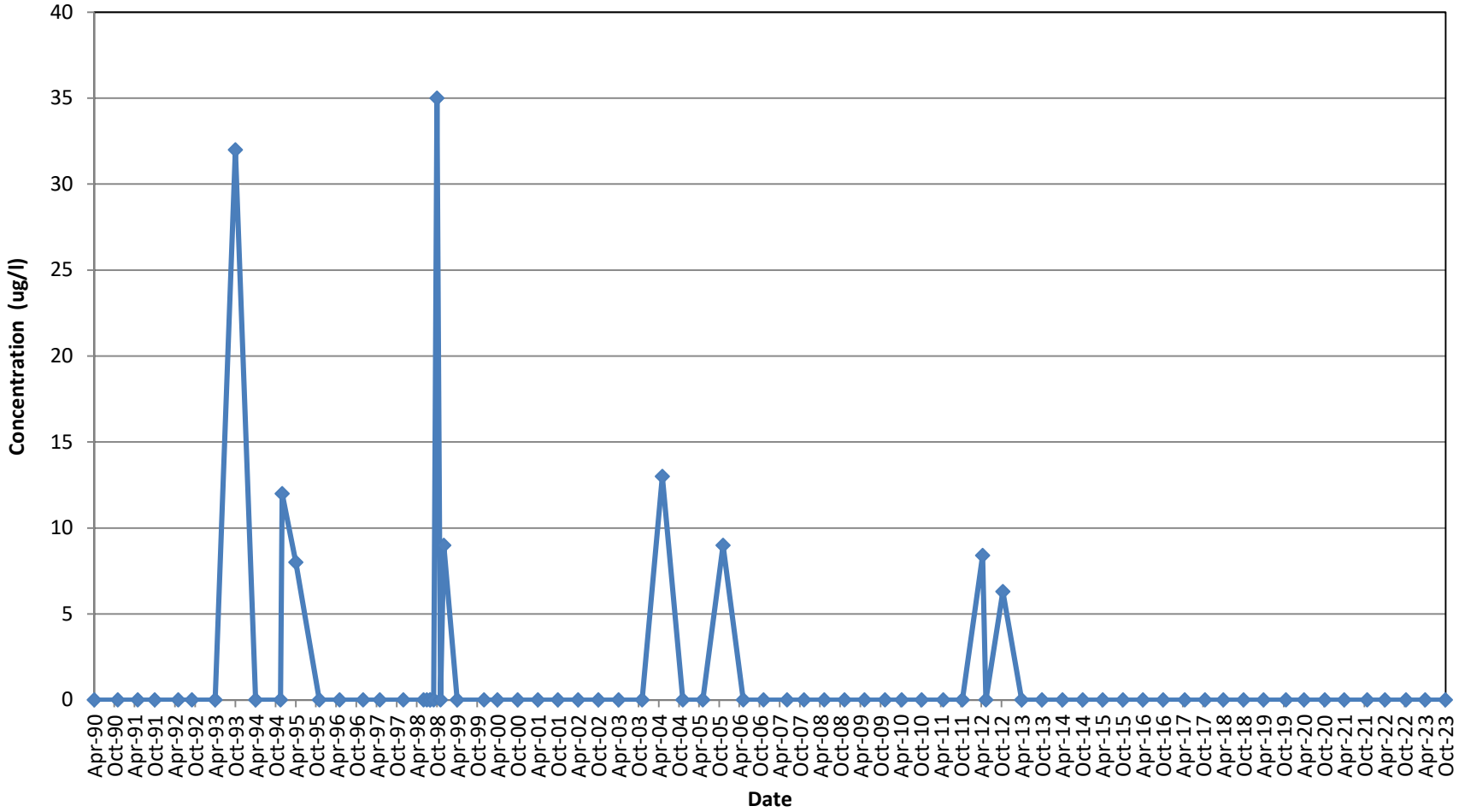
Graph 2A
MW-3 Chlorobenzene Concentrations vs. Time (April 2010 - October 2023)
Site No. HW442009
October 2023 Biannual Report



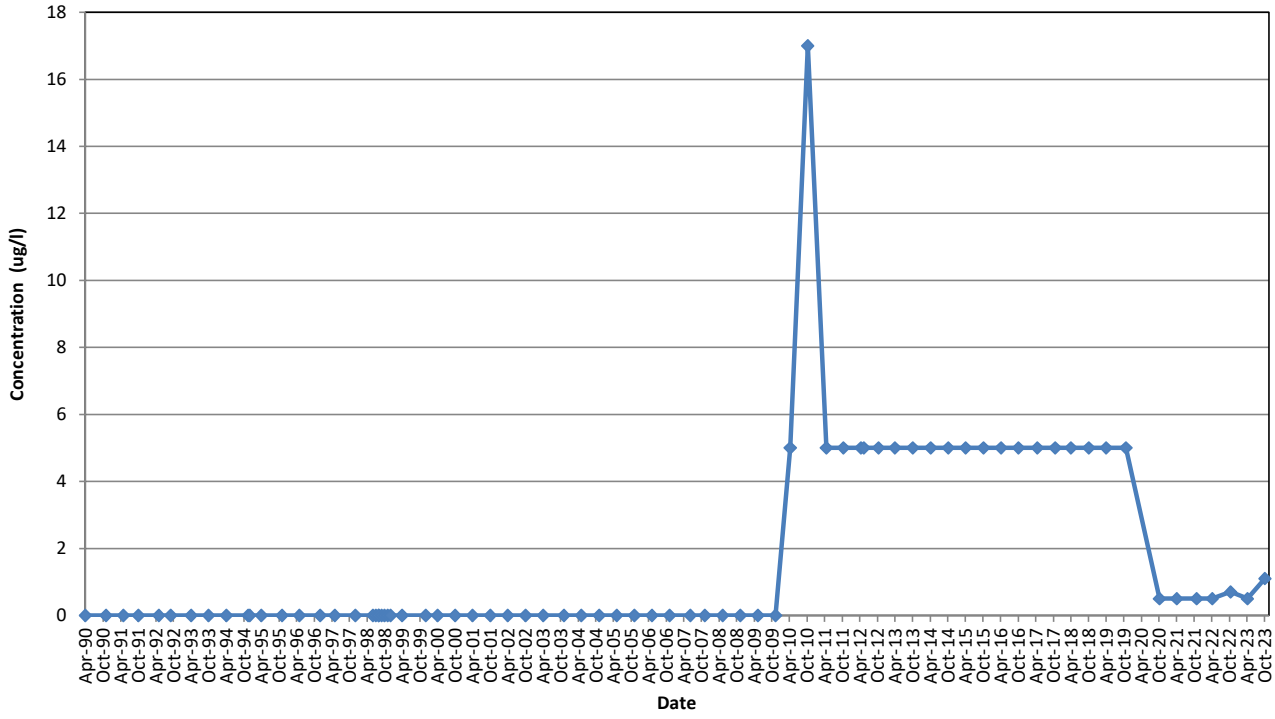
Graph 3
MW-5/MW-5A Benzene Concentrations vs. Time
Site No. HW442009
October 2023 Biannual Report



Graph 4
MW-5/MW-5A Chlorobenzene Concentrations vs. Time
Site No. HW442009
October 2023 Biannual Report



Graph 5
MW-5/MW-5A 1,2 - Dichloroethane Concentrations vs. Time
Site No. HW442009
October 2023 Biannual Report



APPENDIX A

Groundwater Monitoring Program Modifications Email

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 | F: (518) 357-2593
www.dec.ny.gov

June15, 2023

Curia (formerly AMRI)
Attention: Stephen Graham
33 Riverside Avenue
Rensselaer, NY 12144

(by email only: Stephen.Graham@curiaglobal.com)

RE: Emerging Contaminants Investigation Needs
Curia-Sterling Drug Site #1, NYSDEC Site #442009
33 Riverside Avenue, Rensselaer, New York

Dear Stephen Graham:

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have reviewed the groundwater data, for the Curia-Sterling Drug Site #1 (Site), generated by sampling some of the on-site and off-site groundwater monitoring wells for Emerging Contaminants, namely 1,4-dioxane and poly- and perfluoroalkyl substances (PFAS).

The NYSDEC recently revised the applicable groundwater quality guidance values for the PFAS compounds perfluorooctanesulfonic acid (PFOS) from 10 ng/L (nanograms per liter, or parts per trillion, or ppt) to 2.7 ng/l, and perfluorooctanoic acid (PFOA) from 10 ng/L to 6.7 ng/L. The NYSDEC groundwater quality guidance value for the emerging contaminant 1,4-dioxane is 0.35 ug/L (micrograms per liter, or parts per billion, or ppb). The figures in Attachment 1 summarize the groundwater flow directions for the Site and the emerging contaminants groundwater sampling results for the Site.

The nature and extent of PFAS and 1,4-dioxane are not defined; therefore, the groundwater monitoring for these compounds needs to be expanded. In addition, since MW-3 contains PFAS and 1,4-dioxane at concentrations greater than the groundwater quality values, and since MW-3 groundwater migrates to the groundwater collection and treatment system (GWTS), the monitoring of the GWTS needs to be expanded to include PFAS and 1,4-dioxane, thereby ensuring appropriate treatment of these chemicals is occurring prior to discharge.

Groundwater Monitoring Program Modifications

Regarding the semi-annual groundwater monitoring program, for the regular October 2023 and April 2024 sampling events, the groundwater monitoring wells to be sampled are: MW-3, MW-5A, MW-6A, MW-7A, MW-8, MW-9, MW-11A, MW-12, MW-14A, MW-17, MW-18, OS-1A, OS-3, OS-4A, OS-5A, and the former total fluids extraction well located near piezometers TPZ-1 and TPZ-4.

Groundwater samples from the monitoring wells will need to be sampled and analyzed for PFAS in accordance with the updated NYSDEC guidance, as revised in April 2023 (see Attachment 2 for reference). The samples for 1,4-dioxane will need to be analyzed using USEPA Method 8270 SIM, via a NYSDOH ELAP-certified laboratory.

Laboratory analyses for volatile organic compounds (VOCs) is unchanged at this time, so USEPA Method 8260 continues to be the necessary method, and a NYSDOH ELAP-certified laboratory continues to be necessary, with Category B deliverables and a Data Usability Summary Report by a third-party validator.

Data reporting and evaluations will inform the determinations for necessary follow-up actions, which may include continued emerging contaminants monitoring, additional groundwater well installations, or others.

Groundwater Collection and Treatment System Monitoring Modifications

Regarding the monthly monitoring, and semi-annual reporting, of the on-site groundwater collection and treatment system, the laboratory analyses for the Influent and Effluent samples need to be expanded to include PFAS and 1,4-dioxane.

The contaminated groundwater being collected by the GWTS comes from the area near MW-3, which has been shown to contain PFAS and 1,4-dioxane, in addition to the long-standing presence of VOCs. The GWTS has been sampled for Influent, Effluent and Between Carbon Drums for a short list of VOCs for many years. The granular activated carbon (GAC) treatment has been generally effective in producing acceptable removal of the VOCs for which analytical results have been generated.

The GWTS monitoring program has not included PFAS and 1,4-dioxane as yet, so it will need to be revised to include those groundwater contaminants for the monthly sampling events of October 2023 thru September 2024. The generated data set can then be evaluated to determine an appropriate analyte set and frequency for the PFAS/dioxane emerging contaminants.

The analytical methods and sampling precautions will need to be consistent with the descriptions and information referenced above for the groundwater monitoring program, except that Category A deliverables without Data Usability Summary Report will continue to be acceptable at this time.

Please contact me at 518-357-2394 if there are any technical questions related to the above requested modifications to the Site's monitoring programs. Please contact

Michael Murphy, NYSDEC Project Attorney, at 518-402-8564 if there are any legal questions related to the above requested modifications.

Sincerely,

Christopher O'Neill, P.E.
Professional Engineer 2

attachments

EC: S. Graham, Curia
C. Hitt, Curia
R. Stout, Whiteman Osterman & Hanna
T. Bakner, Whiteman Osterman & Hanna
S. Miller, CHA
K. Cowan, CHA
S. Selmer, NYSDOH
J. Deming, NYSDOH
M. Murphy, NYSDEC

ATTACHMENT 1

Groundwater Contour Map (as per CHA report)

And

Emerging Contaminants Groundwater

Results Summary Figures

Hudson River

Route 9 & 20

N

OS-4A
Max = 0.29

OS-4A		
1,4-Dioxane (P-Dioxane) (ug/L)		
4/5/2018		
0.29		

OS-3		
1,4-Dioxane (P-Dioxane) (ug/L)		
4/5/2018	4/29/2021	
0.05	<0.35	

OS-3
Max = 0.05

OS-1A		
1,4-Dioxane (P-Dioxane) (ug/L)		
4/5/2018	4/29/2021	
0.06	0.28	

MW-16

OS-1A
Max = 0.28

MW-14A			
1,4-Dioxane (P-Dioxane) (ug/L)			
4/4/2018	10/31/2019*	10/6/2020	4/2/2021*
0.86	0.89	1.35	1.14

OS-5A		
1,4-Dioxane (P-Dioxane) (ug/L)		
4/5/2018		
0.66		

OS-5A
Max = 0.66

MW-3
Max = 550

MW-18

MW-3			
1,4-Dioxane (P-Dioxane) (ug/L)			
4/5/2018	10/31/2019*	10/6/2020	4/2/2021*
550	15	103	11.4

MW-8
Max = 0.11

MW-8			
1,4-Dioxane (P-Dioxane) (ug/L)			
4/5/2018	10/31/2019*	10/6/2020	4/2/2021*
0.08	0.11	<0.35	ND

MW-14A
Max = 1.35

MW-5A
Max = 1.3

MW-5A			
1,4-Dioxane (P-Dioxane) (ug/L)			
4/4/2018	10/31/2019*	10/6/2020	4/2/2021*
1.2	1.3	0.74	0.65

MW-17		
1,4-Dioxane (P-Dioxane) (ug/L)		
4/12/2018		
0.18		

MW-17
Max = 0.18

MW-12			
1,4-Dioxane (P-Dioxane) (ug/L)			
4/4/2018	10/31/2019*	10/6/2020	4/2/2021*
14	9.2	8.42	4.32

MW-7A

MW-9

MW-10

MW-6A		
1,4-Dioxane (P-Dioxane) (ug/L)		
4/4/2018		
11		

MW-6A
Max = 11

MW-12
Max = 14

MW-11A
Max = 14

MW-11A		
1,4-Dioxane (P-Dioxane) (ug/L)		
4/4/2018		
14		

Notes:
DEC Standard/Action Limit:
1,4-Dioxane: 0.35 ug/L or ppb
*Data not in EQuIS

Sterling Drug Site #1 Wells

1,4-Dioxane Maximum (ug/L or ppb)

- 0-0.5
- .5-5
- 5-10
- 10-25
- 25+
- Additional Existing Wells

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OS-3 Perfluorooctanoic Acid (PFOA) (ng/L)			
4/29/2021			
21			

OS-1A Perfluorooctanoic Acid (PFOA) (ng/L)			
4/29/2021			
1.5			

MW-14A Perfluorooctanoic Acid (PFOA) (ng/L)			
11/20/2019*	10/6/2020	4/2/2021	
17	18.4	28	

MW-3 Perfluorooctanoic Acid (PFOA) (ng/L)			
11/20/2019*	10/6/2020	4/2/2021	
21	25	30	

MW-8 Perfluorooctanoic Acid (PFOA) (ng/L)			
11/20/2019*	10/6/2020	4/2/2021	
13	10.3	7.5	

MW-5A Perfluorooctanoic Acid (PFOA) (ng/L)			
11/20/2019*	10/6/2020	4/2/2021	
6	4	7.6	

MW-12 Perfluorooctanoic Acid (PFOA) (ng/L)			
10/22/2019*	10/6/2020	4/2/2021	
9	6.39	10	

Notes:
DEC Standard/Action Limit:
PFOA: 6.7 ng/L or ppt
*Data not in EQuIS

Sterling Drug Site #1 Wells

PFOA Maximum (ng/L or ppt)

- 0-1.7
- 1.7-5
- 5-10
- 10-20
- 20+
- Additional Existing Wells

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ATTACHMENT 2

NYSDEC Revised April 2023 Guidance for Sampling, Analysis, and Assessment of PFAS

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

April 2023



Table of Contents

Objective 1
Applicability 1
Field Sampling Procedures 1
Analysis and Reporting 2
Routine Analysis 2
Additional Analysis 2
Data Assessment and Application to Site Cleanup 3
Water Sample Results 3
Soil Sample Results 3
Testing for Imported Soil 4
Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS 5
Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids 6
Appendix C - Sampling Protocols for PFAS in Monitoring Wells 8
Appendix D - Sampling Protocols for PFAS in Surface Water 10
Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells 12
Appendix F - Sampling Protocols for PFAS in Fish 14
Appendix G - PFAS Analyte List 22
Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids 24

ERRATA SHEET for

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Data Assessment and Application to Site Cleanup Page 3	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	3/28/2023
Water Sample Results Page 3	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below.	NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These guidance values also include criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt).Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.	3/28/2023
Soil Sample Results Page 3	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values:	NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:	3/28/2023
Protection of Groundwater Page 3	PFOA (ppb) 1.1 PFOS (ppb) 3.7	PFOA (ppb) 0.8 PFOS (ppb) 1.0	3/28/2023

Citation and Page Number	Current Text	Corrected Text	Date
Footnote 2 Page 3	The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	3/28/2023
Testing for Imported Soil Page 4	If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.	If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.	3/28/2023
Routine Analysis, page 9	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020
Water Sample Results Page 10	PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (…) If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (…) If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Soil Sample Results, page 10	"The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase."	"Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. " [Interim SCO Table] "PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP. As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. "	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs. If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. [2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases… soil parameters, such as Total Organic Carbon (EPA Method 9060), soil…	In cases… soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil…	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021
Water Sample Results Page 9	"In addition, further assessment of water may be warranted if either of the following screening levels are met: a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L"	Deleted	6/15/2021

Citation and Page Number	Current Text	Corrected Text	Date
Routine Analysis, Page XX	Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP)… criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids).	Deleted	5/31/2022
Analysis and Reporting, Page XX	As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.	Deleted	5/31/2022
Routine Analysis, Page XX	LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media.	EPA Method 1633 is the procedure to use for environmental samples.	
Soil Sample Results, Page XX	Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6	
Appendix A	"Include in the text… LC-MS/MS for PFAS using methodologies based on EPA Method 537.1"	"Include in the text ….EPA Method 1633"	
Appendix A	"Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101"	Deleted	
Appendix B	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	

Citation and Page Number	Current Text	Corrected Text	Date
Appendix C	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix D	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix G		Updated to include all forty PFAS analytes in EPA Method 533	
Appendix H		Deleted	
Appendix I	Appendix I	Appendix H	
Appendix H	"These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report."	"These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER)."	
Appendix H	"The holding time is 14 days…"	"The holding time is 28 days…"	
Appendix H, Initial Calibration	"The initial calibration should contain a minimum of five standards for linear fit…"	"The initial calibration should contain a minimum of six standards for linear fit…"	
Appendix H, Initial Calibration	Linear fit calibration curves should have an R^2 value greater than 0.990.	Deleted	
Appendix H, Initial Calibration Verification	Initial Calibration Verification Section	Deleted	
Appendix H	secondary Ion Monitoring Section	Deleted	
Appendix H	Branched and Linear Isomers Section	Deleted	

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments, or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third-party data validator. Electronic data submissions should meet the requirements provided at: https://www.dec.ny.gov/chemical/62440.html.

DER has developed a *PFAS Analyte List* (Appendix G) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

EPA Method 1633 is the procedure to use for environmental samples. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist. Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.[1]

[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These human health criteria should also be applied to surface water that is used as a water supply. This guidance also includes criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt). Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater[2]	0.8	1.0

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These

[2] The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
    - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an "Analytical Methods/Quality Assurance Summary Table" specifying:
    - Matrix type
    - Number or frequency of samples to be collected per matrix
    - Number of field and trip blanks per matrix
    - Analytical parameters to be measured per matrix
    - Analytical methods to be used per matrix with minimum reporting limits
    - Number and type of matrix spike and matrix spike duplicate samples to be collected
    - Number and type of duplicate samples to be collected
    - Sample preservation to be used per analytical method and sample matrix
    - Sample container volume and type to be used per analytical method and sample matrix
    - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by EPA Method 1633
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
    - Reporting Limits should be less than or equal to:
        - Aqueous – 2 ng/L (ppt)
        - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
-
- Include detailed sampling procedures
    - Precautions to be taken
    - Pump and equipment types
    - Decontamination procedures
    - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the current SOP developed by the Division of Fish and Wildlife (DFW) entitled "General Fish Handling Procedures for Contaminant Analysis" (Ver. 8). This SOP should be followed when collecting fish for contaminant analysis. Note, however, that the Bureau of Ecosystem Health will not be supplying bags or tags. All supplies are the responsibility of the collector

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:

   1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).

   2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.

   3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.

B. The following data are required on each **Fish Collection Record** form:

   1. Project and Site Name.

   2. DEC Region.

   3. All personnel (and affiliation) involved in the collection.

   4. Method of collection (gill net, hook and line, etc.)

   5. Preservation Method.

C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:

   1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.

   2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.

   3. Date collected.

   4. Sample location (waterway and nearest prominent identifiable landmark).

   5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.

2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.

3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.

4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate “Age” column.

5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.

6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.

7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.

E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish’s tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with

the same information.

F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.

G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.

H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:

No materials containing Teflon.
No Post-it notes.
No ice packs; only water ice or dry ice.
Any gloves worn must be powder free nitrile.
No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
Wash hands after handling any food containers or packages as these may contain PFCs.
Keep pre-wrapped food containers and wrappers isolated from fish handling.
Wear clothing washed at least six times since purchase.
Wear clothing washed without fabric softener.
Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.

I. All fish must be kept at a temperature <45° F (<8° C) immediately following data processing. As soon as possible, freeze at -20° C ± 5° C. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.

J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

Project and Site Name _____ DEC Region _____

Collections made by (include all crew) _____

Sampling Method: □Electrofishing □Gill netting □Trap netting □Trawling □Seining □Angling □Other _____

Preservation Method: □Freezing □Other _____ Notes (SWFDB survey number): _____

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ( )	WEIGHT ( )	REMARKS

richter: revised 2011, 5/7/15, 10/4/16, 3/20/17; becker: 3/23/17, 4/26/19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY

I, _____, of _____ collected the
(Print Name) (Print Business Address)

following on _____, 20____ from _____
(Date) (Water Body)

in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of _____, in _____ County.

Item(s) _____

_____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on _____, 20_____.

_____ _____
Signature Date

I, _____, received the above mentioned sample(s) on the date specified and assigned identification number(s) _____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_____ _____
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

richter: revised 21 April 2014; becker: 23 March 2017, 26 April, 2019

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelops, approximately 2” x 3.5”, if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonic acids	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluoropentanesulfonic acid	PFPeS	2706-91-4
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorononanesulfonic acid	PFNS	68259-12-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
	Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Perfluoroalkyl carboxylic acids	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUnA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTeDA	376-06-7
Per- and Polyfluoroether carboxylic acids	Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
	4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
	Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
	Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Fluorotelomer sulfonic acids	4:2 Fluorotelomer sulfonic acid	4:2-FTS	757124-72-4
	6:2 Fluorotelomer sulfonic acid	6:2-FTS	27619-97-2
	8:2 Fluorotelomer sulfonic acid	8:2-FTS	39108-34-4
Fluorotelomer carboxylic acids	3:3 Fluorotelomer carboxylic acid	3:3 FTCA	356-02-5
	5:3 Fluorotelomer carboxylic acid	5:3 FTCA	914637-49-3
	7:3 Fluorotelomer carboxylic acid	7:3 FTCA	812-70-4
Perfluorooctane sulfonamides	Perfluorooctane sulfonamide	PFOSA	754-91-6
	N-methylperfluorooctane sulfonamide	NMeFOSA	31506-32-8
	N-ethylperfluorooctane sulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids	N-methylperfluorooctane sulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols	N-methylperfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
	N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2

Group	Chemical Name	Abbreviation	CAS Number
Ether sulfonic acids	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major)	9Cl-PF3ONS	756426-58-1
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	11Cl-PF3OUdS	763051-92-9
	Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7

Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER). Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 28 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6ºC upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of six standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects

Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results

Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample

Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects

Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

APPENDIX B

Well Inspection Logs

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-3

Date of Inspection: 10.2.23

Time of Inspection: 14:15

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: TPZ-6

Date of Inspection: 10.2.2023

Time of Inspection: 13:00

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-	A				
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: TPZ-4

Date of Inspection: 10.2.2023

Time of Inspection: 13:45

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-	A				
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: TPZ-1

Date of Inspection: 10.2.2023

Time of Inspection: 13:30

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: TPZ-3

Date of Inspection: 10.2.2023

Time of Inspection: 13:15

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-14A

Date of Inspection: 10.2.2023

Time of Inspection: 13:00

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-18

Date of Inspection: 10.2.2023

Time of Inspection: 12:45

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-5A

Date of Inspection: 10.2.2023

Time of Inspection: 12:30

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-11A

Date of Inspection: 10.2.2023

Time of Inspection: 12:15

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-17

Date of Inspection: 10.2.2023

Time of Inspection: 12:10

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth					
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-10

Date of Inspection: 10/2/23

Time of Inspection: 11:14

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth	A				
	Siltation	A				
	Recharge Rate	A				
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-12

Date of Inspection: 10.2.23

Time of Inspection: 12:00

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth 13.10					
	Siltation some					
	Recharge Rate ok					
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-7A

Date of Inspection: 10/4/23

Time of Inspection: 1345

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth 13.92					
	Siltation some					
	Recharge Rate very good					
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-9

Date of Inspection: ~~10/2/23~~ 10/4/23

Time of Inspection: ~~11:16~~ 12:50

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth 11.02					
	Siltation NO SILT					
	Recharge Rate good					
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-6A

Date of Inspection: 10/4/23

Time of Inspection: 1500

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth 13.28					
	Siltation No silt					
	Recharge Rate good					
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: MW-8

Date of Inspection: 10/4/23

Time of Inspection: 1025

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing					
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth 17.70					
	Siltation NO			Silt on bottom		
	Recharge Rate good					
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: OS-3

Date of Inspection: 10/3/23

Time of Inspection: 1450

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing					
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth 10.9					
	Siltation silt on bottom			turbid towards end of sampling		
	Recharge Rate very good					
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: OS-5A

Date of Inspection: 10/3/23

Time of Inspection: 14:10

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing	A				
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth 12.53					
	Siltation	A				
	Recharge Rate	A		OK Recharge Rate		
	Other-					
Security	Security Cap in Place	A				
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: OS-4A

Date of Inspection: 10/3/23

Time of Inspection: 1200

Inspector's Name(s): C. Hurlburt

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)	A				
	Well Number Readable on Casing					
	Integrity of Surface Seal/Apron	A				
	Integrity of Surface Casing	A				
	Corrosion	A				
	Inner Casing/Screen Integrity	A				
	Measuring Point Visibility	A				
	Total Depth					
	Siltation No silt	>A				
	Recharge Rate really good					
	Other-					
Security	Security Cap in Place	~~A~~	U	no bolts on cover		
	Lock in Place	A				
	Lock Functional	A				
	Other					

*Status U=unacceptable
A=acceptable

TABLE 4
GROUNDWATER MONITORING SYSTEM
INSPECTION
Curia

Well Designation: OS-1A

Date of Inspection: 10/3/23

Time of Inspection: 10:00hrs

Inspector's Name(s): ~~C. Hurlburt~~ J Harrick

ITEM	TYPES OF PROBLEMS	*STATUS A	*STATUS U	COMMENTS	ACTION	DATE
Well Condition	Flagging Visibility (if applicable)					
	Well Number Readable on Casing	✓		inside well cap		
	Integrity of Surface Seal/Apron					
	Integrity of Surface Casing					
	Corrosion	✓	✓			
	Inner Casing/Screen Integrity	✓				
	Measuring Point Visibility	✓				
	Total Depth			17.53'		
	Siltation	✓				
	Recharge Rate		✓			
	Other-					
Security	Security Cap in Place	✓				
	Lock in Place	✓				
	Lock Functional	✓				
	Other					

*Status U=unacceptable
A=acceptable

APPENDIX C

Laboratory Reports

ANALYTICAL REPORT

Lab Number:	L2358719
Client:	CHA Companies One Park Place 300 South State St., Suite 600 Syracuse, NY 13202
ATTN:	Samantha Miller
Phone:	(315) 471-3920
Project Name:	CURIA GW 2023
Project Number:	075104
Report Date:	10/25/23

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Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2358719-01	MW-8	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/04/23 09:45	10/04/23
L2358719-02	MW-6A	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/04/23 14:55	10/04/23
L2358719-03	MW-9	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/04/23 12:40	10/04/23
L2358719-04	MW-7A	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/04/23 13:30	10/04/23
L2358719-05	TRIP BLANKS	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/04/23 00:00	10/04/23
L2358719-06	FB-2	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/04/23 17:20	10/04/23

Project Name:	CURIA GW 2023	**Lab Number:**	L2358719
Project Number:	075104	**Report Date:**	10/25/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	CURIA GW 2023	**Lab Number:**	L2358719
Project Number:	075104	**Report Date:**	10/25/23

Case Narrative (continued)

Report Submission

October 25, 2023: This final report includes the results of all requested analyses.

October 17, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by 1633

L2358719-01 and -04: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 10/25/23

ORGANICS

VOLATILES

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-01 Date Collected: 10/04/23 09:45

Client ID: MW-8 Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/15/23 00:47

Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	106		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-02 Date Collected: 10/04/23 14:55
Client ID: MW-6A Date Received: 10/04/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/15/23 01:10
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	104		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-05 Date Collected: 10/04/23 00:00

Client ID: TRIP BLANKS Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/15/23 01:32

Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	105		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/14/23 21:26
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,05 Batch: WG1840205-5					
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	106		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358719

Report Date: 10/25/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,05 Batch: WG1840205-3 WG1840205-4								
Chlorobenzene	110		100		75-130	10		20
1,2-Dichloroethane	100		100		70-130	0		20
Benzene	110		100		70-130	10		20
Toluene	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		102		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	97		99		70-130
Dibromofluoromethane	101		103		70-130

SEMIVOLATILES

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-01
Client ID: MW-8
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 09:45
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 12:57
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 16:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	60.5	J	ng/l	144	32.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	31		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-01
Client ID: MW-8
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 09:45
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 02:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	10.2	J	ng/l	12.8	2.05	1
Perfluoropentanoic Acid (PFPeA)	19.0		ng/l	6.40	1.71	1
Perfluorobutanesulfonic Acid (PFBS)	2.30	J	ng/l	3.20	1.07	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	12.8	3.34	1
Perfluorohexanoic Acid (PFHxA)	14.8		ng/l	3.20	0.944	1
Perfluoropentanesulfonic Acid (PFPeS)	1.71	J	ng/l	3.20	0.560	1
Perfluoroheptanoic Acid (PFHpA)	16.9		ng/l	3.20	0.640	1
Perfluorohexanesulfonic Acid (PFHxS)	15.4		ng/l	3.20	0.768	1
Perfluorooctanoic Acid (PFOA)	13.8		ng/l	3.20	1.39	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	12.8	4.32	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	3.20	0.864	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	3.20	1.01	1
Perfluorooctanesulfonic Acid (PFOS)	38.7		ng/l	3.20	1.46	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	3.20	1.30	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	12.8	4.98	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	3.20	0.992	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	3.20	1.74	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	3.20	1.39	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	3.20	0.736	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	3.20	0.864	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	3.20	1.73	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	3.20	1.47	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	3.20	1.20	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	3.20	0.848	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	12.8	1.79	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	12.8	2.02	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	3.20	1.22	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-01 Date Collected: 10/04/23 09:45

Client ID: MW-8 Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	12.8	2.64	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	12.8	2.64	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	3.20	1.39	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	3.20	1.47	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	32.0	7.52	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	32.0	3.92	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	6.40	0.912	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	6.40	0.848	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	6.40	0.704	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	6.40	3.78	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	16.0	5.28	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	80.0	18.7	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	80.0	12.6	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-01 Date Collected: 10/04/23 09:45

Client ID: MW-8 Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	80		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	88		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	84		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	104		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	86		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	71		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	80		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	76		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	64		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	72		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	75		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	66		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	89		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	66		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	72		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	62		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	73		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	75		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	73		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	73		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	54		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	55		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	53		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	62		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-02
Client ID: MW-6A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 14:55
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 13:21
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 16:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	1020		ng/l	147	33.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-02
Client ID: MW-6A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 14:55
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 02:59
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	8.03		ng/l	5.90	0.945	1
Perfluoropentanoic Acid (PFPeA)	15.0		ng/l	2.95	0.790	1
Perfluorobutanesulfonic Acid (PFBS)	2.58		ng/l	1.48	0.494	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.90	1.54	1
Perfluorohexanoic Acid (PFHxA)	6.62		ng/l	1.48	0.436	1
Perfluoropentanesulfonic Acid (PFPeS)	1.84		ng/l	1.48	0.258	1
Perfluoroheptanoic Acid (PFHpA)	2.35		ng/l	1.48	0.295	1
Perfluorohexanesulfonic Acid (PFHxS)	12.5		ng/l	1.48	0.354	1
Perfluorooctanoic Acid (PFOA)	6.46		ng/l	1.48	0.642	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.90	1.99	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.531	J	ng/l	1.48	0.399	1
Perfluorononanoic Acid (PFNA)	1.54		ng/l	1.48	0.465	1
Perfluorooctanesulfonic Acid (PFOS)	27.6		ng/l	1.48	0.672	1
Perfluorodecanoic Acid (PFDA)	1.19	J	ng/l	1.48	0.598	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.90	2.30	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.48	0.458	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.48	0.805	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.48	0.642	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.48	0.340	1
Perfluorooctanesulfonamide (PFOSA)	0.930	J	ng/l	1.48	0.399	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.48	0.797	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.48	0.679	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.48	0.554	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.48	0.391	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.90	0.827	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.90	0.930	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.48	0.561	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-02 Date Collected: 10/04/23 14:55

Client ID: MW-6A Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.90	1.22	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.90	1.22	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.48	0.642	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.48	0.679	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.8	3.47	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.8	1.81	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.95	0.421	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.95	0.391	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.95	0.325	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.95	1.74	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.38	2.44	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	36.9	8.64	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	36.9	5.82	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-02 Date Collected: 10/04/23 14:55

Client ID: MW-6A Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	82		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	73		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	80		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	147		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	75		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	84		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	81		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	76		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	93		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	70		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	65		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	64		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	109		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	68		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	58		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	52		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	74		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	60		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	62		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	82		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	47		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	49		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	44		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	56		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-03
Client ID: MW-9
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 12:40
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 13:45
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 16:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	142	32.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	35		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-03
Client ID: MW-9
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 12:40
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 03:12
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	5.29	J	ng/l	5.96	0.954	1
Perfluoropentanoic Acid (PFPeA)	8.92		ng/l	2.98	0.797	1
Perfluorobutanesulfonic Acid (PFBS)	13.7		ng/l	1.49	0.499	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.96	1.56	1
Perfluorohexanoic Acid (PFHxA)	23.2		ng/l	1.49	0.440	1
Perfluoropentanesulfonic Acid (PFPeS)	20.1		ng/l	1.49	0.261	1
Perfluoroheptanoic Acid (PFHpA)	4.72		ng/l	1.49	0.298	1
Perfluorohexanesulfonic Acid (PFHxS)	134		ng/l	1.49	0.358	1
Perfluorooctanoic Acid (PFOA)	14.3		ng/l	1.49	0.648	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.96	2.01	1
Perfluoroheptanesulfonic Acid (PFHpS)	2.11		ng/l	1.49	0.402	1
Perfluorononanoic Acid (PFNA)	0.507	J	ng/l	1.49	0.469	1
Perfluorooctanesulfonic Acid (PFOS)	85.3		ng/l	1.49	0.678	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.49	0.604	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.96	2.32	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.49	0.462	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.49	0.812	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.49	0.648	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.49	0.343	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.49	0.402	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.49	0.805	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.49	0.686	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.49	0.559	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.49	0.395	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.96	0.834	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.96	0.939	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.49	0.566	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-03 Date Collected: 10/04/23 12:40

Client ID: MW-9 Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.96	1.23	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.96	1.23	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.49	0.648	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.49	0.686	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.9	3.50	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.9	1.82	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.98	0.425	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.98	0.395	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.98	0.328	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.98	1.76	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.45	2.46	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.2	8.72	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.2	5.88	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-03 Date Collected: 10/04/23 12:40

Client ID: MW-9 Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	79		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	79		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	89		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	96		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	76		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	69		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	81		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	77		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	67		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	75		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	78		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	70		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	54		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	58		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	62		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	49		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	58		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	50		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	35		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	68		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	39		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	38		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	36		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	42		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-04
Client ID: MW-7A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 13:30
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 14:13
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 16:49

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	142	32.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	36		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-04
Client ID: MW-7A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 13:30
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 03:25
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	16.0	2.56	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	8.00	2.14	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	4.00	1.34	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	16.0	4.18	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	4.00	1.18	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	4.00	0.700	1
Perfluoroheptanoic Acid (PFHpA)	0.960	J	ng/l	4.00	0.800	1
Perfluorohexanesulfonic Acid (PFHxS)	2.84	J	ng/l	4.00	0.960	1
Perfluorooctanoic Acid (PFOA)	2.96	J	ng/l	4.00	1.74	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	16.0	5.40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	4.00	1.08	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	4.00	1.26	1
Perfluorooctanesulfonic Acid (PFOS)	4.20		ng/l	4.00	1.82	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	4.00	1.62	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	16.0	6.22	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	4.00	1.24	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	4.00	2.18	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	4.00	1.74	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	4.00	0.920	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	4.00	1.08	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	4.00	2.16	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	4.00	1.84	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	4.00	1.50	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	4.00	1.06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	16.0	2.24	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	16.0	2.52	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	4.00	1.52	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-04 Date Collected: 10/04/23 13:30

Client ID: MW-7A Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	16.0	3.30	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	16.0	3.30	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	4.00	1.74	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	4.00	1.84	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	40.0	9.40	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	40.0	4.90	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	8.00	1.14	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	8.00	1.06	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	8.00	0.880	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	8.00	4.72	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	20.0	6.60	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	100	23.4	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	100	15.8	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-04 Date Collected: 10/04/23 13:30

Client ID: MW-7A Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	63		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	73		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	68		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	65		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	70		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	62		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	66		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	68		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	53		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	61		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	64		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	59		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	79		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	56		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	67		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	63		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	60		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	72		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	68		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	65		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	52		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	52		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	57		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	64		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-06
Client ID: FB-2
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/04/23 17:20
Date Received: 10/04/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 03:38
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	5.96	0.954	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.98	0.797	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.49	0.499	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.96	1.56	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.49	0.440	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.49	0.261	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.49	0.298	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.49	0.358	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.49	0.648	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.96	2.01	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.49	0.402	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.49	0.469	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.49	0.678	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.49	0.603	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.96	2.32	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.49	0.462	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.49	0.812	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.49	0.648	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.49	0.343	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.49	0.402	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.49	0.805	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.49	0.685	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.49	0.559	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.49	0.395	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.96	0.834	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.96	0.939	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.49	0.566	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-06 Date Collected: 10/04/23 17:20

Client ID: FB-2 Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.96	1.23	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.96	1.23	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.49	0.648	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.49	0.685	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.9	3.50	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.9	1.82	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.98	0.425	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.98	0.395	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.98	0.328	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.98	1.76	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.45	2.46	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.2	8.72	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.2	5.88	1

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-06 Date Collected: 10/04/23 17:20

Client ID: FB-2 Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	83		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	91		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	89		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	74		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	88		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	75		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	85		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	82		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	68		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	79		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	79		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	70		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	81		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	67		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	80		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	65		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	75		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	94		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	98		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	77		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	62		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	60		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	53		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	64		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 09:57
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 16:49

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270E-SIM - Mansfield Lab for sample(s): 01-04 Batch: WG1838479-1					
1,4-Dioxane	ND		ng/l	150	33.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	38		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 23:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-04,06 Batch: WG1841909-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	6.40	1.02
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	3.20	0.856
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.60	0.536
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.40	1.67
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.60	0.472
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.60	0.280
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.60	0.320
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.60	0.384
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.60	0.696
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.40	2.16
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.60	0.432
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.60	0.504
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.60	0.728
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.60	0.648
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.40	2.49
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.60	0.496
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.60	0.872
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.60	0.696
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.60	0.368
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.60	0.432
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.60	0.864
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.60	0.736
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.60	0.600
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.60	0.424
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.40	0.896
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.40	1.01
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.60	0.608

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 23:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-04,06 Batch: WG1841909-1					
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.40	1.32
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.40	1.32
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.60	0.696
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.60	0.736
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	16.0	3.76
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	16.0	1.96
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.20	0.456
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.20	0.424
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.20	0.352
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.20	1.89
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	8.00	2.64
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	40.0	9.36
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	40.0	6.31

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 23:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-04,06 Batch: WG1841909-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	76		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	83		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	83		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	84		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	82		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	72		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	80		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	79		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	81		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	77		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	74		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	73		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	87		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	66		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	72		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	64		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	72		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	72		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	74		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	72		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	51		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	54		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	67		20-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358719

Report Date: 10/25/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270E-SIM - Mansfield Lab	Associated sample(s): 01-04		Batch: WG1838479-2 WG1838479-3					
1,4-Dioxane	113		114		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	34		43		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-04,06 Batch: WG1841909-2 LOW LEVEL								
Perfluorobutanoic Acid (PFBA)	119		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	125		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	137		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	120		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	121		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	110		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	127		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	118		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	123		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	116		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	122		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	115		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	124		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	114		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	96		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	111		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	120		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	102		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	116		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	102		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	114		-		40-150	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104
Lab Number: L2358719
Report Date: 10/25/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-04,06 Batch: WG1841909-2 LOW LEVEL								
Perfluorotridecanoic Acid (PFTrDA)	112		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	121		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	127		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	124		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	102		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	105		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	97		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	98		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	97		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	114		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	120		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	110		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	115		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	118		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	120		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	112		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	95		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	69		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358719

Report Date: 10/25/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-04,06 Batch: WG1841909-2 LOW LEVEL								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	75				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	84				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	78				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	89				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	85				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	73				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	80				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	77				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	83				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	77				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	74				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	69				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	92				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	67				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	71				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	64				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	66				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	73				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	74				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	73				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	46				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	50				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	54				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	65				20-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-04,06 Batch: WG1841909-3								
Perfluorobutanoic Acid (PFBA)	110		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	109		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	105		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	108		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	108		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	107		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	112		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	106		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	115		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	106		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	101		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	109		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	101		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	117		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	115		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	103		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	112		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	126		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	106		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	124		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	111		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	118		-		40-150	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-04,06 Batch: WG1841909-3								
Perfluorotridecanoic Acid (PFTrDA)	120		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	128		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	109		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	108		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	92		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	108		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	109		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	125		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	116		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	112		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	104		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	118		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	108		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	102		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	126		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	132		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	97		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	100		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358719

Report Date: 10/25/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-04,06 Batch: WG1841909-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	83				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	86				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	83				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	89				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	84				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	81				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	84				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	80				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	90				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	79				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	82				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	75				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	112				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	75				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	69				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	68				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	77				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	72				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	66				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	78				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	54				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	59				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	65				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	68				20-150

METALS

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

SAMPLE RESULTS

Lab ID: L2358719-02 Date Collected: 10/04/23 14:55

Client ID: MW-6A Date Received: 10/04/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	0.0560		mg/l	0.0050	0.0019	1	10/10/23 13:28	10/11/23 18:09	EPA 3005A	19,200.7	JMF
Sodium, Total	277.		mg/l	2.00	0.120	1	10/10/23 13:28	10/11/23 18:09	EPA 3005A	19,200.7	JMF

Project Name: CURIA GW 2023 **Lab Number:** L2358719

Project Number: 075104 **Report Date:** 10/25/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02 Batch: WG1837788-1										
Arsenic, Total	ND		mg/l	0.0050	0.0019	1	10/10/23 13:28	10/11/23 16:37	19,200.7	JMF
Sodium, Total	ND		mg/l	2.00	0.120	1	10/10/23 13:28	10/11/23 16:37	19,200.7	JMF

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358719

Report Date: 10/25/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1837788-2								
Arsenic, Total	108		-		85-115	-		
Sodium, Total	112		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1837788-3 QC Sample: L2358408-01 Client ID: MS Sample												
Arsenic, Total	0.006	0.12	0.154	123		-	-		75-125	-		20
Sodium, Total	969	10	917	**0**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1837788-7 QC Sample: L2358469-01 Client ID: MS Sample												
Arsenic, Total	ND	0.12	0.146	122		-	-		75-125	-		20
Sodium, Total	163	10	171	80		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358719

Report Date: 10/25/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1837788-8 QC Sample: L2358469-01 Client ID: DUP Sample						
Arsenic, Total	ND	ND	mg/l	NC		20

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2358719-01A	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-01B	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-01C	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-01D	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-01E	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-01F	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-01G	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-01H	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-02A	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-02B	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-02C	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-02D	Plastic 250ml HNO3 preserved	B	<2	<2	4.0	Y	Absent		NA-UI(180),AS-UI(180)
L2358719-02E	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-02F	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-02G	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-02H	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-02I	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-03A	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-03B	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-03C	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-03D	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-03E	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)

*Values in parentheses indicate holding time in days

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2358719-04A	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-04B	Amber 250ml unpreserved	B	7	7	4.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358719-04C	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-04D	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-04E	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-05A	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-05B	Vial HCl preserved	B	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L2358719-06A	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-06B	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2358719-06C	Plastic 500ml unpreserved	A	NA		4.3	Y	Absent		A2-1633-DRAFT(28)

*Values in parentheses indicate holding time in days

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358719
Report Date: 10/25/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: CURIA GW 2023
Project Number: 075104
Lab Number: L2358719
Report Date: 10/25/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name:	CURIA GW 2023	**Lab Number:**	L2358719
Project Number:	075104	**Report Date:**	10/25/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW 2023	**Lab Number:**	L2358719
Project Number:	075104	**Report Date:**	10/25/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW 2023	**Lab Number:**	L2358719
Project Number:	075104	**Report Date:**	10/25/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	CURIA GW 2023	**Lab Number:**	L2358719
Project Number:	075104	**Report Date:**	10/25/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

144 Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. Draft EPA Method 1633, EPA Document 821-D-22-001, June 2022.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 10/5/23

ALPHA Job #: L2358719

Client Information
Client: CHA Consulting
Address: 3 winners Circle, Albany, NY
Phone:
Fax:
Email: Smiller@chacompanies.com

Project Information
Project Name: Curia GW 2023
Project Location: 33 Riverside Ave, Rensselaer, NY
Project # 075104
(Use Project name as Project #) ☐
Project Manager: Melissa Deyo
ALPHAQuote #: Q24522

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL. As, Na

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other

Regulatory Requirement
☒ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS EPA 1633	1,4 Dioxane	8260 Site specific VOCs	EPA 200.7 total As	EPA 200.7 total Na	8260 VOCs TCL	Temp		Sample Specific Comments	Total Bottle
58719.01	MW-8	10/4/23	0945	GW	AH	X	X	X						Site specific VOCs	8
02	MW-6A	"	1455	"	"	X	X	X	X	X				are benzene, chlorobenzene,	9
03	MW-9	"	1240	"	"	X	X							toluene + 1,2 DCA	5
04	MW-7A	"	1330	↓	↓	X	X								5
05	Trip Blanks	"									X				2
06	FB-2	↓	1720	rinse water	AH	X									3
	Temp Blank											X			1
	Container Type					A	A	V	P	P	A				
	Preservative					A	A	B	C	C	A				

ANALYSIS

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Andrew Hodgens	10/4/23 1831	Secured Storage	10/4/23 1831
Secured Storage	10/4/23 2126		10/4/23 2126
	10/4/23 2126		10/5/23 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2359057
Client:	CHA Companies One Park Place 300 South State St., Suite 600 Syracuse, NY 13202
ATTN:	Samantha Miller
Phone:	(315) 471-3920
Project Name:	CURIA GW OCT 2023
Project Number:	075104
Report Date:	10/27/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: CURIA GW OCT 2023
Project Number: 075104

Lab Number: L2359057
Report Date: 10/27/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2359057-01	MW-12	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 08:45	10/05/23
L2359057-02	MW-11A	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 09:30	10/05/23
L2359057-03	MW-5A	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 10:30	10/05/23
L2359057-04	MW-17	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 11:50	10/05/23
L2359057-05	MW-14A	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 13:30	10/05/23
L2359057-06	MW-18	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 14:45	10/05/23
L2359057-07	FB-3	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 14:25	10/05/23
L2359057-08	TRIP BLANK	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/05/23 00:00	10/05/23

Project Name:	CURIA GW OCT 2023	**Lab Number:**	L2359057
Project Number:	075104	**Report Date:**	10/27/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	CURIA GW OCT 2023	**Lab Number:**	L2359057
Project Number:	075104	**Report Date:**	10/27/23

Case Narrative (continued)

Report Submission

October 27, 2023: This final report includes the results of all requested analyses.

