PERIODIC REVIEW REPORT
JANUARY 2020 – DECEMBER 2020

CRYSTAL CLEANERS SITE
CITY OF CORNING, NEW YORK 14830

NYSDEC Site No. 851022
Work Assignment No. D009812-04

Prepared for:

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233

Prepared by:

TRC Engineers, Inc.
10 Maxwell Drive, Suite 200
Clifton Park, New York 12065

JUNE 2021

TRC Project No. 386554

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

LIST OF FIGURES

LIST OF TABLES

LIST OF ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

AMSL	Above Mean Sea Level
COCs	Contaminants of Concern
CVOCs	Chlorinated Volatile Organic Compounds
DER	Division of Environmental Remediation
DTW	Depth to Water
DUSRs	Data Usability Summary Reports
ECs	Engineering Controls
EE	Environmental Easement
ft. bgs.	Feet Below Ground Surface
ICs	Institutional Controls
IRM	Interim Remedial Measure
MTBE	Methyl tert-butyl ether
ŋg/L	Nanograms Per Liter
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PCE	Tetrachloroethylene
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PRR	Periodic Review Report
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RAOs	Remedial Action Objectives
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SCG	Standard, Criteria and Guidance
SIM	Selected Ion Monitoring
SMP	Site Management Plan
SMR	Site Management Report
SSDS	Sub-Slab Depressurization System
TCL	Target Compound List
TICs	Tentatively Identified Compounds
TOC	Top of Casing
TRC	TRC Engineers, Inc.
USEPA	United States Environmental Protection Agency
USTs	Underground Storage Tanks
UTM	Universal Transverse Mercator
VOCs	Volatile Organic Compounds
WA	Work Assignment
µg/L	micrograms per liter

Executive Summary

Category	Summary/Results
Engineering Control	• Sub-Slab Depressurization System
Institutional Control	• SMP (2013) • EE (2017)
Site Classification	Class 4
Site Management Plan	SMP Rev. No. 1 – September 2013
Certification/Reporting Period	The Certification Period is defined as 1 year in the SMP. The SMP requires a PRR to be completed every year. This PRR is the first to be completed for the Site since the SMP was approved in September 2013. SMRs are not required. The SMP requires certified reporting following a sampling event.
Inspection	**Frequency**
1. Site Inspection	Annually and following severe weather events
2. SSDS	As needed
Monitoring	**Frequency**
1. Groundwater	Every 5th quarter
Prior PRR Recommendations	This PRR is the first to be completed for the Site since the SMP was approved in September 2013. No SMRs were completed for the Site.
Site Management Activities	Two site inspections, one round of groundwater level measurements, and one groundwater sampling event: • 09/14/20 – Site inspection • 09/14/20 – Groundwater level measurements • 09/14 – 09/15/20 – Collect groundwater samples from six wells. All samples collected were submitted to Eurofins/TestAmerica Laboratories for analysis of VOCs, with three samples also submitted for analysis of PFAS and 1,4-Dioxane. • 12/22/20 – Site inspection
Significant Findings or Concerns	No significant findings or concerns were identified during the site visit.
Recommendations	1. A 1-year Certification Period is recommended with a PRR frequency of one report every year. The certification period should begin January 1st and end December 31st, with the next PRR covering the reporting period beginning January 1st, 2021 ending December 31st, 2021. If COC concentrations continue to be detected at similar or lower levels, a sampling and reporting reduction to once every three years will be requested in the next PRR. 2. Water level measurements should continue to be collected at the site monitoring wells during inspection and groundwater monitoring events. 3. Groundwater monitoring should continue to be completed at the Site.
Cost Evaluation	The total cost of the site management activities during this reporting period was $21,845.00. This cost includes engineering and subcontractor costs (e.g., laboratory analytical, equipment, rentals, etc.). It should be noted that this total does not include any costs incurred by the NYSDEC in support of the project.

1.0 Introduction

This PRR has been prepared for the Crystal Cleaners Site (the Site) and covers the period January 2020 through December 2020. This PRR was prepared in accordance with the New York State Department of Environmental Conservation Department of Environmental Remediation Work Assignment No. D009812-04 and NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation. A summary of applicable Site and remedial program information is presented below:

Site Information			
Site Name:	Crystal Cleaners Site	**NYSDEC Site No:**	851022
Site Location:	343 West Pulteney Street, Corning, Steuben County, NY	**Remedial Program:**	State Superfund Program
Site Type:	Dry Cleaner	**Classification:**	04
Parcel Identification(s):	299.19-03-011.000, Steuben County Tax Maps	**Parcel Acreage / EE Acreage:**	0.58 / 0.571
Selected Remedy:	Sub-slab Depressurization System, Wellhead Treatment, Groundwater Monitoring	**Site COC(s):**	• VOCs
Current Remedial Program Phase:	Post RA Site Monitoring; Site Management	**Institutional Controls:**	• SMP (2013) • EE (2017)
Post-Remediation Monitoring and Sampling Frequency:	Groundwater monitoring every fifth quarter, annual site inspection, severe weather event inspection (as needed)	**Engineering Controls:**	• Sub-slab Depressurization System
Monitoring Locations:	Overburden monitoring wells (6)	**Required Reporting:**	• PRR – Annual • Severe Weather Event Report – Within 14 days of the inspection

1.1 Site Location, Ownership, and Description

The Site is located at 343 West Pulteney Street in the City of Corning, Steuben County, New York. The Site property is identified as Section 299.19, Block 03 and Lot 011.000 (Tax ID/SBL No. 299.19-03-011.000) on the Steuben County Tax Map and is approximately 0.58 acres in size. The current owner of the property is listed as Oliviarae, LLC. The Site historically contained a one-story retail building with a basement beneath one portion and large parking lot. The building was demolished in 2020 and the Site property is currently vacant. The property is bounded by West Pulteney Street to the south, Townsend Avenue to the west, Cutler Avenue to the east, and residential properties to the north. Site Location and Site Layout maps are provided on **Figure 1** and **Figure 2**, respectively.

1.2 Investigation/Remedial History

The Crystal Cleaners Site has been used for commercial/retail purposes since the early 1970s. The on-Site, one-story building was constructed in 1970, and soon thereafter, was utilized by a dry-cleaning business, laundromat,

gas station, and mini-mart. The dry-cleaning business operated on the Site until the late 2000s. The initial dry-cleaning system reportedly utilized at the Site was a wet to dry system, which can result in PCE emissions or spills during the transfer of clothing or other items from the wet machinery to the dry machinery. The wet to dry system was later converted to a dry to dry system in the mid-1980s and further equipped with spill protection in the mid-1990s, when the business began operation under a new manager/owner. VOCs, primarily chlorinated solvents (CVOCs), were detected in the City of Corning's nearby water supply wells, SW-1 and SW-2, in the early 1980s. The wells are located approximately 950 feet and 1,300 feet southeast of the Site, respectively, along the banks of the Chemung River. The City of Corning installed wellhead treatment (i.e., an air stripper) on the impacted wells and continue use as conditions warrant.

The on-Site gas station, which operated from 1974 until 2008, installed four 4,000-gallon underground gasoline storage tanks in 1974 and one 1,000-gallon underground kerosene tank in 1984. In 1992, a routine tank/system test failed leading to the removal and replacement of all four gasoline tanks and the excavation of 600 tons of contaminated soil. The four 4,000-gallon gasoline tanks were replaced with two 8,000-gallon gasoline tanks. In 2000, the original kerosene tank was abandoned in place and a new 1,000-gallon underground kerosene tank was installed. The tanks were reportedly removed from the Site in 2008.

In 2005, Teeter Environmental Services performed a Phase II investigation to evaluate the condition of the USTs. Soil and groundwater samples were collected and submitted for laboratory analysis. Sample results showed that concentrations of PCE, naphthalene, toluene, and m,p-xylenes were above SCGs. Additional Site sampling activities were completed in 2007 by MACTEC Engineering and Consulting, P.C. and were presented in the Final Site Characterization Report dated March 2007. Contaminated groundwater, presumably from off-Site migration of VOCs, was found downgradient in the residential area near the Site and in the public water supply wells. The Site was subsequently listed as a Class 2 Site in the Registry of Inactive Waste Disposal Sites in 2008.

A RI/FS was performed by AECOM from 2009 to 2011, in order to characterize the nature and extent of the contamination, and included extensive sampling of sub-surface soil, on-Site groundwater, downgradient groundwater, and soil vapor. SVI sampling was completed at 17 private residences and the on-Site building. Based on the findings, it was recommended that continued SVI sampling be done in one residence and as part of an IRM, a SSDS system be installed in another residential structure identified as H05 located on West Poultney St. to the southeast of the Site (**Figure 2**). The IRM was completed in December 2010, and due to its effectiveness, the NYSDEC selected a "no further action" remedy in the ROD, which was released in March 2011. A SMP was published by the NYSDEC in September 2013 to establish the procedures required to manage residual contamination left in place at the Site following completion of the IRM, including management of all Engineering and Institutional Controls; development and implementation of an Operation, Maintenance, and Monitoring Plan; submittal of Site Management Reports; performance of inspections and certification of results; and proper communication of Site information to NYSDEC by future Site owners. In September 2020, the vacant one-story building was demolished with approval from NYSDEC.

A Custodial Record detailing known and available Site reports and the Notification of Demolition and Renovation are included in **Appendix A.**

1.3 Remaining Contamination

Remediation of the Site is complete. Prior to remediation, the primary contaminants of concern were PCE and its associated daughter products. Remedial actions have successfully achieved soil cleanup objectives for restricted-residential use. Residual contamination in the groundwater is being managed under the SMP. A moderate amount of PCE from the Site migrated off-Site and impacted the City of Corning's Public Supply Wells SW-1 and SW-2. Due to the presence of the contamination, the City of Corning installed wellhead treatment (i.e., an air stripper) on the wells to remove VOCs from the drinking water and to ensure that it meets drinking water standards prior to distribution.

1.4 Regulatory Requirements/Remedial Controls

A summary of the RAOs, as found in the March 2011 ROD, include the following:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles from contaminated groundwater.

RAOs for Environmental Protection

- Restore the ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the Site.

2.0 Institutional and Engineering Control Plan Compliance

2.1 Institutional Controls

The Crystal Cleaners Site's inclusion on the Registry of Inactive Hazardous Waste Disposal Sites, ROD, SMP, and EE act as the ICs.

The 2013 SMP and 2017 EE require the following for the Site:

- Compliance with the EE and the SMP by the Grantor and the Grantor's successors and assigns.
- All ECs must be operated and maintained as specified in the SMP.
- All ECs on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined by the SMP.
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP.
- Institutional controls identified in the EE may not be discontinued without an amendment or extinguishment of the EE.
- The Site property may only be used for restricted-residential, commercial and industrial uses provided that the long-term Engineering and Institutional Controls included in the SMP are employed.
- The Site property may not be used for a higher level of use, such as unrestricted, residential use without additional remediation and amendment of the EE, as approved by the NYSDEC.
- The use of the groundwater underlying the Site is prohibited without treatment rendering it safe for intended use as determined by the New York State Department of Health (NYSDOH) and the Steuben County Department of Health.
- A provision for evaluation of the potential for soil vapor intrusion should the on-Site building be occupied and for any buildings developed on the Site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.
- Vegetable gardens and farming on the property are prohibited.
- The Site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.
- Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the owner of the Controlled Property to assure compliance with the restrictions identified by the EE.

2.2 Engineering Controls

The ECs listed in the SMP for the Site include two SSDS: one SSDS is currently located in H05 and the second was located in the one-story building located on the Site. Following the demolition of the on-site building in September 2020, the SSDS in the residential structure is the only remaining EC.

The SSDS in H05 was installed in the basement of the structure in December 2010. Construction details are discussed in Section 3.0 of the 2013 SMP. As-built drawings are also included as attachments in SMP. NYSDEC sends a letter to remind the current homeowner to contact NYSDEC if they have questions or repairs are needed. Maintenance for residential SSDS are completed separately from the site inspection and groundwater sampling activities completed in connection with the Site.

3.0 Monitoring and Sampling Plan Compliance

The SMP (2013) was prepared to manage the contamination remaining on the Site and to ensure the remedy remains effective by restricting site use, site development and soil movement on the property. The SMP specifies the following monitoring and sampling activities for the Site:

Summary of September 2013 SMP Site Monitoring and Sampling Plan			
Site Management Activity	**Frequency**	**Location**	**Laboratory Analysis**
Site Inspection	Annual	Site property and surrounding area	Not Applicable
Severe Weather Event Inspection	As needed	Site property and surrounding area	Not Applicable
Groundwater Sampling	Every 5th Quarter	• MW-1 • MW-2 • MW-3 • MW-4 • MW-5 • MW-6	USEPA Method 8260 for VOCs
Sub-slab Depressurization System Audit	As needed	Residential Structure H05	Not Applicable
Severe Weather Event Report	As needed - within 14 days of the inspection	Not Applicable	Not Applicable
Periodic Review Report	Annual	Not Applicable	Not Applicable

Notes:
USEPA – United States Environmental Protection Agency.
VOCs – Volatile Organic Carbons.

3.1 Site Inspection

TRC conducted a site inspection on Tuesday, September 14th, 2020, in accordance with the SMP. The Site inspection was conducted to document the condition of the on- and off-site monitoring wells, overall site conditions, and to collect groundwater samples from the six wells.

TRC conducted a second site inspection on Tuesday, December 22nd, 2020 to observe the status of the Site and the demolished one-story building. No severe weather event inspections were performed this reporting period.

A summary of the Site inspection results is presented below:

Summary of Site Activities and Site Monitoring and Sampling January 2020 through December 2020		
Site Management Activity	**Summary of Results**	**Maintenance/Corrective Measure**
Site and Monitoring Well Network Inspections	The Site wells appeared to be in good condition during the September 2020 inspection. Field staff met with the Site owner and were informed that demolition of the on-Site building was scheduled to occur following the inspection. Building demolition was completed at the time of the December site visit. The Site appeared to be in good condition as no debris or building materials were observed on the Site. Observations were limited due to deep snow cover.	No routine maintenance or corrective measures needed at this time.
Groundwater Gauging and Sampling	All six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6) were sampled utilizing USEPA low-flow sampling methods.	No routine maintenance or corrective measures needed at this time.

Field activity reports and photographic logs from the inspection activities can be found in **Appendix B**.

3.2 Groundwater Monitoring Summary

3.2.1 Groundwater Gauging

On September 14th, 2020 prior to groundwater sample collection, all wells were gauged for depth to groundwater to evaluate groundwater flow direction. The Site monitoring wells are all screened in the overburden hydrogeologic unit. The groundwater surface elevation contours with an interpretation of groundwater flow direction for the overburden wells are presented on **Figure 3**. The groundwater gauging and elevation information can be found on **Table 1**. A summary of the hydrogeologic information is presented below:

September 2020 Hydrogeologic Summary			
Number of Gauged Wells	**Hydrogeologic Units**	**Hydrogeologic Strata**	**Monitoring Wells**
6	1	Overburden	6
Overburden Groundwater Elevation Range			
Highest groundwater elevation: 921.89 feet AMSL (MW-1) Lowest groundwater elevation: 911.77 feet AMSL (MW-6)			
Inferred Overburden Groundwater Flow Direction			
Southeast			

Notes:
AMSL – Above Mean Sea Level

3.2.2 Groundwater Sampling

TRC collected groundwater samples from six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6) utilizing standard low-flow sampling techniques during the period from September 14th, 2020 through September 15th, 2020. Groundwater sampling logs can be found in **Appendix C**. All groundwater samples, in addition to QA/QC samples collected at the frequencies specified in TRC's July 2020 QAPP, were submitted to Eurofins/TestAmerica Laboratories for analysis of TCL VOCs + 10 TICs via USEPA Method 8260 (low level). Additionally, monitoring wells MW-1 (upgradient), MW-2 (on-Site) and MW-4 (downgradient) were selected for emerging contaminant sampling and were submitted for analysis using USEPA Method 537 Modified for PFAS and USEPA Method 8270 SIM for 1,4-Dioxane.

A summary of the groundwater sampling information and pertinent well details for each well is presented below:

Summary of Groundwater Monitoring and Sampling Activities September 2020							
	Monitoring Well Details				**2020 Groundwater Sampling Event**		
Well ID	**Northing***	**Easting***	**Screen Zone (ft. bgs)**	**Unit Screened**	**DTW (ft. below TOC)**	**Analytes**	**Notes**
MW-1	4668952.844	328491.3607	20.00 – 30.00	Overburden	16.71	VOCs	PFAS, 1,4-Dioxane collected
MW-2	4668850.181	328527.2284	20.00 – 30.00	Overburden	15.39	VOCs	PFAS, 1,4-Dioxane collected
MW-3	4668758.929	328560.1900	25.00 – 35.00	Overburden	13.12	VOCs	
MW-4	4668744.809	328731.5310	25.00 – 35.00	Overburden	13.00	VOCs	PFAS, 1,4-Dioxane collected
MW-5	4668611.136	328613.1648	45.00 – 55.00	Overburden	20.22	VOCs	

Summary of Groundwater Monitoring and Sampling Activities September 2020							
	Monitoring Well Details				2020 Groundwater Sampling Event		
Well ID	Northing*	Easting*	Screen Zone (ft. bgs)	Unit Screened	DTW (ft. below TOC)	Analytes	Notes
MW-6	4668634.004	328825.7385	45.00 – 55.00	Overburden	21.63	VOCs	

Notes:
DTW – Depth to water.
ft. bgs – Feet below ground surface.
TOC – Top of casing.
* Universal Transverse Mercator Zone 18N.
VOCs – Volatile Organic Carbons

A table with well construction details is included in **Appendix A**.