October 19, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by 1633

L2359057-01, -02, -03, -05, and -06: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

L2359057-01, -03, and -04: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

L2359057-05: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 10/27/23

ORGANICS

VOLATILES

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-01 Date Collected: 10/05/23 08:45

Client ID: MW-12 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/15/23 07:58

Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	6.9		ug/l	2.5	0.70	1
1,2-Dichloroethane	1.2		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	105		70-130

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-02 Date Collected: 10/05/23 09:30

Client ID: MW-11A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/15/23 08:20

Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	106		70-130

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-03 Date Collected: 10/05/23 10:30
Client ID: MW-5A Date Received: 10/05/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/15/23 08:43
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	1.1		ug/l	0.50	0.13	1
Benzene	0.48	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	106		70-130

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-04 Date Collected: 10/05/23 11:50

Client ID: MW-17 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/15/23 09:05

Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	0.95	J	ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	5.9		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	104		70-130

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-05 Date Collected: 10/05/23 13:30
Client ID: MW-14A Date Received: 10/05/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/15/23 09:27
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	2.8		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	0.26	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	107		70-130

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-08 Date Collected: 10/05/23 00:00

Client ID: TRIP BLANK Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/17/23 09:03

Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	92		70-130

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/15/23 07:36
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1840245-5					
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	106		70-130

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/17/23 08:38
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 08 Batch: WG1841196-5					
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	94		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1840245-3 WG1840245-4								
Chlorobenzene	99		96		75-130	3		20
1,2-Dichloroethane	98		98		70-130	0		20
Benzene	99		96		70-130	3		20
Toluene	98		94		70-130	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	103		101		70-130
4-Bromofluorobenzene	101		98		70-130
Dibromofluoromethane	104		103		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 08 Batch: WG1841196-3 WG1841196-4								
Chlorobenzene	99		96		75-130	3		20
1,2-Dichloroethane	88		92		70-130	4		20
Benzene	85		83		70-130	2		20
Toluene	98		95		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		96		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	98		99		70-130
Dibromofluoromethane	91		93		70-130

SEMIVOLATILES

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-01
Client ID: MW-12
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 08:45
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 18:44
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/12/23 12:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	8240		ng/l	150	33.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	41		15-110

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-01
Client ID: MW-12
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 08:45
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 16:02
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	12.1	J	ng/l	32.0	5.12	1
Perfluoropentanoic Acid (PFPeA)	40.4		ng/l	16.0	4.28	1
Perfluorobutanesulfonic Acid (PFBS)	4.12	J	ng/l	8.00	2.68	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	32.0	8.36	1
Perfluorohexanoic Acid (PFHxA)	21.3		ng/l	8.00	2.36	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	8.00	1.40	1
Perfluoroheptanoic Acid (PFHpA)	6.28	J	ng/l	8.00	1.60	1
Perfluorohexanesulfonic Acid (PFHxS)	10.0		ng/l	8.00	1.92	1
Perfluorooctanoic Acid (PFOA)	12.4		ng/l	8.00	3.48	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	45.4		ng/l	32.0	10.8	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	8.00	2.16	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	8.00	2.52	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	8.00	3.64	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	8.00	3.24	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	32.0	12.4	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	8.00	2.48	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	8.00	4.36	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	8.00	3.48	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	8.00	1.84	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	8.00	2.16	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	8.00	4.32	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	8.00	3.68	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	8.00	3.00	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	8.00	2.12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	32.0	4.48	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	32.0	5.04	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	8.00	3.04	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-01 Date Collected: 10/05/23 08:45

Client ID: MW-12 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	32.0	6.60	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	32.0	6.60	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	8.00	3.48	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	8.00	3.68	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	80.0	18.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	80.0	9.80	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	16.0	2.28	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	16.0	2.12	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	16.0	1.76	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	16.0	9.44	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	40.0	13.2	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	200	46.8	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	200	31.6	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-01 Date Collected: 10/05/23 08:45

Client ID: MW-12 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	87		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	85		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	98		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	**159**	Q	20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	84		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	76		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	86		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	87		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	77		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	86		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	81		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	71		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	95		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	79		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	81		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	63		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	81		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	90		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	81		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	74		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	50		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	51		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	52		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	62		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-02
Client ID: MW-11A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 09:30
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 19:07
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/12/23 12:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	147	33.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	41		15-110

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-02
Client ID: MW-11A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 09:30
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 16:41
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	11.0		ng/l	6.04	0.966	1
Perfluoropentanoic Acid (PFPeA)	17.2		ng/l	3.02	0.808	1
Perfluorobutanesulfonic Acid (PFBS)	3.74		ng/l	1.51	0.506	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.04	1.58	1
Perfluorohexanoic Acid (PFHxA)	18.5		ng/l	1.51	0.445	1
Perfluoropentanesulfonic Acid (PFPeS)	2.57		ng/l	1.51	0.264	1
Perfluoroheptanoic Acid (PFHpA)	8.97		ng/l	1.51	0.302	1
Perfluorohexanesulfonic Acid (PFHxS)	21.8		ng/l	1.51	0.362	1
Perfluorooctanoic Acid (PFOA)	14.7		ng/l	1.51	0.657	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.04	2.04	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.51	0.408	1
Perfluorononanoic Acid (PFNA)	2.10		ng/l	1.51	0.476	1
Perfluorooctanesulfonic Acid (PFOS)	9.17		ng/l	1.51	0.687	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.51	0.612	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.04	2.35	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.51	0.468	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.51	0.823	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.51	0.657	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.51	0.347	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.51	0.408	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.51	0.815	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.51	0.695	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.51	0.566	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.51	0.400	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.04	0.846	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.04	0.951	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.51	0.574	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-02 Date Collected: 10/05/23 09:30

Client ID: MW-11A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.04	1.24	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.04	1.24	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.51	0.657	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.51	0.695	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	15.1	3.55	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	15.1	1.85	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.02	0.430	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.02	0.400	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.02	0.332	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.02	1.78	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.55	2.49	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.8	8.83	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.8	5.96	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-02 Date Collected: 10/05/23 09:30

Client ID: MW-11A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	80		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	69		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	88		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	**175**	Q	20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	78		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	92		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	89		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	81		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	108		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	82		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	80		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	68		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	102		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	72		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	64		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	62		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	78		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	68		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	64		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	49		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	44		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	55		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-03
Client ID: MW-5A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 10:30
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 19:31
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/12/23 12:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	1390		ng/l	150	33.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-03
Client ID: MW-5A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 10:30
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 16:54
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	6.12	J	ng/l	32.0	5.12	1
Perfluoropentanoic Acid (PFPeA)	9.52	J	ng/l	16.0	4.28	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	8.00	2.68	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	32.0	8.36	1
Perfluorohexanoic Acid (PFHxA)	11.0		ng/l	8.00	2.36	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	8.00	1.40	1
Perfluoroheptanoic Acid (PFHpA)	4.64	J	ng/l	8.00	1.60	1
Perfluorohexanesulfonic Acid (PFHxS)	14.0		ng/l	8.00	1.92	1
Perfluorooctanoic Acid (PFOA)	9.80		ng/l	8.00	3.48	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	32.0	10.8	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	8.00	2.16	1
Perfluorononanoic Acid (PFNA)	3.56	J	ng/l	8.00	2.52	1
Perfluorooctanesulfonic Acid (PFOS)	22.0		ng/l	8.00	3.64	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	8.00	3.24	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	32.0	12.4	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	8.00	2.48	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	8.00	4.36	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	8.00	3.48	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	8.00	1.84	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	8.00	2.16	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	8.00	4.32	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	8.00	3.68	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	8.00	3.00	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	8.00	2.12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	32.0	4.48	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	32.0	5.04	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	8.00	3.04	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-03 Date Collected: 10/05/23 10:30

Client ID: MW-5A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	32.0	6.60	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	32.0	6.60	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	8.00	3.48	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	8.00	3.68	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	80.0	18.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	80.0	9.80	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	16.0	2.28	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	16.0	2.12	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	16.0	1.76	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	16.0	9.44	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	40.0	13.2	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	200	46.8	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	200	31.6	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-03 Date Collected: 10/05/23 10:30

Client ID: MW-5A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	87		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	85		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	94		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	**167**	Q	20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	84		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	77		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	88		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	84		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	78		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	81		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	81		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	72		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	82		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	65		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	66		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	60		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	74		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	66		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	63		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	78		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	47		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	48		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	42		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	54		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-04
Client ID: MW-17
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 11:50
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 19:54
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/12/23 12:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	2340		ng/l	150	33.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	38		15-110

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-04
Client ID: MW-17
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 11:50
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 17:06
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	23.0	J	ng/l	32.0	5.12	1
Perfluoropentanoic Acid (PFPeA)	15.3	J	ng/l	16.0	4.28	1
Perfluorobutanesulfonic Acid (PFBS)	3.68	J	ng/l	8.00	2.68	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	32.0	8.36	1
Perfluorohexanoic Acid (PFHxA)	31.1		ng/l	8.00	2.36	1
Perfluoropentanesulfonic Acid (PFPeS)	4.64	J	ng/l	8.00	1.40	1
Perfluoroheptanoic Acid (PFHpA)	11.0		ng/l	8.00	1.60	1
Perfluorohexanesulfonic Acid (PFHxS)	41.8		ng/l	8.00	1.92	1
Perfluorooctanoic Acid (PFOA)	17.2		ng/l	8.00	3.48	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	32.0	10.8	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	8.00	2.16	1
Perfluorononanoic Acid (PFNA)	2.60	J	ng/l	8.00	2.52	1
Perfluorooctanesulfonic Acid (PFOS)	25.0		ng/l	8.00	3.64	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	8.00	3.24	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	32.0	12.4	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	8.00	2.48	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	8.00	4.36	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	8.00	3.48	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	8.00	1.84	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	8.00	2.16	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	8.00	4.32	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	8.00	3.68	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	8.00	3.00	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	8.00	2.12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	32.0	4.48	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	32.0	5.04	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	8.00	3.04	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-04 Date Collected: 10/05/23 11:50

Client ID: MW-17 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	32.0	6.60	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	32.0	6.60	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	8.00	3.48	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	8.00	3.68	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	80.0	18.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	80.0	9.80	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	16.0	2.28	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	16.0	2.12	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	16.0	1.76	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	16.0	9.44	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	40.0	13.2	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	200	46.8	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	200	31.6	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-04 Date Collected: 10/05/23 11:50

Client ID: MW-17 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	90		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	103		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	98		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	130		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	93		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	84		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	91		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	92		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	72		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	82		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	81		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	72		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	78		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	67		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	58		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	67		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	68		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	62		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	88		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	50		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	47		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	57		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-05
Client ID: MW-14A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 13:30
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 20:18
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/12/23 12:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	2970		ng/l	144	32.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	36		15-110

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-05
Client ID: MW-14A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 13:30
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 17:19
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	28.7		ng/l	6.05	0.968	1
Perfluoropentanoic Acid (PFPeA)	60.2		ng/l	3.03	0.810	1
Perfluorobutanesulfonic Acid (PFBS)	29.3		ng/l	1.51	0.507	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.05	1.58	1
Perfluorohexanoic Acid (PFHxA)	139		ng/l	1.51	0.446	1
Perfluoropentanesulfonic Acid (PFPeS)	53.2		ng/l	1.51	0.265	1
Perfluoroheptanoic Acid (PFHpA)	31.9		ng/l	1.51	0.303	1
Perfluorohexanesulfonic Acid (PFHxS)	334		ng/l	1.51	0.363	1
Perfluorooctanoic Acid (PFOA)	82.4		ng/l	1.51	0.658	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.05	2.04	1
Perfluoroheptanesulfonic Acid (PFHpS)	21.4		ng/l	1.51	0.408	1
Perfluorononanoic Acid (PFNA)	5.08		ng/l	1.51	0.477	1
Perfluorooctanesulfonic Acid (PFOS)	666	E	ng/l	1.51	0.688	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.51	0.613	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.05	2.35	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.51	0.469	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.51	0.825	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.51	0.658	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.51	0.348	1
Perfluorooctanesulfonamide (PFOSA)	2.13	F	ng/l	1.51	0.408	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.51	0.817	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.51	0.696	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.51	0.567	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.51	0.401	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.05	0.847	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.05	0.953	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.51	0.575	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-05 Date Collected: 10/05/23 13:30

Client ID: MW-14A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.05	1.25	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.05	1.25	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.51	0.658	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.51	0.696	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	15.1	3.56	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	15.1	1.85	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.03	0.431	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.03	0.401	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.03	0.333	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.03	1.78	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.57	2.50	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.8	8.85	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.8	5.97	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-05 Date Collected: 10/05/23 13:30

Client ID: MW-14A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	91		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	92		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	102		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	**227**	Q	20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	86		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	117		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	93		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	62		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	**290**	Q	20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	95		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	91		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	77		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	**241**	Q	20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	102		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	100		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	102		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	120		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	97		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	87		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	122		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	61		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	56		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	66		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	68		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-05 D
Client ID: MW-14A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 13:30
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/26/23 07:18
Analyst: SL

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorooctanesulfonic Acid (PFOS)	800		ng/l	15.1	6.88	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	71		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-06
Client ID: MW-18
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 14:45
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 20:41
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/12/23 12:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	991.		ng/l	144	32.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	35		15-110

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-06
Client ID: MW-18
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 14:45
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 17:32
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	10.4		ng/l	5.76	0.921	1
Perfluoropentanoic Acid (PFPeA)	16.8		ng/l	2.88	0.770	1
Perfluorobutanesulfonic Acid (PFBS)	3.58		ng/l	1.44	0.482	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.76	1.50	1
Perfluorohexanoic Acid (PFHxA)	15.6		ng/l	1.44	0.425	1
Perfluoropentanesulfonic Acid (PFPeS)	2.76		ng/l	1.44	0.252	1
Perfluoroheptanoic Acid (PFHpA)	10.2		ng/l	1.44	0.288	1
Perfluorohexanesulfonic Acid (PFHxS)	29.9		ng/l	1.44	0.345	1
Perfluorooctanoic Acid (PFOA)	19.7		ng/l	1.44	0.626	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.76	1.94	1
Perfluoroheptanesulfonic Acid (PFHpS)	1.34	J	ng/l	1.44	0.389	1
Perfluorononanoic Acid (PFNA)	2.44		ng/l	1.44	0.453	1
Perfluorooctanesulfonic Acid (PFOS)	34.3		ng/l	1.44	0.655	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.44	0.583	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.76	2.24	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.44	0.446	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.44	0.784	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.44	0.626	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.44	0.331	1
Perfluorooctanesulfonamide (PFOSA)	0.720	JF	ng/l	1.44	0.389	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.44	0.777	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.44	0.662	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.44	0.540	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.44	0.381	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.76	0.806	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.76	0.907	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.44	0.547	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-06 Date Collected: 10/05/23 14:45

Client ID: MW-18 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.76	1.19	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.76	1.19	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.44	0.626	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.44	0.662	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.4	3.38	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.4	1.76	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.88	0.410	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.88	0.381	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.88	0.317	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.88	1.70	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.20	2.38	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	36.0	8.42	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	36.0	5.68	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-06 Date Collected: 10/05/23 14:45

Client ID: MW-18 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	73		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	78		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	76		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	140		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	83		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	130		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	87		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	70		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	**198**	Q	20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	82		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	81		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	78		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	**188**	Q	20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	95		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	80		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	109		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	66		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	58		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	130		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	53		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	49		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	46		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	53		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-07
Client ID: FB-3
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/05/23 14:25
Date Received: 10/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 17:45
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	5.96	0.953	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.98	0.797	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.49	0.499	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.96	1.56	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.49	0.439	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.49	0.261	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.49	0.298	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.49	0.358	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.49	0.648	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.96	2.01	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.49	0.402	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.49	0.469	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.49	0.678	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.49	0.603	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.96	2.32	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.49	0.462	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.49	0.812	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.49	0.648	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.49	0.343	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.49	0.402	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.49	0.804	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.49	0.685	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.49	0.559	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.49	0.395	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.96	0.834	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.96	0.938	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.49	0.566	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-07 Date Collected: 10/05/23 14:25

Client ID: FB-3 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.96	1.23	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.96	1.23	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.49	0.648	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.49	0.685	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.9	3.50	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.9	1.82	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.98	0.424	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.98	0.395	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.98	0.328	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.98	1.76	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.45	2.46	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.2	8.71	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.2	5.88	1

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-07 Date Collected: 10/05/23 14:25

Client ID: FB-3 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	86		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	97		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	87		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	77		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	86		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	83		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	89		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	81		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	70		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	89		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	88		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	78		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	85		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	75		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	88		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	65		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	81		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	95		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	88		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	79		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	50		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	52		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	49		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	61		20-150

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 10/13/23 10:49
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/12/23 12:48

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270E-SIM - Mansfield Lab for sample(s): 01-06 Batch: WG1838845-1					
1,4-Dioxane	ND		ng/l	150	33.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	38		15-110

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/25/23 11:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-07 Batch: WG1842111-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	6.40	1.02
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	3.20	0.856
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.60	0.536
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.40	1.67
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.60	0.472
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.60	0.280
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.60	0.320
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.60	0.384
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.60	0.696
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.40	2.16
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.60	0.432
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.60	0.504
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.60	0.728
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.60	0.648
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.40	2.49
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.60	0.496
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.60	0.872
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.60	0.696
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.60	0.368
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.60	0.432
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.60	0.864
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.60	0.736
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.60	0.600
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.60	0.424
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.40	0.896
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.40	1.01
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.60	0.608

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/25/23 11:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-07 Batch: WG1842111-1					
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.40	1.32
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.40	1.32
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.60	0.696
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.60	0.736
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	16.0	3.76
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	16.0	1.96
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.20	0.456
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.20	0.424
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.20	0.352
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.20	1.89
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	8.00	2.64
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	40.0	9.36
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	40.0	6.31

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/25/23 11:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/20/23 07:20

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-07 Batch: WG1842111-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	84		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	96		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	81		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	83		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	89		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	77		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	85		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	84		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	73		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	81		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	73		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	93		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	71		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	78		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	70		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	81		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	79		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	78		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	76		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	51		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	50		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	54		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	64		20-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270E-SIM - Mansfield Lab	Associated sample(s): 01-06		Batch: WG1838845-2 WG1838845-3					
1,4-Dioxane	108		108		40-140	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	44		45		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW OCT 2023
Project Number: 075104

Lab Number: L2359057
Report Date: 10/27/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-07 Batch: WG1842111-2 LOW LEVEL								
Perfluorobutanoic Acid (PFBA)	109		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	113		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	113		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	114		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	118		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	105		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	119		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	103		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	113		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	109		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	104		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	105		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	113		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	122		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	122		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	101		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	103		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	116		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	100		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	117		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	96		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	106		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-07 Batch: WG1842111-2 LOW LEVEL								
Perfluorotridecanoic Acid (PFTrDA)	100		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	108		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	109		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	119		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	96		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	107		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	107		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	94		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	89		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	115		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	113		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	109		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	118		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	129		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	88		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	119		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	102		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	85		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-07 Batch: WG1842111-2 LOW LEVEL								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	86				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	99				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	95				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	86				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	89				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	80				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	89				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	88				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	78				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	90				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	92				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	76				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	91				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	83				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	79				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	81				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	85				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	83				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	78				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	79				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	61				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	60				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	63				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	74				20-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW OCT 2023
Project Number: 075104

Lab Number: L2359057
Report Date: 10/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-07 Batch: WG1842111-3								
Perfluorobutanoic Acid (PFBA)	103		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	102		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	98		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	101		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	101		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	109		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	97		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	100		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	107		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	102		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	103		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	104		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	96		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	102		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	100		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	98		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	100		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	104		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	102		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	105		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	98		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	103		-		40-150	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW OCT 2023
Project Number: 075104

Lab Number: L2359057
Report Date: 10/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-07 Batch: WG1842111-3								
Perfluorotridecanoic Acid (PFTrDA)	103		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	109		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	99		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	105		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	91		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	91		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	91		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	112		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	112		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	100		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	94		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	108		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	103		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	105		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	94		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	133		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	94		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	79		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-07 Batch: WG1842111-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	90				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	100				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	100				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	93				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	92				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	87				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	90				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	86				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	84				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	82				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	92				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	86				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	97				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	88				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	82				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	84				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	85				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	82				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	76				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	82				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	59				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	61				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	69				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	77				20-150

METALS

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-01 Date Collected: 10/05/23 08:45

Client ID: MW-12 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	0.0777		mg/l	0.0050	0.0019	1	10/10/23 13:28	10/11/23 18:25	EPA 3005A	19,200.7	JMF

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-03 Date Collected: 10/05/23 10:30

Client ID: MW-5A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	0.0172		mg/l	0.0050	0.0019	1	10/10/23 13:28	10/11/23 17:16	EPA 3005A	19,200.7	JMF
Sodium, Total	1180		mg/l	10.0	0.600	5	10/10/23 13:28	10/11/23 21:15	EPA 3005A	19,200.7	MAM

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-04 Date Collected: 10/05/23 11:50

Client ID: MW-17 Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Sodium, Total	215.		mg/l	2.00	0.120	1	10/13/23 17:40	10/16/23 21:00	EPA 3005A	19,200.7	AMW

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

SAMPLE RESULTS

Lab ID: L2359057-05 Date Collected: 10/05/23 13:30

Client ID: MW-14A Date Received: 10/05/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	0.857		mg/l	0.0050	0.0019	1	10/12/23 04:16	10/12/23 12:16	EPA 3005A	19,200.7	DHL

Project Name: CURIA GW OCT 2023 **Lab Number:** L2359057

Project Number: 075104 **Report Date:** 10/27/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01,03 Batch: WG1837788-1										
Arsenic, Total	ND		mg/l	0.0050	0.0019	1	10/10/23 13:28	10/11/23 16:37	19,200.7	JMF
Sodium, Total	ND		mg/l	2.00	0.120	1	10/10/23 13:28	10/11/23 16:37	19,200.7	JMF

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 05 Batch: WG1838228-1										
Arsenic, Total	ND		mg/l	0.0050	0.0019	1	10/12/23 04:16	10/12/23 08:46	19,200.7	DHL

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 04 Batch: WG1839346-1										
Sodium, Total	ND		mg/l	2.00	0.120	1	10/13/23 17:40	10/16/23 20:53	19,200.7	AMW

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03 Batch: WG1837788-2								
Arsenic, Total	108		-		85-115	-		
Sodium, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 05 Batch: WG1838228-2								
Arsenic, Total	108		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 04 Batch: WG1839346-2								
Sodium, Total	108		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CURIA GW OCT 2023
Project Number: 075104

Lab Number: L2359057
Report Date: 10/27/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03 QC Batch ID: WG1837788-3 QC Sample: L2358408-01 Client ID: MS Sample												
Arsenic, Total	0.006	0.12	0.154	123		-	-		75-125	-		20
Sodium, Total	969	10	917	**0**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01,03 QC Batch ID: WG1837788-7 QC Sample: L2358469-01 Client ID: MS Sample												
Arsenic, Total	ND	0.12	0.146	122		-	-		75-125	-		20
Sodium, Total	163	10	171	80		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 05 QC Batch ID: WG1838228-3 QC Sample: L2359151-01 Client ID: MS Sample												
Arsenic, Total	0.155	0.12	0.301	122		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 05 QC Batch ID: WG1838228-7 QC Sample: L2359497-01 Client ID: MS Sample												
Arsenic, Total	ND	0.12	0.159	**132**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1839346-3 QC Sample: L2359707-01 Client ID: MS Sample												
Sodium, Total	29.0	10	38.1	91		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1839346-7 WG1839346-8 QC Sample: L2360336-04 Client ID: MS Sample												
Sodium, Total	46.4	10	55.0	86		59.4	**130**	Q	75-125	8		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: CURIA GW OCT 2023

Project Number: 075104

Lab Number: L2359057

Report Date: 10/27/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03 QC Batch ID: WG1837788-8 QC Sample: L2358469-01 Client ID: DUP Sample						
Arsenic, Total	ND	ND	mg/l	NC		20

Project Name: CURIA GW OCT 2023
Project Number: 075104

Lab Number: L2359057
Report Date: 10/27/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2359057-01A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-01B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-01C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-01D	Plastic 250ml HNO3 preserved	A	<2	<2	5.0	Y	Absent		AS-UI(180)
L2359057-01E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-01F	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-01G	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-01H	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-01I	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-02A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-02B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-02C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-02E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-02F	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-02G	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-02H	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-02I	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-03A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-03B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-03C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-03D	Plastic 250ml HNO3 preserved	A	<2	<2	5.0	Y	Absent		NA-UI(180),AS-UI(180)
L2359057-03E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2359057-03F	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-03G	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-03H	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-03I	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-04A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-04B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-04C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-04D	Plastic 250ml HNO3 preserved	A	<2	<2	5.0	Y	Absent		NA-UI(180)
L2359057-04E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-04F	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-04G	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-04H	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-04I	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-05A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-05B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-05C	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-05D	Plastic 250ml HNO3 preserved	A	<2	<2	5.0	Y	Absent		AS-UI(180)
L2359057-05E	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-05F	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-05G	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-05H	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-05I	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-06A	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-06B	Amber 250ml unpreserved	A	7	7	5.0	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359057-06C	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-06D	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-06E	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-07A	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)

*Values in parentheses indicate holding time in days

Project Name: CURIA GW OCT 2023
Project Number: 075104

Lab Number: L2359057
Report Date: 10/27/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2359057-07B	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-07C	Plastic 500ml unpreserved	B	NA		5.0	Y	Absent		A2-1633-DRAFT(28)
L2359057-08A	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)
L2359057-08B	Vial HCl preserved	A	NA		5.0	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: CURIA GW OCT 2023
Project Number: 075104
Lab Number: L2359057
Report Date: 10/27/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: CURIA GW OCT 2023
Project Number: 075104
Lab Number: L2359057
Report Date: 10/27/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name:	CURIA GW OCT 2023	**Lab Number:**	L2359057
Project Number:	075104	**Report Date:**	10/27/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW OCT 2023	**Lab Number:**	L2359057
Project Number:	075104	**Report Date:**	10/27/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW OCT 2023	**Lab Number:**	L2359057
Project Number:	075104	**Report Date:**	10/27/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	CURIA GW OCT 2023	**Lab Number:**	L2359057
Project Number:	075104	**Report Date:**	10/27/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

144 Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. Draft EPA Method 1633, EPA Document 821-D-22-001, June 2022.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page of

Date Rec'd in Lab: 10/6/23

ALPHA Job #: L2359057

Client Information
Client: CHA CONSULTING
Address: 3 WINNERS CIRCLE
ALBANY NY 12205
Phone:
Fax:
Email: JMILLER@chacompanies.com

Project Information
Project Name: CURIA GW OCT 2023
Project Location: 33 RIVERSIDE AVE, RENSSELAER NY
Project #: 075104
(Use Project name as Project #)
Project Manager: Melissa Deyo
ALPHAQuote #: Q24522

Turn-Around Time
Standard: X
Rush (only if pre approved):
Due Date:
of Days:

Deliverables
ASP-A: ☐
ASP-B: X
EQuIS (1 File): ☐
EQuIS (4 File): X
Other: ☐

Billing Information
Same as Client Info: ☐
PO #

Regulatory Requirement
NY TOGS: X
AWQ Standards: ☐
NY Restricted Use: ☐
NY Unrestricted Use: ☐
NYC Sewer Discharge: ☐
NY Part 375: ☐
NY CP-51: ☐
Other: ☐

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
NJ: ☐
NY: X
Other: ☐

These samples have been previously analyzed by Alpha: ☐

Other project specific requirements/comments:

Please specify Metals or TAL. As, Na

ANALYSIS

Sample Filtration
Done: ☐
Lab to do: ☐
Preservation
Lab to do: ☐
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS EPA 1633	1,4 Dioxane	VOCs (8260 site specific)	EPA 200.7 Total As	EPA 200.7 Total Na	8260 VOCs TCL	Temp		Sample Specific Comments	Total Bottle
L2359057-01	MW-12	10.5.23	8:45	GW	CRH	X	X	X	X						9
-02	MW-11A		9:30			X	X	X							8
-03	MW-5A		10:30			X	X	X	X	X					9
-04	MW-17		11:50			X	X	X		X					9
-05	MW-14A		13:30			X	X	X	X						9
-06	MW-18		14:45			X	X								5
-07	FB-3		14:25	RINSE W		X									3
-08	TRIP Blank										X				2
	TRIP Blank											X			1

Container Type	A	A	V	P	P	A		
Preservative	A	A	B	C	C	A		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	10.5.23 17:25		10/5/23 1725
	10/5/23 1725		10/6/23 0820

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2359293
Client:	CHA Companies One Park Place 300 South State St., Suite 600 Syracuse, NY 13202
ATTN:	Samantha Miller
Phone:	(315) 471-3920
Project Name:	CURIA OCTOBER GW SAMPL.
Project Number:	075104
Report Date:	10/31/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104

Lab Number: L2359293
Report Date: 10/31/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2359293-01	MW-3	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/06/23 10:25	10/06/23
L2359293-02	TFE	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/06/23 12:00	10/06/23
L2359293-03	WC-1	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/06/23 11:30	10/06/23
L2359293-04	FB-4	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/06/23 12:35	10/06/23
L2359293-05	TRIP BLANK	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/06/23 00:00	10/06/23
L2359293-06	WC-1	WATER	33 RIVERSIDE AVE, RENSSELAER NY	10/06/23 11:30	10/06/23

Project Name:	CURIA OCTOBER GW SAMPL.	**Lab Number:**	L2359293
Project Number:	075104	**Report Date:**	10/31/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	CURIA OCTOBER GW SAMPL.	**Lab Number:**	L2359293
Project Number:	075104	**Report Date:**	10/31/23

Case Narrative (continued)

Report Submission

October 31, 2023: This final report includes the results of all requested analyses.

October 20, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The element list for metals analysis was specified by the client.

L2359293-03: Headspace was noted in the sample containers submitted for Volatile Organics. The analysis was cancelled at the client's request.

Perfluorinated Alkyl Acids by 1633

L2359293-02: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

Pesticides

L2359293-06: The surrogate recovery is outside the acceptance criteria for decachlorobiphenyl (235%); however, the sample was not re-extracted due to coelution with obvious interferences.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 10/31/23

ORGANICS

VOLATILES

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-01 D
Client ID: MW-3
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 10:25
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/19/23 12:07
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	250	70.	100
1,1-Dichloroethane	ND		ug/l	250	70.	100
Chloroform	ND		ug/l	250	70.	100
Carbon tetrachloride	ND		ug/l	50	13.	100
1,2-Dichloropropane	ND		ug/l	100	14.	100
Dibromochloromethane	ND		ug/l	50	15.	100
1,1,2-Trichloroethane	ND		ug/l	150	50.	100
Tetrachloroethene	ND		ug/l	50	18.	100
Chlorobenzene	15000		ug/l	250	70.	100
Trichlorofluoromethane	ND		ug/l	250	70.	100
1,2-Dichloroethane	ND		ug/l	50	13.	100
1,1,1-Trichloroethane	ND		ug/l	250	70.	100
Bromodichloromethane	ND		ug/l	50	19.	100
trans-1,3-Dichloropropene	ND		ug/l	50	16.	100
cis-1,3-Dichloropropene	ND		ug/l	50	14.	100
Bromoform	ND		ug/l	200	65.	100
1,1,2,2-Tetrachloroethane	ND		ug/l	50	17.	100
Benzene	690		ug/l	50	16.	100
Toluene	ND		ug/l	250	70.	100
Ethylbenzene	ND		ug/l	250	70.	100
Chloromethane	ND		ug/l	250	70.	100
Bromomethane	ND		ug/l	250	70.	100
Vinyl chloride	ND		ug/l	100	7.1	100
Chloroethane	ND		ug/l	250	70.	100
1,1-Dichloroethene	ND		ug/l	50	17.	100
trans-1,2-Dichloroethene	ND		ug/l	250	70.	100
Trichloroethene	ND		ug/l	50	18.	100
1,2-Dichlorobenzene	ND		ug/l	250	70.	100

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-01 D
Client ID: MW-3
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 10:25
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	250	70.	100
1,4-Dichlorobenzene	ND		ug/l	250	70.	100
Methyl tert butyl ether	ND		ug/l	250	70.	100
p/m-Xylene	ND		ug/l	250	70.	100
o-Xylene	ND		ug/l	250	70.	100
cis-1,2-Dichloroethene	ND		ug/l	250	70.	100
Styrene	ND		ug/l	250	70.	100
Dichlorodifluoromethane	ND		ug/l	500	100	100
Acetone	ND		ug/l	500	150	100
Carbon disulfide	ND		ug/l	500	100	100
2-Butanone	ND		ug/l	500	190	100
4-Methyl-2-pentanone	ND		ug/l	500	100	100
2-Hexanone	ND		ug/l	500	100	100
Bromochloromethane	ND		ug/l	250	70.	100
1,2-Dibromoethane	ND		ug/l	200	65.	100
1,2-Dibromo-3-chloropropane	ND		ug/l	250	70.	100
Isopropylbenzene	ND		ug/l	250	70.	100
1,2,3-Trichlorobenzene	ND		ug/l	250	70.	100
1,2,4-Trichlorobenzene	ND		ug/l	250	70.	100
Methyl Acetate	ND		ug/l	200	23.	100
Cyclohexane	ND		ug/l	1000	27.	100
1,4-Dioxane	ND		ug/l	25000	6100	100
Freon-113	ND		ug/l	250	70.	100
Methyl cyclohexane	ND		ug/l	1000	40.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	92		70-130

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-05 Date Collected: 10/06/23 00:00
Client ID: TRIP BLANK Date Received: 10/06/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/16/23 19:22
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-05 Date Collected: 10/06/23 00:00

Client ID: TRIP BLANK Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	94		70-130

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/16/23 17:52
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 05 Batch: WG1840747-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/16/23 17:52
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 05 Batch: WG1840747-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/16/23 17:52
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 05 Batch: WG1840747-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	93		70-130

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/19/23 07:10
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1842158-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/19/23 07:10
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1842158-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/19/23 07:10
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1842158-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 05 Batch: WG1840747-3 WG1840747-4								
Methylene chloride	90		91		70-130	1		20
1,1-Dichloroethane	93		94		70-130	1		20
Chloroform	92		92		70-130	0		20
Carbon tetrachloride	92		93		63-132	1		20
1,2-Dichloropropane	90		93		70-130	3		20
Dibromochloromethane	96		97		63-130	1		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	99		97		62-150	2		20
1,2-Dichloroethane	89		94		70-130	5		20
1,1,1-Trichloroethane	92		93		67-130	1		20
Bromodichloromethane	87		90		67-130	3		20
trans-1,3-Dichloropropene	97		99		70-130	2		20
cis-1,3-Dichloropropene	86		88		70-130	2		20
Bromoform	100		100		54-136	0		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	90		92		70-130	2		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		99		70-130	1		20
Chloromethane	84		85		64-130	1		20
Bromomethane	70		73		39-139	4		20
Vinyl chloride	97		96		55-140	1		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 05 Batch: WG1840747-3 WG1840747-4								
Chloroethane	100		100		55-138	0		20
1,1-Dichloroethene	91		89		61-145	2		20
trans-1,2-Dichloroethene	90		90		70-130	0		20
Trichloroethene	95		96		70-130	1		20
1,2-Dichlorobenzene	110		100		70-130	10		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	85		88		63-130	3		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	90		91		70-130	1		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	83		82		36-147	1		20
Acetone	76		92		58-148	19		20
Carbon disulfide	91		92		51-130	1		20
2-Butanone	84		92		63-138	9		20
4-Methyl-2-pentanone	90		97		59-130	7		20
2-Hexanone	89		99		57-130	11		20
Bromochloromethane	92		93		70-130	1		20
1,2-Dibromoethane	98		99		70-130	1		20
1,2-Dibromo-3-chloropropane	100		100		41-144	0		20
Isopropylbenzene	110		100		70-130	10		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 05 Batch: WG1840747-3 WG1840747-4								
1,2,4-Trichlorobenzene	100		100		70-130	0		20
Methyl Acetate	88		92		70-130	4		20
Cyclohexane	94		94		70-130	0		20
1,4-Dioxane	96		102		56-162	6		20
Freon-113	95		95		70-130	0		20
Methyl cyclohexane	92		91		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		96		70-130
Toluene-d8	103		102		70-130
4-Bromofluorobenzene	105		103		70-130
Dibromofluoromethane	91		92		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1842158-3 WG1842158-4								
Methylene chloride	97		98		70-130	1		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	90		97		70-130	7		20
Carbon tetrachloride	88		93		63-132	6		20
1,2-Dichloropropane	98		100		70-130	2		20
Dibromochloromethane	93		95		63-130	2		20
1,1,2-Trichloroethane	100		110		70-130	10		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	100		100		62-150	0		20
1,2-Dichloroethane	96		100		70-130	4		20
1,1,1-Trichloroethane	96		97		67-130	1		20
Bromodichloromethane	88		93		67-130	6		20
trans-1,3-Dichloropropene	97		98		70-130	1		20
cis-1,3-Dichloropropene	88		91		70-130	3		20
Bromoform	83		92		54-136	10		20
1,1,2,2-Tetrachloroethane	97		100		67-130	3		20
Benzene	93		93		70-130	0		20
Toluene	110		100		70-130	10		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	94		94		64-130	0		20
Bromomethane	53		54		39-139	2		20
Vinyl chloride	99		99		55-140	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1842158-3 WG1842158-4								
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	96		94		61-145	2		20
trans-1,2-Dichloroethene	91		94		70-130	3		20
Trichloroethene	94		93		70-130	1		20
1,2-Dichlorobenzene	99		100		70-130	1		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		110		70-130	10		20
Methyl tert butyl ether	84		92		63-130	9		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	97		96		70-130	1		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	90		90		36-147	0		20
Acetone	91		100		58-148	9		20
Carbon disulfide	93		92		51-130	1		20
2-Butanone	93		100		63-138	7		20
4-Methyl-2-pentanone	93		100		59-130	7		20
2-Hexanone	93		100		57-130	7		20
Bromochloromethane	89		92		70-130	3		20
1,2-Dibromoethane	98		100		70-130	2		20
1,2-Dibromo-3-chloropropane	82		87		41-144	6		20
Isopropylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	89		96		70-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1842158-3 WG1842158-4								
1,2,4-Trichlorobenzene	94		100		70-130	6		20
Methyl Acetate	91		100		70-130	9		20
Cyclohexane	110		110		70-130	0		20
1,4-Dioxane	68		72		56-162	6		20
Freon-113	100		100		70-130	0		20
Methyl cyclohexane	96		95		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		98		70-130
Toluene-d8	105		105		70-130
4-Bromofluorobenzene	97		102		70-130
Dibromofluoromethane	92		96		70-130

SEMIVOLATILES

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-01
Client ID: MW-3
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 10:25
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 07:23
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/13/23 16:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	4560		ng/l	144	32.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-01
Client ID: MW-3
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 10:25
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 21:49
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 10/21/23 07:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	23.5		ng/l	5.96	0.954	1
Perfluoropentanoic Acid (PFPeA)	13.4		ng/l	2.98	0.798	1
Perfluorobutanesulfonic Acid (PFBS)	4.70		ng/l	1.49	0.499	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.96	1.56	1
Perfluorohexanoic Acid (PFHxA)	16.3		ng/l	1.49	0.440	1
Perfluoropentanesulfonic Acid (PFPeS)	0.440	J	ng/l	1.49	0.261	1
Perfluoroheptanoic Acid (PFHpA)	9.35		ng/l	1.49	0.298	1
Perfluorohexanesulfonic Acid (PFHxS)	2.57		ng/l	1.49	0.358	1
Perfluorooctanoic Acid (PFOA)	36.0		ng/l	1.49	0.648	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.96	2.01	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.49	0.402	1
Perfluorononanoic Acid (PFNA)	52.8		ng/l	1.49	0.470	1
Perfluorooctanesulfonic Acid (PFOS)	23.8		ng/l	1.49	0.678	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.49	0.604	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.96	2.32	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.49	0.462	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.49	0.812	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.49	0.648	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.49	0.343	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.49	0.402	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.49	0.805	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.49	0.686	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.49	0.559	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.49	0.395	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.96	0.835	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.96	0.939	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.49	0.566	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-01 Date Collected: 10/06/23 10:25

Client ID: MW-3 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.96	1.23	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.96	1.23	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.49	0.648	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.49	0.686	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.9	3.50	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.9	1.83	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.98	0.425	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.98	0.395	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.98	0.328	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.98	1.76	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.45	2.46	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.3	8.72	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.3	5.88	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-01 Date Collected: 10/06/23 10:25

Client ID: MW-3 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	86		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	78		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	125		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	65		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	88		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	77		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	80		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	83		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	54		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	76		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	66		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	56		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	35		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	35		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	72		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	51		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	44		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	71		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	58		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	76		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	39		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	43		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	41		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	46		20-150

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-02
Client ID: TFE
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 12:00
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 07:48
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/13/23 16:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	144	32.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		15-110

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-02
Client ID: TFE
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 12:00
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 22:28
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 10/21/23 07:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	9.55		ng/l	6.22	0.995	1
Perfluoropentanoic Acid (PFPeA)	9.77		ng/l	3.11	0.832	1
Perfluorobutanesulfonic Acid (PFBS)	1.80		ng/l	1.56	0.521	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.22	1.62	1
Perfluorohexanoic Acid (PFHxA)	9.74		ng/l	1.56	0.459	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.56	0.272	1
Perfluoroheptanoic Acid (PFHpA)	10.6		ng/l	1.56	0.311	1
Perfluorohexanesulfonic Acid (PFHxS)	3.67		ng/l	1.56	0.373	1
Perfluorooctanoic Acid (PFOA)	18.3		ng/l	1.56	0.676	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.22	2.10	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.56	0.420	1
Perfluorononanoic Acid (PFNA)	10.2		ng/l	1.56	0.490	1
Perfluorooctanesulfonic Acid (PFOS)	20.3		ng/l	1.56	0.708	1
Perfluorodecanoic Acid (PFDA)	16.0		ng/l	1.56	0.630	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.22	2.42	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.56	0.482	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.56	0.848	1
Perfluoroundecanoic Acid (PFUnA)	2.01		ng/l	1.56	0.676	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.56	0.358	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.56	0.420	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.56	0.840	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.56	0.715	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.56	0.583	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.56	0.412	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.22	0.871	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.22	0.980	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.56	0.591	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-02 Date Collected: 10/06/23 12:00

Client ID: TFE Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.22	1.28	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.22	1.28	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.56	0.676	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.56	0.715	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	15.6	3.65	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	15.6	1.90	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.11	0.443	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.11	0.412	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.11	0.342	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.11	1.84	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.78	2.57	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	38.9	9.10	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	38.9	6.14	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-02 Date Collected: 10/06/23 12:00

Client ID: TFE Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	91		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	91		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	100		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	102		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	90		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	106		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	85		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	88		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	51		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	88		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	66		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	78		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	40		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	22		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	24		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	23		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	59		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	45		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	89		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	**17**	Q	20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	**18**	Q	20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	**18**	Q	20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	20		20-150