3.2.3 Groundwater Sample Results

Groundwater analytical data for VOCs can be found in **Table 2**. The DUSRs can be found in **Appendix D**. Detected compounds exceeding their respective SCGs for each well are illustrated on **Figure 4**. A summary of the September 2020 groundwater analytical results is presented below and on **Table 3**:

Exceedance Summary of Laboratory Analytical Results in Groundwater September 2020				
Constituent	SCG	Concentration Range (µg/L)	Location with Highest Detection	Frequency Exceeding SCG
VOCs				
Tetrachloroethene	5	ND – 140	MW-2	2/6
Trichloroethene	5	ND – 6.5	MW-2	1/6

Notes:
µg/L - Micrograms per Liter
SCG - Standard, Criteria and Guidance
ND - Not detected.
VOCs – Volatile Organic Compounds

Additionally, a summary of the results for the groundwater samples from monitoring wells MW-1, MW-2, and MW-4 that were analyzed for emerging contaminants are presented below:

Summary of Groundwater Analytical Results - Emerging Contaminants
September 2020

Constituent	SCG	Concentration Range	Location with Highest Detection	Frequency Exceeding SCG
PFAS				
No concentrations were detected above SCGs				
1,4-Dioxane				
No concentrations were detected above SCGs				

Notes:
SCG - Standard, Criteria and Guidance
PFAS - Per- and Polyfluoroalkyl Substances

Groundwater concentration trends were not prepared for the Site due to the limited dataset. A plume map showing the concentrations of total Site-related CVOCs in overburden groundwater is presented on **Figure 5**.

4.0 Cost Summary

The total estimated cost of the site management activities for 2020 (January 2020 through December 2020) is approximately $21,845.00. Site management activities included two site inspections, sampling of six monitoring wells, analysis of six samples for VOCs, analysis of three samples for 1,4-dioxane and PFAS, and preparation of a PRR. The total includes engineering, as well as expenses associated with the project. It should be noted that the total does not include costs incurred by NYSDEC for project support. A summary of the 2020 site management costs is presented below:

Summary of Site Management Costs January 1, 2020 through December 31, 2020		
Cost Item	**Amount Expended (January 1, 2020 through December 31, 2020)**	**Percent of Total Cost**
Engineering Support		
TRC	$18,912.00	86%
Subcontractors		
Eurofins/TestAmerica Laboratories	$2,094.00	10%
Expenses		
TRC	$839.00	4%
Total Cost	**$21,845.00**	----

The following provides a review of each cost item:

- Engineering support includes labor costs associated with project management (e.g., WA Package preparation, monthly invoicing, project scheduling and coordination, etc.), site inspections, groundwater sampling, and reporting (i.e., site inspection reports, DUSRs, EDDs and PRRs).
- Subcontractors include analytical laboratory costs associated with the groundwater sampling event.
- Expense costs include travel, equipment, and supplies in support of the site inspections, groundwater sampling event and routine site maintenance activities.

5.0 Conclusions and Recommendations

5.1 Conclusions

- Based on groundwater elevations measured during the September 2020 Site visit, groundwater flow in overburden hydrogeologic unit is to the southeast. This observation is consistent with historical observations.
- Site COCs, which include only CVOCs, were detected at concentrations exceeding their respective SCGs in 2 of 6 groundwater samples collected from the Site. Overall, detections of CVOCs were distributed in the former source area and directly downgradient of the Site. The highest concentrations were detected in MW-2, with total CVOC concentrations of 152.1 µg/l. This concentration is within the same order of magnitude but lower than historically observed during the 2009 RI (total CVOCs of 350.1 ug/L). CVOCs were detected in only one other well at the Site, monitoring well MW-3. Total CVOC concentrations were 31.0 ug/L. These concentrations are similar to concentrations observed during the 2009 RI (total CVOCs of 36.5 ug/L). CVOCs were not observed in other monitoring wells at the Site. This data is consistent with historical results.
- PFAS were detected in the three groundwater samples collected from Site monitoring wells (MW-1, MW-2, and MW-4) selected for emerging contaminant analysis. However, concentrations of PFAS compounds did not exceed the NYSDEC guidance in any of the samples. 1,4-Dioxane was not detected in any analytical samples collected at the Site.
- MTBE, a gasoline additive that has been discontinued for use in New York since 2004, was detected in two monitoring wells (MW-5 and MW-6) at concentrations below SCGs. MTBE has been historically detected at the Site and is attributed to the former gasoline USTs but is not included in the Site COCs.
- Site and groundwater use are consistent with the restrictions set forth in the ROD, the SMP and EE. Groundwater monitoring activities were completed in September 2020 for the 2020 certification period. Two site inspections and site inspection reports were also completed. The ICs operated as intended this reporting period.
- The remedy continued to be protective of human health and the environment this reporting period.

5.2 Recommendations

- Annual site inspections should continue to verify the ICs and ECs are in-place and effective and to observe any future development of the Site. One site inspection report should also be completed following the inspection event. Severe weather event inspections (and associated reports) should be completed as needed.
- Groundwater sampling should continue at the Site every 5th quarter. If results continue to show stable to decreasing trends, a recommendation will be made during the next PRR to reduce groundwater sampling frequency.
- The Certification Period should remain at one year with a PRR frequency of one report every year. The certification period should begin in January and end in December, with the next PRR covering the reporting period beginning January 1st, 2021 ending December 31st, 2021.

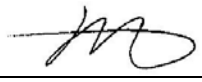
- Water level measurements should continue to be collected at the six site monitoring wells during groundwater monitoring events.

6.0 Certification of Engineering and Institutional Controls

For each institutional or engineering control identified for the Site, I certify that all the following statements are true:

- The institutional and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by DER;
- Nothing has occurred that would impair the ability of such control to protect public health and the environment; and,
- Nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control.

TRC Engineers, Inc.

Prepared By: 

Nathan T. Kranes, P.G

Project Manager

Reviewed By: 

James J. Magda, P.G.

Senior Technical Reviewer

7.0 Future Site Activities

Based on the recommendations in Section 5.0, the following site management activities will be completed during the next PRR reporting period (January 2021 to December 2021):

- Site Inspections – Annual (next scheduled: Q3 2021)
- Severe Weather Event Inspection – As needed
- Groundwater – Annual (next scheduled: Q3 2021)
- PRR – Every year (next scheduled: Q4 2021)

Figures

LEGEND

- SITE LOCATION

BASE MAP: USGS TOPOGRAPHIC IMAGERY
DATA SOURCES: TRC

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CRYSTAL CLEANERS - SITE NO. 851022
343 W PULTENEY ST.
CITY OF CORNING, NEW YORK 14830

TITLE:

SITE LOCATION MAP

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 40
CHECKED BY:	N. KRANES		
APPROVED BY:	J. MAGDA		**FIGURE 1**
DATE:	JUNE 2021		

TRC
10 Maxwell Drive
Clifton Park, NY 12065
Phone: 518-348-1190
www.TRCcompanies.com

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet. Map Rotation: 0
-- Saved By: LLILL on 2/10/2021, 14:02:43 PM: File Path: T:\1-PROJECTS\NYSDEC\386554_40_CrystalCleaners\2-APRX\sitelocation\sitelocation.aprx; Layout Name: 8.5x11P_Inset

LEGEND (SYMBOLS NOT TO SCALE)

- TAX PARCEL BOUNDARY
- MONITORING WELL
- SUPPLY WELL
- H05 REDIDENTIAL STRUCTURE

NOTES

1. BASE MAP IMAGERY FROM GOOGLE MAP/ GOOGLE EARTH.
2. PARCEL DATA FROM STEUBEN COUNTY REAL PROPERTY MAPPING DEPARTMENT.
3. WELL LOCATIONS ARE FROM THE CRYSTAL CLEANERS SITE MANAGEMENT PLAN DATED SEPTEMBER 2013.
4. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE, UNLESS OTHERWISE STATED.

N

1:1,800
1" = 150'
0 150 300 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CRYSTAL CLEANERS - SITE NO. 851022
343 W PULTENEY ST.
CITY OF CORNING, NEW YORK 14830

TITLE:
SITE LAYOUT MAP

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 40
CHECKED BY:	N. KRANES	FIGURE 2	
APPROVED BY:	J. MAGDA		
DATE:	JUNE 2021		

TRC
10 Maxwell Drive
Clifton Park, NY 12065
Phone: 518-348-1190
www.TRCcompanies.com

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet; Map Rotation: 0
-- Saved By: LLILL on 2/10/2021, 15:52:31 PM; File Path: T:\1-PROJECTS\NYSDEC\386554_40_CrystalCleaners\2-APRX\sitelayout\sitelayout.aprx; Layout Name: sitelayout

LEGEND (SYMBOLS NOT TO SCALE)

- TAX PARCEL BOUNDARY
- MONITORING WELL
- SUPPLY WELL
- GROUNDWATER ELEVATION CONTOUR (1.5' INTERVALS)
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. BASE MAP IMAGERY FROM GOOGLE MAP/ GOOGLE EARTH.

2. PARCEL DATA FROM STEUBEN COUNTY REAL PROPERTY MAPPING DEPARTMENT.

3. WELL LOCATIONS ARE FROM THE CRYSTAL CLEANERS SITE MANAGEMENT PLAN DATED SEPTEMBER 2013.

4. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE, UNLESS OTHERWISE STATED.

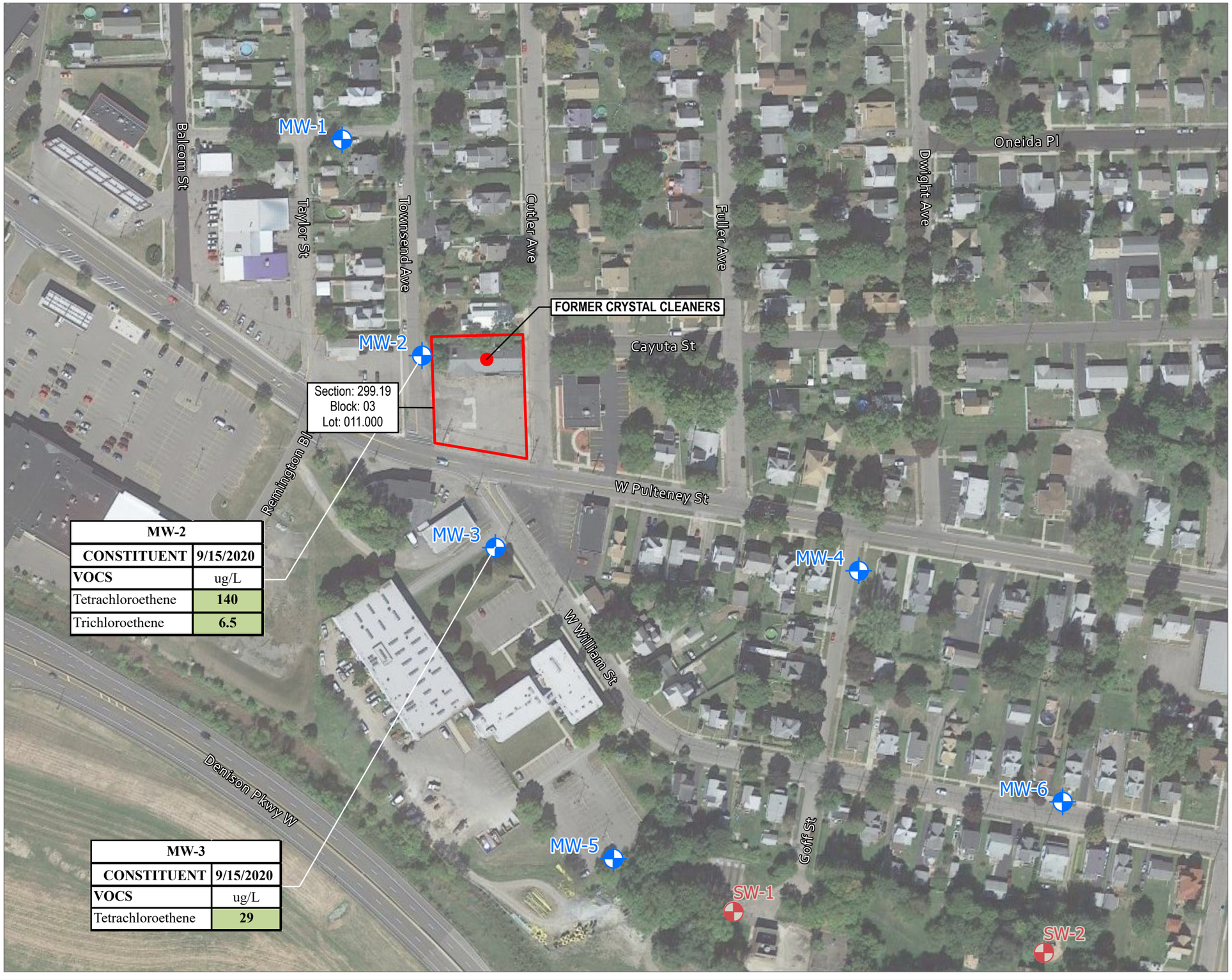
1:1,800
1" = 150'
0 150 300 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CRYSTAL CLEANERS - SITE NO. 851022
343 W PULTENEY ST.
CITY OF CORNING, NEW YORK 14830

TITLE:
GROUNDWATER SURFACE ELEVATIONS AND FLOW MAP - SEPTEMBER 2020

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 40
CHECKED BY:	N. KRANES		FIGURE 3
APPROVED BY:	J. MAGDA		
DATE:	JUNE 2021		

TRC
10 Maxwell Drive
Clifton Park, NY 12065
Phone: 518-348-1190
www.TRCcompanies.com



MW-2	
CONSTITUENT	9/15/2020
VOCS	ug/L
Tetrachloroethene	**140**
Trichloroethene	**6.5**

MW-3	
CONSTITUENT	9/15/2020
VOCS	ug/L
Tetrachloroethene	**29**

LEGEND (SYMBOLS NOT TO SCALE)

- TAX PARCEL BOUNDARY
- MONITORING WELL
- SUPPLY WELL

CONSTITUENT	Class GA Values*
VOCS	ug/L
Tetrachloroethene	5
Trichloroethene	5

NOTES

1. BASE MAP IMAGERY FROM GOOGLE MAP/ GOOGLE EARTH.

2. PARCEL DATA FROM STEUBEN COUNTY REAL PROPERTY MAPPING DEPARTMENT.

3. WELL LOCATIONS ARE FROM THE CRYSTAL CLEANERS SITE MANAGEMENT PLAN DATED SEPTEMBER 2013.

4. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE, UNLESS OTHERWISE STATED.

5. ug/L - MICROGRAMS PER LITER.

6. VOCs - VOLATILE ORGANIC COMPOUNDS.

7. VALUES SHOWN IN BOLD AND SHADED TYPE EXCEED THE LISTED CRITERIA.

8. *NYSDEC AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES FOR CLASS GA WATER.

1:1,800
1" = 150'
0 150 300 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CRYSTAL CLEANERS - SITE NO. 851022
343 W PULTENEY ST.
CITY OF CORNING, NEW YORK 14830

TITLE: SUMMARY OF DETECTED COMPOUNDS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS/GUIDANCE - SEPTEMBER 2020

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 40
CHECKED BY:	N. KRANES		
APPROVED BY:	J. MAGDA		
DATE:	JUNE 2021		

FIGURE 4

TRC
10 Maxwell Drive
Clifton Park, NY 12065
Phone: 518-348-1190
www.TRCcompanies.com

LEGEND (SYMBOLS NOT TO SCALE)

- TAX PARCEL BOUNDARY
- MONITORING WELL
- SUPPLY WELL
- > 30 ug/L TOTAL CVOCS
- > 150 ug/L TOTAL CVOCS

NOTES

1. BASE MAP IMAGERY FROM GOOGLE MAP/ GOOGLE EARTH.
2. PARCEL DATA FROM STEUBEN COUNTY REAL PROPERTY MAPPING DEPARTMENT.
3. WELL LOCATIONS ARE FROM THE CRYSTAL CLEANERS SITE MANAGEMENT PLAN DATED SEPTEMBER 2013.
4. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE, UNLESS OTHERWISE STATED.
5. ND - NO CVOCs DETECTED ABOVE SPECIFIED QUANTITATION LIMITS.

N

1:1,800
1" = 150'
0 150 300 FEET

PROJECT:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CRYSTAL CLEANERS - SITE NO. 851022
343 W PULTENEY ST.
CITY OF CORNING, NEW YORK 14830

TITLE:
TOTAL CHLORINATED VOLATILE ORGANIC COMPOUNDS (CVOCS) IN GROUNDWATER - SEPTEMBER 2020

DRAWN BY:	L. LILL	PROJ. NO.:	386554 PHASE 40
CHECKED BY:	N. KRANES		FIGURE 5
APPROVED BY:	J. MAGDA		
DATE:	JUNE 2021		

TRC

10 Maxwell Drive
Clifton Park, NY 12065
Phone: 518-348-1190
www.TRCcompanies.com

Coordinate System: NAD 1983 StatePlane New York Central FIPS 3102 Feet; Map Rotation: 0
-- Saved By: LLILL on 2/10/2021, 16:00:10 PM; File Path: T:\1-PROJECTS\NYSDEC\386554_40_CrystalCleaners\2-APRX\plumemap\plumemap.aprx; Layout Name: 11x17L

Tables

Table 1
New York State Department Of Environmental Conservation
Crystal Cleaners - Site No. 851022
City of Corning, New York
Summary of Depth to Water Measurements and Groundwater Elevations

Well ID	Screened Formation	TOC Elevation (feet AMSL)	Gauge Date	Depth to Water (feet below TOC)	Depth to Bottom (feet below TOC)	Groundwater Elev. (feet AMSL)
MW-1	Overburden	938.60	9/14/2020	16.71	29.92	921.89
MW-2	Overburden	934.79	9/14/2020	15.39	29.90	919.40
MW-3	Overburden	932.00	9/14/2020	13.12	34.91	918.88
MW-4	Overburden	932.98	9/14/2020	13.00	33.98	919.98
MW-5	Overburden	933.26	9/14/2020	20.22	54.89	913.04
MW-6	Overburden	933.40	9/14/2020	21.63	54.71	911.77

Notes

Elev. : Elevation
AMSL : Above Mean Sea Level
ID : Identification
TOC : Top of Casing

Table 2
New York State Department of Environmental Conservation
Crystal Cleaners Site - Site No. 851022
City of Corning, New York
Summary of VOC Results in Groundwater Samples - September 2020