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-04
Client ID: FB-4
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 12:35
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 22:41
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 10/21/23 07:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	5.82	0.932	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.91	0.779	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.46	0.488	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.82	1.52	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.46	0.429	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.46	0.255	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.46	0.291	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.46	0.349	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.46	0.633	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.82	1.96	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.46	0.393	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.46	0.458	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.46	0.662	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.46	0.590	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.82	2.26	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.46	0.451	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.46	0.793	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.46	0.633	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.46	0.335	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.46	0.393	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.46	0.786	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.46	0.670	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.46	0.546	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.46	0.386	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.82	0.815	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.82	0.917	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.46	0.553	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-04 Date Collected: 10/06/23 12:35

Client ID: FB-4 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.82	1.20	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.82	1.20	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.46	0.633	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.46	0.670	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.6	3.42	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.6	1.78	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.91	0.415	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.91	0.386	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.91	0.320	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.91	1.72	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.28	2.40	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	36.4	8.52	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	36.4	5.74	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-04 Date Collected: 10/06/23 12:35

Client ID: FB-4 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	90		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	96		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	87		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	65		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	91		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	92		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	87		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	91		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	58		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	86		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	76		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	78		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	44		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	44		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	105		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	70		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	52		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	98		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	92		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	92		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	46		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	52		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	52		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	62		20-150

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06
Client ID: WC-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 11:30
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 10/11/23 20:26
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 04:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06 Date Collected: 10/06/23 11:30

Client ID: WC-1 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	2.1	J	ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	51		15-120
2,4,6-Tribromophenol	60		10-120
4-Terphenyl-d14	51		41-149

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06
Client ID: WC-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 11:30
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/12/23 20:12
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 04:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.06	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.03	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.01	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.05	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.04	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06 Date Collected: 10/06/23 11:30

Client ID: WC-1 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		21-120
Phenol-d6	47		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	54		41-149

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 10/11/23 18:04
Analyst: IM

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 04:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG1838161-1					
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Isophorone	ND		ug/l	5.0	1.2
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 10/11/23 18:04
Analyst: IM

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 04:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 06 Batch: WG1838161-1					
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Carbazole	ND		ug/l	2.0	0.49
Atrazine	ND		ug/l	10	0.76
Benzaldehyde	ND		ug/l	5.0	0.53
Caprolactam	ND		ug/l	10	3.3
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	48		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	79		10-120
4-Terphenyl-d14	76		41-149

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 10/12/23 12:13
Analyst: AH

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 04:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 06 Batch: WG1838162-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 10/12/23 12:13
Analyst: AH

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 04:42

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 06 Batch: WG1838162-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		21-120
Phenol-d6	53		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	74		15-120
2,4,6-Tribromophenol	78		10-120
4-Terphenyl-d14	82		41-149

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 06:05
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/13/23 16:41

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270E-SIM - Mansfield Lab for sample(s): 01-02 Batch: WG1839544-1					
1,4-Dioxane	ND		ng/l	150	33.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 21:07
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 10/21/23 07:10

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-02,04 Batch: WG1842563-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	6.40	1.02
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	3.20	0.856
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.60	0.536
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.40	1.67
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.60	0.472
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.60	0.280
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.60	0.320
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.60	0.384
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.60	0.696
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.40	2.16
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.60	0.432
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.60	0.504
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.60	0.728
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.60	0.648
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.40	2.49
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.60	0.496
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.60	0.872
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.60	0.696
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.60	0.368
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.60	0.432
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.60	0.864
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.60	0.736
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.60	0.600
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.60	0.424
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.40	0.896
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.40	1.01
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.60	0.608

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 21:07
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 10/21/23 07:10

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-02,04 Batch: WG1842563-1					
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.40	1.32
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.40	1.32
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.60	0.696
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.60	0.736
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	16.0	3.76
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	16.0	1.96
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.20	0.456
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.20	0.424
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.20	0.352
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.20	1.89
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	8.00	2.64
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	40.0	9.36
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	40.0	6.31

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 21:07
Analyst: RS

Extraction Method: EPA 1633
Extraction Date: 10/21/23 07:10

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-02,04 Batch: WG1842563-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	91		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	96		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	87		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	68		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	93		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	94		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	84		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	92		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	65		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	94		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	86		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	86		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	59		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	56		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	94		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	73		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	61		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	98		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	79		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	85		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	44		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	56		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	60		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	67		20-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG1838161-2 WG1838161-3								
Bis(2-chloroethyl)ether	56		51		40-140	9		30
3,3'-Dichlorobenzidine	57		50		40-140	13		30
2,4-Dinitrotoluene	80		69		48-143	15		30
2,6-Dinitrotoluene	79		68		40-140	15		30
4-Chlorophenyl phenyl ether	67		55		40-140	20		30
4-Bromophenyl phenyl ether	70		55		40-140	24		30
Bis(2-chloroisopropyl)ether	51		44		40-140	15		30
Bis(2-chloroethoxy)methane	59		52		40-140	13		30
Hexachlorocyclopentadiene	66		58		40-140	13		30
Isophorone	59		51		40-140	15		30
Nitrobenzene	62		54		40-140	14		30
NDPA/DPA	67		54		40-140	21		30
n-Nitrosodi-n-propylamine	57		52		29-132	9		30
Bis(2-ethylhexyl)phthalate	73		61		40-140	18		30
Butyl benzyl phthalate	68		56		40-140	19		30
Di-n-butylphthalate	67		55		40-140	20		30
Di-n-octylphthalate	73		61		40-140	18		30
Diethyl phthalate	72		58		40-140	22		30
Dimethyl phthalate	72		58		40-140	22		30
Biphenyl	65		53		40-140	20		30
4-Chloroaniline	47		41		40-140	14		30
2-Nitroaniline	79		68		52-143	15		30
3-Nitroaniline	68		59		25-145	14		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG1838161-2 WG1838161-3								
4-Nitroaniline	74		60		51-143	21		30
Dibenzofuran	64		53		40-140	19		30
1,2,4,5-Tetrachlorobenzene	63		53		2-134	17		30
Acetophenone	58		49		39-129	17		30
2,4,6-Trichlorophenol	74		62		30-130	18		30
p-Chloro-m-cresol	73		59		23-97	21		30
2-Chlorophenol	60		53		27-123	12		30
2,4-Dichlorophenol	67		60		30-130	11		30
2,4-Dimethylphenol	66		59		30-130	11		30
2-Nitrophenol	76		66		30-130	14		30
4-Nitrophenol	71		61		10-80	15		30
2,4-Dinitrophenol	80		76		20-130	5		30
4,6-Dinitro-o-cresol	99		82		20-164	19		30
Phenol	49		42		12-110	15		30
2-Methylphenol	62		53		30-130	16		30
3-Methylphenol/4-Methylphenol	65		55		30-130	17		30
2,4,5-Trichlorophenol	77		63		30-130	20		30
Carbazole	64		**53**	Q	55-144	19		30
Atrazine	73		64		40-140	13		30
Benzaldehyde	69		61		40-140	12		30
Caprolactam	30		25		10-130	18		30
2,3,4,6-Tetrachlorophenol	70		57		40-140	20		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 06 Batch: WG1838161-2 WG1838161-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	57		51		21-120
Phenol-d6	49		42		10-120
Nitrobenzene-d5	66		56		23-120
2-Fluorobiphenyl	67		55		15-120
2,4,6-Tribromophenol	79		66		10-120
4-Terphenyl-d14	65		54		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 06 Batch: WG1838162-2 WG1838162-3								
Acenaphthene	69		57		40-140	19		40
2-Chloronaphthalene	70		59		40-140	17		40
Fluoranthene	76		65		40-140	16		40
Hexachlorobutadiene	64		56		40-140	13		40
Naphthalene	72		58		40-140	22		40
Benzo(a)anthracene	73		62		40-140	16		40
Benzo(a)pyrene	84		70		40-140	18		40
Benzo(b)fluoranthene	82		70		40-140	16		40
Benzo(k)fluoranthene	82		67		40-140	20		40
Chrysene	78		63		40-140	21		40
Acenaphthylene	74		60		40-140	21		40
Anthracene	78		65		40-140	18		40
Benzo(ghi)perylene	83		68		40-140	20		40
Fluorene	71		59		40-140	18		40
Phenanthrene	74		61		40-140	19		40
Dibenzo(a,h)anthracene	87		72		40-140	19		40
Indeno(1,2,3-cd)pyrene	77		64		40-140	18		40
Pyrene	78		65		40-140	18		40
2-Methylnaphthalene	70		58		40-140	19		40
Pentachlorophenol	68		59		40-140	14		40
Hexachlorobenzene	72		59		40-140	20		40
Hexachloroethane	62		55		40-140	12		40

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 06 Batch: WG1838162-2 WG1838162-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	63		54		21-120
Phenol-d6	57		47		10-120
Nitrobenzene-d5	75		64		23-120
2-Fluorobiphenyl	70		58		15-120
2,4,6-Tribromophenol	84		69		10-120
4-Terphenyl-d14	73		61		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270E-SIM - Mansfield Lab	Associated sample(s): 01-02		Batch: WG1839544-2 WG1839544-3					
1,4-Dioxane	110		109		40-140	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	43		54		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-02,04 Batch: WG1842563-2 LOW LEVEL								
Perfluorobutanoic Acid (PFBA)	114		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	91		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	115		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	100		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	112		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	105		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	88		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	98		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	102		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	98		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	81		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	98		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	106		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	106		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	108		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	101		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	71		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	95		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	102		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	95		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	88		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	96		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-02,04 Batch: WG1842563-2 LOW LEVEL								
Perfluorotridecanoic Acid (PFTrDA)	99		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	104		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	115		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	138		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	91		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	138		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	133		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	96		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	99		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	111		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	112		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	106		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	104		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	115		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	88		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	85		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	89		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	47		-		40-150	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-02,04 Batch: WG1842563-2 LOW LEVEL

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	92				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	97				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	89				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	77				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	95				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	94				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	90				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	97				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	72				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	93				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	84				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	100				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	66				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	59				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	110				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	78				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	67				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	102				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	94				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	46				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	58				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	61				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	67				20-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-02,04 Batch: WG1842563-3								
Perfluorobutanoic Acid (PFBA)	104		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	102		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	104		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	109		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	102		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	103		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	93		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	101		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	106		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	98		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	86		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	89		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	93		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	105		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	94		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	117		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	111		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	97		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	109		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	95		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	95		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	100		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-02,04 Batch: WG1842563-3								
Perfluorotridecanoic Acid (PFTrDA)	96		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	100		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	97		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	125		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	96		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	144		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	148		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	102		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	104		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	110		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	107		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	109		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	110		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	109		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	96		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	93		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	92		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	59		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-02,04 Batch: WG1842563-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	93				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	97				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	92				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	74				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	97				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	97				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	91				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	96				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	71				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	100				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	80				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	82				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	73				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	55				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	102				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	79				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	61				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	92				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	82				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	84				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	54				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	58				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	64				20-150

Lab Duplicate Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104

Lab Number: L2359293
Report Date: 10/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
1,4 Dioxane by 8270E-SIM - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1839544-4 QC Sample: L2359293-02 Client ID: TFE						
1,4-Dioxane	ND	ND	ng/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	50		48		15-110

PCBS

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06
Client ID: WC-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 11:30
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 10/17/23 22:41
Analyst: ER

Extraction Method: EPA 3510C
Extraction Date: 10/17/23 04:23
Cleanup Method: EPA 3665A
Cleanup Date: 10/17/23
Cleanup Method: EPA 3660B
Cleanup Date: 10/17/23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.071	0.061	1	A
Aroclor 1221	ND		ug/l	0.071	0.061	1	A
Aroclor 1232	ND		ug/l	0.071	0.061	1	A
Aroclor 1242	ND		ug/l	0.071	0.061	1	A
Aroclor 1248	ND		ug/l	0.071	0.061	1	A
Aroclor 1254	ND		ug/l	0.071	0.061	1	A
Aroclor 1260	ND		ug/l	0.071	0.061	1	A
Aroclor 1262	ND		ug/l	0.071	0.061	1	A
Aroclor 1268	ND		ug/l	0.071	0.061	1	A
PCBs, Total	ND		ug/l	0.071	0.061	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	34		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	38		30-150	B

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/16/23 13:31
Analyst: RMP

Extraction Method: EPA 3510C
Extraction Date: 10/16/23 05:10
Cleanup Method: EPA 3665A
Cleanup Date: 10/16/23
Cleanup Method: EPA 3660B
Cleanup Date: 10/16/23

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 06 Batch: WG1840050-1						
Aroclor 1016	ND		ug/l	0.071	0.061	A
Aroclor 1221	ND		ug/l	0.071	0.061	A
Aroclor 1232	ND		ug/l	0.071	0.061	A
Aroclor 1242	ND		ug/l	0.071	0.061	A
Aroclor 1248	ND		ug/l	0.071	0.061	A
Aroclor 1254	ND		ug/l	0.071	0.061	A
Aroclor 1260	ND		ug/l	0.071	0.061	A
Aroclor 1262	ND		ug/l	0.071	0.061	A
Aroclor 1268	ND		ug/l	0.071	0.061	A
PCBs, Total	ND		ug/l	0.071	0.061	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	59		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 06 Batch: WG1840050-2 WG1840050-3									
Aroclor 1016	68		68		40-140	1		50	A
Aroclor 1260	66		68		40-140	3		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		68		30-150	A
Decachlorobiphenyl	70		70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		70		30-150	B
Decachlorobiphenyl	74		73		30-150	B

PESTICIDES

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06
Client ID: WC-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY

Date Collected: 10/06/23 11:30
Date Received: 10/06/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 10/12/23 12:26
Analyst: AKM

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 15:44

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06 Date Collected: 10/06/23 11:30

Client ID: WC-1 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	**235**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	48		30-150	B
Decachlorobiphenyl	**17**	Q	30-150	B

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 10/12/23 08:41
Analyst: AKM

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 07:39

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 06 Batch: WG1838256-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
4,4'-DDT	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A
Chlordane	ND		ug/l	0.143	0.033	A

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 10/12/23 08:41
Analyst: AKM

Extraction Method: EPA 3510C
Extraction Date: 10/11/23 07:39

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 06 Batch: WG1838256-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	47		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	49		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 06 Batch: WG1838256-2 WG1838256-3									
Delta-BHC	74		76		30-150	3		20	A
Lindane	72		75		30-150	4		20	A
Alpha-BHC	64		65		30-150	1		20	A
Beta-BHC	67		69		30-150	3		20	A
Heptachlor	65		68		30-150	3		20	A
Aldrin	60		62		30-150	3		20	A
Heptachlor epoxide	63		64		30-150	2		20	A
Endrin	66		68		30-150	3		20	A
Endrin aldehyde	45		51		30-150	12		20	A
Endrin ketone	51		55		30-150	8		20	A
Dieldrin	64		66		30-150	3		20	A
4,4'-DDE	62		65		30-150	4		20	A
4,4'-DDD	62		65		30-150	5		20	A
4,4'-DDT	63		64		30-150	2		20	A
Endosulfan I	62		66		30-150	7		20	A
Endosulfan II	61		65		30-150	5		20	A
Endosulfan sulfate	57		62		30-150	8		20	A
Methoxychlor	62		68		30-150	9		20	A
cis-Chlordane	52		54		30-150	3		20	A
trans-Chlordane	62		65		30-150	5		20	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 06 Batch: WG1838256-2 WG1838256-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		65		30-150	A
Decachlorobiphenyl	44		48		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		63		30-150	B
Decachlorobiphenyl	47		50		30-150	B

METALS

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-03 Date Collected: 10/06/23 11:30

Client ID: WC-1 Date Received: 10/06/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	0.147		mg/l	0.0050	0.0019	1	10/12/23 04:16	10/12/23 12:26	EPA 3005A	19,200.7	DHL
Sodium, Total	568.		mg/l	2.00	0.120	1	10/13/23 17:40	10/16/23 21:06	EPA 3005A	19,200.7	AMW

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 03 Batch: WG1838228-1										
Arsenic, Total	ND		mg/l	0.0050	0.0019	1	10/12/23 04:16	10/12/23 08:46	19,200.7	DHL

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 03 Batch: WG1839346-1										
Arsenic, Total	ND		mg/l	0.0050	0.0019	1	10/13/23 17:40	10/16/23 20:53	19,200.7	AMW
Sodium, Total	ND		mg/l	2.00	0.120	1	10/13/23 17:40	10/16/23 20:53	19,200.7	AMW

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.

Project Number: 075104

Lab Number: L2359293

Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03 Batch: WG1838228-2								
Arsenic, Total	108		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 03 Batch: WG1839346-2								
Arsenic, Total	102		-		85-115	-		
Sodium, Total	108		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1838228-3 QC Sample: L2359151-01 Client ID: MS Sample												
Arsenic, Total	0.155	0.12	0.301	122		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1838228-7 QC Sample: L2359497-01 Client ID: MS Sample												
Arsenic, Total	ND	0.12	0.159	**132**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1839346-3 QC Sample: L2359707-01 Client ID: MS Sample												
Arsenic, Total	0.002J	0.12	0.130	108		-	-		75-125	-		20
Sodium, Total	29.0	10	38.1	91		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1839346-7 WG1839346-8 QC Sample: L2360336-04 Client ID: MS Sample												
Arsenic, Total	2.36	0.12	2.59	**192**	Q	2.67	**258**	Q	75-125	3		20
Sodium, Total	46.4	10	55.0	86		59.4	**130**	Q	75-125	8		20

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L2359293
Report Date: 10/31/23

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1839346-10 QC Sample: L2360336-04 Client ID: DUP Sample						
Arsenic, Total	2.36	2.28	mg/l	3		20

INORGANICS
&
MISCELLANEOUS

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

SAMPLE RESULTS

Lab ID: L2359293-06
Client ID: WC-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER NY
Sample Depth:
Matrix: Water

Date Collected: 10/06/23 11:30
Date Received: 10/06/23
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	8.09		SU	-	NA	1	-	10/13/23 17:56	1,9040C	AAS
Flash Point	>150		deg F	70	NA	1	-	10/09/23 09:45	1,1010A	MRS
Cyanide, Reactive	ND		mg/l	1.0	1.0	1	10/11/23 17:50	10/11/23 19:38	125,7.3	QJM
Sulfide, Reactive	ND		mg/l	1.0	1.0	1	10/11/23 17:50	10/11/23 19:59	125,7.3	QJM

Project Name: CURIA OCTOBER GW SAMPL. **Lab Number:** L2359293

Project Number: 075104 **Report Date:** 10/31/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 06 Batch: WG1838487-1										
Cyanide, Reactive	ND		mg/l	1.0	1.0	1	10/11/23 17:50	10/11/23 19:35	125,7.3	QJM
General Chemistry - Westborough Lab for sample(s): 06 Batch: WG1838490-1										
Sulfide, Reactive	ND		mg/l	1.0	1.0	1	10/11/23 17:50	10/11/23 19:56	125,7.3	QJM

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104

Lab Number: L2359293
Report Date: 10/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 06 Batch: WG1837252-1								
Flash Point	101		-		96-104	-		
General Chemistry - Westborough Lab Associated sample(s): 06 Batch: WG1838487-2								
Cyanide, Reactive	87		-		30-125	-		25
General Chemistry - Westborough Lab Associated sample(s): 06 Batch: WG1838490-2								
Sulfide, Reactive	83		-		60-125	-		25
General Chemistry - Westborough Lab Associated sample(s): 06 Batch: WG1839598-1								
pH	100		-		99-101	-		5

Lab Duplicate Analysis

Batch Quality Control

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104

Lab Number: L2359293
Report Date: 10/31/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 06 QC Batch ID: WG1838487-3 QC Sample: L2359293-06 Client ID: WC-1						
Cyanide, Reactive	ND	ND	mg/l	NC		25
General Chemistry - Westborough Lab Associated sample(s): 06 QC Batch ID: WG1838490-3 QC Sample: L2359293-06 Client ID: WC-1						
Sulfide, Reactive	ND	ND	mg/l	NC		25
General Chemistry - Westborough Lab Associated sample(s): 06 QC Batch ID: WG1839598-2 QC Sample: L2360596-01 Client ID: DUP Sample						
pH	7.60	7.57	SU	0		5

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104

Lab Number: L2359293
Report Date: 10/31/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2359293-01A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2359293-01B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2359293-01C	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2359293-01D	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-01E	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-01F	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-01G	Amber 250ml unpreserved	A	7	7	5.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359293-01H	Amber 250ml unpreserved	A	7	7	5.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359293-02A	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-02B	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-02C	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-02D	Amber 250ml unpreserved	A	7	7	5.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359293-02E	Amber 250ml unpreserved	A	7	7	5.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2359293-03A	Vial HCl preserved	A	NA		5.7	Y	Absent		ARCHIVE()
L2359293-03B	Vial HCl preserved	A	NA		5.7	Y	Absent		ARCHIVE()
L2359293-03C	Vial HCl preserved	A	NA		5.7	Y	Absent		ARCHIVE()
L2359293-03D	Plastic 250ml HNO3 preserved	A	<2	<2	5.7	Y	Absent		NA-UI(180),AS-UI(180)
L2359293-04A	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-04B	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-04C	Plastic 500ml unpreserved	B	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2359293-05A	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)
L2359293-05B	Vial HCl preserved	A	NA		5.7	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104

Lab Number: L2359293
Report Date: 10/31/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2359293-06A	Amber 120ml unpreserved	A	7	7	5.7	Y	Absent		NYTCL-8082-LVI(365)
L2359293-06B	Amber 120ml unpreserved	A	7	7	5.7	Y	Absent		NYTCL-8082-LVI(365)
L2359293-06C	Amber 120ml unpreserved	A	7	7	5.7	Y	Absent		NYTCL-8081(7)
L2359293-06D	Amber 120ml unpreserved	A	7	7	5.7	Y	Absent		NYTCL-8081(7)
L2359293-06E	Amber 250ml unpreserved	A	7	7	5.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2359293-06F	Amber 250ml unpreserved	A	7	7	5.7	Y	Absent		REACTS(7),REACTCN(7),PH-9040(1),FLASH()

*Values in parentheses indicate holding time in days

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: CURIA OCTOBER GW SAMPL.
Project Number: 075104
Lab Number: L2359293
Report Date: 10/31/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name:	CURIA OCTOBER GW SAMPL.	**Lab Number:**	L2359293
Project Number:	075104	**Report Date:**	10/31/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA OCTOBER GW SAMPL.	**Lab Number:**	L2359293
Project Number:	075104	**Report Date:**	10/31/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA OCTOBER GW SAMPL.	**Lab Number:**	L2359293
Project Number:	075104	**Report Date:**	10/31/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	CURIA OCTOBER GW SAMPL.	**Lab Number:**	L2359293
Project Number:	075104	**Report Date:**	10/31/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

144 Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. Draft EPA Method 1633, EPA Document 821-D-22-001, June 2022.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 10/7/23

ALPHA Job #: L2359293

Client Information
Client: CHA Consulting
Address: 111 Winners Circle, Albany NY 12205
Phone:
Fax:
Email: JMiller@chacompanies.com

Project Information
Project Name: Curia October GW Sampling
Project Location: 33 Riverside Ave, Rensselaer NY
Project #: 075104
(Use Project name as Project #) ☐
Project Manager: Melissa DeYo
ALPHAQuote #: Q24522

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☒ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL. As, Na

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS EPA 1633	1,4 Dioxane	VOCs 8260 Site Specific	EPA 200.7 total As	EPA 200.7 total Na	8260 VOCs TCL	Temp	TAL Metals	Sample Specific Comments	Total Bottle
59293.01	MW-3	10.6.23	10:25	GW	CRH	X	X				X				
.02	TFE		12:00			X	X				X				
.03	WC-1		11:30								X		X		
.04	FB-4		12:35			X									3
.05	TRIP BLANK	—	—	W	—						X				
	TEMP BLANK	—	—	W	—							X			

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A	A	V	P	P	V	P	P	
Preservative	A	A	B	C	C	B	A	C	

Relinquished By:	Date/Time	Received By:	Date/Time
	10.6.23 13:45		10/6/23 13:45
	10.6.23 13:57		10/7/23 0220

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-9288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 2 of 2

Date Rec'd in Lab: 10/7/23

ALPHA Job #: L2359293

Client Information
Client: CHA CONSULTING
Address: 11 Winners Circle Albany NY 12205
Phone:
Fax:
Email: smiller@chacompanies.com

Project Information
Project Name: Curia Oct 2023 GW Sampling
Project Location: Rensselaer NY
Project # 075104
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #: Q24522

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other

Regulatory Requirement
☒ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL SVOCs 8270	TCL PCBs EPA 8082	Pesticides EPA 8081B	Reactivity Ignitability Corrosivity					Sample Specific Comments	Total Bottle
59293 06	WC-1	10.6.2023	11:30	GW	CRH	X	X	X	X						

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A								
Preservative									

Relinquished By:	Date/Time	Received By:	Date/Time
	10.6.23 13:45		10.6.23 13:45
	10-6-23 13:50		10/7/23 0320

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2358274
Client:	CHA Companies One Park Place 300 South State St., Suite 600 Syracuse, NY 13202
ATTN:	Samantha Miller
Phone:	(315) 471-3920
Project Name:	CURIA GW 2023
Project Number:	075104
Report Date:	10/26/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2358274-01	OS-1A	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/03/23 09:45	10/03/23
L2358274-02	OS-4A	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/03/23 11:40	10/03/23
L2358274-03	OS-5A	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/03/23 13:50	10/03/23
L2358274-04	OS-3	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/03/23 14:45	10/03/23
L2358274-05	CHA-1	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/03/23 12:00	10/03/23
L2358274-06	FB-1	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/03/23 15:30	10/03/23
L2358274-07	TRIP BLANKS	WATER	33 RIVERSIDE AVE, RENSSELAER, NY	10/03/23 00:00	10/03/23

Project Name:	CURIA GW 2023	**Lab Number:**	L2358274
Project Number:	075104	**Report Date:**	10/26/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	CURIA GW 2023	**Lab Number:**	L2358274
Project Number:	075104	**Report Date:**	10/26/23

Case Narrative (continued)

Report Submission

October 26, 2023: This final report includes the results of all requested analyses.

October 17, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The analyses performed were specified by the client.

L2358274-05: Sample containers for Volatile Organics and 1,4 Dioxane by 8270E-SIM were received for the "CHA-1" sample, but were not listed on the chain of custody. At the client's request, the analyses were performed.

Perfluorinated Alkyl Acids by 1633

L2358274-04: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

L2358274-06 and WG1841909-4/-5: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

The WG1841909-4/-5 MS/MSD recoveries, performed on L2358274-01,are outside the acceptance criteria for 3-perfluoropropyl propanoic acid (3:3ftca) (156%/153%).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 10/26/23

ORGANICS

VOLATILES

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-01 Date Collected: 10/03/23 09:45

Client ID: OS-1A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/14/23 12:42

Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	107		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-02 Date Collected: 10/03/23 11:40
Client ID: OS-4A Date Received: 10/03/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/14/23 13:04
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	107		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-03 Date Collected: 10/03/23 13:50
Client ID: OS-5A Date Received: 10/03/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/14/23 13:27
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	106		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-04 Date Collected: 10/03/23 14:45
Client ID: OS-3 Date Received: 10/03/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/14/23 13:49
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	107		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-05 Date Collected: 10/03/23 12:00
Client ID: CHA-1 Date Received: 10/03/23
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 10/14/23 14:12
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	107		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-07 Date Collected: 10/03/23 00:00

Client ID: TRIP BLANKS Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 10/14/23 14:34

Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Chlorobenzene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	106		70-130

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 10/14/23 09:42
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05,07 Batch: WG1840256-5					
Chlorobenzene	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,07 Batch: WG1840256-3 WG1840256-4								
Chlorobenzene	100		100		75-130	0		20
1,2-Dichloroethane	100		97		70-130	3		20
Benzene	100		100		70-130	0		20
Toluene	100		98		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		101		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	98		100		70-130
Dibromofluoromethane	101		103		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05,07 QC Batch ID: WG1840256-6 WG1840256-7 QC Sample: L2358274-01 Client ID: OS-1A												
Chlorobenzene	ND	10	9.5	95		10	100		75-130	5		20
1,2-Dichloroethane	ND	10	10	100		10	100		70-130	0		20
Benzene	ND	10	10	100		10	100		70-130	0		20
Toluene	ND	10	9.5	95		10	100		70-130	5		20

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		105		70-130
4-Bromofluorobenzene	96		99		70-130
Dibromofluoromethane	104		103		70-130
Toluene-d8	100		101		70-130

SEMIVOLATILES

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-01
Client ID: OS-1A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 09:45
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 11:31
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/10/23 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	76.8	J	ng/l	144	32.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-01
Client ID: OS-1A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 09:45
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/24/23 23:59
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	5.85	0.937	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.93	0.783	1
Perfluorobutanesulfonic Acid (PFBS)	2.47		ng/l	1.46	0.490	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.85	1.53	1
Perfluorohexanoic Acid (PFHxA)	0.622	J	ng/l	1.46	0.432	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.46	0.256	1
Perfluoroheptanoic Acid (PFHpA)	0.454	J	ng/l	1.46	0.293	1
Perfluorohexanesulfonic Acid (PFHxS)	0.666	J	ng/l	1.46	0.351	1
Perfluorooctanoic Acid (PFOA)	1.25	J	ng/l	1.46	0.637	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.85	1.98	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.46	0.395	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.46	0.461	1
Perfluorooctanesulfonic Acid (PFOS)	2.25		ng/l	1.46	0.666	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.46	0.593	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.85	2.28	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.46	0.454	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.46	0.798	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.46	0.637	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.46	0.337	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.46	0.395	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.46	0.790	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.46	0.673	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.46	0.549	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.46	0.388	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.85	0.820	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.85	0.922	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.46	0.556	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-01 Date Collected: 10/03/23 09:45

Client ID: OS-1A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.85	1.21	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.85	1.21	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.46	0.637	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.46	0.673	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.6	3.44	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.6	1.79	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.93	0.417	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.93	0.388	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.93	0.322	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.93	1.73	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.32	2.41	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	36.6	8.56	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	36.6	5.77	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-01 Date Collected: 10/03/23 09:45

Client ID: OS-1A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	76		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	70		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	84		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	146		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	71		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	66		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	78		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	76		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	84		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	71		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	69		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	61		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	89		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	65		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	57		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	57		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	68		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	59		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	63		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	67		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	54		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	54		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	43		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	54		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-02
Client ID: OS-4A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 11:40
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 12:38
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/10/23 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	48.2	J	ng/l	139	31.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-02
Client ID: OS-4A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 11:40
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 00:38
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	4.41	J	ng/l	5.84	0.935	1
Perfluoropentanoic Acid (PFPeA)	2.07	J	ng/l	2.92	0.782	1
Perfluorobutanesulfonic Acid (PFBS)	5.75		ng/l	1.46	0.490	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.84	1.53	1
Perfluorohexanoic Acid (PFHxA)	1.83		ng/l	1.46	0.431	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.46	0.256	1
Perfluoroheptanoic Acid (PFHpA)	1.29	J	ng/l	1.46	0.292	1
Perfluorohexanesulfonic Acid (PFHxS)	1.19	J	ng/l	1.46	0.351	1
Perfluorooctanoic Acid (PFOA)	8.26		ng/l	1.46	0.636	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.84	1.97	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.424	J	ng/l	1.46	0.394	1
Perfluorononanoic Acid (PFNA)	1.61		ng/l	1.46	0.460	1
Perfluorooctanesulfonic Acid (PFOS)	18.0		ng/l	1.46	0.665	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.46	0.592	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.84	2.27	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.46	0.453	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.46	0.796	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.46	0.636	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.46	0.336	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.46	0.394	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.46	0.789	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.46	0.672	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.46	0.548	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.46	0.387	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.84	0.818	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.84	0.921	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.46	0.555	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-02 Date Collected: 10/03/23 11:40

Client ID: OS-4A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.84	1.20	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.84	1.20	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.46	0.636	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.46	0.672	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.6	3.43	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.6	1.79	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.92	0.416	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.92	0.387	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.92	0.322	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.92	1.72	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.31	2.41	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	36.5	8.55	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	36.5	5.76	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-02 Date Collected: 10/03/23 11:40

Client ID: OS-4A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	78		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	77		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	82		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	127		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	72		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	70		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	78		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	72		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	77		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	73		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	63		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	92		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	65		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	63		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	59		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	74		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	65		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	66		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	68		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	57		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	58		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	49		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	61		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-03
Client ID: OS-5A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 13:50
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 13:23
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/10/23 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	414.		ng/l	139	31.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-03
Client ID: OS-5A
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 13:50
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 00:51
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	21.1		ng/l	6.26	1.00	1
Perfluoropentanoic Acid (PFPeA)	12.9		ng/l	3.13	0.838	1
Perfluorobutanesulfonic Acid (PFBS)	11.4		ng/l	1.56	0.524	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.26	1.64	1
Perfluorohexanoic Acid (PFHxA)	9.93		ng/l	1.56	0.462	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.56	0.274	1
Perfluoroheptanoic Acid (PFHpA)	2.78		ng/l	1.56	0.313	1
Perfluorohexanesulfonic Acid (PFHxS)	0.564	J	ng/l	1.56	0.376	1
Perfluorooctanoic Acid (PFOA)	6.99		ng/l	1.56	0.681	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.26	2.11	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.56	0.423	1
Perfluorononanoic Acid (PFNA)	2.14		ng/l	1.56	0.493	1
Perfluorooctanesulfonic Acid (PFOS)	3.08		ng/l	1.56	0.712	1
Perfluorodecanoic Acid (PFDA)	1.05	J	ng/l	1.56	0.634	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.26	2.43	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.56	0.485	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.56	0.853	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.56	0.681	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.56	0.360	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.56	0.423	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.56	0.845	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.56	0.720	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.56	0.587	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.56	0.415	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.26	0.877	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.26	0.986	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.56	0.595	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-03 Date Collected: 10/03/23 13:50

Client ID: OS-5A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.26	1.29	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.26	1.29	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.56	0.681	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.56	0.720	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	15.6	3.68	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	15.6	1.92	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.13	0.446	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.13	0.415	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.13	0.344	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.13	1.85	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.83	2.58	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	39.1	9.16	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	39.1	6.18	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-03 Date Collected: 10/03/23 13:50

Client ID: OS-5A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	79		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	77		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	85		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	135		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	74		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	73		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	79		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	71		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	71		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	70		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	68		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	60		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	77		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	55		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	62		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	56		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	57		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	58		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	52		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	71		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	44		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	42		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	33		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	43		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-04
Client ID: OS-3
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 14:45
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 13:45
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/10/23 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	139	31.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	30		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-04
Client ID: OS-3
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 14:45
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 01:04
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	9.63	J	ng/l	21.3	3.41	1
Perfluoropentanoic Acid (PFPeA)	7.17	J	ng/l	10.7	2.85	1
Perfluorobutanesulfonic Acid (PFBS)	10.8		ng/l	5.33	1.79	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	21.3	5.57	1
Perfluorohexanoic Acid (PFHxA)	5.20	J	ng/l	5.33	1.57	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	5.33	0.933	1
Perfluoroheptanoic Acid (PFHpA)	3.84	J	ng/l	5.33	1.07	1
Perfluorohexanesulfonic Acid (PFHxS)	5.52		ng/l	5.33	1.28	1
Perfluorooctanoic Acid (PFOA)	14.9		ng/l	5.33	2.32	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	21.3	7.20	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	5.33	1.44	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	5.33	1.68	1
Perfluorooctanesulfonic Acid (PFOS)	22.5		ng/l	5.33	2.43	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	5.33	2.16	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	21.3	8.29	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	5.33	1.65	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	5.33	2.91	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	5.33	2.32	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	5.33	1.23	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	5.33	1.44	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	5.33	2.88	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	5.33	2.45	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	5.33	2.00	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	5.33	1.41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	21.3	2.99	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	21.3	3.36	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	5.33	2.03	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-04 Date Collected: 10/03/23 14:45

Client ID: OS-3 Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	21.3	4.40	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	21.3	4.40	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	5.33	2.32	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	5.33	2.45	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	53.3	12.5	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	53.3	6.53	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	10.7	1.52	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	10.7	1.41	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	10.7	1.17	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	10.7	6.29	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	26.7	8.80	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	133	31.2	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	133	21.0	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-04 Date Collected: 10/03/23 14:45

Client ID: OS-3 Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	78		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	88		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	93		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	80		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	84		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	70		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	78		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	78		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	62		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	76		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	63		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	50		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	50		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	32		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	47		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	44		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	30		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	48		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	39		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	76		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	38		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	38		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	32		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	37		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-05
Client ID: CHA-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 12:00
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 13:00
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/10/23 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	46.6	J	ng/l	139	31.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-05
Client ID: CHA-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 12:00
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 01:16
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	4.44	J	ng/l	6.01	0.961	1
Perfluoropentanoic Acid (PFPeA)	2.12	J	ng/l	3.00	0.804	1
Perfluorobutanesulfonic Acid (PFBS)	6.08		ng/l	1.50	0.503	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.01	1.57	1
Perfluorohexanoic Acid (PFHxA)	1.53		ng/l	1.50	0.443	1
Perfluoropentanesulfonic Acid (PFPeS)	0.270	J	ng/l	1.50	0.263	1
Perfluoroheptanoic Acid (PFHpA)	1.22	J	ng/l	1.50	0.300	1
Perfluorohexanesulfonic Acid (PFHxS)	1.20	J	ng/l	1.50	0.360	1
Perfluorooctanoic Acid (PFOA)	8.25		ng/l	1.50	0.653	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.01	2.03	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.50	0.406	1
Perfluorononanoic Acid (PFNA)	1.64		ng/l	1.50	0.473	1
Perfluorooctanesulfonic Acid (PFOS)	17.8		ng/l	1.50	0.683	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.50	0.608	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.01	2.34	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.50	0.466	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.50	0.818	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.50	0.653	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.50	0.345	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.50	0.406	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.50	0.811	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.50	0.691	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.50	0.563	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.50	0.398	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.01	0.841	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.01	0.946	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.50	0.571	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-05 Date Collected: 10/03/23 12:00

Client ID: CHA-1 Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.01	1.24	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.01	1.24	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.50	0.653	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.50	0.691	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	15.0	3.53	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	15.0	1.84	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.00	0.428	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.00	0.398	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.00	0.330	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.00	1.77	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.51	2.48	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.5	8.79	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.5	5.92	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-05 Date Collected: 10/03/23 12:00

Client ID: CHA-1 Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	78		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	70		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	87		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	133		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	72		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	64		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	79		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	76		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	68		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	73		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	75		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	69		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	78		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	69		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	70		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	59		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	75		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	75		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	72		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	64		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	55		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	57		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	46		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	59		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-06
Client ID: FB-1
Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 10/03/23 15:30
Date Received: 10/03/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 10/25/23 01:29
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	5.93	0.949	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.96	0.793	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.48	0.497	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.93	1.55	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.48	0.437	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.48	0.259	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.48	0.296	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.48	0.356	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.48	0.645	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.93	2.00	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.48	0.400	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.48	0.467	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.48	0.675	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.48	0.600	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.93	2.30	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.48	0.460	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.48	0.808	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.48	0.645	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.48	0.341	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.48	0.400	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.48	0.801	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.48	0.682	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.48	0.556	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.48	0.393	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.93	0.830	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.93	0.934	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.48	0.563	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-06 Date Collected: 10/03/23 15:30

Client ID: FB-1 Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.93	1.22	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.93	1.22	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.48	0.645	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.48	0.682	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.8	3.48	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.8	1.82	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.96	0.423	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.96	0.393	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.96	0.326	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.96	1.75	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.41	2.45	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.1	8.67	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.1	5.85	1

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-06 Date Collected: 10/03/23 15:30

Client ID: FB-1 Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	78		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	86		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	75		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	68		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	78		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	72		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	79		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	69		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	65		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	74		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	73		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	64		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	83		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	48		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	112		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	54		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	62		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	132		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	**158**	Q	20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	74		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	51		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	52		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	43		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	53		20-150

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 10/15/23 05:36
Analyst: TPR

Extraction Method: EPA 3510C
Extraction Date: 10/10/23 20:00

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270E-SIM - Mansfield Lab for sample(s): 01-05 Batch: WG1838067-1					
1,4-Dioxane	ND		ng/l	150	33.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 23:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-06 Batch: WG1841909-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	6.40	1.02
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	3.20	0.856
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.60	0.536
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.40	1.67
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.60	0.472
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.60	0.280
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.60	0.320
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.60	0.384
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.60	0.696
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.40	2.16
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.60	0.432
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.60	0.504
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.60	0.728
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.60	0.648
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.40	2.49
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.60	0.496
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.60	0.872
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.60	0.696
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.60	0.368
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.60	0.432
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.60	0.864
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.60	0.736
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.60	0.600
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.60	0.424
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.40	0.896
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.40	1.01
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.60	0.608

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 23:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-06 Batch: WG1841909-1					
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.40	1.32
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.40	1.32
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.60	0.696
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.60	0.736
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	16.0	3.76
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	16.0	1.96
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.20	0.456
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.20	0.424
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.20	0.352
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.20	1.89
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	8.00	2.64
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	40.0	9.36
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	40.0	6.31

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 144,1633
Analytical Date: 10/24/23 23:21
Analyst: AC

Extraction Method: EPA 1633
Extraction Date: 10/19/23 14:13

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab for sample(s): 01-06 Batch: WG1841909-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	76		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	83		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	83		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	84		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	82		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	72		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	80		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	79		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	81		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	77		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	74		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	73		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	87		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	66		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	72		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	64		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	72		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	72		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	74		20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	72		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	48		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	51		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	54		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	67		20-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270E-SIM - Mansfield Lab	Associated sample(s): 01-05		Batch: WG1838067-2	WG1838067-3				
1,4-Dioxane	115		115		40-140	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	45		46		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1841909-2 LOW LEVEL								
Perfluorobutanoic Acid (PFBA)	119		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	125		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	137		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	120		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	121		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	110		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	127		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	118		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	123		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	110		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	116		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	122		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	115		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	124		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	114		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	96		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	111		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	120		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	102		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	116		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	102		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	114		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1841909-2 LOW LEVEL								
Perfluorotridecanoic Acid (PFTrDA)	112		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	121		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	127		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	124		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	102		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	105		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	97		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	98		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	97		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	114		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	120		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	110		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	115		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	118		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	120		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	112		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	95		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	69		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	Low Level LCS %Recovery	Qual	Low Level LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1841909-2 LOW LEVEL

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	75				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	84				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	78				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	89				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	85				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	73				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	80				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	77				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	83				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	77				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	74				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	69				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	92				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	67				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	71				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	64				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	66				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	73				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	74				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	73				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	46				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	50				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	54				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	65				20-150

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1841909-3								
Perfluorobutanoic Acid (PFBA)	110		-		40-150	-		30
Perfluoropentanoic Acid (PFPeA)	109		-		40-150	-		30
Perfluorobutanesulfonic Acid (PFBS)	105		-		40-150	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	108		-		40-150	-		30
Perfluorohexanoic Acid (PFHxA)	108		-		40-150	-		30
Perfluoropentanesulfonic Acid (PFPeS)	107		-		40-150	-		30
Perfluoroheptanoic Acid (PFHpA)	112		-		40-150	-		30
Perfluorohexanesulfonic Acid (PFHxS)	106		-		40-150	-		30
Perfluorooctanoic Acid (PFOA)	115		-		40-150	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	106		-		40-150	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	101		-		40-150	-		30
Perfluorononanoic Acid (PFNA)	109		-		40-150	-		30
Perfluorooctanesulfonic Acid (PFOS)	101		-		40-150	-		30
Perfluorodecanoic Acid (PFDA)	117		-		40-150	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	115		-		40-150	-		30
Perfluorononanesulfonic Acid (PFNS)	103		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	112		-		40-150	-		30
Perfluoroundecanoic Acid (PFUnA)	126		-		40-150	-		30
Perfluorodecanesulfonic Acid (PFDS)	106		-		40-150	-		30
Perfluorooctanesulfonamide (PFOSA)	124		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	111		-		40-150	-		30
Perfluorododecanoic Acid (PFDoA)	118		-		40-150	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1841909-3								
Perfluorotridecanoic Acid (PFTrDA)	120		-		40-150	-		30
Perfluorotetradecanoic Acid (PFTeDA)	128		-		40-150	-		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	109		-		40-150	-		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	108		-		40-150	-		30
Perfluorododecanesulfonic Acid (PFDoS)	92		-		40-150	-		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	108		-		40-150	-		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	109		-		40-150	-		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	125		-		40-150	-		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	116		-		40-150	-		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	112		-		40-150	-		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	104		-		40-150	-		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	118		-		40-150	-		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	108		-		40-150	-		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	102		-		40-150	-		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	126		-		40-150	-		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	132		-		40-150	-		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	97		-		40-150	-		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	100		-		40-150	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 Batch: WG1841909-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	83				20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	86				20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	83				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	89				20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	84				20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	81				20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	84				20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	80				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	90				20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	79				20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	82				20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	75				20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	112				20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	75				20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	69				20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	68				20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	77				20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	72				20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	66				20-150
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	78				20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	54				20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	59				20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	65				20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	68				20-150

Matrix Spike Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270E-SIM - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1838067-4 WG1838067-5 QC Sample: L2358274-01 Client ID: OS-1A												
1,4-Dioxane	76.8J	4810	5680	118		5290	118		40-140	7		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1,4-Dioxane-d8	38		32		15-110

Matrix Spike Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104
Lab Number: L2358274
Report Date: 10/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1841909-4 WG1841909-5 QC Sample: L2358274-01 Client ID: OS-1A												
Perfluorobutanoic Acid (PFBA)	ND	74.6	82.8	111		84.8	114		40-150	2		30
Perfluoropentanoic Acid (PFPeA)	ND	37.3	44.6	120		45.8	123		40-150	3		30
Perfluorobutanesulfonic Acid (PFBS)	2.47	16.5	19.5	103		20.0	106		40-150	3		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	69.9	71.9	103		73.8	106		40-150	3		30
Perfluorohexanoic Acid (PFHxA)	0.622J	18.6	22.3	116		21.7	113		40-150	3		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	17.5	18.6	106		18.8	107		40-150	1		30
Perfluoroheptanoic Acid (PFHpA)	0.454J	18.6	21.4	112		21.8	114		40-150	2		30
Perfluorohexanesulfonic Acid (PFHxS)	0.666J	17	18.6	105		18.8	106		40-150	1		30
Perfluorooctanoic Acid (PFOA)	1.25J	18.6	23.3	118		23.0	117		40-150	1		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	70.8	69.3	98		74.3	105		40-150	7		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	17.8	19.9	112		18.8	106		40-150	6		30
Perfluorononanoic Acid (PFNA)	ND	18.6	20.5	110		20.8	112		40-150	1		30
Perfluorooctanesulfonic Acid (PFOS)	2.25	17.3	20.6	106		20.2	104		40-150	2		30
Perfluorodecanoic Acid (PFDA)	ND	18.6	20.6	111		21.3	114		40-150	3		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	71.6	88.3	123		89.3	125		40-150	1		30
Perfluorononanesulfonic Acid (PFNS)	ND	17.9	17.6	98		18.8	105		40-150	7		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	18.6	21.8	117		25.2	135		40-150	14		30
Perfluoroundecanoic Acid (PFUnA)	ND	18.6	23.2	124		23.8	128		40-150	3		30
Perfluorodecanesulfonic Acid (PFDS)	ND	18	19.1	106		20.5	114		40-150	7		30
Perfluorooctanesulfonamide (PFOSA)	ND	18.6	22.4	120		22.5	121		40-150	0		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	18.6	22.2	119		22.2	119		40-150	0		30
Perfluorododecanoic Acid (PFDoA)	ND	18.6	21.2	114		21.3	114		40-150	0		30

Matrix Spike Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104
Lab Number: L2358274
Report Date: 10/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1841909-4 WG1841909-5 QC Sample: L2358274-01 Client ID: OS-1A												
Perfluorotridecanoic Acid (PFTrDA)	ND	18.6	22.0	118		21.8	117		40-150	1		30
Perfluorotetradecanoic Acid (PFTeDA)	ND	18.6	24.2	130		24.3	130		40-150	0		30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	74.6	83.0	111		82.2	110		40-150	1		30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	70.4	71.6	102		73.2	104		40-150	2		30
Perfluorododecanesulfonic Acid (PFDoS)	ND	18.1	19.1	106		18.4	102		40-150	4		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	69.7	55.5	80		70.2	101		40-150	23		30
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	70.4	56.5	80		71.3	101		40-150	23		30
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	18.6	22.2	119		21.7	116		40-150	2		30
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	18.6	22.1	119		21.0	113		40-150	5		30
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	186	212	114		208	112		40-150	2		30
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	186	204	109		197	106		40-150	3		30
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	37.3	42.5	114		43.3	116		40-150	2		30
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	37.3	39.6	106		42.0	113		40-150	6		30
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	33.2	34.5	104		34.4	104		40-150	0		30
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	37.3	44.3	119		47.3	127		40-150	7		30
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND	93.2	145	**156**	Q	143	**153**	Q	40-150	1		30
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND	466	473	102		471	101		40-150	0		30
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND	466	483	104		557	119		40-150	14		30

Matrix Spike Analysis

Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104
Lab Number: L2358274
Report Date: 10/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1841909-4 WG1841909-5 QC Sample: L2358274-01 Client ID: OS-1A

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	99		124		20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	**153**	Q	**151**	Q	20-150
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	98		102		20-150
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	63		56		20-150
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	78		78		20-150
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	66		62		20-150
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	65		56		20-150
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	77		70		20-150
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	61		56		20-150
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	87		85		20-150
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	72		65		20-150
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	83		74		20-150
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	90		89		20-150
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	66		62		20-150
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	78		70		20-150
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	80		78		20-150
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	82		76		20-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	70		70		20-150
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	67		63		20-150
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	87		82		20-150
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	82		76		20-150
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	83		78		20-150
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	89		80		20-150

Matrix Spike Analysis

Batch Quality Control

Project Name: CURIA GW 2023 ***Lab Number:*** L2358274

Project Number: 075104 ***Report Date:*** 10/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1841909-4 WG1841909-5 QC Sample: L2358274-01 Client ID: OS-1A												

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	82		77		20-150

METALS

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

SAMPLE RESULTS

Lab ID: L2358274-03 Date Collected: 10/03/23 13:50

Client ID: OS-5A Date Received: 10/03/23

Sample Location: 33 RIVERSIDE AVE, RENSSELAER, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	0.0045	J	mg/l	0.0050	0.0019	1	10/10/23 11:39	10/10/23 19:57	EPA 3005A	19,200.7	AMW
Sodium, Total	23.6		mg/l	2.00	0.120	1	10/10/23 11:39	10/10/23 19:57	EPA 3005A	19,200.7	AMW

Project Name: CURIA GW 2023 **Lab Number:** L2358274

Project Number: 075104 **Report Date:** 10/26/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 03 Batch: WG1837707-1										
Arsenic, Total	0.0022	J	mg/l	0.0050	0.0019	1	10/10/23 11:39	10/10/23 19:44	19,200.7	AMW
Sodium, Total	ND		mg/l	2.00	0.120	1	10/10/23 11:39	10/10/23 19:44	19,200.7	AMW

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW 2023

Project Number: 075104

Lab Number: L2358274

Report Date: 10/26/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03 Batch: WG1837707-2								
Arsenic, Total	100		-		85-115	-		
Sodium, Total	108		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1837707-3 QC Sample: L2358213-02 Client ID: MS Sample												
Arsenic, Total	0.004J	0.12	0.131	109		-	-		75-125	-		20
Sodium, Total	51.9	10	63.8	119		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 03 QC Batch ID: WG1837707-7 QC Sample: L2358879-01 Client ID: MS Sample												
Arsenic, Total	0.005J	0.12	0.138	115		-	-		75-125	-		20
Sodium, Total	200	10	207	**70**	Q	-	-		75-125	-		20

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2358274-01A	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01A1	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01A2	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01B	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01B1	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01B2	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01C	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01C1	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01C2	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-01D	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-01D1	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-01D2	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-01E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-01E1	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-01E2	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-01F	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-01G	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-01H	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-01I	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-01J	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-01K	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-01L	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)

*Values in parentheses indicate holding time in days

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2358274-01M	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-01N	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-02A	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-02B	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-02C	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-02D	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-02E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-02F	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-02G	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-02H	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-03A	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-03B	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-03C	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-03D	Plastic 250ml HNO3 preserved	B	<2	<2	3.7	Y	Absent		NA-UI(180),AS-UI(180)
L2358274-03E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-03F	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-03G	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-03H	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-03I	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-04A	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-04B	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-04C	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-04D	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-04E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-04F	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-04G	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-04H	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-05A	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2358274-05B	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-05C	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-05D	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-05E	Amber 250ml unpreserved	B	7	7	3.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2358274-05F	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-05G	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-05H	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-06A	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-06B	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-06C	Plastic 500ml unpreserved	A	NA		5.3	Y	Absent		A2-1633-DRAFT(28)
L2358274-07A	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)
L2358274-07B	Vial HCl preserved	B	NA		3.7	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: CURIA GW 2023
Project Number: 075104

Lab Number: L2358274
Report Date: 10/26/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: CURIA GW 2023
Project Number: 075104
Lab Number: L2358274
Report Date: 10/26/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name:	CURIA GW 2023	**Lab Number:**	L2358274
Project Number:	075104	**Report Date:**	10/26/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW 2023	**Lab Number:**	L2358274
Project Number:	075104	**Report Date:**	10/26/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW 2023	**Lab Number:**	L2358274
Project Number:	075104	**Report Date:**	10/26/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	CURIA GW 2023	**Lab Number:**	L2358274
Project Number:	075104	**Report Date:**	10/26/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

144 Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. Draft EPA Method 1633, EPA Document 821-D-22-001, June 2022.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 1 of 1

Date Rec'd in Lab: 10/4/23

ALPHA Job #: L2358274

Client Information
Client: CHA Consulting
Address: 3 winners Circle
Albany, NY
Phone:
Fax:
Email: Smiller@chacompanies.com

Project Information
Project Name: Curia GW 2023
Project Location: 33 Riverside Ave, Rensselaer, NY
Project #: 075104
(Use Project name as Project #): ☐
Project Manager: Melissa Deyo
ALPHAQuote #:

Turn-Around Time
Standard: ☒ Due Date:
Rush (only if pre approved): ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☒ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility: ☐ NJ ☐ NY ☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL. As, Na

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PFAS EPA 1633	1,4 Dioxane	8260 site specific VOCs	EPA 200.7 total As+Na	8260 VOCs	Temp			Sample Specific Comments	Total Bottle
58274-01	OS-1A	10/3/23	0945	GW	AH	X	X	X						Site specific VOCs =	8
	MS		0945			X	X	X						benzene, chlorobenzene	8
	MSD		0945			X	X	X						toluene and 1,2 DCA	8
-02	OS-4A		1140			X	X	X							8
-03	OS-5A		1350			X	X	X	X						9
-04	OS-3		1445			X	X	X							8
-05	CHA-1		1200			X									8
-06	FB-1		1530			X									3
-07	Trip Blanks									X					2
	Temp Blank										X				1

Preservative Code: A = None, B = HCl, C = HNO_3, D = H_2SO_4, E = NaOH, F = MeOH, G = $NaHSO_4$, H = $Na_2S_2O_3$, K/E = Zn Ac/NaOH, O = Other

Container Code: P = Plastic, A = Amber Glass, V = Vial, G = Glass, B = Bacteria Cup, C = Cube, O = Other, E = Encore, D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	P	A	A	P	A			
Preservative	A	A	B	C	A			

Relinquished By:	Date/Time	Received By:	Date/Time
Andrew Hodgson	10/3/23 1708	Ami Corley AHC	10/3/23 17:08
Ami Corley	10/3/23 12:10		10/4/23 0130

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

ANALYTICAL REPORT

Lab Number:	L2368808
Client:	CHA Companies One Park Place 300 South State St., Suite 600 Syracuse, NY 13202
ATTN:	Samantha Miller
Phone:	(315) 471-3920
Project Name:	CURIA GW SAMPLING
Project Number:	075104
Report Date:	11/28/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: CURIA GW SAMPLING
Project Number: 075104

Lab Number: L2368808
Report Date: 11/28/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2368808-01	WC-1	WATER	RENSSELAER NY	11/17/23 10:30	11/17/23
L2368808-02	TRIP BLANK	WATER	RENSSELAER NY	11/17/23 00:00	11/17/23

Project Name:	CURIA GW SAMPLING	**Lab Number:**	L2368808
Project Number:	075104	**Report Date:**	11/28/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	CURIA GW SAMPLING	**Lab Number:**	L2368808
Project Number:	075104	**Report Date:**	11/28/23

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L2368808-01D: The sample has elevated detection limits due to the dilution required by the sample matrix (foam).

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 11/28/23

ORGANICS

VOLATILES

Project Name: CURIA GW SAMPLING
Project Number: 075104
Lab Number: L2368808
Report Date: 11/28/23

SAMPLE RESULTS

Lab ID: L2368808-01 D
Client ID: WC-1
Sample Location: RENSSELAER NY

Date Collected: 11/17/23 10:30
Date Received: 11/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 11/27/23 11:37
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.4	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	270		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.7	10
Benzene	18		ug/l	5.0	1.6	10
Toluene	ND		ug/l	25	7.0	10
Ethylbenzene	ND		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	ND		ug/l	10	0.71	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10

Project Name: CURIA GW SAMPLING **Lab Number:** L2368808

Project Number: 075104 **Report Date:** 11/28/23

SAMPLE RESULTS

Lab ID: L2368808-01 D Date Collected: 11/17/23 10:30

Client ID: WC-1 Date Received: 11/17/23

Sample Location: RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	ND		ug/l	25	7.0	10
o-Xylene	ND		ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	41	J	ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
Methyl Acetate	ND		ug/l	20	2.3	10
Cyclohexane	ND		ug/l	100	2.7	10
1,4-Dioxane	ND		ug/l	2500	610	10
Freon-113	ND		ug/l	25	7.0	10
Methyl cyclohexane	ND		ug/l	100	4.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	99		70-130

Project Name: CURIA GW SAMPLING
Project Number: 075104
Lab Number: L2368808
Report Date: 11/28/23

SAMPLE RESULTS

Lab ID: L2368808-02
Client ID: TRIP BLANK
Sample Location: RENSSELAER NY
Date Collected: 11/17/23 00:00
Date Received: 11/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 11/27/23 11:10
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: CURIA GW SAMPLING **Lab Number:** L2368808

Project Number: 075104 **Report Date:** 11/28/23

SAMPLE RESULTS

Lab ID: L2368808-02 Date Collected: 11/17/23 00:00

Client ID: TRIP BLANK Date Received: 11/17/23

Sample Location: RENSSELAER NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.0	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	103		70-130

Project Name: CURIA GW SAMPLING **Lab Number:** L2368808

Project Number: 075104 **Report Date:** 11/28/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 11/27/23 10:44
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1856926-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: CURIA GW SAMPLING **Lab Number:** L2368808

Project Number: 075104 **Report Date:** 11/28/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 11/27/23 10:44
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1856926-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CURIA GW SAMPLING
Project Number: 075104
Lab Number: L2368808
Report Date: 11/28/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 11/27/23 10:44
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1856926-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW SAMPLING
Project Number: 075104

Lab Number: L2368808
Report Date: 11/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1856926-3 WG1856926-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	95		97		63-130	2		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	94		97		70-130	3		20
Chlorobenzene	98		99		75-130	1		20
Trichlorofluoromethane	120		120		62-150	0		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
Bromoform	91		92		54-136	1		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	110		110		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	100		100		64-130	0		20
Bromomethane	**160**	Q	**160**	Q	39-139	0		20
Vinyl chloride	130		130		55-140	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CURIA GW SAMPLING
Project Number: 075104

Lab Number: L2368808
Report Date: 11/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1856926-3 WG1856926-4								
Chloroethane	**140**	Q	**140**	Q	55-138	0		20
1,1-Dichloroethene	130		130		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		110		70-130	10		20
1,2-Dichlorobenzene	96		98		70-130	2		20
1,3-Dichlorobenzene	96		97		70-130	1		20
1,4-Dichlorobenzene	94		96		70-130	2		20
Methyl tert butyl ether	97		98		63-130	1		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Styrene	100		105		70-130	5		20
Dichlorodifluoromethane	96		96		36-147	0		20
Acetone	110		110		58-148	0		20
Carbon disulfide	**140**	Q	130		51-130	7		20
2-Butanone	100		100		63-138	0		20
4-Methyl-2-pentanone	91		93		59-130	2		20
2-Hexanone	91		94		57-130	3		20
Bromochloromethane	100		100		70-130	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	87		90		41-144	3		20
Isopropylbenzene	95		96		70-130	1		20
1,2,3-Trichlorobenzene	91		92		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: CURIA GW SAMPLING

Project Number: 075104

Lab Number: L2368808

Report Date: 11/28/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1856926-3 WG1856926-4								
1,2,4-Trichlorobenzene	87		88		70-130	1		20
Methyl Acetate	110		110		70-130	0		20
Cyclohexane	100		110		70-130	10		20
1,4-Dioxane	118		116		56-162	2		20
Freon-113	130		130		70-130	0		20
Methyl cyclohexane	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		101		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	99		99		70-130

Project Name: CURIA GW SAMPLING
Project Number: 075104

Lab Number: L2368808
Report Date: 11/28/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2368808-01A	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260-R2(14)
L2368808-01B	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260-R2(14)
L2368808-01C	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260-R2(14)
L2368808-02A	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260-R2(14)
L2368808-02B	Vial HCl preserved	A	NA		2.6	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name:	CURIA GW SAMPLING	**Lab Number:**	L2368808
Project Number:	075104	**Report Date:**	11/28/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW SAMPLING	**Lab Number:**	L2368808
Project Number:	075104	**Report Date:**	11/28/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW SAMPLING	**Lab Number:**	L2368808
Project Number:	075104	**Report Date:**	11/28/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers

Project Name:	CURIA GW SAMPLING	**Lab Number:**	L2368808
Project Number:	075104	**Report Date:**	11/28/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 11/18/23

ALPHA Job #: L2368808

Client Information
Client: CHA CONSULTING
Address: 111 WINNERS CIRCLE ALBANY NY 12205
Phone:
Fax:
Email: SMILLER@CHASOLUTIONS.COM

Project Information
Project Name: CURIA GW SAMPLING
Project Location: RENSSELAER NY
Project # 075104
(Use Project name as Project #) ☐
Project Manager: MELISSA DEYO
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL VOCs	Sample Specific Comments	Total Bottle
68508-01	WC-1	11.17.23	10:30	GRH	GW	X		
-02	TRIP BLANK	—	—	—	—	X		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	V
Preservative	

Relinquished By:	Date/Time	Received By:	Date/Time
	11.17.23 15:40		11/17/23 1540
	11/17/23 1540		11/18/23 0830

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX D

Data Usability Summary Report

ALPHA
GEOSCIENCE

[redacted]

November 14, 2023

Ms. Samantha Miller, P.E.
Section Manager I
CHA
III Winners Circle
P.O. Box 5269
Albany, New York 12205

Re: Data Validation Reports
Curia Project
October 2023 Ground Water Sampling Events

Dear Ms. Miller:

The data usability summary reports (DUSRs) and data validation reviews are attached to this letter for the Curia Project, October 2023 ground water sampling events. The data were acceptable for Alpha Analytica Labs, SDG numbers L2358274, L2358719, L2359057, and L2359293 with some issues that are identified and discussed in the validation summaries. There were no data that were qualified rejected, unusable (R) in the data packs.

A list of common data validation acronyms is attached to this letter to assist you interpreting the validation summaries. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist CHA.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

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L2348274

Data Usability Summary Report
for Alpha Analytical Labs
SDG Number: L2348274

4 Ground Water Samples, 1 Field Duplicate,
1 Field Blank, and 1 Trip Blank
Collected October 3, 2023

Prepared by: Donald Anné
November 14, 2023

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contains the results of 1,4-dioxane analyses for 4 ground water samples and 1 field duplicate; results of volatile analyses for 4 ground water samples, 1 field duplicate, and 1 trip blank; results of PFAS analyses for 4 ground water samples, 1 field duplicate, and 1 field blank; and results of arsenic and sodium analysis for 1 ground water sample.

The overall performances of the analyses are acceptable. Alpha Analytical Labs did fulfill the requirements of the analytical methods.

The data are acceptable with some minor issues that are identified in the accompanying data validation reviews. There are no data qualified as either rejected (R) or estimated; therefore, all data are considered usable. Detailed information on data quality is included in the data validation reviews.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

Qualified Data Section

(No Data Qualified)

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-01	**Date Collected**	: 10/03/23 09:45
Client ID	: OS-1A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/14/23 12:42
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: PID
Lab File ID	: V08231014A13	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-02	**Date Collected**	: 10/03/23 11:40
Client ID	: OS-4A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/14/23 13:04
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: PID
Lab File ID	: V08231014A14	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-03	**Date Collected**	: 10/03/23 13:50
Client ID	: OS-5A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/14/23 13:27
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: PID
Lab File ID	: V08231014A15	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-04	**Date Collected**	: 10/03/23 14:45
Client ID	: OS-3	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/14/23 13:49
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: PID
Lab File ID	: V08231014A16	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-05	**Date Collected**	: 10/03/23 12:00
Client ID	: CHA-1	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/14/23 14:12
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: PID
Lab File ID	: V08231014A17	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-07	**Date Collected**	: 10/03/23 00:00
Client ID	: TRIP BLANKS	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/14/23 14:34
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: PID
Lab File ID	: V08231014A18	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-01	**Date Collected**	: 10/03/23 09:45
Client ID	: OS-1A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 11:31
Sample Matrix	: WATER	**Date Extracted**	: 10/10/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110152319	**Analyst**	: TPR
Sample Amount	: 260 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	76.8	144	32.6	J

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-02	**Date Collected**	: 10/03/23 11:40
Client ID	: OS-4A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 12:38
Sample Matrix	: WATER	**Date Extracted**	: 10/10/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110152322	**Analyst**	: TPR
Sample Amount	: 270 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	48.2	139	31.4	J

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-03	**Date Collected**	: 10/03/23 13:50
Client ID	: OS-5A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 13:23
Sample Matrix	: WATER	**Date Extracted**	: 10/10/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110152324	**Analyst**	: TPR
Sample Amount	: 270 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	414.	139	31.4	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-04	**Date Collected**	: 10/03/23 14:45
Client ID	: OS-3	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 13:45
Sample Matrix	: WATER	**Date Extracted**	: 10/10/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110152325	**Analyst**	: TPR
Sample Amount	: 270 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	ND	139	31.4	U

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-05	**Date Collected**	: 10/03/23 12:00
Client ID	: CHA-1	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 13:00
Sample Matrix	: WATER	**Date Extracted**	: 10/10/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110152323	**Analyst**	: TPR
Sample Amount	: 270 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	46.6	139	31.4	J

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358274
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358274-01	Date Collected	: 10/03/23 09:45
Client ID	: OS-1A	Date Received	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/24/23 23:59
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_65	Analyst	: AC
Sample Amount	: 546.6 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	5.85	0.937	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	2.93	0.783	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	2.47	1.46	0.490	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.85	1.53	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	0.622	1.46	0.432	J
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.46	0.256	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	0.454	1.46	0.293	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	0.666	1.46	0.351	J
335-67-1	Perfluorooctanoic Acid (PFOA)	1.25	1.46	0.637	J
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.85	1.98	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.46	0.395	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	1.46	0.461	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	2.25	1.46	0.666	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.46	0.593	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.85	2.28	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.46	0.454	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.46	0.798	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.46	0.637	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-01	**Date Collected**	: 10/03/23 09:45
Client ID	: OS-1A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/24/23 23:59
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_65	**Analyst**	: AC
Sample Amount	: 546.6 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.46	0.337	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.46	0.395	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.46	0.790	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.46	0.673	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.46	0.549	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.46	0.388	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.85	0.820	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.85	0.922	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.46	0.556	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.85	1.21	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.85	1.21	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.46	0.637	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.46	0.673	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.6	3.44	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-01	**Date Collected**	: 10/03/23 09:45
Client ID	: OS-1A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/24/23 23:59
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_65	**Analyst**	: AC
Sample Amount	: 546.6 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.6	1.79	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.93	0.417	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.93	0.388	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.93	0.322	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.93	1.73	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.32	2.41	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	36.6	8.56	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	36.6	5.77	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358274
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358274-02	Date Collected	: 10/03/23 11:40
Client ID	: OS-4A	Date Received	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 00:38
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_68	Analyst	: AC
Sample Amount	: 547.43 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	4.41	5.84	0.935	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	2.07	2.92	0.782	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	5.75	1.46	0.490	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.84	1.53	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	1.83	1.46	0.431	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.46	0.256	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	1.29	1.46	0.292	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	1.19	1.46	0.351	J
335-67-1	Perfluorooctanoic Acid (PFOA)	8.26	1.46	0.636	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.84	1.97	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	0.424	1.46	0.394	J
375-95-1	Perfluorononanoic Acid (PFNA)	1.61	1.46	0.460	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	18.0	1.46	0.665	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.46	0.592	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.84	2.27	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.46	0.453	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.46	0.796	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.46	0.636	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-02	**Date Collected**	: 10/03/23 11:40
Client ID	: OS-4A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 00:38
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_68	**Analyst**	: AC
Sample Amount	: 547.43 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.46	0.336	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.46	0.394	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.46	0.789	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.46	0.672	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.46	0.548	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.46	0.387	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.84	0.818	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.84	0.921	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.46	0.555	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.84	1.20	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.84	1.20	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.46	0.636	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.46	0.672	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.6	3.43	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-02	**Date Collected**	: 10/03/23 11:40
Client ID	: OS-4A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 00:38
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_68	**Analyst**	: AC
Sample Amount	: 547.43 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.6	1.79	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.92	0.416	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.92	0.387	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.92	0.322	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.92	1.72	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.31	2.41	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	36.5	8.55	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	36.5	5.76	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358274
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358274-03	Date Collected	: 10/03/23 13:50
Client ID	: OS-5A	Date Received	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 00:51
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_69	Analyst	: AC
Sample Amount	: 511.03 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

CAS NO.	Parameter	ng/l Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	21.1	6.26	1.00	
2706-90-3	Perfluoropentanoic Acid (PFPeA)	12.9	3.13	0.838	
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	11.4	1.56	0.524	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	6.26	1.64	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	9.93	1.56	0.462	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.56	0.274	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	2.78	1.56	0.313	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	0.564	1.56	0.376	J
335-67-1	Perfluorooctanoic Acid (PFOA)	6.99	1.56	0.681	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	6.26	2.11	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.56	0.423	U
375-95-1	Perfluorononanoic Acid (PFNA)	2.14	1.56	0.493	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	3.08	1.56	0.712	
335-76-2	Perfluorodecanoic Acid (PFDA)	1.05	1.56	0.634	J
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	6.26	2.43	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.56	0.485	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.56	0.853	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.56	0.681	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-03	**Date Collected**	: 10/03/23 13:50
Client ID	: OS-5A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 00:51
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_69	**Analyst**	: AC
Sample Amount	: 511.03 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.56	0.360	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.56	0.423	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.56	0.845	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.56	0.720	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.56	0.587	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.56	0.415	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	6.26	0.877	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	6.26	0.986	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.56	0.595	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	6.26	1.29	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	6.26	1.29	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.56	0.681	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.56	0.720	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	15.6	3.68	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-03	**Date Collected**	: 10/03/23 13:50
Client ID	: OS-5A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 00:51
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_69	**Analyst**	: AC
Sample Amount	: 511.03 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	15.6	1.92	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	3.13	0.446	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	3.13	0.415	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	3.13	0.344	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	3.13	1.85	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.83	2.58	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	39.1	9.16	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	39.1	6.18	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358274
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358274-04	Date Collected	: 10/03/23 14:45
Client ID	: OS-3	Date Received	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 01:04
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_70	Analyst	: AC
Sample Amount	: 150 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	9.63	21.3	3.41	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	7.17	10.7	2.85	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	10.8	5.33	1.79	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	21.3	5.57	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	5.20	5.33	1.57	J
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	5.33	0.933	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	3.84	5.33	1.07	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	5.52	5.33	1.28	
335-67-1	Perfluorooctanoic Acid (PFOA)	14.9	5.33	2.32	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	21.3	7.20	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	5.33	1.44	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	5.33	1.68	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	22.5	5.33	2.43	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	5.33	2.16	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	21.3	8.29	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	5.33	1.65	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	5.33	2.91	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	5.33	2.32	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-04	**Date Collected**	: 10/03/23 14:45
Client ID	: OS-3	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 01:04
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_70	**Analyst**	: AC
Sample Amount	: 150 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	5.33	1.23	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	5.33	1.44	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	5.33	2.88	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	5.33	2.45	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	5.33	2.00	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	5.33	1.41	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	21.3	2.99	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	21.3	3.36	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	5.33	2.03	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	21.3	4.40	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	21.3	4.40	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	5.33	2.32	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	5.33	2.45	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	53.3	12.5	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358274
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358274-04	Date Collected	: 10/03/23 14:45
Client ID	: OS-3	Date Received	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 01:04
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_70	Analyst	: AC
Sample Amount	: 150 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	53.3	6.53	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	10.7	1.52	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	10.7	1.41	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	10.7	1.17	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	10.7	6.29	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	26.7	8.80	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	133	31.2	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	133	21.0	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358274
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358274-05	Date Collected	: 10/03/23 12:00
Client ID	: CHA-1	Date Received	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 01:16
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_71	Analyst	: AC
Sample Amount	: 532.66 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

CAS NO.	Parameter	ng/l Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	4.44	6.01	0.961	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	2.12	3.00	0.804	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	6.08	1.50	0.503	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	6.01	1.57	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	1.53	1.50	0.443	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	0.270	1.50	0.263	J
375-85-9	Perfluoroheptanoic Acid (PFHpA)	1.22	1.50	0.300	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	1.20	1.50	0.360	J
335-67-1	Perfluorooctanoic Acid (PFOA)	8.25	1.50	0.653	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	6.01	2.03	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.50	0.406	U
375-95-1	Perfluorononanoic Acid (PFNA)	1.64	1.50	0.473	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	17.8	1.50	0.683	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.50	0.608	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	6.01	2.34	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.50	0.466	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.50	0.818	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.50	0.653	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-05	**Date Collected**	: 10/03/23 12:00
Client ID	: CHA-1	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 01:16
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_71	**Analyst**	: AC
Sample Amount	: 532.66 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.50	0.345	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.50	0.406	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.50	0.811	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.50	0.691	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.50	0.563	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.50	0.398	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	6.01	0.841	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	6.01	0.946	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.50	0.571	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	6.01	1.24	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	6.01	1.24	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.50	0.653	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.50	0.691	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	15.0	3.53	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-05	**Date Collected**	: 10/03/23 12:00
Client ID	: CHA-1	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 01:16
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_71	**Analyst**	: AC
Sample Amount	: 532.66 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	15.0	1.84	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	3.00	0.428	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	3.00	0.398	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	3.00	0.330	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	3.00	1.77	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.51	2.48	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.5	8.79	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.5	5.92	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358274
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358274-06	Date Collected	: 10/03/23 15:30
Client ID	: FB-1	Date Received	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 01:29
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_72	Analyst	: AC
Sample Amount	: 539.5 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	5.93	0.949	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	2.96	0.793	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	1.48	0.497	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.93	1.55	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	1.48	0.437	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.48	0.259	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	1.48	0.296	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	1.48	0.356	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	1.48	0.645	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.93	2.00	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.48	0.400	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	1.48	0.467	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	ND	1.48	0.675	U
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.48	0.600	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.93	2.30	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.48	0.460	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.48	0.808	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.48	0.645	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-06	**Date Collected**	: 10/03/23 15:30
Client ID	: FB-1	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 01:29
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_72	**Analyst**	: AC
Sample Amount	: 539.5 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.48	0.341	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.48	0.400	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.48	0.801	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.48	0.682	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.48	0.556	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.48	0.393	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.93	0.830	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.93	0.934	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.48	0.563	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.93	1.22	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.93	1.22	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.48	0.645	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.48	0.682	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.8	3.48	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-06	**Date Collected**	: 10/03/23 15:30
Client ID	: FB-1	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 01:29
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_72	**Analyst**	: AC
Sample Amount	: 539.5 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.8	1.82	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.96	0.423	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.96	0.393	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.96	0.326	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.96	1.75	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.41	2.45	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.1	8.67	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.1	5.85	U

Form 1
METALS

Client	: CHA Companies	**Lab Number**	: L2358274
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358274-03	**Date Collected**	: 10/03/23 13:50
Client ID	: OS-5A	**Date Received**	: 10/03/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/10/23 19:57
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 19,200.7	**Analyst**	: AMW
Lab File ID	: WG1837637.pdf	**Instrument ID**	: TRACE6
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/10/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-38-2	Arsenic, Total	0.0045	0.0050	0.0019	J
7440-23-5	Sodium, Total	23.6	2.00	0.120	

VOC Data Section

QA/QC Review of Method 8260C Volatiles* Data
for Alpha Analytical, SDG Number: L2358274

4 Ground Water Samples, 1 Field Duplicate,
and 1 Trip Blank
Collected October 3, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for target compounds were above the method minimums, as required.

The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for target compounds were above the method minimums and the %Ds were below the method maximum, as required.

The RRFs for target compounds were above the allowable minimum (0.010) and the %Ds were below the allowable maximum (20%), as required.

Blanks: The analyses of the method and trip blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous MS/MSD sample OS-1A.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1840256-3/4.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

Field Duplicates: The analyses of aqueous field duplicate pair OS-4A/CHA-1 reported target compounds as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked surrogates were within GC/MS quantitation limits. The analyses of the ground water samples reported target compounds as not detected.

* Target volatiles include chlorobenzene, 1,2-dichloroethane, benzene, and toluene.

1,4-Dioxane

Data Section

QA/QC Review of Method 8270D SIM 1,4-Dioxane
Data for Alpha Analytical, SDG Number: L2358274

4 Ground Water Samples and 1 Field Duplicate
Collected October 3, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were extracted and analyzed within USEPA SW-846 holding times.

Initial Calibration: The average RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %RSD was below the allowable maximum (30%), as required.

Continuing Calibration: The RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %D was below the allowable maximum (20%), as required.

Blanks: The analysis of the method blank reported 1,4-dioxane as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent difference for 1,4-dioxane was below the allowable maximum and the percent recoveries were within QC limits for aqueous MS/MSD sample OS-1A.

Laboratory Control Sample: The relative percent difference for 1,4-dioxane was below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1838067-2/3.

Field Duplicates: The analyses of aqueous field duplicate pair OS-4A/CHA-1 reported 1,4-dioxane as below the lowest standard; therefore, a valid relative percent difference could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked surrogate and 1,4-dioxane results were within quantitation limits.

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PFAS

Data Section

[redacted]

QA/QC Review of Method 537 (Modified) PFAS Data
for Alpha Analytical Labs SDG Number: L2358274

4 Ground Water Sample, 1 Field Duplicate,
and 1 Field Blank
Collected October 3, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFASs were below the method maximum (20%) or the R or R squared were above the method minimums, as required.

Continuing Calibration: The percent recoveries for applicable PFASs were within QC limits (70-130%), as required.

Blanks: The analyses of the method and field blanks reported target PFAS as not detected.

Surrogate Recovery: One of eighteen surrogate recoveries for sample FB-1was above QC limits. Positive results associated with the surrogates above QC limits should be considered estimated (J) in sample FB-1.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for target PFAS were below the allowable maximum and the percent recoveries were within QC limits for aqueous MS/MSD sample OS-1A.

Laboratory Control Sample: The percent recoveries for target PFAS were within QC limits for aqueous samples WG1841909-2/3.

Field Duplicates: The relative percent differences for applicable PFAS were below the allowable maximum (20%) for aqueous field duplicate pair OS-4A/CHA-1 (attached table), as required.

Compound ID: Checked PFAS results were within LC quantitation limits.

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Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW 2023

Lab Number: L2358274
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 ()	S2 ()	S3 ()	S4 ()	S5 ()	S6 ()	S7 ()
OS-1A (L2358274-01)	76	70	84	146	71	66	78
OS-4A (L2358274-02)	78	77	82	127	72	70	78
OS-5A (L2358274-03)	79	77	85	135	74	73	79
OS-3 (L2358274-04)	78	88	93	80	84	70	78
CHA-1 (L2358274-05)	78	70	87	133	72	64	79
FB-1 (L2358274-06)	78	86	75	68	78	72	79
WG1841909-1BLANK	76	83	83	84	82	72	80
WG1841909-2LCS	75	84	78	89	85	73	80
WG1841909-3LCS	83	86	83	89	84	81	84
OS-1AMS	87	82	90	153*	80	82	87
OS-1AMSD	82	76	89	151*	78	76	85

QC LIMITS

(20-150) S1 = PERFLUORO[13C4]BUTANOIC ACID (MPFBA)
(20-150) S2 = PERFLUORO[13C5]PENTANOIC ACID (M5PFPEA)
(20-150) S3 = PERFLUORO[2,3,4-13C3]BUTANESULFONIC ACID (M3PFBS)
(20-150) S4 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]HEXANESULFONIC ACID (M2-4:2FTS)
(20-150) S5 = PERFLUORO[1,2,3,4,6-13C5]HEXANOIC ACID (M5PFHXA)
(20-150) S6 = PERFLUORO[1,2,3,4-13C4]HEPTANOIC ACID (M4PFHPA)
(20-150) S7 = PERFLUORO[1,2,3-13C3]HEXANESULFONIC ACID (M3PFHXS)

* Values outside of QC limits

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW 2023

Lab Number: L2358274
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S8 ()	S9 ()	S10 ()	S11 ()	S12 ()	S13 ()	S14 ()
OS-1A (L2358274-01)	76	84	71	69	61	89	65
OS-4A (L2358274-02)	72	77	74	73	63	92	65
OS-5A (L2358274-03)	71	71	70	68	60	77	55
OS-3 (L2358274-04)	78	62	76	63	50	50	32
CHA-1 (L2358274-05)	76	68	73	75	69	78	69
FB-1 (L2358274-06)	69	65	74	73	64	83	48
WG1841909-1BLANK	79	81	77	74	73	87	66
WG1841909-2LCS	77	83	77	74	69	92	67
WG1841909-3LCS	80	90	79	82	75	112	75
OS-1AMS	83	98	89	83	78	99	77
OS-1AMSD	78	102	80	74	70	124	70

QC LIMITS

(20-150) S8 = PERFLUORO[13C8]OCTANOIC ACID (M8PFOA)
(20-150) S9 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]OCTANESULFONIC ACID (M2-6:2FTS)
(20-150) S10 = PERFLUORO[13C9]NONANOIC ACID (M9PFNA)
(20-150) S11 = PERFLUORO[13C8]OCTANESULFONIC ACID (M8PFOS)
(20-150) S12 = PERFLUORO[1,2,3,4,5,6-13C6]DECANOIC ACID (M6PFDA)
(20-150) S13 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]DECANESULFONIC ACID (M2-8:2FTS)
(20-150) S14 = N-DEUTERIOMETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D3-NMEFOSAA)

* Values outside of QC limits

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW 2023

Lab Number: L2358274
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S15 ()	S16 ()	S17 ()	S18 ()	S19 ()	S20 ()	S21 ()
OS-1A (L2358274-01)	57	57	68	59	63	67	54
OS-4A (L2358274-02)	63	59	74	65	66	68	57
OS-5A (L2358274-03)	62	56	57	58	52	71	44
OS-3 (L2358274-04)	47	44	30	48	39	76	38
CHA-1 (L2358274-05)	70	59	75	75	72	64	55
FB-1 (L2358274-06)	112	54	62	132	158*	74	51
WG1841909-1BLANK	72	64	72	72	74	72	48
WG1841909-2LCS	71	64	66	73	74	73	46
WG1841909-3LCS	69	68	77	72	66	78	54
OS-1AMS	66	72	78	70	67	82	65
OS-1AMSD	62	65	78	70	63	77	56

QC LIMITS

(20-150) S15 = PERFLUORO[1,2,3,4,5,6,7-13C7]UNDECANOIC ACID (M7-PFUDA)
(20-150) S16 = PERFLUORO[13C8]OCTANESULFONAMIDE (M8FOSA)
(20-150) S17 = N-DEUTERIOETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D5-NETFOSAA)
(20-150) S18 = PERFLUORO[1,2-13C2]DODECANOIC ACID (MPFDOA)
(20-150) S19 = PERFLUORO[1,2-13C2]TETRADECANOIC ACID (M2PFTEDA)
(20-150) S20 = 2,3,3,3-TETRAFLUORO-2-[1,1,2,2,3,3,3-HEPTAFLUOROPROPOXY]-13C3-PROPANOIC ACID (M3HFPO-DA)
(20-150) S21 = N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDE (D3-NMEFOSA)

*** Values outside of QC limits**

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW 2023

Lab Number: L2358274
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S22 ()	S23 ()	S24 ()	S25 ()	S26 ()	S27 ()	S28 ()	TOT OUT
OS-1A (L2358274-01)	54	43	54	--	--	--	--	0
OS-4A (L2358274-02)	58	49	61	--	--	--	--	0
OS-5A (L2358274-03)	42	33	43	--	--	--	--	0
OS-3 (L2358274-04)	38	32	37	--	--	--	--	0
CHA-1 (L2358274-05)	57	46	59	--	--	--	--	0
FB-1 (L2358274-06)	52	43	53	--	--	--	--	1
WG1841909-1BLANK	51	54	67	--	--	--	--	0
WG1841909-2LCS	50	54	65	--	--	--	--	0
WG1841909-3LCS	59	65	68	--	--	--	--	0
OS-1AMS	63	61	66	--	--	--	--	1
OS-1AMSD	56	56	62	--	--	--	--	1

QC LIMITS

(20-150) S22 = N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDE (D5-NETFOSA)
(20-150) S23 = 2-(N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D7-NMEFOSE)
(20-150) S24 = 2-(N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D9-NETFOSE)

* Values outside of QC limits

Metals Data Section

QA/QC Review of Arsenic and Sodium Data
for Alpha Analytical Labs
SDG Number: L2358274

1 Ground Water Sample
Collected October 3, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for arsenic and sodium were within control limits (90-110%).

Blanks: The analyses of initial and continuing calibration blanks and method reported arsenic and sodium as either not detected or below the reporting limits, as required.

ICP Interference Check Sample: The percent recoveries for arsenic and lead were not reported on the Form 4a.

Spike Sample Recovery: The applicable percent recoveries for arsenic and sodium were within control limits (75-125%) for aqueous batch spike samples L2358213-02 and L2358879-01.

Laboratory Duplicates: This data was not reported.

Laboratory Control Sample: The percent recoveries for arsenic and sodium were within control limits (80-120%) for aqueous sample WG1837707-2.

Serial Dilution: This data was not reported.

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Field Duplicate Calculation Section

Semi-Volatiles (1,4-Dioxane)

Calculations for Field Duplicate Relative Percent Difference (RPD)
SDG No. L2358274

S1= OS-4A **S2=** CHA-1

Analyte	S1	S2	RPD (%)
1,4-Dioxane	**48.2**	**46.6**	NC

* RPD is above the allowable maximum 20%

Results are in units of ng/L.

Bold numbers were values that are below the CRQL.
ND - Not detected.
NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

PFAS

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. L2358274

S1= OS-4A **S2=** CHA-1

Analyte	S1	S2	RPD (%)
Perfluorobutanoic Acid (PFBA)	**4.41**	**4.44**	NC
Perfluoropentanoic Acid (PFPeA)	**2.07**	**2.12**	NC
Perfluorobutanesulfonic Acid (PFBS)	5.75	6.08	6%
Perfluorohexanoic Acid (PFHxA)	1.83	1.53	18%
Perfluoropentanesulfonic Acid (PFPeS)	ND	**0.27**	NC
Perfluoroheptanoic Acid (PFHpA)	**1.29**	**1.22**	NC
Perfluorohexanesulfonic Acid (PFHxS)	**1.19**	**1.2**	NC
Perfluorooctanoic Acid (PFOA)	8.26	8.25	0%
Perfluoroheptanesulfonic Acid (PFHpS)	**0.424**	ND	NC
Perfluorononanoic Acid (PFNA)	1.61	1.64	2%
Perfluorooctanesulfonic Acid (PFOS	18	17.8	1%

* RPD is above the allowable maximum 20%

Results are in units of ng/L.

Bold numbers were values that are below the CRQL.
ND - Not detected.
NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA or PFTrDA	Perfluorotridecanoic acid
PFTeA or PFTA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid or 6:2 Fluorotelomersulfonate
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid or 8:2 Fluorotelomersulfonate

L2358719

[redacted]

Data Usability Summary Report
for Alpha Analytical Labs
SDG Number: L2358719

4 Ground Water Samples, 1 Field Blank,
and 1 Trip Blank
Collected October 4, 2023

Prepared by: Donald Anné
November 14, 2023

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contains the results of 1,4-dioxane analyses for 4 ground water samples; results of volatile analyses for 2 ground water samples and 1 trip blank; results of PFAS analyses for 4 ground water samples and 1 field blank; and results of arsenic and sodium analysis for 1 ground water sample.

The overall performances of the analyses are acceptable. Alpha Analytical Labs did fulfill the requirements of the analytical methods.

The data are acceptable with some minor issues that are identified in the accompanying data validation reviews. There are no data qualified as either rejected (R) or estimated; therefore, all data are considered usable. Detailed information on data quality is included in the data validation reviews.