		Sample Location:	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6					
		Sample Name:	CC-MW-1		CC-MW-2		CC-MW-3		CC-MW-4		CC-MW-5		CC-MW-6					
		Laboratory Sample Identification:	480-175175-1		480-175175-2		480-175175-3		480-175175-5		480-175175-4		480-175175-6					
		Sample Date:	09/14/2020		09/15/2020		09/15/2020		09/15/2020		09/15/2020		09/15/2020					
Volatile Organic Compounds (VOCs)	Unit	Class GA Values*	Results		Results		Results		Results		Results		Results					
1,1,1-Trichloroethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,1,2,2-Tetrachloroethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,1,2-Trichloroethane	ug/L	1	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,1,2-Trichloro- 1,2,2-trifluoroethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,1-Dichloroethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,1-Dichloroethene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,2,4-Trichlorobenzene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,2-Dibromo-3-chloropropane	ug/L	0.04	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,2-Dichlorobenzene	ug/L	3	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,2-Dichloroethane	ug/L	0.6	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,2-Dichloropropane	ug/L	1	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,3-Dichlorobenzene	ug/L	3	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,4-Dichlorobenzene	ug/L	3	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
2-Butanone (MEK)	ug/L	50	10	U	20	U	10	U	10	U	10	U	10	U				
2-Hexanone	ug/L	50	5.0	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U				
4-Methyl-2-pentanone	ug/L	NC	5.0	U	10	U	5.0	U	5.0	U	5.0	U	5.0	U				
Acetone	ug/L	50	10	U	20	U	10	U	10	U	10	U	10	U				
Benzene	ug/L	1	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Bromodichloromethane	ug/L	50	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Bromoform	ug/L	50	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Bromomethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Carbon disulfide	ug/L	60	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Carbon tetrachloride	ug/L	5	1.0	UJ	2.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ	1.0	UJ				
Chlorobenzene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Chloroethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Chloroform	ug/L	7	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Chloromethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
cis-1,2-Dichloroethene	ug/L	5	1.0	U	**3.4**		**1.3**		1.0	U	1.0	U	1.0	U				
cis-1,3-Dichloropropene	ug/L	0.4	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Cyclohexane	ug/L	NC	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Dibromochloromethane	ug/L	50	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Dichlorodifluoromethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Ethylbenzene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.0006	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Isopropylbenzene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Methyl acetate	ug/L	NC	2.5	U	5.0	U	2.5	U	2.5	U	2.5	U	2.5	U				
Methyl tert-butyl ether	ug/L	10	1.0	U	2.0	U	1.0	U	1.0	U	**0.42**	**J**	**0.44**	**J**				
Methylcyclohexane	ug/L	NC	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Methylene chloride	ug/L	5	1.0	U	**2.2**		1.0	U	1.0	U	1.0	U	1.0	U				
Styrene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Tetrachloroethene	ug/L	5	1.0	U	**140**		**29**		1.0	U	1.0	U	1.0	U				
Toluene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
trans-1,2-Dichloroethene	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
trans-1,3-Dichloropropene	ug/L	0.4	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Trichloroethene	ug/L	5	1.0	U	**6.5**		**0.72**	**J**	1.0	U	1.0	U	1.0	U				
Trichlorofluoromethane	ug/L	5	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Vinyl chloride	ug/L	2	1.0	U	2.0	U	1.0	U	1.0	U	1.0	U	1.0	U				
Xylenes, total	ug/L	5	2.0	U	4.0	U	2.0	U	2.0	U	2.0	U	2.0	U				

Notes:

ug/L - micrograms per liter.

J - Estimated value.

NC - No NYSDEC standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in bold indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed NYSDEC standards.

VOCs - Volatile Organic Compounds.

* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA Water.

Table 3
New York State Department of Environmental Conservation
Crystal Cleaners - Site No. 851022
City of Corning, New York
Summary of Emerging Contaminant Results in Groundwater Samples - September 2020

		Sample Location:	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6					
		Sample Name:	CC-MW-1		CC-MW-2		CC-MW-3		CC-MW-4		CC-MW-5		CC-MW-6					
		Laboratory Sample Identification:	480-175175-1		480-175175-2		480-175175-3		480-175175-5		480-175175-4		480-175175-6					
		Sample Date:	09/14/2020		09/15/2020		09/15/2020		09/15/2020		09/15/2020		09/15/2020					
Semivolatile Organic Compounds (SVOCs)	Unit	Guidance Value*	Results		Results		Results		Results		Results		Results					
1,4-Dioxane	ug/L	1	0.19	U	0.19	U	NA		0.19	U	NA		NA					
Per- and Poly-Fluorinated Alkyl substances (PFAS)	Unit	Guidance Value**	Results		Results		Results		Results		Results		Results					
Perfluorobutyric Acid (PFBA)	ng/L	100	4.5	U	**2.2**	**J**	NA		**3.1**	**J**	NA		NA					
Perfluoropentanoic Acid (PFPeA)	ng/L	100	1.8	U	**2.1**		NA		**5.1**		NA		NA					
Perfluorohexanoic Acid (PFHxA)	ng/L	100	1.8	U	**2.0**		NA		**4.2**		NA		NA					
Perfluoroheptanoic Acid (PFHpA)	ng/L	100	1.8	U	**0.90**	**J**	NA		**2.6**		NA		NA					
Perfluorooctanoic acid (PFOA)	ng/L	10	1.8	U	**2.5**		NA		**4.2**		NA		NA					
Perfluorononoanoic Acid (PFNA)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluorodecanoic Acid (PFDA)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluoroundecanoic Acid (PFUnA)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluorododecanoic Acid (PFDoA)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluorothidecanoic Acid (PFTriA)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluorotetradecanoic Acid (PFTeA)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluorobutane Sulfonate (PFBS)	ng/L	100	**1.8**		**4.2**		NA		**4.9**		NA		NA					
Perfluorohexane Sulfonic Acid (PFHxS)	ng/L	100	1.8	U	**1.5**	**J**	NA		**2.9**		NA		NA					
Perflouroheptane Sulfonate (PFHpS)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluorooctanesulfonic Acid (PFOS)	ng/L	10	**1.1**	**J**	**1.7**	**J**	NA		1.8	U	NA		NA					
Perfluorodecanesulfonic Acid (PFDS)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Perfluorooctane Sulfonamide (PFOSA)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
2-(N-methyl perfluorooctanesulfonamido) acetic acid (N-MeFOSAA)	ng/L	100	4.5	U	4.4	U	NA		4.5	U	NA		NA					
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine (N-EtFOSAA)	ng/L	100	4.5	U	4.4	U	NA		4.5	U	NA		NA					
6:2 Perfluorooctane Sulfonate (6:2 FTS)	ng/L	100	4.5	U	4.4	U	NA		4.5	U	NA		NA					
8:2 Perfluorodecane Sulfonate (8:2 FTS)	ng/L	100	1.8	U	1.8	U	NA		1.8	U	NA		NA					
Total PFAS	ng/L	500	***2.90***	***J***	***17.10***	***J***	*NA*		***27.00***	***J***	NA		NA					

Notes:

ng/L - nanograms per liter.

ug/L - micrograms per liter.

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in bold indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed NYSDEC standards.

SVOCs - Semivolatile Organic Compounds.

PFAS - Per- and Polyfluoroalkyl Substances.

* - New York State Drinking Water Standard for Public Water Systems.

** - Guidelines for Sampling and Analysis of PFAS, NYSDEC Part 375 Remedial Programs, October 2020.

Appendix A

CUSTODIAL RECORD

CRYSTAL CLEANERS SITE (NYSDEC SITE NO. 851022)

Teeter Environmental Services, Inc., "*Phase II Environmental Site Assessment, Sugar Creek and Crystal Cleaners"*, May 2005.

MACTEC Engineering and Consulting, P.C., "*Final Site Characterization Report, Region 8 Dry Cleaning Sites, Crystal Cleaners Site",* March 2007.

New York State Department of Environmental Conservation, "*Record of Decision, Crystal Cleaners, State Superfund Project, Corning, Steuben County, Site No. 851022"*, March 2011.

AECOM Technical Services, Inc., "*Final Remedial Investigation Report, Crystal Cleaners Site (Site No. 851022)",* January 2011.

AECOM Technical Services, Inc., "*Final Feasibility Study Report, Crystal Cleaners Site (Site No. 851022)",* February 2011.

New York State Department of Environmental Conservation, "*Proposed Remedial Action Plan, Crystal Cleaners, Corning, Steuben County, Site No. 851022"*, February 2011.

New York State Department of Environmental Conservation, *Site Management Plan, Crystal Cleaners, Steuben County, New York, NYSDEC Site Number: 851022",* September 2013.

New York State Department of Environmental Conservation, *Environmental Easement Package, Crystal Cleaners, Site No. 851022*", January 2017.

New York State Department of Environmental Conservation
Crystal Cleaners - Site No. 851022
City of Corning, New York
Monitoring Well Construction Summary

Monitoring Well	Installation Date	Well Diameter (inches)	Well Material	Total Depth (feet bgs)	Screened Formation	Screen			Elevation (feet AMSL)				Location (UTM 18N)	
						Top (feet bgs)	Bottom (feet bgs)	Length (feet)	Outer Casing Top	Ground Surface	Screen Top	Screen Bottom	Northing	Easting
MW-1	10/27/2009	2	PVC	30.0	Overburden	20.00	30.00	10.00	938.60	938.60	918.60	908.60	4668952.844	328491.3607
MW-2	10/26/2009	2	PVC	30.0	Overburden	20.00	30.00	10.00	934.79	934.79	914.79	904.79	4668850.181	328527.2284
MW-3	10/28/2009	2	PVC	35.0	Overburden	25.00	35.00	10.00	932.00	932.00	907.00	897.00	4668758.929	328560.1900
MW-4	10/27/2009	2	PVC	35.0	Overburden	25.00	35.00	10.00	932.98	932.28	907.28	897.28	4668744.809	328731.5310
MW-5	10/28/2009	2	PVC	55.0	Overburden	45.00	55.00	10.00	933.26	933.26	888.26	878.26	4668611.136	328613.1648
MW-6	10/26/2009	2	PVC	55.0	Overburden	45.00	55.00	10.00	933.40	933.40	888.40	878.40	4668634.004	328825.7385

Notes

AMSL : above mean sea level
feet bgs : feet below ground surface
PVC : polyvinyl chloride
UTM zone 18N : Universal Transverse Mercator zone 18N

NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project #	Postmark	Date Received	Notification #

I. Type of Notification (O=Original R=Revised C=Canceled): O

II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)

OWNER NAME: Olivia Rae, LLC.
Address: 5 Park Place.
City: Addison State: New York Zip: 14801
Contact: Donald Stiker Tel:

REMOVAL CONTRACTOR: Swarthout Recycling LLC
Address: 1514 County Road 19
City: Beaver Dams State: N.Y. Zip: 14812
Contact: Brian Swarthout Tel: (607) 316-7948

OTHER OPERATOR:
Address:
City: State: Zip:
Contact: Tel:

III. TYPE OF OPERATION (D=Demo O= Ordered Demo R=Renovation E=Emer. Renovation): D

IV. IS ASBESTOS PRESENT? (Yes/No): yes

V. FACILITY DESCRIPTION (Include building name, number and floor or room number)

Bldg. Name: vacant storefront
Address: 343-345 W. Pulteney Street
City: Corning State: N.Y. County: Steuben
Site Location: 343-345 W. Pulteney St., Corning, N.Y. 14830
Building Size: # of Floors: 1 Age in Years: Unknown
Present Use: vacant-condemned Prior Use: Store

VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:

NO survey, bldg unstable or safe to enter.

VII. APPROXIMATE AMOUNT OF ASBESTOS INCLUDING: 1. Regulated ACM to be Removed 2. Category I ACM Not Removed 3. Category II ACM Not Removed	RACM To Be Removed	Nonfriable Asbestos Material Not To Be Removed: Category I	Nonfriable Asbestos Material Not To Be Removed: Category II	Indicate Unit of Measurement Below: UNIT	
Pipes				LnFt:	Ln M:
Surface Area				SqFt: 4800	Sq M:
Vol RACM Off Facility Component				CuFt:	Cu M:

VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start: 9/16/2020 Complete: 9/16/2021

IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start: Complete:

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD(S) TO BE USED:
Controlled demolition, Excavator demo, water spray to control dust

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION OR RENOVATION SITE:
Laborer will be continously spraying water during demo

XII. WASTE TRANSPORTER #1

Name: Swarthout Recycling LLC
Address: 1514 County Road 19
City: Beaver Dams State: N.Y. Zip: 14812
Contact Person: Brian Swarthout Tel: (607) 316-7948

WASTE TRANSPORTER #2 N/a

Name:
Address:
City: State: Zip:
Contact Person: Tel:

XIII. WASTE DISPOSAL SITE

Name: Ontario County Landfill
Address: 1879 State Route 5 & 20
City: Stanley State: N.Y. Zip: 14561
Tel: 1-585-526-4420

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW: NO

Name: Title:
Authority:
Date of Order (MM/DD/YY): Date Ordered to Begin (MM/DD/YY):

XV. FOR EMERGENCY RENOVATIONS: NO

Date and Hour of Emergency (MM/DD/YY):
Description of the sudden unexpected event:
Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:
Aged bldg structually unsound.

XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASTESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:
Negative Pressure, HEPA Vaccum, glove bags

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION, AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

(Signature of Owner/Operator) 9/2/2020 (Date)

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT:

(Signature of Owner/Operator) 9/2/2020 (Date)

Appendix B

DAILY INSPECTION REPORT

Report No. 20201222 Crystal Cleaners - NYSDEC Site No. 851022 Date: 12/22/2020

NYSDEC
Division of Environmental Remediation

NYSDEC Contract No. D009812

Superintendent:

NYSDEC PM: **Brianna Scharf**

Consultant PM: **Nathan Kranes**

Consultant Site Inspectors: **Cait Serowik & Steve Johansson**

Site Location: Corning, New York

Weather Conditions

General Description	Clear, Dry	AM	Clear, Dry	PM
Temperature	28°F	AM	34°F	PM
Wind	5 mph NE	AM	5 mph NE	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No **X**	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA **X**
Were there any nuisance issues reported/observed on this date?	*Yes	No **X**	NA

Health & Safety Comments

Site-specific HASP was followed accordingly.

Summary of Work Performed	Arrived at site:	**11:00**	Departed Site:	**13:00**

TRC Engineers, Inc. (TRC) conducted a visit on Tuesday, December 22, 2020 at the Crystal Cleaners (the Site), located at 343 West Pulteney Street in the town of Corning, New York. The inspection was completed in order to document the condition of the on-site and off-site monitoring wells, overall site conditions, and the status of the on-site demolition. The inspection was limited to the visible extent of the site, as a recent snowstorm event accounted for multiple feet of snow on Site during the time of inspection. Overall, the site appeared to be in good condition. Demolition of the on-site building has been completed and it appears that no debris or building materials from the demolition activities remain on-site. The status of the parking lot and site wells were not able to be examined due to snow cover.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA **X**
Were there any vehicles which were not tarped?	* Yes	No	NA **X**
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA **X**

Personnel and Equipment

Individual	Company	Trade	Total Hours
Caitlin Serowik	TRC	Project Geologist	2
Steve Johansson	TRC	Project Engineer	2

Equipment Description	Contractor/Vendor	Quantity	Used

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
NA						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
NA		**Yes**	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**

Site Representatives

Name	Representing
NA	

Project Schedule Comments

None

Issues Pending

None

Interaction with Public, Property Owners, Media, etc.

None

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)

Photo 1: Looking north, view of the prior location of the on-site building.

Photo 2: Looking northwest, view of the prior location of the on-site building.

Photo 3: Looking west. View of site as taken from the approximate location of MW-02.

Photo 4: Looking north at the approximate location of MW-02.

	
Photo 5: View looking southeast at the on-site parking lot area.	**Photo 6:** View looking downward on a 1 inch well located in the parking lot that was determined to have been installed during the Phase II.

Comments	
None.	
Site Inspector(s): Cait Serowik	**Date: 12/22/2020**

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?	Yes ☐	No ☒
Comments:		

REMEDIAL ACTIVITIES AT PROPERTIES

1. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
2. Is anyone at this location isolated or quarantined for COVID-19?	Yes ☐	No ☒
3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days?	Yes ☐	No ☒
4. Does anyone at this locaton have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
5. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☐	No ☒
If Yes to any of 1-4 above: • If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry. • If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry.	Yes ☐	No ☐

Comments:

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☐	N/A☒
Were there any odors detected on this date?	Yes ☐	No ☐	N/A☒
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the Montauk Highway outfall?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: None.			

DAILY INSPECTION REPORT

Report No. 1 Crystal Cleaners - NYSDEC Site No. 851022 Date: 9/14/2020

NYSDEC
Division of Environmental Remediation

Site Location: Corning, New York

NYSDEC Contract No. D009812

Superintendent:

NYSDEC PM: **Brianna Scharf**

Consultant PM: **Nathan Kranes**

Consultant Site Inspectors: **Cait Serowik & Steve Johansson**

Weather Conditions

General Description	Clear, Dry	AM	Clear, Dry	PM
Temperature	45°F	AM	70°F	PM
Wind	5 mph NE	AM	4 mph NE	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No **X**	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA **X**
Were there any nuisance issues reported/observed on this date?	*Yes	No **X**	NA

Health & Safety Comments

Site-specific HASP was followed accordingly.