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Qualified Data Section

(No Data Qualified)

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-01	**Date Collected**	: 10/04/23 09:45
Client ID	: MW-8	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 00:47
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231014N14	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-02	**Date Collected**	: 10/04/23 14:55
Client ID	: MW-6A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 01:10
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231014N15	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-05	**Date Collected**	: 10/04/23 00:00
Client ID	: TRIP BLANKS	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/15/23 01:32
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231014N16	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-01	**Date Collected**	: 10/04/23 09:45
Client ID	: MW-8	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/13/23 12:57
Sample Matrix	: WATER	**Date Extracted**	: 10/11/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110132310	**Analyst**	: TPR
Sample Amount	: 260 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	60.5	144	32.6	J

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-02	**Date Collected**	: 10/04/23 14:55
Client ID	: MW-6A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/13/23 13:21
Sample Matrix	: WATER	**Date Extracted**	: 10/11/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110132311	**Analyst**	: TPR
Sample Amount	: 255 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	1020	147	33.2	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-03	**Date Collected**	: 10/04/23 12:40
Client ID	: MW-9	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/13/23 13:45
Sample Matrix	: WATER	**Date Extracted**	: 10/11/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110132312	**Analyst**	: TPR
Sample Amount	: 265 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	ND	142	32.0	U

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-04	**Date Collected**	: 10/04/23 13:30
Client ID	: MW-7A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/13/23 14:13
Sample Matrix	: WATER	**Date Extracted**	: 10/11/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F1110132313	**Analyst**	: TPR
Sample Amount	: 265 ml	**Instrument ID**	: BNA11
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	ND	142	32.0	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358719
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358719-01	Date Collected	: 10/04/23 09:45
Client ID	: MW-8	Date Received	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 02:21
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_76	Analyst	: AC
Sample Amount	: 250 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	10.2	12.8	2.05	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	19.0	6.40	1.71	
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	2.30	3.20	1.07	J
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	12.8	3.34	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	14.8	3.20	0.944	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	1.71	3.20	0.560	J
375-85-9	Perfluoroheptanoic Acid (PFHpA)	16.9	3.20	0.640	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	15.4	3.20	0.768	
335-67-1	Perfluorooctanoic Acid (PFOA)	13.8	3.20	1.39	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	12.8	4.32	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	3.20	0.864	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	3.20	1.01	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	38.7	3.20	1.46	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	3.20	1.30	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	12.8	4.98	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	3.20	0.992	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	3.20	1.74	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	3.20	1.39	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-01	**Date Collected**	: 10/04/23 09:45
Client ID	: MW-8	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 02:21
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_76	**Analyst**	: AC
Sample Amount	: 250 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	3.20	0.736	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	3.20	0.864	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	3.20	1.73	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	3.20	1.47	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	3.20	1.20	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	3.20	0.848	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	12.8	1.79	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	12.8	2.02	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	3.20	1.22	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	12.8	2.64	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	12.8	2.64	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	3.20	1.39	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	3.20	1.47	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	32.0	7.52	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-01	**Date Collected**	: 10/04/23 09:45
Client ID	: MW-8	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 02:21
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_76	**Analyst**	: AC
Sample Amount	: 250 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	32.0	3.92	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	6.40	0.912	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	6.40	0.848	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	6.40	0.704	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	6.40	3.78	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	16.0	5.28	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	80.0	18.7	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	80.0	12.6	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358719
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358719-02	Date Collected	: 10/04/23 14:55
Client ID	: MW-6A	Date Received	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 02:59
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_79	Analyst	: AC
Sample Amount	: 541.87 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	8.03	5.90	0.945	
2706-90-3	Perfluoropentanoic Acid (PFPeA)	15.0	2.95	0.790	
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	2.58	1.48	0.494	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.90	1.54	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	6.62	1.48	0.436	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	1.84	1.48	0.258	
375-85-9	Perfluoroheptanoic Acid (PFHpA)	2.35	1.48	0.295	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	12.5	1.48	0.354	
335-67-1	Perfluorooctanoic Acid (PFOA)	6.46	1.48	0.642	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.90	1.99	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	0.531	1.48	0.399	J
375-95-1	Perfluorononanoic Acid (PFNA)	1.54	1.48	0.465	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	27.6	1.48	0.672	
335-76-2	Perfluorodecanoic Acid (PFDA)	1.19	1.48	0.598	J
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.90	2.30	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.48	0.458	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.48	0.805	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.48	0.642	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-02	**Date Collected**	: 10/04/23 14:55
Client ID	: MW-6A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 02:59
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_79	**Analyst**	: AC
Sample Amount	: 541.87 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.48	0.340	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.930	1.48	0.399	J
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.48	0.797	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.48	0.679	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.48	0.554	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.48	0.391	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.90	0.827	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.90	0.930	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.48	0.561	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.90	1.22	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.90	1.22	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.48	0.642	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.48	0.679	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.8	3.47	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-02	**Date Collected**	: 10/04/23 14:55
Client ID	: MW-6A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 02:59
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_79	**Analyst**	: AC
Sample Amount	: 541.87 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.8	1.81	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.95	0.421	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.95	0.391	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.95	0.325	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.95	1.74	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.38	2.44	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	36.9	8.64	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	36.9	5.82	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358719
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358719-03	Date Collected	: 10/04/23 12:40
Client ID	: MW-9	Date Received	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 03:12
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_80	Analyst	: AC
Sample Amount	: 536.79 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	5.29	5.96	0.954	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	8.92	2.98	0.797	
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	13.7	1.49	0.499	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.96	1.56	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	23.2	1.49	0.440	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	20.1	1.49	0.261	
375-85-9	Perfluoroheptanoic Acid (PFHpA)	4.72	1.49	0.298	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	134	1.49	0.358	
335-67-1	Perfluorooctanoic Acid (PFOA)	14.3	1.49	0.648	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.96	2.01	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	2.11	1.49	0.402	
375-95-1	Perfluorononanoic Acid (PFNA)	0.507	1.49	0.469	J
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	85.3	1.49	0.678	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.49	0.604	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.96	2.32	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.49	0.462	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.49	0.812	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.49	0.648	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-03	**Date Collected**	: 10/04/23 12:40
Client ID	: MW-9	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 03:12
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_80	**Analyst**	: AC
Sample Amount	: 536.79 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.49	0.343	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.49	0.402	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.49	0.805	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.49	0.686	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.49	0.559	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.49	0.395	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.96	0.834	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.96	0.939	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.49	0.566	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.96	1.23	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.96	1.23	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.49	0.648	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.49	0.686	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.9	3.50	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-03	**Date Collected**	: 10/04/23 12:40
Client ID	: MW-9	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 03:12
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_80	**Analyst**	: AC
Sample Amount	: 536.79 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.9	1.82	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.98	0.425	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.98	0.395	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.98	0.328	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.98	1.76	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.45	2.46	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.2	8.72	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.2	5.88	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-04	**Date Collected**	: 10/04/23 13:30
Client ID	: MW-7A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 03:25
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_81	**Analyst**	: AC
Sample Amount	: 200 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	16.0	2.56	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	8.00	2.14	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	4.00	1.34	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	16.0	4.18	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	4.00	1.18	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	4.00	0.700	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	0.960	4.00	0.800	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	2.84	4.00	0.960	J
335-67-1	Perfluorooctanoic Acid (PFOA)	2.96	4.00	1.74	J
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	16.0	5.40	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	4.00	1.08	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	4.00	1.26	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	4.20	4.00	1.82	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	4.00	1.62	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	16.0	6.22	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	4.00	1.24	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	4.00	2.18	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	4.00	1.74	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-04	**Date Collected**	: 10/04/23 13:30
Client ID	: MW-7A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 03:25
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_81	**Analyst**	: AC
Sample Amount	: 200 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	4.00	0.920	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	4.00	1.08	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	4.00	2.16	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	4.00	1.84	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	4.00	1.50	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	4.00	1.06	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	16.0	2.24	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	16.0	2.52	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	4.00	1.52	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	16.0	3.30	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	16.0	3.30	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	4.00	1.74	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	4.00	1.84	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	40.0	9.40	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-04	**Date Collected**	: 10/04/23 13:30
Client ID	: MW-7A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 03:25
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_81	**Analyst**	: AC
Sample Amount	: 200 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	40.0	4.90	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	8.00	1.14	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	8.00	1.06	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	8.00	0.880	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	8.00	4.72	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	20.0	6.60	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	100	23.4	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	100	15.8	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358719
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358719-06	Date Collected	: 10/04/23 17:20
Client ID	: FB-2	Date Received	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 03:38
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_82	Analyst	: AC
Sample Amount	: 536.88 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	5.96	0.954	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	2.98	0.797	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	1.49	0.499	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.96	1.56	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	1.49	0.440	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.49	0.261	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	1.49	0.298	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	1.49	0.358	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	1.49	0.648	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.96	2.01	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.49	0.402	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	1.49	0.469	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	ND	1.49	0.678	U
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.49	0.603	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.96	2.32	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.49	0.462	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.49	0.812	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.49	0.648	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2358719
Project Name	: CURIA GW 2023	Project Number	: 075104
Lab ID	: L2358719-06	Date Collected	: 10/04/23 17:20
Client ID	: FB-2	Date Received	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	Date Analyzed	: 10/25/23 03:38
Sample Matrix	: WATER	Date Extracted	: 10/19/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231024_82	Analyst	: AC
Sample Amount	: 536.88 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.49	0.343	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.49	0.402	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.49	0.805	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.49	0.685	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.49	0.559	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.49	0.395	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.96	0.834	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.96	0.939	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.49	0.566	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.96	1.23	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.96	1.23	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.49	0.648	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.49	0.685	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.9	3.50	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-06	**Date Collected**	: 10/04/23 17:20
Client ID	: FB-2	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/25/23 03:38
Sample Matrix	: WATER	**Date Extracted**	: 10/19/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231024_82	**Analyst**	: AC
Sample Amount	: 536.88 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.9	1.82	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.98	0.425	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.98	0.395	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.98	0.328	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.98	1.76	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.45	2.46	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.2	8.72	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.2	5.88	U

Form 1
METALS

Client	: CHA Companies	**Lab Number**	: L2358719
Project Name	: CURIA GW 2023	**Project Number**	: 075104
Lab ID	: L2358719-02	**Date Collected**	: 10/04/23 14:55
Client ID	: MW-6A	**Date Received**	: 10/04/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER, NY	**Date Analyzed**	: 10/11/23 18:09
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 19,200.7	**Analyst**	: JMF
Lab File ID	: WG1838200.csv	**Instrument ID**	: TRACE8
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/10/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-38-2	Arsenic, Total	0.0560	0.0050	0.0019	
7440-23-5	Sodium, Total	277.	2.00	0.120	

VOC Data Section

QA/QC Review of Method 8260C Volatiles* Data
for Alpha Analytical, SDG Number: L2358719

2 Ground Water Samples and 1 Trip Blank
Collected October 4, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for target compounds were above the method minimums, as required.

The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for target compounds were above the method minimums and the %Ds were below the method maximum, as required.

The RRFs for target compounds were above the allowable minimum (0.010) and the %Ds were below the allowable maximum (20%), as required.

Blanks: The analyses of the method and trip blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1840205-3/4.

Compound ID: Checked surrogates were within GC/MS quantitation limits. The analyses of the ground water samples reported target compounds as not detected.

* Target volatiles include chlorobenzene, 1,2-dichloroethane, benzene, and toluene.

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1,4-Dioxane

Data Section

QA/QC Review of Method 8270D SIM 1,4-Dioxane
Data for Alpha Analytical, SDG Number: L2358719

4 Ground Water Samples
Collected October 4, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were extracted and analyzed within USEPA SW-846 holding times.

Initial Calibration: The average RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %RSD was below the allowable maximum (30%), as required.

Continuing Calibration: The RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %D was below the allowable maximum (20%), as required.

Blanks: The analysis of the method blank reported 1,4-dioxane as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples.

Laboratory Control Sample: The relative percent difference for 1,4-dioxane was below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1838479-2/3.

Compound ID: Checked surrogate and 1,4-dioxane results were within quantitation limits.

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Metals Data Section

QA/QC Review of Arsenic and Sodium Data
for Alpha Analytical Labs
SDG Number: L2358719

1 Ground Water Sample
Collected October 4, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for arsenic and sodium were within control limits (90-110%).

Blanks: The analyses of initial and continuing calibration blanks and method reported arsenic and sodium as either not detected or below the reporting limits, as required.

ICP Interference Check Sample: The percent recoveries for arsenic and lead were not reported on the Form 4a.

Spike Sample Recovery: The applicable percent recoveries for arsenic and sodium were within control limits (75-125%) for aqueous batch spike samples L2358408-01 and L2358469-01.

Laboratory Duplicates: The analysis for aqueous batch duplicate sample WG1837788-8 was acceptable.

Laboratory Control Sample: The percent recoveries for arsenic and sodium were within control limits (80-120%) for aqueous sample WG1837788-2.

Serial Dilution: This data was not reported.

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Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA or PFTrDA	Perfluorotridecanoic acid
PFTeA or PFTA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid or 6:2 Fluorotelomersulfonate
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid or 8:2 Fluorotelomersulfonate

QA/QC Review of Method 537 (Modified) PFAS Data
for Alpha Analytical Labs SDG Number: L2358719

4 Ground Water Sample and 1 Field Blank
Collected October 4, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFASs were below the method maximum (20%) or the R or R squared were above the method minimums, as required.

Continuing Calibration: The percent recoveries for applicable PFASs were within QC limits (70-130%), as required.

Blanks: The analyses of the method and field blanks reported target PFAS as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for the ground water samples and field blank.

Laboratory Control Sample: The percent recoveries for target PFAS were within QC limits for aqueous samples WG1841909-2/3.

Compound ID: Checked PFAS results were within LC quantitation limits.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
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L2359057

Data Usability Summary Report
for Alpha Analytical Labs
SDG Number: L2359057

6 Ground Water Samples, 1 Field Blank,
and 1Trip Blank
Collected October 5, 2023

Prepared by: Donald Anné
November 14, 2023

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contains the results of 1,4-dioxane analyses for 6 ground water samples; results of volatile analyses for 5 ground water samples and 1 trip blank; results of PFAS analyses for 6 ground water samples and 1 field blank; results of arsenic analyses for 3 ground water samples; and results of sodium analyses for 2 ground water samples.

The overall performances of the analyses are acceptable. Alpha Analytical Labs did fulfill the requirements of the analytical methods.

The data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The positive PFAS results for PFBS were qualified as "estimated" (J) for samples MW-12, MW-11A, and MW-14A because the percent recovery for the surrogate used to quantitate PFBS was above QC limits in the samples.

- The positive PFAS result for PFOS for sample MW-14A was quantitated using data that was extrapolated beyond the highest calibration standard and flagged "E" by the laboratory. The result for MW-14A marked "E" in the undiluted sample was qualified as estimated (J).

- The positive metal result for arsenic was qualified as "estimated, biased high" (J+) for sample MW-14A because the percent recovery for arsenic was above QC limits in the associated aqueous batch spike sample.

All data are considered usable with estimated (J or J+) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
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Qualified Data Section

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-01	**Date Collected**	: 10/05/23 08:45
Client ID	: MW-12	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/15/23 07:58
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231015A05	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	6.9	2.5	0.70	
107-06-2	1,2-Dichloroethane	1.2	0.50	0.13	
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-02	**Date Collected**	: 10/05/23 09:30
Client ID	: MW-11A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/15/23 08:20
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231015A06	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-03	**Date Collected**	: 10/05/23 10:30
Client ID	: MW-5A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/15/23 08:43
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231015A07	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	1.1	0.50	0.13	
71-43-2	Benzene	0.48	0.50	0.16	J
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-04	**Date Collected**	: 10/05/23 11:50
Client ID	: MW-17	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/15/23 09:05
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231015A08	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	0.95	2.5	0.70	J
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	5.9	0.50	0.16	
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-05	**Date Collected**	: 10/05/23 13:30
Client ID	: MW-14A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/15/23 09:27
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MKS
Lab File ID	: V08231015A09	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	2.8	2.5	0.70	
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	0.26	0.50	0.16	J
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-08	**Date Collected**	: 10/05/23 00:00
Client ID	: TRIP BLANK	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/17/23 09:03
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: VE231017A06	**Instrument ID**	: ELAINE
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
108-90-7	Chlorobenzene	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-01	**Date Collected**	: 10/05/23 08:45
Client ID	: MW-12	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/13/23 18:44
Sample Matrix	: WATER	**Date Extracted**	: 10/12/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610132322	**Analyst**	: TPR
Sample Amount	: 250 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	8240	150	33.9	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-02	**Date Collected**	: 10/05/23 09:30
Client ID	: MW-11A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/13/23 19:07
Sample Matrix	: WATER	**Date Extracted**	: 10/12/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610132323	**Analyst**	: TPR
Sample Amount	: 255 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	ND	147	33.2	U

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-03	**Date Collected**	: 10/05/23 10:30
Client ID	: MW-5A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/13/23 19:31
Sample Matrix	: WATER	**Date Extracted**	: 10/12/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610132324	**Analyst**	: TPR
Sample Amount	: 250 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	1390	150	33.9	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-04	**Date Collected**	: 10/05/23 11:50
Client ID	: MW-17	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/13/23 19:54
Sample Matrix	: WATER	**Date Extracted**	: 10/12/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610132325	**Analyst**	: TPR
Sample Amount	: 250 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	2340	150	33.9	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-05	**Date Collected**	: 10/05/23 13:30
Client ID	: MW-14A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/13/23 20:18
Sample Matrix	: WATER	**Date Extracted**	: 10/12/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610132326	**Analyst**	: TPR
Sample Amount	: 260 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	2970	144	32.6	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-06	**Date Collected**	: 10/05/23 14:45
Client ID	: MW-18	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/13/23 20:41
Sample Matrix	: WATER	**Date Extracted**	: 10/12/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610132327	**Analyst**	: TPR
Sample Amount	: 260 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	991.	144	32.6	

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-01	Date Collected	: 10/05/23 08:45
Client ID	: MW-12	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 16:02
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_39	Analyst	: AC
Sample Amount	: 100 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l				
CAS NO.	Parameter	Results	RL	MDL	Qualifier	
375-22-4	Perfluorobutanoic Acid (PFBA)	12.1	32.0	5.12	J	
2706-90-3	Perfluoropentanoic Acid (PFPeA)	40.4	16.0	4.28		
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	4.12	8.00	2.68	J	J
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	32.0	8.36	U	
307-24-4	Perfluorohexanoic Acid (PFHxA)	21.3	8.00	2.36		
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	8.00	1.40	U	
375-85-9	Perfluoroheptanoic Acid (PFHpA)	6.28	8.00	1.60	J	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	10.0	8.00	1.92		
335-67-1	Perfluorooctanoic Acid (PFOA)	12.4	8.00	3.48		
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	45.4	32.0	10.8		
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	8.00	2.16	U	
375-95-1	Perfluorononanoic Acid (PFNA)	ND	8.00	2.52	U	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	ND	8.00	3.64	U	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	8.00	3.24	U	
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	32.0	12.4	U	
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	8.00	2.48	U	
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	8.00	4.36	U	
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	8.00	3.48	U	

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-01	**Date Collected**	: 10/05/23 08:45
Client ID	: MW-12	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 16:02
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231025_39	**Analyst**	: AC
Sample Amount	: 100 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	8.00	1.84	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	8.00	2.16	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	8.00	4.32	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	8.00	3.68	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	8.00	3.00	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	8.00	2.12	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	32.0	4.48	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	32.0	5.04	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	8.00	3.04	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	32.0	6.60	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	32.0	6.60	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	8.00	3.48	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	8.00	3.68	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	80.0	18.8	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-01	**Date Collected**	: 10/05/23 08:45
Client ID	: MW-12	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 16:02
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231025_39	**Analyst**	: AC
Sample Amount	: 100 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	80.0	9.80	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	16.0	2.28	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	16.0	2.12	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	16.0	1.76	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	16.0	9.44	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	40.0	13.2	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	200	46.8	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	200	31.6	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-02	Date Collected	: 10/05/23 09:30
Client ID	: MW-11A	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 16:41
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_42	Analyst	: AC
Sample Amount	: 529.75 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	11.0	6.04	0.966	
2706-90-3	Perfluoropentanoic Acid (PFPeA)	17.2	3.02	0.808	
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	3.74	1.51	0.506	J
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	6.04	1.58	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	18.5	1.51	0.445	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	2.57	1.51	0.264	
375-85-9	Perfluoroheptanoic Acid (PFHpA)	8.97	1.51	0.302	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	21.8	1.51	0.362	
335-67-1	Perfluorooctanoic Acid (PFOA)	14.7	1.51	0.657	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	6.04	2.04	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.51	0.408	U
375-95-1	Perfluorononanoic Acid (PFNA)	2.10	1.51	0.476	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	9.17	1.51	0.687	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.51	0.612	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	6.04	2.35	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.51	0.468	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.51	0.823	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.51	0.657	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-02	Date Collected	: 10/05/23 09:30
Client ID	: MW-11A	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 16:41
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_42	Analyst	: AC
Sample Amount	: 529.75 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.51	0.347	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.51	0.408	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.51	0.815	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.51	0.695	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.51	0.566	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.51	0.400	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	6.04	0.846	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	6.04	0.951	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.51	0.574	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	6.04	1.24	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	6.04	1.24	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.51	0.657	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.51	0.695	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	15.1	3.55	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-02	**Date Collected**	: 10/05/23 09:30
Client ID	: MW-11A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 16:41
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231025_42	**Analyst**	: AC
Sample Amount	: 529.75 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	15.1	1.85	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	3.02	0.430	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	3.02	0.400	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	3.02	0.332	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	3.02	1.78	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.55	2.49	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.8	8.83	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.8	5.96	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-03	Date Collected	: 10/05/23 10:30
Client ID	: MW-5A	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 16:54
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_43	Analyst	: AC
Sample Amount	: 100 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	6.12	32.0	5.12	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	9.52	16.0	4.28	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	8.00	2.68	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	32.0	8.36	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	11.0	8.00	2.36	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	8.00	1.40	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	4.64	8.00	1.60	J
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	14.0	8.00	1.92	
335-67-1	Perfluorooctanoic Acid (PFOA)	9.80	8.00	3.48	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	32.0	10.8	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	8.00	2.16	U
375-95-1	Perfluorononanoic Acid (PFNA)	3.56	8.00	2.52	J
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	22.0	8.00	3.64	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	8.00	3.24	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	32.0	12.4	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	8.00	2.48	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	8.00	4.36	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	8.00	3.48	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-03	Date Collected	: 10/05/23 10:30
Client ID	: MW-5A	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 16:54
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_43	Analyst	: AC
Sample Amount	: 100 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	8.00	1.84	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	8.00	2.16	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	8.00	4.32	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	8.00	3.68	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	8.00	3.00	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	8.00	2.12	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	32.0	4.48	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	32.0	5.04	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	8.00	3.04	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	32.0	6.60	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	32.0	6.60	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	8.00	3.48	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	8.00	3.68	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	80.0	18.8	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-03	**Date Collected**	: 10/05/23 10:30
Client ID	: MW-5A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 16:54
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231025_43	**Analyst**	: AC
Sample Amount	: 100 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	80.0	9.80	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	16.0	2.28	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	16.0	2.12	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	16.0	1.76	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	16.0	9.44	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	40.0	13.2	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	200	46.8	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	200	31.6	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-04	Date Collected	: 10/05/23 11:50
Client ID	: MW-17	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:06
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_44	Analyst	: AC
Sample Amount	: 100 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	23.0	32.0	5.12	J
2706-90-3	Perfluoropentanoic Acid (PFPeA)	15.3	16.0	4.28	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	3.68	8.00	2.68	J
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	32.0	8.36	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	31.1	8.00	2.36	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	4.64	8.00	1.40	J
375-85-9	Perfluoroheptanoic Acid (PFHpA)	11.0	8.00	1.60	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	41.8	8.00	1.92	
335-67-1	Perfluorooctanoic Acid (PFOA)	17.2	8.00	3.48	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	32.0	10.8	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	8.00	2.16	U
375-95-1	Perfluorononanoic Acid (PFNA)	2.60	8.00	2.52	J
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	25.0	8.00	3.64	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	8.00	3.24	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	32.0	12.4	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	8.00	2.48	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	8.00	4.36	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	8.00	3.48	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-04	Date Collected	: 10/05/23 11:50
Client ID	: MW-17	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:06
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_44	Analyst	: AC
Sample Amount	: 100 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	8.00	1.84	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	8.00	2.16	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	8.00	4.32	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	8.00	3.68	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	8.00	3.00	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	8.00	2.12	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	32.0	4.48	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	32.0	5.04	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	8.00	3.04	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	32.0	6.60	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	32.0	6.60	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	8.00	3.48	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	8.00	3.68	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	80.0	18.8	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-04	**Date Collected**	: 10/05/23 11:50
Client ID	: MW-17	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 17:06
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231025_44	**Analyst**	: AC
Sample Amount	: 100 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	80.0	9.80	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	16.0	2.28	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	16.0	2.12	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	16.0	1.76	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	16.0	9.44	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	40.0	13.2	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	200	46.8	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	200	31.6	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-05	Date Collected	: 10/05/23 13:30
Client ID	: MW-14A	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:19
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_45	Analyst	: AC
Sample Amount	: 528.65 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l				
CAS NO.	Parameter	Results	RL	MDL	Qualifier	
375-22-4	Perfluorobutanoic Acid (PFBA)	28.7	6.05	0.968		
2706-90-3	Perfluoropentanoic Acid (PFPeA)	60.2	3.03	0.810		
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	29.3	1.51	0.507		J
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	6.05	1.58	U	
307-24-4	Perfluorohexanoic Acid (PFHxA)	139	1.51	0.446		
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	53.2	1.51	0.265		
375-85-9	Perfluoroheptanoic Acid (PFHpA)	31.9	1.51	0.303		
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	334	1.51	0.363		
335-67-1	Perfluorooctanoic Acid (PFOA)	82.4	1.51	0.658		
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	6.05	2.04	U	
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	21.4	1.51	0.408		
375-95-1	Perfluorononanoic Acid (PFNA)	5.08	1.51	0.477		
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	666	1.51	0.688	E	J
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.51	0.613	U	
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	6.05	2.35	U	
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.51	0.469	U	
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.51	0.825	U	
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.51	0.658	U	

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-05	Date Collected	: 10/05/23 13:30
Client ID	: MW-14A	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:19
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_45	Analyst	: AC
Sample Amount	: 528.65 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.51	0.348	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	2.13	1.51	0.408	F
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.51	0.817	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.51	0.696	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.51	0.567	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.51	0.401	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	6.05	0.847	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	6.05	0.953	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.51	0.575	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	6.05	1.25	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	6.05	1.25	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.51	0.658	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.51	0.696	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	15.1	3.56	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-05	**Date Collected**	: 10/05/23 13:30
Client ID	: MW-14A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 17:19
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231025_45	**Analyst**	: AC
Sample Amount	: 528.65 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	15.1	1.85	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	3.03	0.431	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	3.03	0.401	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	3.03	0.333	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	3.03	1.78	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.57	2.50	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.8	8.85	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.8	5.97	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-05D	**Date Collected**	: 10/05/23 13:30
Client ID	: MW-14A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/26/23 07:18
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 10
Lab File ID	: SCI08_231025_107	**Analyst**	: SL
Sample Amount	: 528.65 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	800	15.1	6.88	

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-06	Date Collected	: 10/05/23 14:45
Client ID	: MW-18	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:32
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_46	Analyst	: AC
Sample Amount	: 555.76 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	10.4	5.76	0.921	
2706-90-3	Perfluoropentanoic Acid (PFPeA)	16.8	2.88	0.770	
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	3.58	1.44	0.482	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.76	1.50	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	15.6	1.44	0.425	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	2.76	1.44	0.252	
375-85-9	Perfluoroheptanoic Acid (PFHpA)	10.2	1.44	0.288	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	29.9	1.44	0.345	
335-67-1	Perfluorooctanoic Acid (PFOA)	19.7	1.44	0.626	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.76	1.94	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	1.34	1.44	0.389	J
375-95-1	Perfluorononanoic Acid (PFNA)	2.44	1.44	0.453	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	34.3	1.44	0.655	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.44	0.583	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.76	2.24	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.44	0.446	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.44	0.784	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.44	0.626	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-06	Date Collected	: 10/05/23 14:45
Client ID	: MW-18	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:32
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_46	Analyst	: AC
Sample Amount	: 555.76 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.44	0.331	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	0.720	1.44	0.389	JF
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.44	0.777	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.44	0.662	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.44	0.540	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.44	0.381	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.76	0.806	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.76	0.907	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.44	0.547	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.76	1.19	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.76	1.19	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.44	0.626	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.44	0.662	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.4	3.38	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-06	**Date Collected**	: 10/05/23 14:45
Client ID	: MW-18	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 17:32
Sample Matrix	: WATER	**Date Extracted**	: 10/20/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI08_231025_46	**Analyst**	: AC
Sample Amount	: 555.76 g	**Instrument ID**	: LCMS08
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.4	1.76	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.88	0.410	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.88	0.381	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.88	0.317	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.88	1.70	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.20	2.38	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	36.0	8.42	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	36.0	5.68	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-07	Date Collected	: 10/05/23 14:25
Client ID	: FB-3	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:45
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_47	Analyst	: AC
Sample Amount	: 537.05 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	5.96	0.953	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	2.98	0.797	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	1.49	0.499	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.96	1.56	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	1.49	0.439	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.49	0.261	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	1.49	0.298	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	1.49	0.358	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	1.49	0.648	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.96	2.01	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.49	0.402	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	1.49	0.469	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	ND	1.49	0.678	U
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.49	0.603	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.96	2.32	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.49	0.462	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.49	0.812	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.49	0.648	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-07	Date Collected	: 10/05/23 14:25
Client ID	: FB-3	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:45
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_47	Analyst	: AC
Sample Amount	: 537.05 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.49	0.343	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.49	0.402	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.49	0.804	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.49	0.685	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.49	0.559	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.49	0.395	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.96	0.834	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.96	0.938	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.49	0.566	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.96	1.23	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.96	1.23	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.49	0.648	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.49	0.685	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.9	3.50	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-07	Date Collected	: 10/05/23 14:25
Client ID	: FB-3	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 17:45
Sample Matrix	: WATER	Date Extracted	: 10/20/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI08_231025_47	Analyst	: AC
Sample Amount	: 537.05 g	Instrument ID	: LCMS08
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.9	1.82	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.98	0.424	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.98	0.395	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.98	0.328	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.98	1.76	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.45	2.46	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.2	8.71	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.2	5.88	U

Form 1
METALS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-01	**Date Collected**	: 10/05/23 08:45
Client ID	: MW-12	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/11/23 18:25
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 19,200.7	**Analyst**	: JMF
Lab File ID	: WG1838200.csv	**Instrument ID**	: TRACE8
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/10/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-38-2	Arsenic, Total	0.0777	0.0050	0.0019	

Form 1
METALS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-03	**Date Collected**	: 10/05/23 10:30
Client ID	: MW-5A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/11/23 17:16
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 19,200.7	**Analyst**	: JMF
Lab File ID	: WG1838200.csv	**Instrument ID**	: TRACE8
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/10/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-38-2	Arsenic, Total	0.0172	0.0050	0.0019	

Form 1
METALS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-03	**Date Collected**	: 10/05/23 10:30
Client ID	: MW-5A	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/11/23 21:15
Sample Matrix	: WATER	**Dilution Factor**	: 5
Analytical Method	: 19,200.7	**Analyst**	: MAM
Lab File ID	: WG1838200.csv	**Instrument ID**	: TRACE8
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/10/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-23-5	Sodium, Total	1180	10.0	0.600	

Form 1
METALS

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Lab ID	: L2359057-05	Date Collected	: 10/05/23 13:30
Client ID	: MW-14A	Date Received	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/12/23 12:16
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 19,200.7	Analyst	: DHL
Lab File ID	: WG1838701.pdf	Instrument ID	: TRACE6
Sample Amount	: 50ml	%Solids	: N/A
Digestion Method	: EPA 3005A	Date Digested	: 10/12/23

		mg/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
7440-38-2	Arsenic, Total	0.857	0.0050	0.0019	J+

Form 1
METALS

Client	: CHA Companies	**Lab Number**	: L2359057
Project Name	: CURIA GW OCT 2023	**Project Number**	: 075104
Lab ID	: L2359057-04	**Date Collected**	: 10/05/23 11:50
Client ID	: MW-17	**Date Received**	: 10/05/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/16/23 21:00
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 19,200.7	**Analyst**	: AMW
Lab File ID	: WG1840198.pdf	**Instrument ID**	: TRACE8
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/13/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-23-5	Sodium, Total	215.	2.00	0.120	

VOC Data Section

QA/QC Review of Method 8260C Volatiles* Data
for Alpha Analytical, SDG Number: L2359057

5 Ground Water Samples and 1 Trip Blank
Collected October 5, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for target compounds were above the method minimums, as required.

The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for target compounds were above the method minimums and the %Ds were below the method maximum, as required.

The RRFs for target compounds were above the allowable minimum (0.010) and the %Ds were below the allowable maximum (20%), as required.

Blanks: The analyses of the method and trip blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1840245-3/4 and WG1841196-3/4.

Compound ID: Checked surrogate and compound results were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

* Target volatiles include chlorobenzene, 1,2-dichloroethane, benzene, and toluene.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

1,4-Dioxane

Data Section

QA/QC Review of Method 8270D SIM 1,4-Dioxane
Data for Alpha Analytical, SDG Number: L2359057

6 Ground Water Samples
Collected October 5, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were extracted and analyzed within USEPA SW-846 holding times.

Initial Calibration: The average RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %RSD was below the allowable maximum (30%), as required.

Continuing Calibration: The RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %D was below the allowable maximum (20%), as required.

Blanks: The analysis of the method blank reported 1,4-dioxane as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples.

Laboratory Control Sample: The relative percent difference for 1,4-dioxane was below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1838845-2/3.

Compound ID: Checked surrogate and 1,4-dioxane results were within quantitation limits.

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PFAS

Data Section

QA/QC Review of Method 537 (Modified) PFAS Data
for Alpha Analytical Labs SDG Number: L2359057

4 Ground Water Sample and 1 Field Blank
Collected October 5, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFASs were below the method maximum (20%) or the R or R squared were above the method minimums, as required.

Continuing Calibration: The percent recoveries for applicable PFASs were within QC limits (70-130%), as required.

Blanks: The analyses of the method and field blanks reported target PFAS as not detected.

Surrogate Recovery: One of eighteen surrogate recoveries for samples MW-12, MW-11A, and MW-5A was above QC limits. Two of eighteen surrogate recoveries for sample MW-18 were above QC limits. Three of eighteen surrogate recoveries for sample MW-14A were above QC limits. Positive results associated with the surrogates above QC limits should be considered estimated (J) in these samples.

Laboratory Control Sample: The percent recoveries for target PFAS were within QC limits for aqueous samples WG1842111-2/3.

Compound ID: Checked PFAS results were within LC quantitation limits.

The result for PFOS in sample MW-14A was quantitated by extrapolating data above the highest calibration standard and marked 'E' by the laboratory. The sample was diluted by the laboratory and re-analyzed; therefore, the result for PFOS that is flagged as 'E' in the undiluted sample should be considered estimated (J). The use of the diluted result for PFOS is recommended for sample MW-14A. It is recommended that the undiluted results be used for all other compounds.

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Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW OCT 2023

Lab Number: L2359057
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 ()	S2 ()	S3 ()	S4 ()	S5 ()	S6 ()	S7 ()
MW-12 (L2359057-01)	87	85	98	159*	84	76	86
MW-11A (L2359057-02)	80	69	88	175*	78	92	89
MW-5A (L2359057-03)	87	85	94	167*	84	77	88
MW-17 (L2359057-04)	90	103	98	130	93	84	91
MW-14A (L2359057-05D)	NA	NA	NA	NA	NA	NA	NA
MW-14A (L2359057-05)	91	92	102	227*	86	117	93
MW-18 (L2359057-06)	73	78	76	140	83	130	87
FB-3 (L2359057-07)	86	97	87	77	86	83	89
WG1842111-1BLANK	84	96	81	83	89	77	85
WG1842111-2LCS	86	99	95	86	89	80	89
WG1842111-3LCS	90	100	100	93	92	87	90

QC LIMITS

(20-150) S1 = PERFLUORO[13C4]BUTANOIC ACID (MPFBA)
(20-150) S2 = PERFLUORO[13C5]PENTANOIC ACID (M5PFPEA)
(20-150) S3 = PERFLUORO[2,3,4-13C3]BUTANESULFONIC ACID (M3PFBS)
(20-150) S4 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]HEXANESULFONIC ACID (M2-4:2FTS)
(20-150) S5 = PERFLUORO[1,2,3,4,6-13C5]HEXANOIC ACID (M5PFHXA)
(20-150) S6 = PERFLUORO[1,2,3,4-13C4]HEPTANOIC ACID (M4PFHPA)
(20-150) S7 = PERFLUORO[1,2,3-13C3]HEXANESULFONIC ACID (M3PFHXS)

* Values outside of QC limits

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW OCT 2023

Lab Number: L2359057
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S8 ()	S9 ()	S10 ()	S11 ()	S12 ()	S13 ()	S14 ()
MW-12 (L2359057-01)	87	77	86	81	71	95	79
MW-11A (L2359057-02)	81	108	82	80	68	102	72
MW-5A (L2359057-03)	84	78	81	81	72	82	65
MW-17 (L2359057-04)	92	72	82	81	72	78	67
MW-14A (L2359057-05D)	NA	NA	NA	71	NA	NA	NA
MW-14A (L2359057-05)	62	290*	95	91	77	241*	102
MW-18 (L2359057-06)	70	198*	82	81	78	188*	95
FB-3 (L2359057-07)	81	70	89	88	78	85	75
WG1842111-1BLANK	84	73	74	81	73	93	71
WG1842111-2LCS	88	78	90	92	76	91	83
WG1842111-3LCS	86	84	82	92	86	97	88

QC LIMITS

(20-150) S8 = PERFLUORO[13C8]OCTANOIC ACID (M8PFOA)
(20-150) S9 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]OCTANESULFONIC ACID (M2-6:2FTS)
(20-150) S10 = PERFLUORO[13C9]NONANOIC ACID (M9PFNA)
(20-150) S11 = PERFLUORO[13C8]OCTANESULFONIC ACID (M8PFOS)
(20-150) S12 = PERFLUORO[1,2,3,4,5,6-13C6]DECANOIC ACID (M6PFDA)
(20-150) S13 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]DECANESULFONIC ACID (M2-8:2FTS)
(20-150) S14 = N-DEUTERIOMETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D3-NMEFOSAA)

* Values outside of QC limits

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW OCT 2023

Lab Number: L2359057
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S15 ()	S16 ()	S17 ()	S18 ()	S19 ()	S20 ()	S21 ()
MW-12 (L2359057-01)	81	63	81	90	81	74	50
MW-11A (L2359057-02)	64	62	78	68	64	84	48
MW-5A (L2359057-03)	66	60	74	66	63	78	47
MW-17 (L2359057-04)	74	58	67	68	62	88	48
MW-14A (L2359057-05D)	NA	NA	NA	NA	NA	NA	NA
MW-14A (L2359057-05)	100	102	120	97	87	122	61
MW-18 (L2359057-06)	74	80	109	66	58	130	53
FB-3 (L2359057-07)	88	65	81	95	88	79	50
WG1842111-1BLANK	78	70	81	79	78	76	51
WG1842111-2LCS	79	81	85	83	78	79	61
WG1842111-3LCS	82	84	85	82	76	82	59

QC LIMITS

(20-150) S15 = PERFLUORO[1,2,3,4,5,6,7-13C7]UNDECANOIC ACID (M7-PFUDA)
(20-150) S16 = PERFLUORO[13C8]OCTANESULFONAMIDE (M8FOSA)
(20-150) S17 = N-DEUTERIOETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D5-NETFOSAA)
(20-150) S18 = PERFLUORO[1,2-13C2]DODECANOIC ACID (MPFDOA)
(20-150) S19 = PERFLUORO[1,2-13C2]TETRADECANOIC ACID (M2PFTEDA)
(20-150) S20 = 2,3,3,3-TETRAFLUORO-2-[1,1,2,2,3,3,3-HEPTAFLUOROPROPOXY]-13C3-PROPANOIC ACID (M3HFPO-DA)
(20-150) S21 = N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDE (D3-NMEFOSA)

*** Values outside of QC limits**

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA GW OCT 2023

Lab Number: L2359057
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S22 ()	S23 ()	S24 ()	S25 ()	S26 ()	S27 ()	S28 ()	TOT OUT
MW-12 (L2359057-01)	51	52	62	--	--	--	--	1
MW-11A (L2359057-02)	49	44	55	--	--	--	--	1
MW-5A (L2359057-03)	48	42	54	--	--	--	--	1
MW-17 (L2359057-04)	50	47	57	--	--	--	--	0
MW-14A (L2359057-05D)	NA	NA	NA	--	--	--	--	0
MW-14A (L2359057-05)	56	66	68	--	--	--	--	3
MW-18 (L2359057-06)	49	46	53	--	--	--	--	2
FB-3 (L2359057-07)	52	49	61	--	--	--	--	0
WG1842111-1BLANK	50	54	64	--	--	--	--	0
WG1842111-2LCS	60	63	74	--	--	--	--	0
WG1842111-3LCS	61	69	77	--	--	--	--	0

QC LIMITS

(20-150) S22 = N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDE (D5-NETFOSA)
(20-150) S23 = 2-(N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D7-NMEFOSE)
(20-150) S24 = 2-(N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D9-NETFOSE)

* Values outside of QC limits

FORM II A2-1633-DRAFT (Continued)

Metals Data Section

QA/QC Review of Arsenic and Sodium Data
for Alpha Analytical Labs
SDG Number: L2359057

4 Ground Water Samples
Collected October 5, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for arsenic and sodium were within control limits (90-110%).

Blanks: The analyses of initial and continuing calibration blanks and method reported arsenic and sodium as either not detected or below the reporting limits, as required.

ICP Interference Check Sample: The percent recoveries for arsenic and lead were not reported on the Form 4a.

Spike Sample Recovery: The percent recovery for arsenic was above control limits (75-125%) for aqueous batch spike sample L2359497-01. Positive results for arsenic should be considered estimated, biased high (J+) in associated aqueous samples.

Laboratory Duplicates: The relative percent difference for sodium was below the allowable maximum (20%) for aqueous batch MS/MSD sample L2360336-04, as required.

Laboratory Control Sample: The percent recoveries for arsenic and sodium were within control limits (80-120%) for aqueous samples WG1837788-2, WG1838228-2, and WG1839346-2.

Serial Dilution: This data was not reported.

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Form 5a
Matrix Spike

Client	: CHA Companies	Lab Number	: L2359057
Project Name	: CURIA GW OCT 2023	Project Number	: 075104
Client Sample ID	: NA	Matrix	: WATER
Lab Sample ID	: L2359497-01		
Matrix Spike	: WG1838228-7	MS Analysis Date	: 10/12/23 08:59
Matrix Spike Dup	:	MSD Analysis Date	:

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Arsenic, Total	ND	0.12	0.159	132 Q					75-125	20

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA or PFTrDA	Perfluorotridecanoic acid
PFTeA or PFTA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid or 6:2 Fluorotelomersulfonate
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid or 8:2 Fluorotelomersulfonate

L2359293

Data Usability Summary Report
for Alpha Analytical Labs
SDG Number: L2359293

3 Ground Water Samples, 1 Field Blank,
and 1 Trip Blank
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contains the results of 1,4-dioxane analyses for 2 ground water samples; results of volatile analyses for 1 ground water sample and 1 trip blank; results of PFAS analyses for 2 ground water samples and 1 field blank; results of arsenic, sodium, semi-volatile, SIM semi-volatile, pesticide, PCB, reactive cyanide, and reactive sulfide analyses for 1 ground water sample.

The overall performances of the analyses are acceptable. Alpha Analytical Labs did fulfill the requirements of the analytical methods.

The data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The "not detected" semi-volatile result for carbazole was qualified as "estimated" (UJ) for sample WC-1 because 1 of 2 percent recoveries for carbazole was below QC limits, but not below 30% in the associated aqueous LCS/LCSD.

- The positive SIM semi-volatile result for benzo(a)anthracene was qualified as "not detected" (U) for sample WC-1 because the level reported in the sample was not significantly greater than (more than 5 times) the highest associated blank level.

- The "not detected" pesticide results for 22 target pesticides were qualified as "estimated" (UJ) for sample WC-1 because 1 of 2 surrogate recoveries was outside QC limits, but not below 10% on both columns in the sample.

- The "not detected" PFAS results for NMeFOSAA, NEtFOSAA, and NMeFOSE were qualified as "estimated" (UJ) for sample TFE because percent recoveries for the surrogates used to quantitate these PFAS were below QC limits, nut not below 10% in the sample.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
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- The positive PFAS results for PFPeA were qualified as “estimated” (J) for samples MW-3 and TFE because the percent recoveries for PFPeA were above QC limits in the associated continuing calibrations.

- The positive metal result for arsenic was qualified as “estimated, biased high” (J+) for sample WC-1 because the percent recovery for arsenic was above QC limits in the associated aqueous batch spike sample.

All data that are not qualified rejected (R) are considered usable with estimated (J-, J, J+, or UJ) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

Qualified Data Section

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-01D	Date Collected	: 10/06/23 10:25
Client ID	: MW-3	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/19/23 12:07
Sample Matrix	: WATER	Dilution Factor	: 100
Analytical Method	: 1,8260D	Analyst	: PID
Lab File ID	: VE231019A17	Instrument ID	: ELAINE
Sample Amount	: 0.1 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	250	70.	U
75-34-3	1,1-Dichloroethane	ND	250	70.	U
67-66-3	Chloroform	ND	250	70.	U
56-23-5	Carbon tetrachloride	ND	50	13.	U
78-87-5	1,2-Dichloropropane	ND	100	14.	U
124-48-1	Dibromochloromethane	ND	50	15.	U
79-00-5	1,1,2-Trichloroethane	ND	150	50.	U
127-18-4	Tetrachloroethene	ND	50	18.	U
108-90-7	Chlorobenzene	15000	250	70.	
75-69-4	Trichlorofluoromethane	ND	250	70.	U
107-06-2	1,2-Dichloroethane	ND	50	13.	U
71-55-6	1,1,1-Trichloroethane	ND	250	70.	U
75-27-4	Bromodichloromethane	ND	50	19.	U
10061-02-6	trans-1,3-Dichloropropene	ND	50	16.	U
10061-01-5	cis-1,3-Dichloropropene	ND	50	14.	U
75-25-2	Bromoform	ND	200	65.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	17.	U
71-43-2	Benzene	690	50	16.	
108-88-3	Toluene	ND	250	70.	U
100-41-4	Ethylbenzene	ND	250	70.	U
74-87-3	Chloromethane	ND	250	70.	U
74-83-9	Bromomethane	ND	250	70.	U
75-01-4	Vinyl chloride	ND	100	7.1	U
75-00-3	Chloroethane	ND	250	70.	U
75-35-4	1,1-Dichloroethene	ND	50	17.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-01D	Date Collected	: 10/06/23 10:25
Client ID	: MW-3	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/19/23 12:07
Sample Matrix	: WATER	Dilution Factor	: 100
Analytical Method	: 1,8260D	Analyst	: PID
Lab File ID	: VE231019A17	Instrument ID	: ELAINE
Sample Amount	: 0.1 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
156-60-5	trans-1,2-Dichloroethene	ND	250	70.	U
79-01-6	Trichloroethene	ND	50	18.	U
95-50-1	1,2-Dichlorobenzene	ND	250	70.	U
541-73-1	1,3-Dichlorobenzene	ND	250	70.	U
106-46-7	1,4-Dichlorobenzene	ND	250	70.	U
1634-04-4	Methyl tert butyl ether	ND	250	70.	U
179601-23-1	p/m-Xylene	ND	250	70.	U
95-47-6	o-Xylene	ND	250	70.	U
156-59-2	cis-1,2-Dichloroethene	ND	250	70.	U
100-42-5	Styrene	ND	250	70.	U
75-71-8	Dichlorodifluoromethane	ND	500	100	U
67-64-1	Acetone	ND	500	150	U
75-15-0	Carbon disulfide	ND	500	100	U
78-93-3	2-Butanone	ND	500	190	U
108-10-1	4-Methyl-2-pentanone	ND	500	100	U
591-78-6	2-Hexanone	ND	500	100	U
74-97-5	Bromochloromethane	ND	250	70.	U
106-93-4	1,2-Dibromoethane	ND	200	65.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	70.	U
98-82-8	Isopropylbenzene	ND	250	70.	U
87-61-6	1,2,3-Trichlorobenzene	ND	250	70.	U
120-82-1	1,2,4-Trichlorobenzene	ND	250	70.	U
79-20-9	Methyl Acetate	ND	200	23.	U
110-82-7	Cyclohexane	ND	1000	27.	U
123-91-1	1,4-Dioxane	ND	25000	6100	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-01D	**Date Collected**	: 10/06/23 10:25
Client ID	: MW-3	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/19/23 12:07
Sample Matrix	: WATER	**Dilution Factor**	: 100
Analytical Method	: 1,8260D	**Analyst**	: PID
Lab File ID	: VE231019A17	**Instrument ID**	: ELAINE
Sample Amount	: 0.1 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	250	70.	U
108-87-2	Methyl cyclohexane	ND	1000	40.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-05	Date Collected	: 10/06/23 00:00
Client ID	: TRIP BLANK	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/16/23 19:22
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260D	Analyst	: MJV
Lab File ID	: V08231016N09	Instrument ID	: VOA108
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-05	Date Collected	: 10/06/23 00:00
Client ID	: TRIP BLANK	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/16/23 19:22
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260D	Analyst	: MJV
Lab File ID	: V08231016N09	Instrument ID	: VOA108
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	61.	U

Results Summary
Form 1
Volatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-05	**Date Collected**	: 10/06/23 00:00
Client ID	: TRIP BLANK	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/16/23 19:22
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 1,8260D	**Analyst**	: MJV
Lab File ID	: V08231016N09	**Instrument ID**	: VOA108
Sample Amount	: 10 ml	**GC Column**	: RTX-502.2
Level	: LOW	**%Solids**	: N/A
Extract Volume (MeOH)	: N/A	**Injection Volume**	: N/A

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-06	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/11/23 20:26
Sample Matrix	: WATER	Date Extracted	: 10/11/23
Analytical Method	: 1,8270E	Dilution Factor	: 1
Lab File ID	: 59293-06	Analyst	: SZ
Sample Amount	: 275 ml	Instrument ID	: SV106
Extraction Method	: EPA 3510C	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.50	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	1.6	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.2	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.93	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.49	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.38	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.53	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.50	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.69	U
78-59-1	Isophorone	ND	5.0	1.2	U
98-95-3	Nitrobenzene	ND	2.0	0.77	U
86-30-6	NDPA/DPA	ND	2.0	0.42	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	1.5	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.2	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.39	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.3	U
84-66-2	Diethyl phthalate	ND	5.0	0.38	U
131-11-3	Dimethyl phthalate	ND	5.0	1.8	U
92-52-4	Biphenyl	ND	2.0	0.46	U
106-47-8	4-Chloroaniline	ND	5.0	1.1	U
88-74-4	2-Nitroaniline	ND	5.0	0.50	U

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-06	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/11/23 20:26
Sample Matrix	: WATER	Date Extracted	: 10/11/23
Analytical Method	: 1,8270E	Dilution Factor	: 1
Lab File ID	: 59293-06	Analyst	: SZ
Sample Amount	: 275 ml	Instrument ID	: SV106
Extraction Method	: EPA 3510C	GC Column	: RTX5-MS
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

		ug/L				
CAS NO.	Parameter	Results	RL	MDL	Qualifier	
99-09-2	3-Nitroaniline	ND	5.0	0.81	U	
100-01-6	4-Nitroaniline	ND	5.0	0.80	U	
132-64-9	Dibenzofuran	ND	2.0	0.50	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.44	U	
98-86-2	Acetophenone	ND	5.0	0.53	U	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.61	U	
59-50-7	p-Chloro-m-cresol	ND	2.0	0.35	U	
95-57-8	2-Chlorophenol	ND	2.0	0.48	U	
120-83-2	2,4-Dichlorophenol	ND	5.0	0.41	U	
105-67-9	2,4-Dimethylphenol	ND	5.0	1.8	U	
88-75-5	2-Nitrophenol	ND	10	0.85	U	
100-02-7	4-Nitrophenol	ND	10	0.67	U	
51-28-5	2,4-Dinitrophenol	ND	20	6.6	U	
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.8	U	
108-95-2	Phenol	2.1	5.0	0.57	J	
95-48-7	2-Methylphenol	ND	5.0	0.49	U	
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.48	U	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.77	U	
86-74-8	Carbazole	ND	2.0	0.49	U	UJ
1912-24-9	Atrazine	ND	10	0.76	U	
100-52-7	Benzaldehyde	ND	5.0	0.53	U	
105-60-2	Caprolactam	ND	10	3.3	U	

Results Summary
Form 1
Semivolatile Organics by GC/MS

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-06	**Date Collected**	: 10/06/23 11:30
Client ID	: WC-1	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/11/23 20:26
Sample Matrix	: WATER	**Date Extracted**	: 10/11/23
Analytical Method	: 1,8270E	**Dilution Factor**	: 1
Lab File ID	: 59293-06	**Analyst**	: SZ
Sample Amount	: 275 ml	**Instrument ID**	: SV106
Extraction Method	: EPA 3510C	**GC Column**	: RTX5-MS
Extract Volume	: 1000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ug/L			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.84	U

Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-06	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/12/23 20:12
Sample Matrix	: WATER	Date Extracted	: 10/11/23
Analytical Method	: 1,8270E-SIM	Dilution Factor	: 1
Lab File ID	: 59293-06	Analyst	: DV
Sample Amount	: 275 ml	Instrument ID	: SV128
Extraction Method	: EPA 3510C	GC Column	: RXI-5SilM
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

		ug/L				
CAS NO.	Parameter	Results	RL	MDL	Qualifier	
83-32-9	Acenaphthene	ND	0.10	0.01	U	
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U	
206-44-0	Fluoranthene	0.03	0.10	0.02	J	
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U	
91-20-3	Naphthalene	0.06	0.10	0.05	J	
56-55-3	Benzo(a)anthracene	0.03	0.10	0.02	J	U
50-32-8	Benzo(a)pyrene	0.03	0.10	0.02	J	
205-99-2	Benzo(b)fluoranthene	0.03	0.10	0.01	J	
207-08-9	Benzo(k)fluoranthene	0.02	0.10	0.01	J	
218-01-9	Chrysene	0.02	0.10	0.01	J	
208-96-8	Acenaphthylene	ND	0.10	0.01	U	
120-12-7	Anthracene	0.01	0.10	0.01	J	
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U	
86-73-7	Fluorene	ND	0.10	0.01	U	
85-01-8	Phenanthrene	0.05	0.10	0.02	J	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U	
129-00-0	Pyrene	0.04	0.10	0.02	J	
91-57-6	2-Methylnaphthalene	ND	0.10	0.02	U	
87-86-5	Pentachlorophenol	ND	0.80	0.01	U	
118-74-1	Hexachlorobenzene	ND	0.80	0.01	U	
67-72-1	Hexachloroethane	ND	0.80	0.06	U	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-01	**Date Collected**	: 10/06/23 10:25
Client ID	: MW-3	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/15/23 07:23
Sample Matrix	: WATER	**Date Extracted**	: 10/13/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610152306	**Analyst**	: TPR
Sample Amount	: 260 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	4560	144	32.6	

Results Summary
Form 1
1,4 Dioxane by 8270E-SIM

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-02	**Date Collected**	: 10/06/23 12:00
Client ID	: TFE	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/15/23 07:48
Sample Matrix	: WATER	**Date Extracted**	: 10/13/23
Analytical Method	: 1,8270E-SIM	**Dilution Factor**	: 1
Lab File ID	: F610152307	**Analyst**	: TPR
Sample Amount	: 260 ml	**Instrument ID**	: GCMS6
Extraction Method	: EPA 3510C	**GC Column**	: RTX-5
Extract Volume	: 2500 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 1 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
123-91-1	1,4-Dioxane	ND	144	32.6	U

Results Summary
Form 1
Polychlorinated Biphenyls by GC

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-06	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/17/23 22:41
Sample Matrix	: WATER	Date Extracted	: 10/17/23
Analytical Method	: 1,8082A	Dilution Factor	: 1
Lab File ID	: P2231017a-16	Analyst	: ER
Sample Amount	: 140 ml	Instrument ID	: PEST2
Extraction Method	: EPA 3510C	GC Column	: CLP-Pesticide
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL
Sulfur Cleanup	: Y		

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
12674-11-2	Aroclor 1016	ND	0.071	0.061	U
11104-28-2	Aroclor 1221	ND	0.071	0.061	U
11141-16-5	Aroclor 1232	ND	0.071	0.061	U
53469-21-9	Aroclor 1242	ND	0.071	0.061	U
12672-29-6	Aroclor 1248	ND	0.071	0.061	U
11097-69-1	Aroclor 1254	ND	0.071	0.061	U
11096-82-5	Aroclor 1260	ND	0.071	0.061	U
37324-23-5	Aroclor 1262	ND	0.071	0.061	U
11100-14-4	Aroclor 1268	ND	0.071	0.061	U
1336-36-3	PCBs, Total	ND	0.071	0.061	U

Results Summary
Form 1
Organochlorine Pesticides by GC

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-06	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/12/23 12:26
Sample Matrix	: WATER	Date Extracted	: 10/11/23
Analytical Method	: 1,8081B	Dilution Factor	: 1
Lab File ID	: 11231012a-26	Analyst	: AKM
Sample Amount	: 140 ml	Instrument ID	: PEST11
Extraction Method	: EPA 3510C	GC Column	: CLPPesticides
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL
Sulfur Cleanup	: N		

		ug/L				
CAS NO.	Parameter	Results	RL	MDL	Qualifier	
319-86-8	Delta-BHC	ND	0.014	0.003	U	UJ
58-89-9	Lindane	ND	0.014	0.003	U	UJ
319-84-6	Alpha-BHC	ND	0.014	0.003	U	UJ
319-85-7	Beta-BHC	ND	0.014	0.004	U	UJ
76-44-8	Heptachlor	ND	0.014	0.002	U	UJ
309-00-2	Aldrin	ND	0.014	0.002	U	UJ
1024-57-3	Heptachlor epoxide	ND	0.014	0.003	U	UJ
72-20-8	Endrin	ND	0.029	0.003	U	UJ
7421-93-4	Endrin aldehyde	ND	0.029	0.006	U	UJ
53494-70-5	Endrin ketone	ND	0.029	0.003	U	UJ
60-57-1	Dieldrin	ND	0.029	0.003	U	UJ
72-55-9	4,4'-DDE	ND	0.029	0.003	U	UJ
72-54-8	4,4'-DDD	ND	0.029	0.003	U	UJ
50-29-3	4,4'-DDT	ND	0.029	0.003	U	UJ
959-98-8	Endosulfan I	ND	0.014	0.002	U	UJ
33213-65-9	Endosulfan II	ND	0.029	0.004	U	UJ
1031-07-8	Endosulfan sulfate	ND	0.029	0.003	U	UJ
72-43-5	Methoxychlor	ND	0.143	0.005	U	UJ
8001-35-2	Toxaphene	ND	0.143	0.045	U	UJ
5103-71-9	cis-Chlordane	ND	0.014	0.005	U	UJ
5103-74-2	trans-Chlordane	ND	0.014	0.004	U	UJ

Results Summary
Form 1
Organochlorine Pesticides by GC

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-06	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/12/23 12:26
Sample Matrix	: WATER	Date Extracted	: 10/11/23
Analytical Method	: 1,8081B	Dilution Factor	: 1
Lab File ID	: 11231012a-26	Analyst	: AKM
Sample Amount	: 140 ml	Instrument ID	: PEST11
Extraction Method	: EPA 3510C	GC Column	: CLPPesticides
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL
Sulfur Cleanup	: N		

		ug/L				
CAS NO.	Parameter	Results	RL	MDL	Qualifier	
57-74-9	Chlordane	ND	0.143	0.033	U	UJ

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-01	Date Collected	: 10/06/23 10:25
Client ID	: MW-3	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 21:49
Sample Matrix	: WATER	Date Extracted	: 10/21/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI07_231025_22	Analyst	: RS
Sample Amount	: 536.59 g	Instrument ID	: LCMS07
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	23.5	5.96	0.954	
2706-90-3	Perfluoropentanoic Acid (PFPeA)	13.4	2.98	0.798	J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	4.70	1.49	0.499	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.96	1.56	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	16.3	1.49	0.440	
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	0.440	1.49	0.261	J
375-85-9	Perfluoroheptanoic Acid (PFHpA)	9.35	1.49	0.298	
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	2.57	1.49	0.358	
335-67-1	Perfluorooctanoic Acid (PFOA)	36.0	1.49	0.648	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.96	2.01	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.49	0.402	U
375-95-1	Perfluorononanoic Acid (PFNA)	52.8	1.49	0.470	
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	23.8	1.49	0.678	
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.49	0.604	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.96	2.32	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.49	0.462	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.49	0.812	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.49	0.648	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-01	Date Collected	: 10/06/23 10:25
Client ID	: MW-3	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 21:49
Sample Matrix	: WATER	Date Extracted	: 10/21/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI07_231025_22	Analyst	: RS
Sample Amount	: 536.59 g	Instrument ID	: LCMS07
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.49	0.343	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.49	0.402	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.49	0.805	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.49	0.686	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.49	0.559	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.49	0.395	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.96	0.835	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.96	0.939	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.49	0.566	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.96	1.23	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.96	1.23	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.49	0.648	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.49	0.686	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.9	3.50	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-01	**Date Collected**	: 10/06/23 10:25
Client ID	: MW-3	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 21:49
Sample Matrix	: WATER	**Date Extracted**	: 10/21/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI07_231025_22	**Analyst**	: RS
Sample Amount	: 536.59 g	**Instrument ID**	: LCMS07
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.9	1.83	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.98	0.425	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.98	0.395	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.98	0.328	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.98	1.76	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.45	2.46	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	37.3	8.72	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	37.3	5.88	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-02	Date Collected	: 10/06/23 12:00
Client ID	: TFE	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 22:28
Sample Matrix	: WATER	Date Extracted	: 10/21/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI07_231025_25	Analyst	: RS
Sample Amount	: 514.41 g	Instrument ID	: LCMS07
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

CAS NO.	Parameter	ng/l Results	RL	MDL	Qualifier	
375-22-4	Perfluorobutanoic Acid (PFBA)	9.55	6.22	0.995		
2706-90-3	Perfluoropentanoic Acid (PFPeA)	9.77	3.11	0.832		J
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	1.80	1.56	0.521		
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	6.22	1.62	U	
307-24-4	Perfluorohexanoic Acid (PFHxA)	9.74	1.56	0.459		
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.56	0.272	U	
375-85-9	Perfluoroheptanoic Acid (PFHpA)	10.6	1.56	0.311		
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	3.67	1.56	0.373		
335-67-1	Perfluorooctanoic Acid (PFOA)	18.3	1.56	0.676		
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	6.22	2.10	U	
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.56	0.420	U	
375-95-1	Perfluorononanoic Acid (PFNA)	10.2	1.56	0.490		
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	20.3	1.56	0.708		
335-76-2	Perfluorodecanoic Acid (PFDA)	16.0	1.56	0.630		
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	6.22	2.42	U	
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.56	0.482	U	
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.56	0.848	U	UJ
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	2.01	1.56	0.676		

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-02	Date Collected	: 10/06/23 12:00
Client ID	: TFE	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 22:28
Sample Matrix	: WATER	Date Extracted	: 10/21/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI07_231025_25	Analyst	: RS
Sample Amount	: 514.41 g	Instrument ID	: LCMS07
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

CAS NO.	Parameter	ng/l Results	RL	MDL	Qualifier	
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.56	0.358	U	
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.56	0.420	U	
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.56	0.840	U	UJ
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.56	0.715	U	
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.56	0.583	U	
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.56	0.412	U	
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	6.22	0.871	U	
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	6.22	0.980	U	
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.56	0.591	U	
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	6.22	1.28	U	
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	6.22	1.28	U	
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.56	0.676	U	
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.56	0.715	U	
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	15.6	3.65	U	UJ

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-02	Date Collected	: 10/06/23 12:00
Client ID	: TFE	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 22:28
Sample Matrix	: WATER	Date Extracted	: 10/21/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI07_231025_25	Analyst	: RS
Sample Amount	: 514.41 g	Instrument ID	: LCMS07
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	15.6	1.90	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	3.11	0.443	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	3.11	0.412	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	3.11	0.342	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	3.11	1.84	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.78	2.57	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	38.9	9.10	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	38.9	6.14	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-04	Date Collected	: 10/06/23 12:35
Client ID	: FB-4	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 22:41
Sample Matrix	: WATER	Date Extracted	: 10/21/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI07_231025_26	Analyst	: RS
Sample Amount	: 549.5 g	Instrument ID	: LCMS07
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
375-22-4	Perfluorobutanoic Acid (PFBA)	ND	5.82	0.932	U
2706-90-3	Perfluoropentanoic Acid (PFPeA)	ND	2.91	0.779	U
375-73-5	Perfluorobutanesulfonic Acid (PFBS)	ND	1.46	0.488	U
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.82	1.52	U
307-24-4	Perfluorohexanoic Acid (PFHxA)	ND	1.46	0.429	U
2706-91-4	Perfluoropentanesulfonic Acid (PFPeS)	ND	1.46	0.255	U
375-85-9	Perfluoroheptanoic Acid (PFHpA)	ND	1.46	0.291	U
355-46-4	Perfluorohexanesulfonic Acid (PFHxS)	ND	1.46	0.349	U
335-67-1	Perfluorooctanoic Acid (PFOA)	ND	1.46	0.633	U
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.82	1.96	U
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND	1.46	0.393	U
375-95-1	Perfluorononanoic Acid (PFNA)	ND	1.46	0.458	U
1763-23-1	Perfluorooctanesulfonic Acid (PFOS)	ND	1.46	0.662	U
335-76-2	Perfluorodecanoic Acid (PFDA)	ND	1.46	0.590	U
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.82	2.26	U
68259-12-1	Perfluorononanesulfonic Acid (PFNS)	ND	1.46	0.451	U
2355-31-9	N-Methyl Perfluorooctanesulfonamidoaceti c Acid (NMeFOSAA)	ND	1.46	0.793	U
2058-94-8	Perfluoroundecanoic Acid (PFUnA)	ND	1.46	0.633	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-04	**Date Collected**	: 10/06/23 12:35
Client ID	: FB-4	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/25/23 22:41
Sample Matrix	: WATER	**Date Extracted**	: 10/21/23
Analytical Method	: 144,1633	**Dilution Factor**	: 1
Lab File ID	: SCI07_231025_26	**Analyst**	: RS
Sample Amount	: 549.5 g	**Instrument ID**	: LCMS07
Extraction Method	: EPA 1633	**GC Column**	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	**%Solids**	: N/A
GPC Cleanup	: N	**Injection Volume**	: 3 uL

		ng/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
335-77-3	Perfluorodecanesulfonic Acid (PFDS)	ND	1.46	0.335	U
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND	1.46	0.393	U
2991-50-6	N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.46	0.786	U
307-55-1	Perfluorododecanoic Acid (PFDoA)	ND	1.46	0.670	U
72629-94-8	Perfluorotridecanoic Acid (PFTrDA)	ND	1.46	0.546	U
376-06-7	Perfluorotetradecanoic Acid (PFTeDA)	ND	1.46	0.386	U
13252-13-6	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND	5.82	0.815	U
919005-14-4	4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	5.82	0.917	U
79780-39-5	Perfluorododecanesulfonic Acid (PFDoS)	ND	1.46	0.553	U
756426-58-1	9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	5.82	1.20	U
763051-92-9	11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	5.82	1.20	U
31506-32-8	N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND	1.46	0.633	U
4151-50-2	N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND	1.46	0.670	U
24448-09-7	N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND	14.6	3.42	U

Results Summary
Form 1
Perfluorinated Alkyl Acids by EPA 1633

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-04	Date Collected	: 10/06/23 12:35
Client ID	: FB-4	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/25/23 22:41
Sample Matrix	: WATER	Date Extracted	: 10/21/23
Analytical Method	: 144,1633	Dilution Factor	: 1
Lab File ID	: SCI07_231025_26	Analyst	: RS
Sample Amount	: 549.5 g	Instrument ID	: LCMS07
Extraction Method	: EPA 1633	GC Column	: Acquity UPLC BEH C18
Extract Volume	: 4000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 3 uL

		ng/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
1691-99-2	N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND	14.6	1.78	U
377-73-1	Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND	2.91	0.415	U
863090-89-5	Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND	2.91	0.386	U
113507-82-7	Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND	2.91	0.320	U
151772-58-6	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND	2.91	1.72	U
356-02-5	3-Perfluoropropyl Propanoic Acid (3: 3FTCA)	ND	7.28	2.40	U
914637-49-3	2H,2H,3H,3H-Perfluorooctanoic Acid (5: 3FTCA)	ND	36.4	8.52	U
812-70-4	3-Perfluoroheptyl Propanoic Acid (7: 3FTCA)	ND	36.4	5.74	U

Form 1
METALS

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-03	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/12/23 12:26
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 19,200.7	Analyst	: DHL
Lab File ID	: WG1838701.pdf	Instrument ID	: TRACE6
Sample Amount	: 50ml	%Solids	: N/A
Digestion Method	: EPA 3005A	Date Digested	: 10/12/23

		mg/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
7440-38-2	Arsenic, Total	0.147	0.0050	0.0019	J+

Form 1
METALS

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: L2359293-03	**Date Collected**	: 10/06/23 11:30
Client ID	: WC-1	**Date Received**	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	**Date Analyzed**	: 10/16/23 21:06
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 19,200.7	**Analyst**	: AMW
Lab File ID	: WG1840198.pdf	**Instrument ID**	: TRACE8
Sample Amount	: 50ml	**%Solids**	: N/A
Digestion Method	: EPA 3005A	**Date Digested**	: 10/13/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
7440-23-5	Sodium, Total	568.	2.00	0.120	

Form 1
WETCHEM

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: L2359293-06	Date Collected	: 10/06/23 11:30
Client ID	: WC-1	Date Received	: 10/06/23
Sample Location	: 33 RIVERSIDE AVE, RENSSELAER NY	Date Analyzed	: 10/11/23 19:38
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 125,7.3	Analyst	: QJM
Lab File ID	: WG1838487.csv	Instrument ID	: GENSYS10VI
Sample Amount	:	%Solids	: N/A
Digestion Method	:	Date Digested	: 10/11/23

		mg/l			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
57-12-5	Cyanide, Reactive	ND	1.0	1.0	U

Form 1
WETCHEM

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Lab ID	: WG1838490-3	**Date Collected**	: 10/06/23 11:30
Client ID	: WC-1DUP	**Date Received**	: 10/06/23
Sample Location	:	**Date Analyzed**	: 10/11/23 20:00
Sample Matrix	: WATER	**Dilution Factor**	: 1
Analytical Method	: 125,7.3	**Analyst**	: QJM
Lab File ID	: WG1838490.csv	**Instrument ID**	: GENSYS10VI
Sample Amount	:	**%Solids**	: N/A
Digestion Method	:	**Date Digested**	: 10/11/23

		mg/l			
CAS NO.	**Parameter**	**Results**	**RL**	**MDL**	**Qualifier**
NONE	Sulfide, Reactive	ND	1.0	1.0	U

VOC Data Section

QA/QC Review of Method 8260C Baseline Volatiles Data
for Alpha Analytical, SDG Number: L2359293

1 Ground Water Sample and 1 Trip Blank
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for acetone, 2-butanone, 4-methyl-2-pentanone, and 1,1,2-trichloroethane were below the method minimums, but not below 0.010 for ELAINE on 10-02-23. The average RRFs for acetone, 2-butanone, 4-methyl-2-pentanone, and 1,1,2-trichloroethane were below the method minimums, but not below 0.010 for VOA108 on 10-06-23. No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no average RRF is less than 0.010.

The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The average RRFs for methyl acetate, 2-butanone, bromodichloromethane, 4-methyl-2-pentanone, and 1,1,2-trichloroethane were below the method minimums, but not below 0.010 on 10-16-23 (V08231016N01). The RRFs for bromomethane, acetone, 2-butanone, bromodichloromethane, 4-methyl-2-pentanone, and 1,1,2-trichloroethane were below the method minimums, but not below 0.010 on 10-19-23 (VE231019A01). The %Ds for bromomethane and acetone were above the method maximum on 10-16-23 (V08231016N01). The %D for bromomethane was above the method maximum on 10-19-23 (VE231019A01). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.010), as required.

The %Ds for bromomethane and acetone were above the allowable maximum (20%) on 10-16-23 (V08231016N01). The %Ds for bromomethane and 1,4-dioxane were above the allowable maximum (20%) on 10-19-23 (VE231019A01). Positive results for these compounds should be considered estimated (J) in associated samples.

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Blanks: The analyses of the method and trip blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water sample and trip blank.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1840747-3/4 and WG1842158-3/4.

Compound ID: Checked surrogate and compound results were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Initial Calibration Summary
Form 6
Volatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: ELAINE**	**Ical Ref**	**: ICAL20415**
Calibration dates	**: 10/02/23 13:23 10/02/23 17:04**		

Calibration Files

L11 =VE231002A03.D L1 =VE231002A04.D L2 =VE231002A06.D L3 =VE231002A08.D L4 =VE231002A09.D

L6 =VE231002A10.D L8 =VE231002A11.D L10 =VE231002A12.D

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------									
2)	TP	Dichlorodifluo		0.202	0.241	0.290	0.280	0.304	0.307	0.299	0.275	14.28
3)	TP	Chloromethane		0.262	0.285	0.300	0.284	0.287	0.287	0.280	0.284	4.00
4)	TC	Vinyl chloride	0.291	0.224	0.276	0.309	0.295	0.307	0.310	0.299	0.289	9.85
5)	TP	Bromomethane		0.196	0.201	0.170	0.158	0.167	0.178	0.180	0.179	8.75
6)	TP	Chloroethane		0.147	0.180	0.186	0.179	0.183	0.181	0.172	0.175	7.47
7)	TP	Trichlorofluor		0.244	0.317	0.362	0.353	0.384	0.387	0.372	0.346	14.64
8)	TP	Ethyl ether		0.091	0.107	0.112	0.106	0.112	0.112	0.111	0.107	7.21
10)	TC	1,1-Dichloroet		0.158	0.191	0.212	0.204	0.215	0.216	0.213	0.201	10.50
11)	TP	Carbon disulfide		0.517	0.602	0.626	0.583	0.607	0.622	0.611	0.595	6.29
12)	TP	Freon-113		0.148	0.178	0.217	0.213	0.223	0.228	0.225	0.205	14.66
13)	TP	Iodomethane		0.200	0.230	0.278	0.298	0.310	0.306	0.292	0.274	15.33
14)	TP	Acrolein		0.035	0.028	0.029	0.029	0.030	0.029	0.029	0.030	8.45
15)	TP	Methylene chlo		0.193	0.234	0.235	0.225	0.225	0.223	0.223	0.223	6.33
17)	TP	Acetone			0.066	0.049	0.047	0.045	0.046	0.044	0.049	16.36
18)	TP	trans-1,2-Dich		0.181	0.208	0.229	0.219	0.227	0.231	0.229	0.218	8.36
19)	TP	Methyl acetate		0.157	0.120	0.106	0.106	0.110	0.110	0.110	0.117	15.56
21)	TP	Methyl tert butyl ether		0.443	0.517	0.541	0.536	0.555	0.551	0.545	0.527	7.37
22)	TP	tert-Butyl alc		0.012	0.014	0.015	0.015	0.016	0.016	0.015	0.015	8.55
24)	TP	Diisopropyl ether		0.615	0.720	0.731	0.750	0.767	0.771	0.771	0.732	7.56
25)	TP	1,1-Dichloroet		0.370	0.412	0.441	0.423	0.428	0.428	0.430	0.419	5.55
26)	TP	Halothane		0.127	0.161	0.180	0.180	0.187	0.188	0.185	0.172	12.79
27)	TP	Acrylonitrile		0.060	0.052	0.054	0.053	0.054	0.055	0.053	0.054	4.82
28)	TP	Ethyl tert-but		0.607	0.694	0.728	0.731	0.757	0.762	0.767	0.721	7.81
29)	TP	Vinyl acetate		0.379	0.378	0.377	0.366	0.394	0.354	0.388	0.377	3.52
30)	TP	cis-1,2-Dichlo		0.186	0.257	0.262	0.254	0.266	0.259	0.258	0.249	11.33
31)	TP	2,2-Dichloropr		0.299	0.342	0.345	0.329	0.346	0.337	0.330	0.333	4.96
33)	TP	Bromochloromet		0.113	0.128	0.126	0.121	0.119	0.114	0.110	0.119	5.64
34)	TP	Cyclohexane		0.332	0.373	0.453	0.433	0.461	0.470	0.472	0.428	12.71
35)	TC	Chloroform		0.344	0.413	0.398	0.387	0.386	0.391	0.393	0.387	5.48
36)	TP	Ethyl acetate		0.160	0.147	0.163	0.157	0.164	0.163	0.165	0.160	3.82
37)	TP	Carbon tetrachloride	0.310	0.257	0.293	0.330	0.317	0.330	0.341	0.340	0.315	9.03
38)	TP	Tetrahydrofuran			0.044	0.045	0.037	0.043	0.042	0.040	0.042	7.12
39)	S	Dibromofluoromethane	0.289	0.288	0.290	0.283	0.269	0.267	0.269	0.268	0.278	3.75
40)	TP	1,1,1-Trichlor		0.291	0.352	0.368	0.354	0.366	0.379	0.371	0.355	8.27
42)	TP	2-Butanone			0.080	0.064	0.062	0.068	0.069	0.069	0.069	8.84

Initial Calibration Summary
Form 6
Volatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: ELAINE**	**Ical Ref**	**: ICAL20415**
Calibration dates	**: 10/02/23 13:23 10/02/23 17:04**		

Calibration Files

L11 =VE231002A03.D L1 =VE231002A04.D L2 =VE231002A06.D L3 =VE231002A08.D L4 =VE231002A09.D

L6 =VE231002A10.D L8 =VE231002A11.D L10 =VE231002A12.D

	Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
43) TP	1,1-Dichloropr		0.222	0.269	0.303	0.302	0.315	0.318	0.316	0.292	12.00
45) TP	Benzene	1.089	0.807	0.881	0.930	0.908	0.942	0.953	0.948	0.932	8.54
46) TP	Tertiary-Amyl Methyl Ether		0.533	0.605	0.608	0.610	0.631	0.637	0.637	0.609	5.96
47) S	1,2-Dichloroethane-d4	0.301	0.300	0.307	0.296	0.280	0.278	0.287	0.295	0.293	3.59
48) T	1,2-Dichloroet		0.278	0.302	0.302	0.293	0.297	0.297	0.297	0.295	2.85
51) TP	Methyl cyclohe		0.291	0.347	0.416	0.402	0.433	0.452	0.451	0.399	14.98
52) TP	Trichloroethene	0.250	0.177	0.231	0.246	0.245	0.253	0.262	0.259	0.240	11.34
54) TP	Dibromomethane		0.132	0.133	0.134	0.130	0.134	0.136	0.137	0.134	1.83
55) TC	1,2-Dichloropr		0.201	0.243	0.247	0.244	0.249	0.248	0.250	0.240	7.18
57) TP	2-Chloroethyl		0.109	0.109	0.121	0.121	0.129	0.131	0.127	0.121	7.49
58) TP	Bromodichlorom		0.270	0.319	0.323	0.316	0.326	0.324	0.326	0.315	6.39
61) TP	1,4-Dioxane		0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002#	3.51
62) TP	cis-1,3-Dichlo		0.319	0.346	0.376	0.379	0.388	0.389	0.384	0.369	7.19
63) I	Chlorobenzene-d5	----------ISTD----------									
64) S	Toluene-d8	1.257	1.260	1.258	1.255	1.264	1.248	1.233	1.251	1.253	0.78
65) TC	Toluene		0.601	0.668	0.689	0.680	0.690	0.700	0.699	0.675	5.10
66) TP	4-Methyl-2-pen			0.067	0.074	0.075	0.078	0.078	0.077	0.075	5.59
67) TP	Tetrachloroethene		0.241	0.267	0.305	0.305	0.313	0.319	0.313	0.295	9.87
69) TP	trans-1,3-Dich		0.333	0.324	0.363	0.378	0.381	0.386	0.381	0.364	6.96
71) TP	Ethyl methacry		0.221	0.240	0.248	0.257	0.262	0.260	0.259	0.250	5.93
72) TP	1,1,2-Trichlor		0.146	0.164	0.176	0.182	0.186	0.187	0.186	0.175#	8.74
73) TP	Chlorodibromom		0.215	0.241	0.265	0.281	0.289	0.294	0.294	0.268	11.21
74) TP	1,3-Dichloropr		0.308	0.325	0.354	0.367	0.370	0.371	0.371	0.352	7.21
75) TP	1,2-Dibromoethane		0.191	0.197	0.218	0.222	0.227	0.230	0.229	0.216	7.38
77) TP	2-Hexanone		0.138	0.124	0.124	0.124	0.128	0.127	0.125	0.127	4.06
78) TP	Chlorobenzene		0.647	0.752	0.780	0.781	0.784	0.789	0.778	0.759	6.68
79) TC	Ethylbenzene		1.132	1.266	1.358	1.344	1.361	1.375	1.352	1.313	6.63
80) TP	1,1,1,2-Tetrac		0.242	0.256	0.278	0.286	0.293	0.291	0.288	0.276	7.06
81) TP	p/m Xylene		0.460	0.518	0.548	0.533	0.542	0.549	0.543	0.528	5.99
82) TP	o Xylene		0.435	0.502	0.534	0.530	0.537	0.539	0.530	0.515	7.25
83) TP	Styrene		0.730	0.835	0.874	0.874	0.888	0.893	0.884	0.854	6.78
84) I	1,4-Dichlorobenzene-d4	----------ISTD----------									
85) TP	Bromoform		0.247	0.263	0.270	0.284	0.296	0.303	0.305	0.281	7.84
87) TP	Isopropylbenzene		1.974	2.304	2.396	2.371	2.476	2.611	2.566	2.385	8.85
88) S	4-Bromofluorobenzene	0.828	0.829	0.833	0.820	0.832	0.842	0.858	0.865	0.839	1.87
89) TP	Bromobenzene		0.575	0.588	0.574	0.582	0.601	0.620	0.603	0.592	2.86

Initial Calibration Summary
Form 6
Volatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: ELAINE**	**Ical Ref**	**: ICAL20415**
Calibration dates	**: 10/02/23 13:23 10/02/23 17:04**		

Calibration Files
L11 =VE231002A03.D L1 =VE231002A04.D L2 =VE231002A06.D L3 =VE231002A08.D L4 =VE231002A09.D
L6 =VE231002A10.D L8 =VE231002A11.D L10 =VE231002A12.D

	Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
90) TP	n-Propylbenzene		2.347	2.690	2.775	2.746	2.871	3.011	2.892	2.762	7.66
91) TP	1,4-Dichlorobu		0.547	0.582	0.571	0.574	0.600	0.619	0.610	0.586	4.28
92) TP	1,1,2,2-Tetrac		0.410	0.448	0.431	0.428	0.450	0.447	0.451	0.438	3.54
93) TP	4-Ethyltoluene		1.973	2.266	2.397	2.358	2.432	2.535	2.446	2.344	7.81
94) TP	2-Chlorotoluene		1.459	1.678	1.661	1.623	1.669	1.729	1.705	1.646	5.42
95) TP	1,3,5-Trimethy		1.759	2.007	2.074	2.038	2.098	2.180	2.135	2.042	6.73
96) TP	1,2,3-Trichlor		0.357	0.341	0.325	0.329	0.345	0.357	0.352	0.344	3.77
97) TP	trans-1,4-Dich		0.110	0.123	0.122	0.125	0.132	0.139	0.136	0.127	7.88
98) TP	4-Chlorotoluene		1.493	1.705	1.713	1.689	1.747	1.838	1.803	1.713	6.48
99) TP	tert-Butylbenzene		1.402	1.662	1.770	1.728	1.793	1.863	1.798	1.717	8.87
102) TP	1,2,4-Trimethy		1.671	1.997	2.047	2.021	2.093	2.154	2.126	2.016	8.04
103) TP	sec-Butylbenzene		2.042	2.394	2.538	2.475	2.586	2.689	2.611	2.476	8.64
104) TP	p-Isopropyltol		1.802	2.100	2.196	2.172	2.256	2.313	2.307	2.164	8.17
105) TP	1,3-Dichlorobe		1.007	1.129	1.155	1.150	1.170	1.193	1.172	1.139	5.41
106) TP	1,4-Dichlorobe		1.088	1.127	1.142	1.149	1.175	1.180	1.185	1.150	3.00
107) TP	p-Diethylbenzene		1.061	1.223	1.285	1.282	1.323	1.343	1.411	1.275	8.71
108) TP	n-Butylbenzene		1.333	1.643	1.777	1.730	1.798	1.851	1.916	1.721	11.14
109) TP	1,2-Dichlorobe		0.940	1.080	1.093	1.085	1.113	1.107	1.127	1.078	5.84
110) TP	1,2,4,5-Tetram		1.639	1.892	1.963	1.974	2.009	2.144	2.179	1.972	9.06
111) TP	1,2-Dibromo-3-		0.060	0.073	0.067	0.074	0.077	0.080	0.082	0.073	10.42
112) TP	1,3,5-Trichlor		0.661	0.744	0.754	0.741	0.735	0.791	0.774	0.743	5.56
113) TP	Hexachlorobuta		0.166	0.207	0.220	0.213	0.214	0.231	0.219	0.210	9.92
114) TP	1,2,4-Trichlor		0.596	0.634	0.645	0.632	0.650	0.677	0.654	0.641	3.89
115) TP	Naphthalene		1.311	1.371	1.427	1.476	1.590	1.644	1.619	1.491	8.69
116) TP	1,2,3-Trichlor		0.546	0.557	0.567	0.569	0.607	0.614	0.604	0.581	4.67

Initial Calibration Summary
Form 6
Volatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: VOA108**	**Ical Ref**	**: ICAL20424**
Calibration dates	**: 10/06/23 19:01 10/07/23 13:13**		

Calibration Files

L11 =V08231007A03.d L1 =V08231007A05.d L2 =V08231006N07.d L3 =V08231006N09.d L4 =V08231006N10.d

L6 =V08231006N11.d L8 =V08231006N12.d L10 =V08231006N13.d

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------									
2)	TP	Dichlorodifluo		0.182	0.283	0.266	0.260	0.266	0.254	0.262	0.253	12.89
3)	TP	Chloromethane		0.247	0.315	0.294	0.281	0.276	0.267	0.273	0.279	7.59
4)	TC	Vinyl chloride	0.289	0.229	0.307	0.290	0.287	0.289	0.282	0.291	0.283	8.09
5)	TP	Bromomethane		0.263	0.289	0.211	0.194	0.201	0.202	0.211	0.224	16.25
6)	TP	Chloroethane		0.159	0.203	0.189	0.185	0.187	0.182	0.191	0.185	7.18
7)	TP	Trichlorofluor		0.293	0.418	0.400	0.389	0.395	0.376	0.392	0.380	10.65
8)	TP	Ethyl ether		0.115	0.124	0.114	0.114	0.117	0.114	0.117	0.116	2.96
10)	TC	1,1-Dichloroet		0.165	0.230	0.213	0.213	0.214	0.209	0.217	0.209	9.85
11)	TP	Carbon disulfide		0.594	0.729	0.707	0.702	0.712	0.694	0.721	0.694	6.58
12)	TP	Freon-113		0.149	0.225	0.220	0.217	0.222	0.213	0.220	0.209	12.90
13)	TP	Iodomethane			0.191	0.267	0.315	0.344	0.345	0.351	*L	0.9992
14)	TP	Acrolein			0.026	0.023	0.023	0.023	0.024	0.024	0.024	5.36
15)	TP	Methylene chlo		0.224	0.264	0.238	0.234	0.235	0.231	0.238	0.238	5.25
17)	TP	Acetone			0.077	0.045	0.040	0.039	0.038	0.040	*L	0.9993
18)	TP	trans-1,2-Dich		0.202	0.256	0.248	0.240	0.243	0.239	0.246	0.239	7.27
19)	TP	Methyl acetate			0.129	0.097	0.094	0.097	0.099	0.102	0.103	12.69
20)	TP	Methyl tert butyl ether		0.453	0.563	0.542	0.542	0.549	0.544	0.557	0.536	7.01
21)	TP	tert-Butyl alc		0.009	0.016	0.015	0.014	0.014	0.014	0.015	0.014	15.70
22)	TP	Diisopropyl ether		0.608	0.738	0.703	0.711	0.724	0.720	0.746	0.707	6.51
23)	TP	1,1-Dichloroet		0.349	0.450	0.434	0.428	0.432	0.423	0.438	0.422	7.87
24)	TP	Halothane		0.121	0.197	0.191	0.189	0.191	0.186	0.192	0.181	14.73
25)	TP	Acrylonitrile			0.050	0.044	0.044	0.044	0.044	0.046	0.046	5.18
26)	TP	Ethyl tert-but		0.549	0.722	0.684	0.700	0.719	0.718	0.743	0.691	9.41
27)	TP	Vinyl acetate			0.394	0.355	0.391	0.390	0.411	0.418	0.393	5.57
28)	TP	cis-1,2-Dichlo		0.229	0.293	0.278	0.271	0.273	0.267	0.274	0.269	7.26
29)	TP	2,2-Dichloropr		0.299	0.389	0.358	0.365	0.364	0.354	0.363	0.356	7.74
30)	TP	Bromochloromet		0.101	0.137	0.133	0.131	0.132	0.130	0.131	0.128	9.57
31)	TP	Cyclohexane		0.242	0.399	0.367	0.365	0.374	0.360	0.375	0.354	14.40
32)	TC	Chloroform		0.375	0.467	0.443	0.436	0.434	0.426	0.434	0.431	6.45
33)	TP	Ethyl acetate			0.172	0.153	0.150	0.151	0.149	0.153	0.154	5.66
34)	TP	Carbon tetrachloride	0.318	0.267	0.369	0.359	0.354	0.359	0.348	0.359	0.342	9.93
35)	TP	Tetrahydrofuran			0.044	0.038	0.040	0.037	0.037	0.039	0.039	6.44
36)	S	Dibromofluoromethane	0.299	0.299	0.302	0.298	0.296	0.298	0.294	0.297	0.298	0.77
37)	TP	1,1,1-Trichlor		0.282	0.411	0.388	0.385	0.385	0.373	0.383	0.372	11.16
39)	TP	2-Butanone			0.082	0.066	0.064	0.062	0.061	0.063	0.066	11.44

Initial Calibration Summary
Form 6
Volatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: VOA108**	**Ical Ref**	**: ICAL20424**
Calibration dates	**: 10/06/23 19:01 10/07/23 13:13**		

Calibration Files
L11 =V08231007A03.d L1 =V08231007A05.d L2 =V08231006N07.d L3 =V08231006N09.d L4 =V08231006N10.d
L6 =V08231006N11.d L8 =V08231006N12.d L10 =V08231006N13.d

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
40)	TP	1,1-Dichloropr		0.236	0.337	0.326	0.326	0.329	0.319	0.327	0.314	11.18
41)	TP	Benzene	0.910	0.797	0.981	0.942	0.932	0.938	0.919	0.943	0.920	5.85
42)	TP	Tertiary-Amyl Methyl Ether		0.543	0.660	0.625	0.633	0.647	0.643	0.661	0.630	6.47
43)	S	1,2-Dichloroethane-d4	0.281	0.285	0.297	0.288	0.292	0.302	0.302	0.320	0.296	4.17
44)	TP	1,2-Dichloroet		0.269	0.328	0.302	0.303	0.302	0.299	0.308	0.302	5.75
47)	TP	Methyl cyclohe		0.254	0.394	0.384	0.390	0.404	0.389	0.407	0.374	14.34
48)	TP	Trichloroethene	0.253	0.207	0.274	0.265	0.262	0.269	0.261	0.274	0.258	8.47
50)	TP	Dibromomethane		0.119	0.152	0.142	0.142	0.143	0.142	0.145	0.141	7.30
51)	TC	1,2-Dichloropr		0.196	0.252	0.244	0.243	0.244	0.241	0.248	0.238	7.98
53)	TP	2-Chloroethyl		0.086	0.120	0.115	0.116	0.120	0.118	0.122	0.114	11.00
54)	TP	Bromodichlorom		0.278	0.360	0.344	0.344	0.348	0.343	0.352	0.338	8.05
57)	TP	1,4-Dioxane		0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002#	3.90
58)	TP	cis-1,3-Dichlo		0.330	0.400	0.396	0.404	0.410	0.405	0.415	0.394	7.33
59)	I	Chlorobenzene-d5	----------ISTD----------									
60)	S	Toluene-d8	1.212	1.209	1.228	1.218	1.207	1.217	1.205	1.170	1.208	1.43
61)	TC	Toluene		0.599	0.718	0.685	0.679	0.690	0.677	0.676	0.675	5.39
62)	TP	4-Methyl-2-pen			0.066	0.065	0.066	0.068	0.068	0.067	0.067	2.25
63)	TP	Tetrachloroethene		0.223	0.318	0.303	0.301	0.305	0.295	0.292	0.291	10.69
65)	TP	trans-1,3-Dich		0.313	0.383	0.385	0.397	0.402	0.397	0.394	0.381	8.15
67)	TP	Ethyl methacry		0.183	0.257	0.244	0.249	0.254	0.252	0.250	0.241	10.75
68)	TP	1,1,2-Trichlor		0.156	0.195	0.183	0.183	0.186	0.183	0.180	0.181#	6.49
69)	TP	Chlorodibromom		0.211	0.279	0.278	0.290	0.296	0.293	0.289	0.277	10.75
70)	TP	1,3-Dichloropr		0.309	0.382	0.368	0.371	0.372	0.365	0.359	0.361	6.70
71)	TP	1,2-Dibromoethane		0.192	0.232	0.223	0.228	0.228	0.225	0.221	0.221	6.10
72)	TP	2-Hexanone		0.093	0.132	0.113	0.115	0.115	0.114	0.113	0.114	10.06
73)	TP	Chlorobenzene		0.715	0.832	0.806	0.800	0.807	0.798	0.790	0.793	4.64
74)	TC	Ethylbenzene		1.099	1.387	1.325	1.332	1.354	1.326	1.311	1.305	7.21
75)	TP	1,1,1,2-Tetrac		0.227	0.299	0.301	0.308	0.313	0.308	0.304	0.294	10.16
76)	TP	p/m Xylene		0.441	0.551	0.536	0.540	0.549	0.539	0.537	0.528	7.29
77)	TP	o Xylene		0.442	0.541	0.524	0.532	0.547	0.539	0.532	0.523	6.90
78)	TP	Styrene		0.713	0.882	0.872	0.899	0.929	0.911	0.888	0.871	8.28
79)	I	1,4-Dichlorobenzene-d4	----------ISTD----------									
80)	TP	Bromoform		0.227	0.284	0.283	0.303	0.312	0.306	0.306	0.289	10.19
82)	TP	Isopropylbenzene		1.929	2.577	2.425	2.501	2.534	2.432	2.416	2.402	9.05
83)	S	4-Bromofluorobenzene	0.865	0.845	0.866	0.860	0.868	0.853	0.852	0.846	0.857	1.07
84)	TP	Bromobenzene		0.543	0.683	0.624	0.631	0.622	0.602	0.595	0.614	6.93

Initial Calibration Summary
Form 6
Volatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: VOA108**	**Ical Ref**	**: ICAL20424**
Calibration dates	**: 10/06/23 19:01 10/07/23 13:13**		

Calibration Files
L11 =V08231007A03.d L1 =V08231007A05.d L2 =V08231006N07.d L3 =V08231006N09.d L4 =V08231006N10.d
L6 =V08231006N11.d L8 =V08231006N12.d L10 =V08231006N13.d

		Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
85)	TP	n-Propylbenzene		2.241	2.975	2.802	2.896	2.923	2.808	2.764	2.773	8.88
86)	TP	1,4-Dichlorobu		0.485	0.610	0.543	0.564	0.572	0.556	0.556	0.555	6.78
87)	TP	1,1,2,2-Tetrac		0.394	0.491	0.454	0.475	0.467	0.459	0.451	0.456	6.67
88)	TP	4-Ethyltoluene		1.967	2.534	2.407	2.499	2.514	2.416	2.380	2.388	8.16
89)	TP	2-Chlorotoluene		1.441	1.867	1.728	1.729	1.740	1.680	1.691	1.697	7.56
90)	TP	1,3,5-Trimethy		1.692	2.212	2.094	2.183	2.218	2.125	2.109	2.090	8.73
91)	TP	1,2,3-Trichlor		0.303	0.398	0.361	0.373	0.374	0.363	0.366	0.363	8.02
92)	TP	trans-1,4-Dich		0.072	0.130	0.118	0.126	0.124	0.122	0.123	0.117	17.04
93)	TP	4-Chlorotoluene		1.570	1.881	1.777	1.812	1.811	1.742	1.727	1.760	5.57
94)	TP	tert-Butylbenzene		1.468	1.937	1.820	1.850	1.864	1.779	1.763	1.783	8.44
97)	TP	1,2,4-Trimethy		1.706	2.145	2.067	2.151	2.191	2.103	2.079	2.063	7.91
98)	TP	sec-Butylbenzene		1.955	2.776	2.627	2.724	2.765	2.626	2.573	2.578	11.07
99)	TP	p-Isopropyltol		1.769	2.414	2.314	2.406	2.452	2.336	2.300	2.284	10.24
100)	TP	1,3-Dichlorobe		1.104	1.277	1.192	1.227	1.232	1.177	1.163	1.196	4.69
101)	TP	1,4-Dichlorobe		1.107	1.290	1.208	1.215	1.217	1.172	1.154	1.195	4.82
102)	TP	p-Diethylbenzene		1.090	1.412	1.386	1.446	1.477	1.409	1.402	1.375	9.39
103)	TP	n-Butylbenzene		1.485	2.022	1.937	2.036	2.059	1.946	1.927	1.916	10.29
104)	TP	1,2-Dichlorobe		1.006	1.200	1.120	1.136	1.133	1.087	1.074	1.108	5.46
105)	TP	1,2,4,5-Tetram		1.787	2.346	2.238	2.348	2.379	2.296	2.285	2.240	9.17
106)	TP	1,2-Dibromo-3-		0.051	0.074	0.075	0.077	0.077	0.076	0.076	0.072	13.16
107)	TP	1,3,5-Trichlor		0.769	0.935	0.880	0.892	0.882	0.844	0.836	0.862	6.12
108)	TP	Hexachlorobuta		0.271	0.362	0.334	0.337	0.326	0.305	0.304	0.320	9.16
109)	TP	1,2,4-Trichlor		0.688	0.810	0.762	0.787	0.770	0.738	0.730	0.755	5.32
110)	TP	Naphthalene		1.307	1.573	1.504	1.570	1.556	1.503	1.492	1.501	6.13
111)	TP	1,2,3-Trichlor		0.573	0.721	0.684	0.695	0.687	0.657	0.650	0.667	7.13

Calibration Verification Summary
Form 7
Volatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: VOA108		Calibration Date	: 10/16/23 16:23	
Lab File ID	: V08231016N01		Init. Calib. Date(s)	: 10/06/23	10/07/23
Sample No	: WG1840747-2		Init. Calib. Times	: 19:01	13:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	92	0
Dichlorodifluoromethane	0.253	0.21	-	17	20	72	0
Chloromethane	0.279	0.233	-	16.5	20	73	0
Vinyl chloride	0.283	0.274	-	3.2	20	87	0
Bromomethane	0.224	0.157	-	29.9*	20	68	0
Chloroethane	0.185	0.192	-	-3.8	20	93	0
Trichlorofluoromethane	0.38	0.376	-	1.1	20	86	0
Ethyl ether	0.116	0.107	-	7.8	20	85	0
1,1-Dichloroethene	0.209	0.189	-	9.6	20	81	0
Carbon disulfide	0.694	0.629	-	9.4	20	81	0
Freon-113	0.209	0.199	-	4.8	20	83	0
Iodomethane	10	6.466	-	35.3*	20	63	0
Acrolein	0.024	0.02	-	16.7	20	79	0
Methylene chloride	0.238	0.213	-	10.5	20	82	0
Acetone	10	7.651	-	23.5*	20	75	0
trans-1,2-Dichloroethene	0.239	0.216	-	9.6	20	80	0
Methyl acetate	0.103	0.09	-	12.6	20	85	0
Methyl tert-butyl ether	0.536	0.454	-	15.3	20	77	0
tert-Butyl alcohol	0.014	0.013	-	7.1	20	79	0
Diisopropyl ether	0.707	0.62	-	12.3	20	81	0
1,1-Dichloroethane	0.422	0.391	-	7.3	20	83	0
Halothane	0.181	0.169	-	6.6	20	81	0
Acrylonitrile	0.046	0.041	-	10.9	20	86	0
Ethyl tert-butyl ether	0.691	0.591	-	14.5	20	79	0
Vinyl acetate	0.393	0.261	-	33.6*	20	67	0
cis-1,2-Dichloroethene	0.269	0.242	-	10	20	80	0
2,2-Dichloropropane	0.356	0.317	-	11	20	81	0
Bromochloromethane	0.128	0.117	-	8.6	20	80	0
Cyclohexane	0.354	0.334	-	5.6	20	83	0
Chloroform	0.431	0.397	-	7.9	20	82	0
Ethyl acetate	0.154	0.13	-	15.6	20	78	0
Carbon tetrachloride	0.342	0.314	-	8.2	20	80	0
Tetrahydrofuran	0.039	0.035	-	10.3	20	84	0
Dibromofluoromethane	0.298	0.272	-	8.7	20	84	0
1,1,1-Trichloroethane	0.372	0.344	-	7.5	20	81	0
2-Butanone	0.066	0.056	-	15.2	20	77	0
1,1-Dichloropropene	0.314	0.285	-	9.2	20	80	0
Benzene	0.92	0.832	-	9.6	20	81	0
tert-Amyl methyl ether	0.63	0.527	-	16.3	20	77	0
1,2-Dichloroethane-d4	0.296	0.276	-	6.8	20	88	0
1,2-Dichloroethane	0.302	0.268	-	11.3	20	81	0
Methyl cyclohexane	0.374	0.343	-	8.3	20	82	0
Trichloroethene	0.258	0.244	-	5.4	20	84	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: VOA108		Calibration Date	: 10/16/23 16:23	
Lab File ID	: V08231016N01		Init. Calib. Date(s)	: 10/06/23	10/07/23
Sample No	: WG1840747-2		Init. Calib. Times	: 19:01	13:13
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	0.141	0.124	-	12.1	20	80	0
1,2-Dichloropropane	0.238	0.215	-	9.7	20	80	0
2-Chloroethyl vinyl ether	0.114	0.09	-	21.1*	20	71	0
Bromodichloromethane	0.338	0.295*	-	12.7	20	79	0
1,4-Dioxane	0.00151	0.00144*	-	4.6	20	85	0
cis-1,3-Dichloropropene	0.394	0.337	-	14.5	20	78	0
Chlorobenzene-d5	1	1	-	0	20	80	0
Toluene-d8	1.208	1.245	-	-3.1	20	82	0
Toluene	0.675	0.678	-	-0.4	20	80	0
4-Methyl-2-pentanone	0.067	0.06	-	10.4	20	75	0
Tetrachloroethene	0.291	0.302	-	-3.8	20	80	0
trans-1,3-Dichloropropene	0.381	0.369	-	3.1	20	77	0
Ethyl methacrylate	0.241	0.213	-	11.6	20	70	0
1,1,2-Trichloroethane	0.181	0.18*	-	0.6	20	79	0
Chlorodibromomethane	0.277	0.266	-	4	20	77	0
1,3-Dichloropropane	0.361	0.368	-	-1.9	20	80	0
1,2-Dibromoethane	0.221	0.217	-	1.8	20	78	0
2-Hexanone	0.114	0.101	-	11.4	20	72	0
Chlorobenzene	0.793	0.798	-	-0.6	20	80	0
Ethylbenzene	1.305	1.308	-	-0.2	20	79	0
1,1,1,2-Tetrachloroethane	0.294	0.295	-	-0.3	20	79	0
p/m Xylene	0.528	0.526	-	0.4	20	79	0
o Xylene	0.523	0.514	-	1.7	20	79	0
Styrene	0.871	0.829	-	4.8	20	76	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	73	0
Bromoform	0.289	0.301	-	-4.2	20	77	0
Isopropylbenzene	2.402	2.629	-	-9.5	20	79	0
4-Bromofluorobenzene	0.857	0.9	-	-5	20	76	0
Bromobenzene	0.614	0.668	-	-8.8	20	78	0
n-Propylbenzene	2.773	3.051	-	-10	20	79	0
1,4-Dichlorobutane	0.555	0.611	-	-10.1	20	82	0
1,1,2,2-Tetrachloroethane	0.456	0.477	-	-4.6	20	76	0
4-Ethyltoluene	2.388	2.579	-	-8	20	78	0
2-Chlorotoluene	1.697	1.845	-	-8.7	20	78	0
1,3,5-Trimethylbenzene	2.09	2.224	-	-6.4	20	77	0
1,2,3-Trichloropropane	0.363	0.399	-	-9.9	20	80	0
trans-1,4-Dichloro-2-buten	0.117	0.118	-	-0.9	20	73	0
4-Chlorotoluene	1.76	1.896	-	-7.7	20	78	0
tert-Butylbenzene	1.783	1.927	-	-8.1	20	77	0
1,2,4-Trimethylbenzene	2.063	2.178	-	-5.6	20	77	0
sec-Butylbenzene	2.578	2.833	-	-9.9	20	78	0
p-Isopropyltoluene	2.284	2.439	-	-6.8	20	77	0
1,3-Dichlorobenzene	1.196	1.272	-	-6.4	20	78	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: CHA Companies	**Lab Number**	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104
Instrument ID	: VOA108	**Calibration Date**	: 10/16/23 16:23
Lab File ID	: V08231016N01	**Init. Calib. Date(s)**	: 10/06/23 10/07/23
Sample No	: WG1840747-2	**Init. Calib. Times**	: 19:01 13:13
Channel	:		

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	1.195	1.267	-	-6	20	76	0
p-Diethylbenzene	1.375	1.435	-	-4.4	20	75	0
n-Butylbenzene	1.916	2.069	-	-8	20	78	0
1,2-Dichlorobenzene	1.108	1.187	-	-7.1	20	77	0
1,2,4,5-Tetramethylbenzene	2.24	2.308	-	-3	20	75	0
1,2-Dibromo-3-chloropropan	0.072	0.074	-	-2.8	20	72	0
1,3,5-Trichlorobenzene	0.862	0.93	-	-7.9	20	77	0
Hexachlorobutadiene	0.32	0.359	-	-12.2	20	78	0
1,2,4-Trichlorobenzene	0.755	0.795	-	-5.3	20	76	0
Naphthalene	1.501	1.519	-	-1.2	20	73	0
1,2,3-Trichlorobenzene	0.667	0.713	-	-6.9	20	76	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: ELAINE		Calibration Date	: 10/19/23 05:32	
Lab File ID	: VE231019A01		Init. Calib. Date(s)	: 10/02/23	10/02/23
Sample No	: WG1842158-2		Init. Calib. Times	: 13:23	17:04
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	75	0
Dichlorodifluoromethane	0.275	0.246	-	10.5	20	64	0
Chloromethane	0.284	0.267	-	6	20	67	0
Vinyl chloride	0.289	0.285	-	1.4	20	70	0
Bromomethane	0.179	0.094	-	47.5*	20	42	0
Chloroethane	0.175	0.188	-	-7.4	20	76	0
Trichlorofluoromethane	0.346	0.349	-	-0.9	20	73	0
Ethyl ether	0.107	0.1	-	6.5	20	67	0
1,1-Dichloroethene	0.201	0.193	-	4	20	69	0
Carbon disulfide	0.595	0.557	-	6.4	20	67	0
Freon-113	0.205	0.21	-	-2.4	20	73	0
Acrolein	0.03	0.026	-	13.3	20	68	0
Methylene chloride	0.223	0.215	-	3.6	20	69	0
Acetone	0.049	0.045	-	8.2	20	69	0
trans-1,2-Dichloroethene	0.218	0.198	-	9.2	20	65	0
Methyl acetate	0.117	0.106	-	9.4	20	76	0
Methyl tert-butyl ether	0.527	0.442	-	16.1	20	62	0
tert-Butyl alcohol	0.015	0.012	-	20	20	61	0
Diisopropyl ether	0.732	0.787	-	-7.5	20	81	0
1,1-Dichloroethane	0.419	0.42	-	-0.2	20	72	0
Halothane	0.172	0.162	-	5.8	20	68	0
Acrylonitrile	0.054	0.052	-	3.7	20	73	0
Ethyl tert-butyl ether	0.721	0.671	-	6.9	20	70	0
Vinyl acetate	0.377	0.395	-	-4.8	20	79	0
cis-1,2-Dichloroethene	0.249	0.242	-	2.8	20	70	0
2,2-Dichloropropane	0.333	0.316	-	5.1	20	69	0
Bromochloromethane	0.119	0.106	-	10.9	20	64	0
Cyclohexane	0.428	0.458	-	-7	20	76	0
Chloroform	0.387	0.349	-	9.8	20	66	0
Ethyl acetate	0.16	0.157	-	1.9	20	72	0
Carbon tetrachloride	0.315	0.278	-	11.7	20	63	0
Tetrahydrofuran	0.042	0.039	-	7.1	20	65	-.01
Dibromofluoromethane	0.278	0.257	-	7.6	20	69	0
1,1,1-Trichloroethane	0.355	0.34	-	4.2	20	70	0
2-Butanone	0.069	0.064	-	7.2	20	75	0
1,1-Dichloropropene	0.292	0.295	-	-1	20	73	0
Benzene	0.932	0.868	-	6.9	20	70	0
tert-Amyl methyl ether	0.609	0.511	-	16.1	20	63	0
1,2-Dichloroethane-d4	0.293	0.288	-	1.7	20	73	0
1,2-Dichloroethane	0.295	0.284	-	3.7	20	71	0
Methyl cyclohexane	0.399	0.382	-	4.3	20	69	0
Trichloroethene	0.24	0.225	-	6.2	20	69	0
Dibromomethane	0.134	0.115	-	14.2	20	65	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: ELAINE		Calibration Date	: 10/19/23 05:32	
Lab File ID	: VE231019A01		Init. Calib. Date(s)	: 10/02/23	10/02/23
Sample No	: WG1842158-2		Init. Calib. Times	: 13:23	17:04
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichloropropane	0.24	0.236	-	1.7	20	72	0
2-Chloroethyl vinyl ether	0.121	0.064	-	47.1*	20	40	0
Bromodichloromethane	0.315	0.276*	-	12.4	20	64	0
1,4-Dioxane	0.0016	0.00109*	-	31.9*	20	50	0
cis-1,3-Dichloropropene	0.369	0.324	-	12.2	20	65	0
Chlorobenzene-d5	1	1	-	0	20	65	0
Toluene-d8	1.253	1.317	-	-5.1	20	68	0
Toluene	0.675	0.722	-	-7	20	68	0
4-Methyl-2-pentanone	0.075	0.069	-	8	20	61	0
Tetrachloroethene	0.295	0.302	-	-2.4	20	64	0
trans-1,3-Dichloropropene	0.364	0.353	-	3	20	63	0
Ethyl methacrylate	0.25	0.212	-	15.2	20	55	0
1,1,2-Trichloroethane	0.175	0.183*	-	-4.6	20	68	0
Chlorodibromomethane	0.268	0.249	-	7.1	20	61	0
1,3-Dichloropropane	0.352	0.365	-	-3.7	20	67	0
1,2-Dibromoethane	0.216	0.212	-	1.9	20	63	0
2-Hexanone	0.127	0.118	-	7.1	20	62	0
Chlorobenzene	0.759	0.793	-	-4.5	20	66	0
Ethylbenzene	1.313	1.388	-	-5.7	20	66	0
1,1,1,2-Tetrachloroethane	0.276	0.27	-	2.2	20	63	0
p/m Xylene	0.528	0.557	-	-5.5	20	66	0
o Xylene	0.515	0.539	-	-4.7	20	65	0
Styrene	0.854	0.869	-	-1.8	20	65	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	64	0
Bromoform	0.281	0.233	-	17.1	20	55	0
Isopropylbenzene	2.385	2.421	-	-1.5	20	65	0
4-Bromofluorobenzene	0.839	0.816	-	2.7	20	64	0
Bromobenzene	0.592	0.577	-	2.5	20	65	0
n-Propylbenzene	2.762	2.909	-	-5.3	20	67	0
1,4-Dichlorobutane	0.586	0.635	-	-8.4	20	71	0
1,1,2,2-Tetrachloroethane	0.438	0.424	-	3.2	20	63	0
4-Ethyltoluene	2.344	2.439	-	-4.1	20	65	0
2-Chlorotoluene	1.646	1.284	-	22*	20	50	.18
1,3,5-Trimethylbenzene	2.042	2.056	-	-0.7	20	64	0
1,2,3-Trichloropropane	0.344	0.327	-	4.9	20	65	0
trans-1,4-Dichloro-2-buten	0.127	0.13	-	-2.4	20	69	0
4-Chlorotoluene	1.713	1.757	-	-2.6	20	66	0
tert-Butylbenzene	1.717	1.752	-	-2	20	64	0
1,2,4-Trimethylbenzene	2.016	2.028	-	-0.6	20	64	0
sec-Butylbenzene	2.476	2.571	-	-3.8	20	65	0
p-Isopropyltoluene	2.164	2.167	-	-0.1	20	63	0
1,3-Dichlorobenzene	1.139	1.175	-	-3.2	20	65	0
1,4-Dichlorobenzene	1.15	1.176	-	-2.3	20	66	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: CHA Companies	**Lab Number**	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104	
Instrument ID	: ELAINE	**Calibration Date**	: 10/19/23 05:32	
Lab File ID	: VE231019A01	**Init. Calib. Date(s)**	: 10/02/23	10/02/23
Sample No	: WG1842158-2	**Init. Calib. Times**	: 13:23	17:04
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
p-Diethylbenzene	1.275	1.27	-	0.4	20	64	0
n-Butylbenzene	1.721	1.845	-	-7.2	20	67	0
1,2-Dichlorobenzene	1.078	1.07	-	0.7	20	63	0
1,2,4,5-Tetramethylbenzene	1.972	1.868	-	5.3	20	61	0
1,2-Dibromo-3-chloropropan	0.073	0.06	-	17.8	20	57	0
1,3,5-Trichlorobenzene	0.743	0.717	-	3.5	20	61	0
Hexachlorobutadiene	0.21	0.213	-	-1.4	20	62	0
1,2,4-Trichlorobenzene	0.641	0.602	-	6.1	20	60	0
Naphthalene	1.491	1.26	-	15.5	20	57	0
1,2,3-Trichlorobenzene	0.581	0.517	-	11	20	59	0

* Value outside of QC limits.

SVOC Data Section

QA/QC Review of Method 8270D Semi-Volatiles
Data for Alpha Analytical, SDG Number: L2359293

1 Ground Water Sample
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was extracted and analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The average RRFs for 2-chloronaphthalene and 2,6-dinitrotoluene were below the method minimums, but not below 0.010 for SV106 on 09-02-23. No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no average RRF is less than 0.010.

The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRF for 2-chloronaphthalene was below the method minimum, but not below 0.010 on 10-11-23 (WG1838585-3). The %Ds for bis(2-chloroisopropyl)ether, 2,4-dinitrophenol, and 4,6-dinitro-o-cresol were above the method maximum on 10-11-23 (WG1838585-3). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.010), as required.

The %Ds for bis(2-chloroisopropyl)ether, 2,4-dinitrophenol, and 4,6-dinitro-o-cresol were above the allowable maximum (20%) on 10-11-23 (WG1838585-3). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analysis of the method blank reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

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Surrogate Recovery: The surrogate recoveries were within control limits for the ground water sample.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum, but 1 of 2 percent recoveries for carbazole was below QC limits, but not below 30% for aqueous samples WG1838161-2/3. Positive results for carbazole should be considered estimated, biased low (J-) and "not detected" results estimated (UJ) in associated aqueous samples.

Compound ID: Checked compound results were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Laboratory Control Sample Summary
Form 3
Semivolatiles

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Matrix (Level)	: WATER (LOW)		
LCS Sample ID	: WG1838161-2	Analysis Date : 10/11/23 18:28	File ID : 838161-2
LCSD Sample ID	: WG1838161-3	Analysis Date : 10/11/23 18:52	File ID : 838161-3

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Bis(2-chloroethyl)ether	18	10.	56	18	9.3	51	9	40-140	30
3,3'-Dichlorobenzidine	18	10.	57	18	9.0	50	13	40-140	30
2,4-Dinitrotoluene	18	14.	80	18	12.	69	15	48-143	30
2,6-Dinitrotoluene	18	14.	79	18	12.	68	15	40-140	30
4-Chlorophenyl phenyl ether	18	12.	67	18	10.	55	20	40-140	30
4-Bromophenyl phenyl ether	18	13.	70	18	10.	55	24	40-140	30
Bis(2-chloroisopropyl)ether	18	9.2	51	18	8.0	44	15	40-140	30
Bis(2-chloroethoxy)methane	18	11.	59	18	9.4	52	13	40-140	30
Hexachlorocyclopentadiene	18	12.	66	18	10.	58	13	40-140	30
Isophorone	18	11.	59	18	9.3	51	15	40-140	30
Nitrobenzene	18	11.	62	18	9.9	54	14	40-140	30
NDPA/DPA	18	12.	67	18	9.9	54	21	40-140	30
n-Nitrosodi-n-propylamine	18	10.	57	18	9.5	52	9	29-132	30
Bis(2-ethylhexyl)phthalate	18	13.	73	18	11.	61	18	40-140	30
Butyl benzyl phthalate	18	12.	68	18	10.	56	19	40-140	30
Di-n-butylphthalate	18	12.	67	18	9.9	55	20	40-140	30
Di-n-octylphthalate	18	13.	73	18	11.	61	18	40-140	30
Diethyl phthalate	18	13.	72	18	11.	58	22	40-140	30
Dimethyl phthalate	18	13.	72	18	11.	58	22	40-140	30
Biphenyl	18	12.	65	18	9.6	53	20	40-140	30
4-Chloroaniline	18	8.6	47	18	7.5	41	14	40-140	30
2-Nitroaniline	18	14.	79	18	12.	68	15	52-143	30
3-Nitroaniline	18	12.	68	18	11.	59	14	25-145	30
4-Nitroaniline	18	13.	74	18	11.	60	21	51-143	30
Dibenzofuran	18	12.	64	18	9.6	53	19	40-140	30
1,2,4,5-Tetrachlorobenzene	18	11.	63	18	9.7	53	17	2-134	30

Laboratory Control Sample Summary
Form 3
Semivolatiles

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Matrix (Level)	: WATER (LOW)		
LCS Sample ID	: WG1838161-2	Analysis Date : 10/11/23 18:28	File ID : 838161-2
LCSD Sample ID	: WG1838161-3	Analysis Date : 10/11/23 18:52	File ID : 838161-3

	Laboratory Control Sample			Laboratory Control Duplicate					
Parameter	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R	RPD	Recovery Limits	RPD Limit
Acetophenone	18	11.	58	18	9.0	49	17	39-129	30
2,4,6-Trichlorophenol	18	14.	74	18	11.	62	18	30-130	30
p-Chloro-m-cresol	18	13.	73	18	11.	59	21	23-97	30
2-Chlorophenol	18	11.	60	18	9.6	53	12	27-123	30
2,4-Dichlorophenol	18	12.	67	18	11.	60	11	30-130	30
2,4-Dimethylphenol	18	12.	66	18	11.	59	11	30-130	30
2-Nitrophenol	18	14.	76	18	12.	66	14	30-130	30
4-Nitrophenol	18	13.	71	18	11.	61	15	10-80	30
2,4-Dinitrophenol	18	14.	80	18	14.	76	5	20-130	30
4,6-Dinitro-o-cresol	18	18.	99	18	15.	82	19	20-164	30
Phenol	18	8.9	49	18	7.6	42	15	12-110	30
2-Methylphenol	18	11.	62	18	9.6	53	16	30-130	30
3-Methylphenol/4-Methylphenol	18	12.	65	18	10.	55	17	30-130	30
2,4,5-Trichlorophenol	18	14.	77	18	11.	63	20	30-130	30
Carbazole	18	12.	64	18	9.6	53 Q	19	55-144	30
Atrazine	18	13.	73	18	12.	64	13	40-140	30
Benzaldehyde	18	13.	69	18	11.	61	12	40-140	30
Caprolactam	18	5.4	30	18	4.5	25	18	10-130	30
2,3,4,6-Tetrachlorophenol	18	13.	70	18	10.	57	20	40-140	30

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: SV106**	**Ical Ref**	**: ICAL20337**
Calibration dates	**: 09/02/23 12:13 09/03/23 00:52**		

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D L10 =AP9L10.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Avg	%RSD
1)	I	IS1_1,4-Dichlorobenzene-d4	----------ISTD----------											
2)	t	N-Nitrosodimethylamine		0.648	0.703	0.681	0.660	0.622	0.719	0.685	0.676	0.702	0.677	4.47
3)	t	Pyridine	1.054	1.120	1.163	1.116	1.175	1.061	1.236	1.233	1.179	1.168	1.151	5.45
4)	S	2-Fluorophenol	1.088	1.096	1.126	1.083	1.108	0.995	1.181	1.182	1.146	1.151	1.116	4.99
5)	T	Aniline	1.838	1.833	1.964	1.902	1.868	1.720	2.000	1.918	1.903	1.985	1.893	4.42
6)	t	2-Chlorophenol	1.219	1.195	1.332	1.275	1.232	1.185	1.371	1.300	1.302	1.333	1.274	5.01
7)	S	Phenol-d6	1.324	1.450	1.447	1.418	1.415	1.329	1.552	1.459	1.466	1.513	1.437	4.96
8)	T	Phenol	1.574	1.402	1.560	1.504	1.542	1.373	1.603	1.551	1.523	1.579	1.521	5.01
9)	T	bis(2-Chloroethyl)ether	1.344	1.167	1.223	1.216	1.205	1.114	1.275	1.221	1.206	1.247	1.222	5.00
10)	T	1,3-Dichlorobenzene	1.513	1.406	1.544	1.452	1.452	1.343	1.510	1.469	1.451	1.468	1.461	3.91
11)	T	1,4-Dichlorobenzene	1.759	1.418	1.531	1.494	1.463	1.344	1.561	1.490	1.474	1.497	1.503	7.18
12)	T	1,2-Dichlorobenzene	1.543	1.424	1.464	1.456	1.374	1.288	1.496	1.422	1.403	1.441	1.431	4.84
13)	t	Benzyl alcohol	1.065	0.893	1.101	1.048	1.048	0.989	1.167	1.122	1.117	1.185	1.074	8.05
14)	T	bis(2-chloroisopropyl)ether	1.769	1.838	1.890	1.806	1.800	1.644	1.898	1.820	1.744	1.786	1.800	4.06
15)	T	2-Methylphenol	1.062	1.118	1.139	1.150	1.104	1.017	1.221	1.184	1.167	1.215	1.138	5.70
16)	T	Hexachloroethane	0.590	0.574	0.631	0.572	0.572	0.535	0.613	0.589	0.585	0.600	0.586	4.46
17)	T	n-Nitrosodi-n-propylamine	0.970	0.903	0.936	0.894	0.893	0.833	0.981	0.922	0.925	0.978	0.923	4.98
18)	T	3-Methylphenol/4-Methylphenol	1.065	1.100	1.213	1.221	1.177	1.092	1.292	1.238	1.227	1.309	1.193	7.02
19)	S	Nitrobenzene-d5	1.349	1.280	1.290	1.189	1.281	1.160	1.381	1.348	1.345	1.407	1.303	6.12
20)	T	Nitrobenzene	1.173	1.318	1.243	1.244	1.278	1.189	1.396	1.359	1.350	1.396	1.295	6.30
21)	T	Isophorone	2.439	2.405	2.498	2.425	2.467	2.235	2.627	2.531	2.491	2.660	2.478	4.81
22)	T	2-Nitrophenol	0.473	0.461	0.464	0.461	0.482	0.467	0.596	0.573	0.581	0.621	0.518	12.71
23)	T	2,4-Dimethylphenol	1.263	1.209	1.251	1.250	1.287	1.202	1.384	1.328	1.310	1.324	1.281	4.45
24)	T	bis(2-Chloroethoxy)methane	1.673	1.453	1.571	1.543	1.508	1.418	1.628	1.583	1.526	1.621	1.552	5.12
25)	T	2,4-Dichlorophenol	0.973	0.961	1.024	1.067	1.090	1.018	1.186	1.141	1.104	1.192	1.076	7.62
26)	T	1,2,4-Trichlorobenzene	1.228	1.215	1.287	1.261	1.240	1.103	1.291	1.244	1.212	1.268	1.235	4.36
27)	I	IS2_1,4-Dichlorobenzene-d4	----------ISTD----------											
28)	T	Benzaldehyde			1.071	0.918	0.885	1.299	0.926	0.801	0.740	0.787	0.928	19.58
29)	T	Acetophenone	2.251	1.920	1.957	1.826	1.903	2.587	1.898	1.810	1.883	1.906	1.994	12.10
30)	T	m-Toluidine			1.492	1.442	1.434	2.182	1.574	1.433	1.382	1.459	1.550	16.86
31)	T	2-Chloroaniline	1.889	1.484	1.696	1.521	1.557	2.203	1.625	1.546	1.579	1.606	1.670	13.12
32)	I	IS3_1,4-Dichlorobenzene-d4	----------ISTD----------											
33)	T	n-Decane	1.354	1.422	1.378	1.307	1.338	1.336	1.316	1.338	1.318	1.363	1.347	2.55
34)	I	IS1_Naphthalene-d8	----------ISTD----------											
35)	T	Naphthalene	1.046	0.979	1.049	1.016	0.962	0.894	1.038	1.026	1.019	1.055	1.008	4.98
36)	T	Benzoic Acid					0.154	0.161	0.230	0.246	0.255	0.273	*L	0.9982

Initial Calibration Summary
Form 6
Semivolatiles

Client	: **CHA Companies**	**Lab Number**	: **L2359293**
Project Name	: **CURIA OCTOBER GW SAMPL.**	**Project Number**	: **075104**
Instrument ID	: **SV106**	**Ical Ref**	: **ICAL20337**
Calibration dates	: **09/02/23 12:13 09/03/23 00:52**		

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D L10 =AP9L10.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Avg	%RSD
37)	T	4-Chloroaniline	0.147	0.112	0.132	0.134	0.127	0.119	0.142	0.136	0.133	0.138	0.132	7.98
38)	T	Hexachlorobutadiene	0.233	0.210	0.211	0.200	0.208	0.180	0.206	0.206	0.199	0.203	0.206	6.37
39)	T	p-Chloro-m-cresol	0.257	0.259	0.292	0.275	0.293	0.268	0.314	0.315	0.312	0.330	0.291	8.87
40)	T	2-Methylnaphthalene	0.631	0.635	0.683	0.650	0.622	0.571	0.661	0.653	0.641	0.673	0.642	4.86
41)	T	1-Methylnaphthalene	0.217	0.243	0.253	0.253	0.232	0.218	0.251	0.249	0.240	0.251	0.241	5.70
42)	T	Hexachlorocyclopentadiene	0.212	0.203	0.213	0.219	0.221	0.195	0.234	0.230	0.232	0.234	0.219	6.17
43)	T	2,4,6-Trichlorophenol	0.195	0.184	0.205	0.202	0.204	0.182	0.227	0.222	0.223	0.242	0.209	9.27
44)	T	2,4,5-Trichlorophenol	0.230	0.191	0.222	0.220	0.220	0.196	0.243	0.241	0.240	0.241	0.224	8.26
45)	S	2-Fluorobiphenyl	0.835	0.731	0.799	0.785	0.737	0.676	0.772	0.771	0.748	0.781	0.764	5.70
46)	T	2-Chloronaphthalene	0.685	0.640	0.719	0.682	0.665	0.597	0.684	0.674	0.658	0.687	0.669	4.89
47)	T	2-Nitroaniline			0.158	0.153	0.162	0.156	0.192	0.195	0.197	0.208	*L	0.9975
48)	T	1,4-Dinitrobenzene				0.069	0.069	0.061	0.083	0.085	0.089	0.096	*L	0.9958
49)	T	1,3-Dinitrobenzene				0.080	0.076	0.076	0.094	0.099	0.107	0.112	*L	0.9969
50)	T	Dimethyl phthalate	0.828	0.719	0.845	0.777	0.777	0.710	0.808	0.810	0.779	0.821	0.787	5.69
51)	T	Acenaphthylene	1.110	1.006	1.125	1.073	1.054	0.948	1.112	1.118	1.083	1.140	1.077	5.59
52)	T	2,6-Dinitrotoluene			0.129	0.136	0.133	0.126	0.159	0.161	0.159	0.167	*L	0.9978
53)	T	1,2-Dinitrobenzene				0.055	0.058	0.056	0.069	0.069	0.067	0.070	0.063	10.66
54)	I	IS2_Naphthalene-d8	----------ISTD----------											
55)	T	a-Terpineol	0.327	0.276	0.274	0.267	0.267	0.376	0.273	0.268	0.284	0.275	0.289	12.23
56)	T	3-Chloroaniline	0.150	0.143	0.153	0.145	0.145	0.202	0.148	0.139	0.140	0.138	0.150	12.50
57)	T	2,6-Dichlorophenol	0.269	0.249	0.244	0.254	0.263	0.378	0.272	0.270	0.285	0.282	0.277	13.72
58)	T	1-chloro-2-nitrobenzene	0.125	0.121	0.128	0.116	0.115	0.174	0.128	0.130	0.139	0.135	0.131	13.00
59)	T	Caprolactam	0.122	0.140	0.132	0.129	0.135	0.199	0.150	0.148	0.160	0.152	0.147	14.87
60)	T	1,2,4,5-Tetrachlorobenzene	0.383	0.370	0.337	0.334	0.319	0.446	0.323	0.316	0.332	0.321	0.348	11.76
61)	T	Biphenyl	0.951	0.858	0.839	0.798	0.794	1.117	0.800	0.785	0.813	0.802	0.856	12.19
62)	I	IS1_Acenaphthene-d10	----------ISTD----------											
63)	T	3-Nitroaniline		0.218	0.276	0.261	0.272	0.262	0.330	0.312	0.313	0.331	0.286	13.35
64)	T	Acenaphthene	1.245	1.152	1.174	1.130	1.082	0.999	1.158	1.107	1.095	1.164	1.131	5.82
65)	T	2,4-Dinitrophenol				0.094	0.110	0.108	0.137	0.138	0.155	0.165	*L	0.9965
66)	T	Dibenzofuran	1.692	1.754	1.791	1.672	1.656	1.509	1.750	1.672	1.669	1.738	1.690	4.63
67)	T	2,4-Dinitrotoluene			0.309	0.306	0.304	0.304	0.380	0.371	0.389	0.411	*L	0.9969
68)	T	4-Nitrophenol			0.234	0.230	0.243	0.226	0.283	0.277	0.285	0.309	*L	0.9963
69)	T	2,3,5,6-Tetrachlorophenol	0.295	0.260	0.324	0.326	0.326	0.298	0.359	0.347	0.349	0.367	0.325	10.18
70)	T	2,3,4,6-Tetrachlorophenol	0.349	0.297	0.356	0.307	0.333	0.306	0.369	0.347	0.344	0.363	0.337	7.51
71)	T	Diethyl phthalate	1.394	1.403	1.479	1.414	1.390	1.303	1.459	1.395	1.423	1.488	1.415	3.78
72)	T	Fluorene	1.342	1.330	1.403	1.298	1.306	1.208	1.405	1.344	1.329	1.388	1.336	4.38

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: SV106**	**Ical Ref**	**: ICAL20337**
Calibration dates	**: 09/02/23 12:13 09/03/23 00:52**		

Calibration Files
L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D
L8 =AP9L8.D L9 =AP9L9.D L10 =AP9L10.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Avg	%RSD
73)	T	4-Chlorophenyl-phenylether	0.686	0.675	0.667	0.641	0.614	0.566	0.645	0.624	0.610	0.646	0.637	5.59
74)	T	4-Nitroaniline	0.230	0.257	0.293	0.286	0.295	0.277	0.303	0.303	0.316	0.329	0.289	9.99
75)	T	4,6-Dinitro-o-cresol				0.126	0.148	0.131	0.181	0.183	0.203	0.221	*L	0.9946
76)	T	NDPA/DPA	1.117	1.080	1.188	1.110	1.101	1.034	1.182	1.135	1.121	1.169	1.124	4.24
77)	T	Azobenzene	1.389	1.345	1.370	1.263	1.289	1.195	1.348	1.320	1.300	1.373	1.319	4.51
78)	S	2,4,6-Tribromophenol	0.157	0.167	0.185	0.176	0.170	0.170	0.197	0.198	0.201	0.215	0.184	10.14
79)	T	4-Bromophenyl-phenylether	0.407	0.386	0.399	0.346	0.357	0.332	0.375	0.367	0.362	0.379	0.371	6.24
80)	T	Hexachlorobenzene	0.509	0.443	0.462	0.418	0.409	0.375	0.431	0.415	0.415	0.440	0.432	8.29
81)	T	Pentachlorophenol			0.215	0.223	0.221	0.215	0.270	0.262	0.269	0.292	*L	0.9965
82)	I	IS2_Acenaphthene-d10	----------ISTD----------											
83)	T	Dichloran				0.106	0.112	0.170	0.134	0.139	0.168	0.161	*L	0.9968
84)	T	Pentachloronitrobenzene			0.127	0.121	0.141	0.221	0.165	0.165	0.183	0.177	*L	0.9980
85)	I	IS3_Acenaphthene-d10	----------ISTD----------											
86)	T	Atrazine	0.349	0.348	0.329	0.319	0.327	0.341	0.343	0.344	0.374	0.371	0.345	5.15
87)	I	IS1_Phenanthrene-d10	----------ISTD----------											
88)	T	Phenanthrene	1.156	1.108	1.102	1.068	1.103	0.974	1.096	1.069	1.087	1.130	1.089	4.45
89)	T	Anthracene	1.094	1.003	1.131	1.087	1.102	0.980	1.115	1.078	1.107	1.145	1.084	4.88
90)	T	Carbazole	0.877	0.956	1.011	1.020	0.994	0.914	1.023	1.006	1.049	1.058	0.991	5.86
91)	T	Di-n-butylphthalate	1.197	1.122	1.237	1.231	1.251	1.163	1.356	1.316	1.384	1.431	1.269	7.89
92)	T	Fluoranthene	1.161	1.071	1.171	1.161	1.161	1.044	1.213	1.191	1.219	1.254	1.165	5.52
93)	T	Benzidine	0.656	0.641	0.750	0.762	0.786	0.704	0.850	0.847	0.869	0.832	0.770	10.67
94)	T	Pyrene	1.204	1.183	1.265	1.248	1.228	1.103	1.271	1.240	1.272	1.315	1.233	4.79
95)	S	4-Terphenyl-d14	0.837	0.839	0.902	0.885	0.864	0.794	0.919	0.883	0.905	0.945	0.877	5.09
96)	T	Butyl benzyl phthalate		0.406	0.510	0.497	0.523	0.495	0.587	0.583	0.631	0.641	0.541	13.94
97)	I	IS2_Phenanthrene-d10	----------ISTD----------											
98)	T	Diphenamid	0.469	0.442	0.454	0.474	0.474	0.699	0.509	0.489	0.531	0.539	0.508	14.56
99)	I	IS3_Phenanthrene-d10	----------ISTD----------											
100)	T	n-Octadecane	0.468	0.466	0.443	0.422	0.457	0.467	0.456	0.469	0.466	0.483	0.460	3.67
101)	T	Parathion	0.091	0.089	0.084	0.078	0.085	0.085	0.093	0.101	0.112	0.120	0.094	14.22
102)	T	3,3'-Dimethylbenzidine			0.389	0.505	0.540	0.594	0.659	0.717	0.744	0.780	*L	0.9978
103)	I	IS1_Chrysene-d12	----------ISTD----------											
104)	T	Benzo[a]anthracene	1.463	1.326	1.375	1.250	1.283	1.188	1.340	1.321	1.331	1.377	1.326	5.66
105)	T	3,3'-Dichlorobenzidine	0.428	0.404	0.475	0.442	0.471	0.439	0.510	0.506	0.516	0.525	0.472	8.89
106)	T	Chrysene	1.392	1.242	1.284	1.202	1.205	1.095	1.258	1.210	1.203	1.216	1.231	6.11
107)	T	bis(2-Ethylhexyl)phthalate	0.726	0.750	0.902	0.872	0.879	0.827	0.990	0.965	0.973	1.003	0.889	11.02
108)	T	Di-n-octylphthalate	1.204	1.244	1.446	1.403	1.484	1.405	1.693	1.661	1.718	1.736	1.499	12.98

Initial Calibration Summary
Form 6
Semivolatiles

Client	**: CHA Companies**	**Lab Number**	**: L2359293**
Project Name	**: CURIA OCTOBER GW SAMPL.**	**Project Number**	**: 075104**
Instrument ID	**: SV106**	**Ical Ref**	**: ICAL20337**
Calibration dates	**: 09/02/23 12:13 09/03/23 00:52**		

Calibration Files

L1 =AP9L1.D L2 =AP9L2.D L3 =AP9L3.D L4 =AP9L4.D L5 =AP9L5.D L6 =AP9L6.D L7 =AP9L7.D

L8 =AP9L8.D L9 =AP9L9.D L10 =AP9L10.D

		Compound	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Avg	%RSD
109)	T	Benzo(b)fluoranthene	1.277	1.135	1.311	1.217	1.346	1.123	1.379	1.315	1.304	1.254	1.266	6.73
110)	T	Benzo(k)fluoranthene	1.284	1.239	1.215	1.255	1.110	1.160	1.226	1.219	1.186	1.245	1.214	4.15
111)	T	Benzo(a)pyrene	1.056	0.984	1.138	1.086	1.070	0.993	1.161	1.123	1.116	1.108	1.083	5.43
112)	I	IS1_Perylene-d12	----------ISTD----------											
113)	T	Indeno(1,2,3-cd)pyrene	0.916	0.838	0.921	0.920	0.887	0.832	0.993	0.979	1.058	1.000	0.935	7.81
114)	T	Dibenzo[a,h]anthracene	0.899	0.918	0.990	0.974	0.975	0.921	1.091	1.064	1.090	1.073	0.999	7.49
115)	T	Benzo(g,h,i)perylene	0.969	0.962	1.043	0.994	0.967	0.906	1.065	1.022	1.042	0.945	0.991	5.09

Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: SV106		Calibration Date	: 10/11/23 16:53	
Lab File ID	: ABN1011		Init. Calib. Date(s)	: 09/02/23	09/03/23
Sample No	: WG1838585-3		Init. Calib. Times	: 12:13	00:52
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
IS1_1,4-Dichlorobenzene-d4	1	1	-	0	20	94	0
n-Nitrosodimethylamine	0.677	0.618	-	8.7	20	93	0
Pyridine	1.151	0.925	-	19.6	20	82	0
2-Fluorophenol	1.116	1.117	-	-0.1	20	105	0
Aniline	1.893	1.667	-	11.9	20	91	0
2-Chlorophenol	1.274	1.173	-	7.9	20	93	0
Phenol-d6	1.437	1.37	-	4.7	20	97	0
Phenol	1.521	1.374	-	9.7	20	94	0
Bis(2-chloroethyl)ether	1.222	1.076	-	11.9	20	91	0
1,3-Dichlorobenzene	1.461	1.368	-	6.4	20	96	0
1,4-Dichlorobenzene	1.503	1.38	-	8.2	20	96	0
1,2-Dichlorobenzene	1.431	1.333	-	6.8	20	97	0
Benzyl alcohol	1.074	0.988	-	8	20	94	0
Bis(2-chloroisopropyl)ethe	1.8	1.422	-	21*	20	81	0
2-Methylphenol	1.138	1.042	-	8.4	20	96	0
Hexachloroethane	0.586	0.547	-	6.7	20	96	0
n-Nitrosodi-n-propylamine	0.923	0.786	-	14.8	20	88	0
3-Methylphenol/4-Methylphe	1.193	1.058	-	11.3	20	91	0
Nitrobenzene-d5	1.303	1.314	-	-0.8	20	106	0
Nitrobenzene	1.295	1.23	-	5	20	97	0
Isophorone	2.478	2.195	-	11.4	20	92	0
2-Nitrophenol	0.518	0.613	-	-18.3	20	123	0
2,4-Dimethylphenol	1.281	1.206	-	5.9	20	94	0
Bis(2-chloroethoxy)methane	1.552	1.376	-	11.3	20	91	0
2,4-Dichlorophenol	1.076	1.047	-	2.7	20	96	0
1,2,4-Trichlorobenzene	1.235	1.15	-	6.9	20	98	0
IS1_Naphthalene-d8	1	1	-	0	20	94	0
Naphthalene	1.008	0.889	-	11.8	20	93	0
Benzoic Acid	5	5.203	-	-4.1	20	115	0
4-Chloroaniline	0.132	0.117	-	11.4	20	92	0
Hexachlorobutadiene	0.206	0.186	-	9.7	20	97	0
p-Chloro-m-cresol	0.291	0.272	-	6.5	20	95	0
2-Methylnaphthalene	0.642	0.577	-	10.1	20	94	0
1-Methylnaphthalene	0.241	0.227	-	5.8	20	97	0
Hexachlorocyclopentadiene	0.219	0.233	-	-6.4	20	112	0
2,4,6-Trichlorophenol	0.209	0.212	-	-1.4	20	109	0
2,4,5-Trichlorophenol	0.224	0.221	-	1.3	20	105	0
2-Fluorobiphenyl	0.764	0.679	-	11.1	20	94	0
2-Chloronaphthalene	0.669	0.601	-	10.2	20	94	0
2-Nitroaniline	5	5.293	-	-5.9	20	118	0
1,4-Dinitrobenzene	5	5.859	-	-17.2	20	143	0
1,3-Dinitrobenzene	5	5.995	-	-19.9	20	137	0
Dimethyl phthalate	0.787	0.756	-	3.9	20	100	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: SV106		Calibration Date	: 10/11/23 16:53	
Lab File ID	: ABN1011		Init. Calib. Date(s)	: 09/02/23	09/03/23
Sample No	: WG1838585-3		Init. Calib. Times	: 12:13	00:52
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Acenaphthylene	1.077	0.98	-	9	20	97	0
2,6-Dinitrotoluene	5	5.347	-	-6.9	20	121	0
1,2-Dinitrobenzene	0.063	0.068	-	-7.9	20	113	0
IS1_Acenaphthene-d10	1	1	-	0	20	99	0
3-Nitroaniline	0.286	0.303	-	-5.9	20	115	0
Acenaphthene	1.131	0.901	-	20.3*	20	90	0
2,4-Dinitrophenol	5	6.289	-	-25.8*	20	153	0
Dibenzofuran	1.69	1.492	-	11.7	20	98	0
2,4-Dinitrotoluene	5	5.183	-	-3.7	20	123	0
4-Nitrophenol	5	5.12	-	-2.4	20	122	0
2,3,5,6-Tetrachlorophenol	0.325	0.321	-	1.2	20	107	0
2,3,4,6-Tetrachlorophenol	0.337	0.315	-	6.5	20	102	0
Diethyl phthalate	1.415	1.346	-	4.9	20	102	0
Fluorene	1.336	1.174	-	12.1	20	96	0
4-Chlorophenyl phenyl ethe	0.637	0.549	-	13.8	20	96	0
4-Nitroaniline	0.289	0.298	-	-3.1	20	107	0
4,6-Dinitro-o-cresol	5	6.333	-	-26.7*	20	169	0
NDPA/DPA	1.124	1.021	-	9.2	20	98	0
Azobenzene	1.319	1.111	-	15.8	20	92	0
2,4,6-Tribromophenol	0.184	0.206	-	-12	20	120	0
4-Bromophenyl phenyl ether	0.371	0.348	-	6.2	20	104	0
Hexachlorobenzene	0.432	0.389	-	10	20	103	0
Pentachlorophenol	5	4.688	-	6.2	20	110	0
IS1_Phenanthrene-d10	1	1	-	0	20	105	0
Phenanthrene	1.089	0.918	-	15.7	20	99	0
Anthracene	1.084	0.954	-	12	20	102	0
Carbazole	0.991	0.88	-	11.2	20	101	0
Di-n-butylphthalate	1.269	1.151	-	9.3	20	104	0
Fluoranthene	1.165	1.063	-	8.8	20	106	0
Benzidine	0.77	0.755	-	1.9	20	112	0
Pyrene	1.233	1.129	-	8.4	20	107	0
4-Terphenyl-d14	0.877	0.856	-	2.4	20	113	0
Butyl benzyl phthalate	0.541	0.574	-	-6.1	20	121	0
IS1_Chrysene-d12	1	1	-	0	20	116	0
Benzo(a)anthracene	1.326	1.13	-	14.8	20	110	0
3,3'-Dichlorobenzidine	0.472	0.437	-	7.4	20	116	0
Chrysene	1.231	1.057	-	14.1	20	112	0
Bis(2-ethylhexyl)phthalate	0.889	0.856	-	3.7	20	120	0
Di-n-octylphthalate	1.499	1.515	-	-1.1	20	125	0
Benzo(b)fluoranthene	1.266	1.089	-	14	20	112	0
Benzo(k)fluoranthene	1.214	1.07	-	11.9	20	107	0
Benzo(a)pyrene	1.083	1.039	-	4.1	20	121	0
IS1_Perylene-d12	1	1	-	0	20	117	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies		**Lab Number**	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		**Project Number**	: 075104	
Instrument ID	: SV106		**Calibration Date**	: 10/11/23 16:53	
Lab File ID	: ABN1011		**Init. Calib. Date(s)**	: 09/02/23	09/03/23
Sample No	: WG1838585-3		**Init. Calib. Times**	: 12:13	00:52
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Indeno(1,2,3-cd)pyrene	0.935	0.809	-	13.5	20	114	0
Dibenzo(a,h)anthracene	0.999	0.869	-	13	20	111	0
Benzo(ghi)perylene	0.991	0.864	-	12.8	20	112	0

* Value outside of QC limits.

SVOC SIM Data Section

QA/QC Review of Method 8270D SIM Semi-Volatiles
Data for Alpha Analytical, SDG Number: L2359293

1 Ground Water Sample
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was extracted and analyzed within the USEPS SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for target compounds were above the allowable minimum (0.010), as required.

The %D for pentachlorophenol was above the allowable maximum (20%) on 10-12-23 (CCV1012B). Positive results for pentachlorophenol should be considered estimated (J) in associated sample.

Blanks: Method blank WG1838162-1BLANK contained a trace of benzo(a)anthracene (0.02 ug/L). Positive results for benzo(a)anthracene that are less than 5 times the highest blank level should be reported as not detected (U) in associated samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water sample.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1838162-2/3.

Compound ID: Checked compound results were within GC/MS quantitation limits.

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Results Summary
Form 1
Semivolatile Organics by GC/MS-SIM

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Lab ID	: WG1838162-1	Date Collected	: NA
Client ID	: WG1838162-1BLANK	Date Received	: NA
Sample Location	:	Date Analyzed	: 10/12/23 12:13
Sample Matrix	: WATER	Date Extracted	: 10/11/23
Analytical Method	: 1,8270E-SIM	Dilution Factor	: 1
Lab File ID	: 838162-1	Analyst	: AH
Sample Amount	: 275 ml	Instrument ID	: SV128
Extraction Method	: EPA 3510C	GC Column	: RXI-5SilM
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
83-32-9	Acenaphthene	ND	0.10	0.01	U
91-58-7	2-Chloronaphthalene	ND	0.20	0.02	U
206-44-0	Fluoranthene	ND	0.10	0.02	U
87-68-3	Hexachlorobutadiene	ND	0.50	0.05	U
91-20-3	Naphthalene	ND	0.10	0.05	U
56-55-3	Benzo(a)anthracene	0.02	0.10	0.02	J
50-32-8	Benzo(a)pyrene	ND	0.10	0.02	U
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.01	U
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.01	U
218-01-9	Chrysene	ND	0.10	0.01	U
208-96-8	Acenaphthylene	ND	0.10	0.01	U
120-12-7	Anthracene	ND	0.10	0.01	U
191-24-2	Benzo(ghi)perylene	ND	0.10	0.01	U
86-73-7	Fluorene	ND	0.10	0.01	U
85-01-8	Phenanthrene	ND	0.10	0.02	U
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.01	U
129-00-0	Pyrene	ND	0.10	0.02	U
91-57-6	2-Methylnaphthalene	ND	0.10	0.02	U
87-86-5	Pentachlorophenol	ND	0.80	0.01	U
118-74-1	Hexachlorobenzene	ND	0.80	0.01	U
67-72-1	Hexachloroethane	ND	0.80	0.06	U

Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: SV128		Calibration Date	: 10/12/23 11:23	
Lab File ID	: CCV1012B		Init. Calib. Date(s)	: 08/31/23	09/05/23
Sample No	: WG1838976-3		Init. Calib. Times	: 09:45	09:24
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene-d4	1	1	.05	0	20	100	0
2-Fluorophenol	1.022	1.075	.05	-5.2	20	102	0
Phenol-d6	1.251	1.338	.05	-7	20	103	0
Bis(2-chloroethyl)ether	1.078	1.096	.05	-1.7	20	97	0
n-nitrosodi-n-propylamine	0.809	0.759	.05	6.2	20	90	0
Hexachloroethane	0.481	0.491	.05	-2.1	20	100	0
Nitrobenzene-d5	1.06	1.08	.05	-1.9	20	96	0
Naphthalene-d8	1	1	.05	0	20	94	0
Naphthalene	0.977	1.024	.05	-4.8	20	95	0
Hexachlorobutadiene	0.184	0.189	.05	-2.7	20	93	0
2-Methylnaphthalene	0.652	0.673	.05	-3.2	20	92	0
1-Methylnaphthalene	0.604	0.641	.05	-6.1	20	95	0
2-Fluorobiphenyl	0.82	0.794	.05	3.2	20	87	0
2-Chloronaphthalene	0.676	0.691	.05	-2.2	20	91	0
2,6-Dinitrotoluene	0.135	0.134	.05	0.7	20	99	0
Acenaphthylene	1.077	1.078	.05	-0.1	20	88	0
Acenaphthene-d10	1	1	.05	0	20	88	0
Acenaphthene	1.267	1.304	.05	-2.9	20	87	0
2,4-Dinitrotoluene	0.304	0.339	.05	-11.5	20	101	0
Fluorene	1.383	1.479	.05	-6.9	20	89	0
2,4,6-Tribromophenol	0.168	0.186	.05	-10.7	20	92	0
Phenanthrene-d10	1	1	.05	0	20	85	0
4,6-Dinitro-o-cresol	1000	960.459	.05	4	20	95	0
Hexachlorobenzene	0.215	0.22	.05	-2.3	20	83	0
Pentachlorophenol	1000	698.29	.05	30.2*	20	67	0
Phenanthrene	0.997	1.051	.05	-5.4	20	87	0
Anthracene	0.971	1.033	.05	-6.4	20	86	0
Fluoranthene	1.158	1.202	.05	-3.8	20	85	0
Pyrene	1.199	1.277	.05	-6.5	20	86	0
4-Terphenyl-d14	0.845	0.812	.05	3.9	20	77	0
Chrysene-d12	1	1	.05	0	20	85	0
Benzo[a]anthracene	1000	1016.447	.05	-1.6	20	85	0
3,3'-Dichlorobenzidine	0.499	0.501	.05	-0.4	20	87	0
Chrysene	1.234	1.314	.05	-6.5	20	88	0
Bis(2-ethylhexyl)phthalate	0.779	0.648	.05	16.8	20	76	0
Perylene-d12	1	1	.05	0	20	88	0
Benzo[b]fluoranthene	1.127	1.271	.05	-12.8	20	98	0
Benzo[k]fluoranthene	1.043	1.043	.05	0	20	80	0
Benzo[a]pyrene	0.968	0.981	.05	-1.3	20	84	0
Indeno[1,2,3-cd]pyrene	0.969	1.007	.05	-3.9	20	91	0
Dibenzo[a,h]anthracene	0.932	1.07	.05	-14.8	20	93	0
Benzo[g,h,i]perylene	0.992	1.101	.05	-11	20	96	0

* Value outside of QC limits.

1,4-Dioxane

Data Section

QA/QC Review of Method 8270D SIM 1,4-Dioxane
Data for Alpha Analytical, SDG Number: L2359293

2 Ground Water Samples
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were extracted and analyzed within USEPA SW-846 holding times.

Initial Calibration: The average RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %RSD was below the allowable maximum (30%), as required.

Continuing Calibration: The RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %D was below the allowable maximum (20%), as required.

Blanks: The analysis of the method blank reported 1,4-dioxane as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples.

Laboratory Control Sample: The relative percent difference for 1,4-dioxane was below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1838845-2/3.

Laboratory Duplicate: The analysis of aqueous duplicate sample TFE was acceptable.

Compound ID: Checked surrogate and 1,4-dioxane results were within quantitation limits.

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Pesticide Data Section

[redacted]

QA/QC Review of 8081B Pesticide Data
for Alpha Analytical Labs
SDG Number: L2359293

1 Ground Water Sample
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was extracted and analyzed within USEPA SW-846 holding times.

Blanks: The analyses of the method and field blanks reported target pesticides as not detected.

Surrogate Recovery: One of two surrogate recoveries for sample WC-1 was outside QC limits, but not below 10% on both columns. Positive and "not detected" results for sample WC-1 should be considered estimated (J, UJ respectively).

Laboratory Control Sample: The relative percent differences for target pesticides were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples WG1838256-2/3.

Initial Calibration: The %RSDs were below the allowable maximum (20%) or the correlation coefficients were above the allowable minimum (0.995) for applicable pesticides on both columns, as required.

Continuing Calibration: The %D for endrin aldehyde was above the allowable maximum (20%) for channel A on 10-12-23 (11231012a-03). Positive results for endrin aldehyde should be considered estimated (J) in associated samples.

DDT/Endrin Breakdown Check: The percent breakdowns were below the allowable maximum (20%) for 4,4'-DDT and endrin, as required.

Pesticide Identification Summary for Single Component Analytes: Checked surrogate results were within quantitation limits. The analysis of the ground water sample reported target single component pesticides as not detected.

Pesticide Identification Summary for Multi-Component Analytes: The analysis of the ground water sample reported target multi-component pesticides as not detected.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

Surrogate Recovery Summary
Form 2
Pesticides

Client: CHA Companies
Project Name: CURIA OCTOBER GW SAMPL.

Lab Number: L2359293
Project Number: 075104
Matrix: Water

GC Column 1: CLPPesticides
GC Column 2: CLPPesticidesII

CLIENT ID (LAB SAMPLE NO.)	TCX 1 %REC	TCX 2 %REC	DCB 1 %REC	DCB 2 %REC	OTHER (1)	OTHER (2)	TOT OUT
WC-1 (L2359293-06)	55	48	235*	17*			2
WG1838256-1BLANK	64	61	47	49			0
WG1838256-2LCS	63	62	44	47			0
WG1838256-3LCSD	65	63	48	50			0

QC LIMITS
(30-150) TCX = 2,4,5,6-TETRACHLORO-M-XYLENE
(30-150) DCBP = DECACHLOROBIPHENYL

* Values outside of QC limits

FORM II NYTCL-8081

Calibration Verification Summary
Form 7
Pesticides

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: PEST11		Calibration Date	: 10/12/23 07:44	
Lab File ID	: 11231012a-03		Init. Calib. Date(s)	: 09/28/23	09/28/23
Sample No	: WG1838812-1		Init. Calib. Times	: 14:52	19:02
Channel	: A				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1-br-2-nb_Pesticides	1	1	-	0	20	99	0
2,4,5,6-Tetrachloro-m-xylen	1.087	1.025	-	5.7	20	91	0
Hexachlorobenzene	1.221	1.189	-	2.6	20	98	0
alpha-BHC	1.466	1.478	-	-0.8	20	89	0
gamma-BHC (lindane)	1.384	1.332	-	3.8	20	87	0
beta-BHC	50	45.302	-	9.4	20	84	0
delta-BHC	1.395	1.43	-	-2.5	20	92	0
Heptachlor	1.357	1.264	-	6.9	20	88	0
Aldrin	1.29	1.205	-	6.6	20	86	0
Alachlor	0.266	0.241	-	9.4	20	91	0
Chlorpyrifos	0.692	0.573	-	17.2	20	85	0
Heptachlor Epoxide	1.259	1.129	-	10.3	20	85	0
gamma-Chlordane (trans)	1.24	1.136	-	8.4	20	95	0
alpha-Chlordane (cis)	1.359	1.142	-	16	20	84	0
4,4'-DDE	1.205	1.12	-	7.1	20	85	0
Endosulfan I	1.193	1.086	-	9	20	86	0
Dieldrin	1.263	1.187	-	6	20	91	0
Endrin	1.171	1.119	-	4.4	20	88	0
4,4'-DDD	0.983	0.937	-	4.7	20	89	0
Endosulfan II	1.157	1.06	-	8.4	20	89	0
4,4'-DDT	1.07	0.97	-	9.3	20	85	0
Endrin Aldehyde	50	37.507	-	25*	20	70	0
Methoxychlor	0.628	0.553	-	11.9	20	87	0
Mirex	1.114	0.86	-	22.8*	20	80	0
Endosulfan Sulfate	1.121	0.928	-	17.2	20	80	0
Endrin Ketone	1.282	1.054	-	17.8	20	78	0
Decachlorobiphenyl	1.224	0.822	-	32.8*	20	70	0

* Value outside of QC limits.

PCB Data Section

QA/QC Review of 8082A PCB Data
for Alpha Analytical Labs
SDG Number: L2359293

1 Ground Water Sample
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was extracted and analyzed within USEPA SW-846 holding times.

Blanks: The analyses of the method and field blanks reported target aroclors as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for the ground water sample.

Laboratory Control Sample: The relative percent differences for aroclor 1016 and aroclor 1260 were below the allowable maximums and percent recoveries were within QC limits for aqueous samples WG1840050-2/3.

Initial Calibration: The average %RSDs for aroclor 1016 and aroclor 1260 were below the allowable maximum (20%) on both columns, as required.

Continuing Calibration: The average %Ds for aroclor 1016 and aroclor-1260 were below the allowable maximum (20%) for both columns, as required.

PCB Identification Summary: Checked surrogate results were within quantitation limits. The analysis of the ground water sample reported target aroclors as not detected.

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PFAS

Data Section

QA/QC Review of Method 537 (Modified) PFAS Data
for Alpha Analytical Labs SDG Number: L2359293

2 Ground Water Sample and 1 Field Blank
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The samples were analyzed within USEPA holding times.

Initial Calibration: The %RSD for PFPeA was above the method maximum (20%) for LCMS07 on10-18-23. Positive results for PFPeA should be considered estimated (J) in associated samples.

Continuing Calibration: The percent recovery for NFDHA was above QC limits (70-130%) on 10-25-23 (SCI07_231025_09). The percent recovery for NFDHA was above QC limits (70-130%) on 10-25-23 (SCI07_231025_23). Positive results for NFDHA should be considered estimated (J) in associated samples.

Blanks: The analyses of the method and field blanks reported target PFAS as not detected.

Surrogate Recovery: Three of eighteen surrogate recoveries for sample TFE were below QC limits, but not below 10%. Positive results associated with the surrogates above QC limits should be considered estimated (J) in these samples.

Laboratory Control Sample: The percent recoveries for target PFAS were within QC limits for aqueous samples WG1842563-2/3.

Compound ID: Checked PFAS results were within LC quantitation limits.

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Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA OCTOBER GW SAMPL.

Lab Number: L2359293
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S1 ()	S2 ()	S3 ()	S4 ()	S5 ()	S6 ()	S7 ()
MW-3 (L2359293-01)	86	78	125	65	88	77	80
TFE (L2359293-02)	91	91	100	102	90	106	85
FB-4 (L2359293-04)	90	96	87	65	91	92	87
WG1842563-1BLANK	91	96	87	68	93	94	84
WG1842563-2LCS	92	97	89	77	95	94	90
WG1842563-3LCS	93	97	92	74	97	97	91

QC LIMITS

(20-150) S1 = PERFLUORO[13C4]BUTANOIC ACID (MPFBA)
(20-150) S2 = PERFLUORO[13C5]PENTANOIC ACID (M5PFPEA)
(20-150) S3 = PERFLUORO[2,3,4-13C3]BUTANESULFONIC ACID (M3PFBS)
(20-150) S4 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]HEXANESULFONIC ACID (M2-4:2FTS)
(20-150) S5 = PERFLUORO[1,2,3,4,6-13C5]HEXANOIC ACID (M5PFHXA)
(20-150) S6 = PERFLUORO[1,2,3,4-13C4]HEPTANOIC ACID (M4PFHPA)
(20-150) S7 = PERFLUORO[1,2,3-13C3]HEXANESULFONIC ACID (M3PFHXS)

* Values outside of QC limits

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA OCTOBER GW SAMPL.

Lab Number: L2359293
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S8 ()	S9 ()	S10 ()	S11 ()	S12 ()	S13 ()	S14 ()
MW-3 (L2359293-01)	83	54	76	66	56	35	35
TFE (L2359293-02)	88	51	88	66	78	40	22
FB-4 (L2359293-04)	91	58	86	76	78	44	44
WG1842563-1BLANK	92	65	94	86	86	59	56
WG1842563-2LCS	97	72	93	84	100	66	59
WG1842563-3LCS	96	71	100	80	82	73	55

QC LIMITS

(20-150) S8 = PERFLUORO[13C8]OCTANOIC ACID (M8PFOA)
(20-150) S9 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]OCTANESULFONIC ACID (M2-6:2FTS)
(20-150) S10 = PERFLUORO[13C9]NONANOIC ACID (M9PFNA)
(20-150) S11 = PERFLUORO[13C8]OCTANESULFONIC ACID (M8PFOS)
(20-150) S12 = PERFLUORO[1,2,3,4,5,6-13C6]DECANOIC ACID (M6PFDA)
(20-150) S13 = 1H,1H,2H,2H-PERFLUORO[1,2-13C2]DECANESULFONIC ACID (M2-8:2FTS)
(20-150) S14 = N-DEUTERIOMETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D3-NMEFOSAA)

*** Values outside of QC limits**

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA OCTOBER GW SAMPL.

Lab Number: L2359293
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S15 ()	S16 ()	S17 ()	S18 ()	S19 ()	S20 ()	S21 ()
MW-3 (L2359293-01)	72	51	44	71	58	76	39
TFE (L2359293-02)	74	24	23	59	45	89	17*
FB-4 (L2359293-04)	105	70	52	98	92	92	46
WG1842563-1BLANK	94	73	61	98	79	85	44
WG1842563-2LCS	110	78	67	102	94	84	46
WG1842563-3LCS	102	79	61	92	82	84	48

QC LIMITS

(20-150) S15 = PERFLUORO[1,2,3,4,5,6,7-13C7]UNDECANOIC ACID (M7-PFUDA)
(20-150) S16 = PERFLUORO[13C8]OCTANESULFONAMIDE (M8FOSA)
(20-150) S17 = N-DEUTERIOETHYLPERFLUORO-1-OCTANESULFONAMIDOACETIC ACID (D5-NETFOSAA)
(20-150) S18 = PERFLUORO[1,2-13C2]DODECANOIC ACID (MPFDOA)
(20-150) S19 = PERFLUORO[1,2-13C2]TETRADECANOIC ACID (M2PFTEDA)
(20-150) S20 = 2,3,3,3-TETRAFLUORO-2-[1,1,2,2,3,3,3-HEPTAFLUOROPROPOXY]-13C3-PROPANOIC ACID (M3HFPO-DA)
(20-150) S21 = N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDE (D3-NMEFOSA)

*** Values outside of QC limits**

Surrogate Recovery Summary
Form 2
Semivolatiles

Client: CHA Companies
Project Name: CURIA OCTOBER GW SAMPL.

Lab Number: L2359293
Project Number: 075104
Matrix: Water

CLIENT ID (LAB SAMPLE NO.)	S22 ()	S23 ()	S24 ()	S25 ()	S26 ()	S27 ()	S28 ()	TOT OUT
MW-3 (L2359293-01)	43	41	46	--	--	--	--	0
TFE (L2359293-02)	18*	18*	20	--	--	--	--	3
FB-4 (L2359293-04)	52	52	62	--	--	--	--	0
WG1842563-1BLANK	56	60	67	--	--	--	--	0
WG1842563-2LCS	58	61	67	--	--	--	--	0
WG1842563-3LCS	54	58	64	--	--	--	--	0

QC LIMITS

(20-150) S22 = N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDE (D5-NETFOSA)
(20-150) S23 = 2-(N-METHYL-D3-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D7-NMEFOSE)
(20-150) S24 = 2-(N-ETHYL-D5-PERFLUORO-1-OCTANESULFONAMIDO)ETHAN-D4-OL (D9-NETFOSE)

* Values outside of QC limits

Initial Calibration Summary
Form 6
Semivolatiles

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Instrument ID	: LCMS07	Ical Ref	: ICAL20452
Calibration dates	: 10/18/23 17:34 10/18/23 19:17		

Initial Calibration Report

SCIEX OS Version 2.1.6.59781

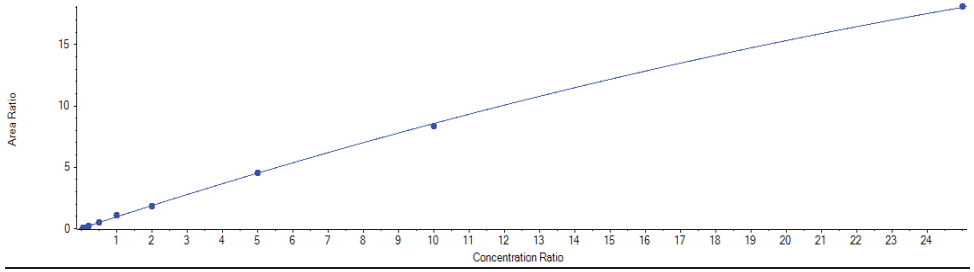
Alpha Analytical Inc.
Dataset: Default
Last Altered: 10/19/2023 2:07:58 PM
Generated: 10/19/2023 12:52:03 PM

Acquisition Method	EPA_1633.dam
Processing Method	EPA1633_AVG.qmethod
Calibration	231018_1633FULL_ICAL

Compound Name: PFPeA

Sample File	Sample ID	Acquisition Date and Time	RT	IS Peak Area	Peak Area	Calc. Conc. (ng/ml)	Percent Recovery	RRF	Signal to Noise	Used	b/a
SCI07_231018_20.wiff	IA1633STD-.1	10/18/2023 5:34:30 PM	4.42	1223263	82057	0.175	87.4	1.68	69	True	1.55
SCI07_231018_21.wiff	IA1633STD-.2	10/18/2023 5:47:21 PM	4.41	1204108	128596	0.386	96.4	1.34	121	True	1.35
SCI07_231018_22.wiff	IA1633STD-.5	10/18/2023 6:00:12 PM	4.41	1137332	252647	0.999	99.9	1.11	174	True	1.26
SCI07_231018_23.wiff	IA1633STD-1.25	10/18/2023 6:13:01 PM	4.41	1178731	642089	2.722	108.9	1.09	433	True	1.21
SCI07_231018_24.wiff	IA1633STD-2.5	10/18/2023 6:25:55 PM	4.41	1144969	1228496	5.569	111.4	1.07	583	True	1.32
SCI07_231018_25.wiff	IA1633STD-5	10/18/2023 6:38:46 PM	4.41	1136920	2081688	9.709	97.1	0.92	1058	True	1.22
SCI07_231018_26.wiff	IA1633STD-12.5	10/18/2023 6:51:34 PM	4.41	1052206	4812937	25.292	101.2	0.92	1184	True	1.44
SCI07_231018_27.wiff	IA1633STD-25	10/18/2023 7:04:28 PM	4.41	1066948	8919654	48.640	97.3	0.84	1473	True	1.43
SCI07_231018_28.wiff	IA1633STD-62.5	10/18/2023 7:17:20 PM	4.41	1079773	19541432	125.734	100.6	0.72	2946	True	1.24

Analyte Name: PFPeA
Regression Equation: $y = -0.00892x^2 + 0.94265x + 0.03415$ ($r = 0.99959$, $r^2 = 0.99918$) (weighting: 1/x)
Calibration Fit: RSD = 26.7% RSE = 8.37
Average RF: 1.08



Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: LCMS07		Calibration Date	: 10/25/23 18:54	
Lab File ID	: SCI07_231025_09		Init. Calib. Date(s)	: 10/18/23	10/18/23
Sample No	: WG1844264-3		Init. Calib. Times	: 17:34	19:17
Channel	:				

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
Perfluorobutanoic Acid (PFBA)	10.430	10.000	104.3	70-130
Perfluoropentanoic Acid (PFPeA)	5.279	5.000	105.6	70-130
Perfluorobutanesulfonic Acid (PFBS)	2.194	2.217	99	70-130
Perfluorohexanoic Acid (PFHxA)	2.500	2.500	100	70-130
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	9.957	9.375	106.2	70-130
Perfluoropentanesulfonic Acid (PFPeS)	2.547	2.353	108.3	70-130
Perfluoroheptanoic Acid (PFHpA)	2.396	2.500	95.8	70-130
Perfluorohexanesulfonic Acid (PFHxS)	2.399	2.285	105	70-130
Perfluorooctanoic Acid (PFOA)	2.766	2.500	110.6	70-130
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	9.889	9.500	104.1	70-130
Perfluoroheptanesulfonic Acid (PFHpS)	2.149	2.382	90.2	70-130
Perfluorononanoic Acid (PFNA)	2.290	2.500	91.6	70-130
Perfluorooctanesulfonic Acid (PFOS)	2.235	2.320	96.4	70-130
Perfluorodecanoic Acid (PFDA)	2.642	2.500	105.7	70-130
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	10.824	9.600	112.8	70-130
Perfluorononanesulfonic Acid (PFNS)	2.737	2.405	113.8	70-130
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2.569	2.500	102.8	70-130
Perfluoroundecanoic Acid (PFUnA)	2.496	2.500	99.9	70-130
Perfluorodecanesulfonic Acid (PFDS)	2.613	2.413	108.3	70-130
Perfluorooctanesulfonamide (PFOSA)	2.478	2.500	99.1	70-130
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2.547	2.500	101.9	70-130
Perfluorododecanoic Acid (PFDoA)	2.685	2.500	107.4	70-130
Perfluorotridecanoic Acid (PFTrDA)	2.366	2.500	94.6	70-130
Perfluorotetradecanoic Acid (PFTeDA)	2.686	2.500	107.4	70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	10.005	10.000	100.1	70-130
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	10.208	9.450	108	70-130
Perfluorododecanesulfonic Acid (PFDoS)	2.119	2.425	87.4	70-130
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	11.333	9.350	121.2	70-130
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	12.196	9.450	129.1	70-130
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	2.504	2.500	100.1	70-130
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	2.615	2.500	104.6	70-130
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	26.601	25.000	106.4	70-130
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	26.585	25.000	106.3	70-130
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	5.172	5.000	103.4	70-130
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	5.539	5.000	110.8	70-130
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	4.868	4.450	109.4	70-130
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	7.015	5.000	140.3*	70-130
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	11.330	12.500	90.6	70-130
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	61.623	62.500	98.6	70-130
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	50.454	62.500	80.7	70-130
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	9.710	10.000	97.1	70-130
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	4.850	5.000	97	70-130
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	2.100	2.330	90.2	70-130

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies	**Lab Number**	: L2359293		
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104		
Instrument ID	: LCMS07	**Calibration Date**	: 10/25/23 18:54		
Lab File ID	: SCI07_231025_09	**Init. Calib. Date(s)**	: 10/18/23	10/18/23	
Sample No	: WG1844264-3	**Init. Calib. Times**	: 17:34	19:17	
Channel	:				

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	3.440	4.690	73.3	70-130
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	2.440	2.500	97.5	70-130
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	2.620	2.500	105	70-130
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	2.120	2.370	89.5	70-130
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	2.410	2.500	96.3	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	3.320	4.755	69.9*	70-130
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	1.170	1.250	94	70-130
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	2.110	2.395	87.9	70-130
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	1.050	1.250	84.4	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	2.850	4.800	59.4*	70-130
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	2.990	5.000	59.8*	70-130
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	1.210	1.250	97.1	70-130
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	2.480	2.500	99.2	70-130
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	3.120	5.000	62.3*	70-130
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	1.200	1.250	96	70-130
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	1.010	1.250	81.2	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	9.870	10.000	98.7	70-130
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	1.670	2.500	66.7*	70-130
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	1.780	2.500	71.3	70-130
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	16.200	25.000	64.8*	70-130
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	17.690	25.000	70.7	70-130
Perfluoro-n-[1,2-13C2]Hexanoic Acid (13C2-PFHxA)	1.520	2.500	60.7*	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanoic Acid (13C4-PFOA)	1.390	2.500	55.7*	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanesulfonic Acid (13C4-PFOS)	1.530	2.395	63.9*	70-130
Perfluoro-n-[1,2-13C2]Decanoic Acid (13C2-PFDA)	0.810	1.250	65*	70-130
Perfluoro-n-[2,3,4-13C3]Butanoic Acid (13C3-PFBA)	2.660	5.000	53.2*	70-130
Perfluoro-n-[1,2,3,4,5-13C5]Nonanoic Acid (13C5-PFNA)	0.750	1.250	60.2*	70-130
Perfluoro-1-hexane[18O2]Sulfonic Acid (18O2-PFHxS)	1.380	2.370	58.1*	70-130

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies		Lab Number	: L2359293	
Project Name	: CURIA OCTOBER GW SAMPL.		Project Number	: 075104	
Instrument ID	: LCMS07		Calibration Date	: 10/25/23 22:02	
Lab File ID	: SCI07_231025_23		Init. Calib. Date(s)	: 10/18/23	10/18/23
Sample No	: WG1844264-8		Init. Calib. Times	: 17:34	19:17
Channel	:				

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
Perfluorobutanoic Acid (PFBA)	10.518	10.000	105.2	70-130
Perfluoropentanoic Acid (PFPeA)	5.135	5.000	102.7	70-130
Perfluorobutanesulfonic Acid (PFBS)	2.242	2.217	101.1	70-130
Perfluorohexanoic Acid (PFHxA)	2.513	2.500	100.5	70-130
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	10.051	9.375	107.2	70-130
Perfluoropentanesulfonic Acid (PFPeS)	2.341	2.353	99.5	70-130
Perfluoroheptanoic Acid (PFHpA)	2.362	2.500	94.5	70-130
Perfluorohexanesulfonic Acid (PFHxS)	2.315	2.285	101.3	70-130
Perfluorooctanoic Acid (PFOA)	2.739	2.500	109.6	70-130
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	9.953	9.500	104.8	70-130
Perfluoroheptanesulfonic Acid (PFHpS)	2.093	2.382	87.9	70-130
Perfluorononanoic Acid (PFNA)	2.088	2.500	83.5	70-130
Perfluorooctanesulfonic Acid (PFOS)	2.188	2.320	94.3	70-130
Perfluorodecanoic Acid (PFDA)	2.551	2.500	102.1	70-130
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	9.328	9.600	97.2	70-130
Perfluorononanesulfonic Acid (PFNS)	2.563	2.405	106.6	70-130
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2.700	2.500	108	70-130
Perfluoroundecanoic Acid (PFUnA)	2.436	2.500	97.5	70-130
Perfluorodecanesulfonic Acid (PFDS)	2.497	2.413	103.5	70-130
Perfluorooctanesulfonamide (PFOSA)	2.207	2.500	88.3	70-130
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2.416	2.500	96.6	70-130
Perfluorododecanoic Acid (PFDoA)	2.336	2.500	93.4	70-130
Perfluorotridecanoic Acid (PFTrDA)	2.227	2.500	89.1	70-130
Perfluorotetradecanoic Acid (PFTeDA)	2.256	2.500	90.3	70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	10.048	10.000	100.5	70-130
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	10.690	9.450	113.1	70-130
Perfluorododecanesulfonic Acid (PFDoS)	2.303	2.425	95	70-130
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	12.420	9.350	132.8*	70-130
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	13.040	9.450	138*	70-130
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	2.512	2.500	100.5	70-130
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	2.584	2.500	103.4	70-130
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	25.145	25.000	100.6	70-130
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	25.583	25.000	102.3	70-130
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	5.194	5.000	103.9	70-130
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	5.402	5.000	108	70-130
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	4.609	4.450	103.6	70-130
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	7.778	5.000	155.6*	70-130
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	10.954	12.500	87.6	70-130
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	58.474	62.500	93.6	70-130
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	45.203	62.500	72.3	70-130
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	9.580	10.000	95.8	70-130
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	5.070	5.000	101.5	70-130
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	2.140	2.330	91.8	70-130

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Semivolatiles

Client	: CHA Companies	**Lab Number**	: L2359293		
Project Name	: CURIA OCTOBER GW SAMPL.	**Project Number**	: 075104		
Instrument ID	: LCMS07	**Calibration Date**	: 10/25/23 22:02		
Lab File ID	: SCI07_231025_23	**Init. Calib. Date(s)**	: 10/18/23	10/18/23	
Sample No	: WG1844264-8	**Init. Calib. Times**	: 17:34	19:17	
Channel	:				

Compound	Concentration (ng/ml)	True Value (ng/ml)	% Recovery	QC Limits
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	3.150	4.690	67.1*	70-130
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	2.560	2.500	102.4	70-130
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	2.650	2.500	106.1	70-130
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	2.280	2.370	96.2	70-130
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	2.450	2.500	97.9	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	3.080	4.755	64.8*	70-130
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	1.120	1.250	89.5	70-130
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	2.030	2.395	84.7	70-130
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	1.230	1.250	98	70-130
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	2.980	4.800	62.1*	70-130
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	2.440	5.000	48.8*	70-130
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	1.420	1.250	114	70-130
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	2.550	2.500	101.8	70-130
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	3.000	5.000	59.9*	70-130
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	1.470	1.250	117.2	70-130
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	1.270	1.250	102	70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	9.650	10.000	96.5	70-130
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	1.520	2.500	60.6*	70-130
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	1.720	2.500	68.7*	70-130
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	16.010	25.000	64.1*	70-130
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	17.250	25.000	69*	70-130
Perfluoro-n-[1,2-13C2]Hexanoic Acid (13C2-PFHxA)	1.650	2.500	66.2*	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanoic Acid (13C4-PFOA)	1.540	2.500	61.4*	70-130
Perfluoro-n-[1,2,3,4-13C4]Octanesulfonic Acid (13C4-PFOS)	1.830	2.395	76.3	70-130
Perfluoro-n-[1,2-13C2]Decanoic Acid (13C2-PFDA)	0.810	1.250	65.1*	70-130
Perfluoro-n-[2,3,4-13C3]Butanoic Acid (13C3-PFBA)	3.100	5.000	62*	70-130
Perfluoro-n-[1,2,3,4,5-13C5]Nonanoic Acid (13C5-PFNA)	0.910	1.250	73	70-130
Perfluoro-1-hexane[18O2]Sulfonic Acid (18O2-PFHxS)	1.510	2.370	63.7*	70-130

* Value outside of QC limits.

Metals Data Section

QA/QC Review of Arsenic and Sodium Data
for Alpha Analytical Labs
SDG Number: L2358719

1 Ground Water Sample
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for arsenic and sodium were within control limits (90-110%).

Blanks: The analyses of initial and continuing calibration blanks and method reported arsenic and sodium as either not detected or below the reporting limits, as required.

ICP Interference Check Sample: The percent recoveries for arsenic and lead were not reported on the Form 4a.

Spike Sample Recovery: The percent recovery for arsenic was above control limits (75-125%) for aqueous batch spike sample L2359497-01. Positive results for arsenic should be considered estimated, biased high (J+) in associated aqueous samples.

Laboratory Duplicates: The relative percent differences for arsenic and sodium were below the allowable maximum (20%) for aqueous batch MS/MSD sample L2360336-04, as required.

Laboratory Control Sample: The percent recoveries for arsenic and sodium were within control limits (80-120%) for aqueous samples WG1838228-2 and WG1839346-2.

Serial Dilution: The %D for arsenic was below the allowable maximum (10%) for aqueous batch serial dilution sample L2360336-04, as required.

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Form 5a
Matrix Spike

Client	: CHA Companies	Lab Number	: L2359293
Project Name	: CURIA OCTOBER GW SAMPL.	Project Number	: 075104
Client Sample ID	: NA	Matrix	: WATER
Lab Sample ID	: L2359497-01		
Matrix Spike	: WG1838228-7	MS Analysis Date	: 10/12/23 08:59
Matrix Spike Dup	:	MSD Analysis Date	:

		Matrix Spike Sample			Matrix Spike Duplicate					
Parameter	Sample Conc. (mg/l)	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	Spike Added (mg/l)	Spike Conc. (mg/l)	%R	RPD	Recovery Limits	RPD Limit
Arsenic, Total	ND	0.12	0.159	132 Q					75-125	20

General Chemistry
Data Section

QA/QC Review of Reactive Cyanide Data for
Alpha Analytical Labs, SDG Number: L2359293

1 Ground Water Sample
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was analyzed within USEPA holding times.

Blanks: The analysis of the method blank reported reactive cyanide as not detected.

Laboratory Duplicates: The analysis for aqueous duplicate sample WC-1 was acceptable.

Laboratory Control Sample: The percent recovery was within QC limits (35-125%) for aqueous sample WG1838487-2/3.

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679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

QA/QC Review of Reactive Sulfide Data for
Alpha Analytical Labs, SDG Number: L2359293

1 Ground Water Sample
Collected October 6, 2023

Prepared by: Donald Anné
November 14, 2023

Holding Times: The sample was analyzed within USEPA SW 846 holding times.

Blanks: The analysis of the method blank reported reactive sulfide as not detected.

Laboratory Duplicates: The analysis for aqueous duplicate sample WC-1 was acceptable.

Laboratory Control Sample: The percent recovery for reactive sulfide was within laboratory QC limits (60-125%) for aqueous sample WG1838490-2.

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679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
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Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA or PFTrDA	Perfluorotridecanoic acid
PFTeA or PFTA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid or 6:2 Fluorotelomersulfonate
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid or 8:2 Fluorotelomersulfonate

APPENDIX E

Contained In Approval and Waste Manifest

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Materials Management, Bureau of Hazardous Waste and Radiation Management
625 Broadway, 9th Floor, Albany, New York 12233-7256
P: (518) 402-8651 | F: (518) 402-9024
www.dec.ny.gov

Match 4, 2024

Sent via e-mail, no hard copy to follow

Ms. Samantha Miller
Senior Engineer V
CHA Consulting Inc.
One Park Place
300 South State Street, Suite 600
Syracuse, NY 13202

Re: "Contained-In" Determination Request for Purge Water Associated with October 2023 Groundwater Sampling
Curia, New York
NYSDEC Inactive Hazardous Waste Site Number 442009

Dear Ms. Samantha:

The New York State Department of Environmental Conservation (NYSDEC) has reviewed your contained-in determination request letter dated December 6, 2023, requesting a "contained-in" determination for one 55-gallon drum of pumped groundwater generated during the October 2023 groundwater sampling at the Curia, New York (Curia) facility.

Evaluation

Concentrations for (Lab Sample ID L2368808-01, L2359293-01, L2359293-03, L2359293-06) detected for individual volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), were all less than their current NYSDEC "contained in" groundwater action levels and Land Disposal Restriction concentrations. Most of the individual VOCs, SVOCs were not detected above the reporting limit. No hazardous constituents exhibited a hazardous waste characteristic by exceeding their TCLP regulatory level.

Concentrations for aniline, chloroform and Methane (dichloro)-, trichloroethene (TCE) and tetrachloroethene (PCE) in the pumped groundwater sample (Lab Sample ID L2368808-01, L2359293-01, L2359293-03, L2359293-06) were below the current NYSDEC "contained in" groundwater action level and the Land Disposal Restriction concentration. Therefore, one 55-gallon drum of pumped groundwater generated during the October 2023 groundwater sampling, does not have to be managed as hazardous waste and may be transported off-site to a POTW or a permitted industrial wastewater facility, able to receive the pumped groundwater, for proper off-site disposal as non-hazardous waste.

Should you have any questions regarding the content of this letter, please do not hesitate to contact me at (518) 402-9594 or email me at alison.egbon@dec.ny.gov.

Sincerely,



Alison Egbon
Assistant Environmental Engineer
RCRA Technical Assistance Section

ec: H. Wilkie, DEC
D. Evans, DEC

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
NYD982628877	1	844-872-2732	3887203

GENERATOR

5. Generator's Name and Mailing Address
CURIA NEW YORK INC
33 RIVERSIDE AVE
RENSSELAER, NY 12144 5184337772
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: TRADEBE TRANSPORTATION LLC — U.S. EPA ID Number: CTD021816889

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
TRADEBE TREATMENT & RECYCLING NORTHEAST LLC
410 SHATTUCK WAY
NEWINGTON, NH 03801 603-431-2480
Facility's Phone:
U.S. EPA ID Number: NHD980521843

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON DOT / NON RCRA REGULATED MATERIAL, (ABSORBENT, PROPYLENE GLYCOL), ,	1	DF	150	P	
2.	NON DOT / NON RCRA REGULATED MATERIAL, (ENZALUTAMIDE, PPE), ,	4	CF	800	P	
3.	NON DOT / NON RCRA REGULATED MATERIAL, (PURGE WATER/ DECON), ,	1	DF	300	P	
4.						

13. Special Handling Instructions and Additional Information
EMERG RESPONSE: TRADEBE ENVIRON. SERVICES | COMPASS2: 3887203
[1] 1000197513 (NE3) 55GALDRUM (ERG171) [2] 1000193883 (NE3) CUBICYDBX (ERG171) [3] 1000408691 (LE3) 55GALDRUM (ERG171)

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Danielle Slavis — Signature: [signature] — Month: 3 — Day: 5 — Year: 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Esa Jessop — Signature: [signature] — Month: 03 — Day: 05 — Year: 24

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

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