Summary of Work Performed	Arrived at site:	**09:00**	Departed Site:	**17:00**

TRC Engineers, Inc. (TRC) conducted an annual site inspection, groundwater gauging, and sampling event on Tuesday, September 14, and Wednesday September 15, 2020 at the Crystal Cleaners (the Site), located at 343 West Pulteney Street in the town of Corning, New York. The inspection was completed in order to document the condition of the on-site and off-site monitoring wells, and overall site conditions. The site appeared to be in good condition. Demolition of the current on-site building is to occur following the site inspection, as told to TRC by the site owner. All monitoring wells were located and reported to be in good condition. Groundwater samples were collected from the one on-site well and five off-site wells. The groundwater samples were submitted to TestAmerica/Eurofins Laboratories, Inc. for analysis using EPA method 8260 for TCL VOCs + 10. Monitoring wells MW-4 (downgradient), MW-2 (on-site), and MW-1 (upgradient) were selected for emerging contaminant sampling and additional samples were submitted for analysis using EPA method 537 for PFAS and EPA method 8270 for 1,4-Dioxane.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA **X**
Were there any vehicles which were not tarped?	* Yes	No	NA **X**
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA **X**

Personnel and Equipment

Individual	Company	Trade	Total Hours
Caitlin Serowik	TRC	Project Geologist	9
Steve Johansson	TRC	Project Engineer	9

Equipment Description	Contractor/Vendor	Quantity	Used
PID	Pine Environmental	1	
Landfill Gas Meter	Pine Environmental	1	
Oil/Water Interface Probe	Pine Environmental	1	
YSI	Pine Environmental	1	
Peristaltic Pump	Pine Environmental	1	

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
NA						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
NA		**Yes**	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**

Site Representatives

Name	Representing
NA	

Project Schedule Comments

None

Issues Pending

None

Interaction with Public, Property Owners, Media, etc.

None

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)

Photo 1: View looking downward on MW-2, located on-site.

Photo 2: Looking west. Overview of the on-site building that is to be demolished in the upcoming weeks.

Photo 3: View facing southwest. Overview of the parking lot area located on-site.

Photo 4: Looking south onto the on-site parking area.

	
Photo 5: View looking northwest at the former Crystal Cleaners locality.	**Photo 6:** View looking downward on a 1 inch well located in the parking lot that was determined to have been installed during the Phase II.

Comments	
None.	
Site Inspector(s): Cait Serowik	**Date: 9/14/2020**

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?	Yes ☐	No ☒
Comments:		

REMEDIAL ACTIVITIES AT PROPERTIES

1. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
2. Is anyone at this location isolated or quarantined for COVID-19?	Yes ☐	No ☒
3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days?	Yes ☐	No ☒
4. Does anyone at this locaton have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
5. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☐	No ☒
If Yes to any of 1-4 above: • If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry. • If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry.	Yes ☐	No ☐

Comments:

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☐	N/A☒
Were there any odors detected on this date?	Yes ☐	No ☐	N/A☒
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the Montauk Highway outfall?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: None.			

Appendix C

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Crystal Cleaners
PROJECT NUMBER	386554.0000.0000
SAMPLE ID	CC-MW-1
SAMPLE TIME	14:35

LOCATION ID	MW-1
DATE	9/14/2020
START TIME	13:15
END TIME	14:35
SITE NAME/NUMBER	Crystal Cleaners / 851022
PAGE	1 OF 1

WELL DIAMETER (INCHES) [ ] 1 [X] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

INITIAL DTW (BMP)	16.72 FT	**FINAL DTW (BMP)**	16.72 FT	**PROT. CASING STICKUP (AGS)**	FT	**TOC/TOR DIFFERENCE**	FT
WELL DEPTH (BMP)	29.92 FT	**SCREEN LENGTH**	10.00 FT	**PID AMBIENT AIR**	PPM	**REFILL TIMER SETTING**	SEC
WATER COLUMN	13.20 FT	**DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041)	0.00 GAL	**PID WELL MOUTH**	0 PPM	**DISCHARGE TIMER SETTING**	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	2.16 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	3.25 GAL	**DRAWDOWN/ TOTAL PURGED**	0.00	**PRESSURE TO PUMP**	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1315	**BEGIN PURGING**									
1325	16.73	250	14.90	0.876	8.47	8.62	89.3	-69		
1335	16.73	250	13.10	0.873	8.34	4.76	31.3	-62		
1340	16.73	250	13.06	0.880	8.28	4.21	36.3	-58		
1345	16.73	250	12.98	0.882	8.21	4.03	26.3	-53		
1350	16.73	250	12.97	0.852	8.21	8.31	10.4	-54		
1355	16.73	250	13.94	0.855	8.33	3.53	34.4	-61		
1400	16.73	250	13.83	0.856	8.32	3.51	36.8	-61		
1405	16.73	250	13.66	0.861	8.29	3.38	16.7	-59		
1410	16.73	250	13.56	0.885	8.27	3.36	7.7	-58		
1415	16.73	250	12.12	0.873	8.19	7.24	8.5	-56		
1420	16.73	250	12.95	0.873	8.26	7.38	5.8	-57		
1425	16.73	250	12.92	0.871	8.20	7.31	5.3	-53		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	13	**0.871**	**8.2**	**7.3**	**5.3**	**-53**

TEMP.: nearest degree (ex. 10.1 = 10)

COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)

pH: nearest tenth (ex. 5.53 = 5.5)

DO: nearest tenth (ex. 3.51 = 3.5)

TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)

ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [X] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [ ] WL METER
- [ ] PID
- [ ] WQ METER
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[ ]	See Chain of Custody							

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 3.25

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature:

Print Name: Caitlin Serowik

Checked By:

Date: 9/14/2020

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Crystal Cleaners
PROJECT NUMBER	386554.0000.0000
SAMPLE ID	CC-MW-2
SAMPLE TIME	12:15

LOCATION ID	MW-2
DATE	9/15/2020
START TIME	11:35
END TIME	12:15
SITE NAME/NUMBER	Crystal Cleaners / 851022
PAGE	1 OF 1

WELL DIAMETER (INCHES) [ ] 1 [X] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

INITIAL DTW (BMP)	15.52 FT	**FINAL DTW (BMP)**	15.52 FT	**PROT. CASING STICKUP (AGS)**	FT	**TOC/TOR DIFFERENCE**	FT
WELL DEPTH (BMP)	29.90 FT	**SCREEN LENGTH**	10.00 FT	**PID AMBIENT AIR**	PPM	**REFILL TIMER SETTING**	SEC
WATER COLUMN	14.38 FT	**DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041)	0.00 GAL	**PID WELL MOUTH**	0 PPM	**DISCHARGE TIMER SETTING**	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	2.36 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	2.28 GAL	**DRAWDOWN/ TOTAL PURGED**	0.00	**PRESSURE TO PUMP**	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1135	**BEGIN PURGING**									
1145	15.52	250	14.40	1.00	8.24	6.24	3.1	-56		
1155	15.52	250	14.28	1.01	8.21	2.99	1.2	-55		
1200	15.52	250	14.38	1.01	8.21	2.66	0.9	-54		
1205	15.52	250	14.42	1.01	8.20	2.46	0.7	-54		
1210	15.52	250	14.49	1.00	8.18	2.32	0.3	-53		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	14	**1**	**8.2**	**2.32**	**0.3**	**-53**

TEMP.: nearest degree (ex. 10.1 = 10)

COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)

pH: nearest tenth (ex. 5.53 = 5.5)

DO: nearest tenth (ex. 3.51 = 3.5)

TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)

ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [X] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [ ] WL METER
- [ ] PID
- [ ] WQ METER
- [ ] TURB. METER
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
	See Chain of Custody							

PURGE OBSERVATIONS

	YES	NO	
PURGE WATER CONTAINERIZED	[ ]	[X]	NUMBER OF GALLONS GENERATED: 2.28
NO-PURGE METHOD UTILIZED	[ ]	[X]	If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature:

Print Name: Caitlin Serowik

Checked By:

Date: 9/15/2020

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Crystal Cleaners
PROJECT NUMBER	386554.0000.0000
SAMPLE ID	CC-MW-3
SAMPLE TIME	13:30

LOCATION ID	MW-3
DATE	9/15/2020
START TIME	12:40
END TIME	13:30
SITE NAME/NUMBER	Crystal Cleaners / 851022
PAGE	1 OF 1

WELL DIAMETER (INCHES) [ ] 1 [X] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

INITIAL DTW (BMP)	13.17 FT	**FINAL DTW (BMP)**	13.20 FT	**PROT. CASING STICKUP (AGS)**	FT	**TOC/TOR DIFFERENCE**	FT
WELL DEPTH (BMP)	34.91 FT	**SCREEN LENGTH**	10.00 FT	**PID AMBIENT AIR**	PPM	**REFILL TIMER SETTING**	SEC
WATER COLUMN	21.74 FT	**DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041)	0.00 GAL	**PID WELL MOUTH**	0 PPM	**DISCHARGE TIMER SETTING**	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	3.57 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	2.93 GAL	**DRAWDOWN/ TOTAL PURGED**	0.03	**PRESSURE TO PUMP**	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1240	**BEGIN PURGING**									
1250	31.20	250	16.66	2.57	7.53	6.56	80.2	41		
1300	13.20	250	16.30	2.45	7.31	2.37	29.0	46		
1305	13.20	250	16.43	2.40	7.25	2.03	19.1	46		
1310	13.20	250	16.57	2.33	7.20	1.79	13.6	46		
1315	13.20	250	16.54	2.31	7.17	1.67	9.9	46		
1320	13.20	250	16.61	2.30	7.14	1.51	7.9	45		
1325	13.20	250	16.79	2.25	7.14	1.59	6.5	42		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	17	**2.25**	**7.1**	**1.6**	**6.5**	**42**

TEMP.: nearest degree (ex. 10.1 = 10)

COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)

pH: nearest tenth (ex. 5.53 = 5.5)

DO: nearest tenth (ex. 3.51 = 3.5)

TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)

ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [X] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [ ] WL METER _____
- [ ] PID _____
- [ ] WQ METER _____
- [ ] TURB. METER _____
- [ ] PUMP _____
- [ ] OTHER _____
- [ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[ ]	See Chain of Custody							
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 2.93

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature:

Print Name: Caitlin Serowik

Checked By:

Date: 9/15/2020

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Crystal Cleaners
PROJECT NUMBER	386554.0000.0000
SAMPLE ID	CC-MW-4
SAMPLE TIME	16:25

LOCATION ID	MW-4
DATE	9/15/2020
START TIME	15:45
END TIME	16:25
SITE NAME/NUMBER	Crystal Cleaners / 851022
PAGE	1 OF 1

WELL DIAMETER (INCHES) [ ] 1 [X] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

INITIAL DTW (BMP)	13.09 FT	**FINAL DTW (BMP)**	13.81 FT	**PROT. CASING STICKUP (AGS)**	FT	**TOC/TOR DIFFERENCE**	FT
WELL DEPTH (BMP)	33.98 FT	**SCREEN LENGTH**	10.00 FT	**PID AMBIENT AIR**	PPM	**REFILL TIMER SETTING**	SEC
WATER COLUMN	20.89 FT	**DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041)	0.12 GAL	**PID WELL MOUTH**	0 PPM	**DISCHARGE TIMER SETTING**	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	3.43 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	2.28 GAL	**DRAWDOWN/ TOTAL PURGED**	0.72	**PRESSURE TO PUMP**	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1545	**BEGIN PURGING**									
1555	13.81	250	14.58	1.58	7.79	4.25	26.4	-22		
1605	13.81	250	14.57	1.67	7.68	1.80	9.8	-30		
1610	13.81	250	14.63	1.71	7.65	1.56	8.0	-27		
1615	13.81	250	14.56	1.73	7.62	1.44	7.4	-22		
1620	13.81	250	14.60	1.76	7.61	1.42	5.7	-20		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

15	**1.76**	**7.6**	**1.4**	**5.7**	**-20**	

TEMP.: nearest degree (ex. 10.1 = 10)

COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)

pH: nearest tenth (ex. 5.53 = 5.5)

DO: nearest tenth (ex. 3.51 = 3.5)

TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)

ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [X] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [ ] WL METER _____
- [ ] PID _____
- [ ] WQ METER _____
- [ ] TURB. METER _____
- [ ] PUMP _____
- [ ] OTHER _____
- [ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[ ]	See Chain of Custody							
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 2.28

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature:

Print Name: Caitlin Serowik

Checked By:

Date: 9/15/2020

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Crystal Cleaners	**LOCATION ID**	MW-4
PROJECT NUMBER	386554.0000.0000	**DATE**	9/15/2020
SAMPLE ID	CC-MW-5	**START TIME**	14:00
SAMPLE TIME	15:25	**END TIME**	15:25
		SITE NAME/NUMBER	Crystal Cleaners / 851022
		PAGE	1 OF 1

WELL DIAMETER (INCHES) [ ] 1 [X] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

INITIAL DTW (BMP)	21.00 FT	**FINAL DTW (BMP)**	21.14 FT	**PROT. CASING STICKUP (AGS)**	FT	**TOC/TOR DIFFERENCE**	FT
WELL DEPTH (BMP)	54.89 FT	**SCREEN LENGTH**	10.00 FT	**PID AMBIENT AIR**	PPM	**REFILL TIMER SETTING**	SEC
WATER COLUMN	33.89 FT	**DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041)	0.02 GAL	**PID WELL MOUTH**	0 PPM	**DISCHARGE TIMER SETTING**	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	5.56 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	5.20 GAL	**DRAWDOWN/ TOTAL PURGED**	0.14	**PRESSURE TO PUMP**	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1400	**BEGIN PURGING**									
1410	21.14	250	13.17	0.894	6.89	6.44	47.4	73		
1420	21.14	250	13.02	0.934	6.67	6.18	40.5	85		
1425	21.14	250	12.88	1.05	6.56	4.26	31.1	87		
1430	21.14	250	12.85	1.10	6.67	3.50	32.2	73		
1435	21.14	250	12.81	1.21	6.86	2.06	28.0	38		
1440	21.14	250	12.85	1.23	6.96	1.78	20.5	4		
1445	21.14	250	12.80	1.24	7.03	1.60	16.4	-27		
1450	21.14	250	12.85	1.24	7.05	1.57	14.4	-36		
1455	21.14	250	12.69	1.24	7.09	1.45	12.9	-48		
1500	21.14	250	12.72	1.25	7.11	3.05	11.5	-56		
1505	21.14	250	12.76	1.22	7.18	1.39	11.2	-66		
1510	21.14	250	12.76	1.22	7.24	1.27	9.1	-78		
1515	21.14	250	12.86	1.22	7.27	1.21	9.5	-86		
1520	21.14	250	12.84	1.23	7.33	1.22	7.4	-81		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	13	**1.23**	**7.3**	**1.2**	**7.4**	**-81**

TEMP.: nearest degree (ex. 10.1 = 10)

COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)

pH: nearest tenth (ex. 5.53 = 5.5)

DO: nearest tenth (ex. 3.51 = 3.5)

TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)

ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [X] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [ ] WL METER _____
- [ ] PID _____
- [ ] WQ METER _____
- [ ] TURB. METER _____
- [ ] PUMP _____
- [ ] OTHER _____
- [ ] FILTERS NO. ____ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[ ]	See Chain of Custody							
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 5.20

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature: Print Name: Caitlin Serowik

Checked By: Date: 9/15/2020

LOW FLOW GROUNDWATER SAMPLING RECORD

PROJECT NAME	Crystal Cleaners
PROJECT NUMBER	386554.0000.0000
SAMPLE ID	CC-MW-6
SAMPLE TIME	17:40

LOCATION ID	MW-6
DATE	9/15/2020
START TIME	16:45
END TIME	17:40
SITE NAME/NUMBER	Crystal Cleaners / 851022
PAGE	1 OF 1

WELL DIAMETER (INCHES) [ ] 1 [X] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

TUBING ID (INCHES) [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP) [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	X		
CASING	X		
LOCKED	X		
COLLAR			X

INITIAL DTW (BMP)	23.00 FT	**FINAL DTW (BMP)**	23.10 FT	**PROT. CASING STICKUP (AGS)**	FT	**TOC/TOR DIFFERENCE**	FT
WELL DEPTH (BMP)	54.71 FT	**SCREEN LENGTH**	10.00 FT	**PID AMBIENT AIR**	PPM	**REFILL TIMER SETTING**	SEC
WATER COLUMN	31.71 FT	**DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041)	0.02 GAL	**PID WELL MOUTH**	0 PPM	**DISCHARGE TIMER SETTING**	SEC
CALCULATED GAL/VOL (column X well diameter squared X 0.041)	5.20 GAL	**TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL)	3.25 GAL	**DRAWDOWN/ TOTAL PURGED**	0.10	**PRESSURE TO PUMP**	PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)

TIME 3-5 Minutes	DTW (FT) 0.0-0.33 ft Drawdown	PURGE RATE (mL/min)	TEMP. (°C) (+/- 3 degrees)	SP. CONDUCTANCE (mS/cm) (+/- 3%)	pH (units) (+/- 0.1 units)	DISS. O_2 (mg/L) (+/- 10%)	TURBIDITY (ntu) (+/- 10% <10 ntu)	REDOX (mv) (+/- 10 mv)	PUMP INTAKE DEPTH (ft)	COMMENTS
1645	**BEGIN PURGING**									
1655	23.10	250	18.58	0.973	8.05	5.15	34.7	23		
1705	23.10	250	17.68	0.981	7.78	1.69	22.0	13		
1710	23.10	250	17.64	0.979	7.70	1.35	17.9	9		
1715	23.10	250	17.59	0.978	7.61	1.14	15.6	5		
1720	23.10	250	17.52	0.983	7.54	1.02	14.2	1		
1725	23.10	250	17.59	0.979	7.52	0.96	13.6	-3		
1730	23.10	250	17.65	0.976	7.51	0.94	13.9	-4		
1735	23.10	250	17.65	0.978	7.53	0.92	12.4	-9		

FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])

	18	**0.978**	**7.5**	**0.9**	**12.4**	**-9**

TEMP.: nearest degree (ex. 10.1 = 10)

COND.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)

pH: nearest tenth (ex. 5.53 = 5.5)

DO: nearest tenth (ex. 3.51 = 3.5)

TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)

ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [X] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [ ] WL METER _____
- [ ] PID _____
- [ ] WQ METER _____
- [ ] TURB. METER _____
- [ ] PUMP _____
- [ ] OTHER _____
- [ ] FILTERS NO. ___ TYPE _____

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	QC COLLECTED	SAMPLE BOTTLE ID NUMBERS
[ ]	See Chain of Custody							
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								
[ ]								

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	[ ]	[X]
NO-PURGE METHOD UTILIZED	[ ]	[X]

NUMBER OF GALLONS GENERATED: 3.25

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

SKETCH/NOTES

Sampler Signature:

Print Name: Caitlin Serowik

Checked By:

Date: 9/15/2020

Data Usability Summary Report

Site: Crystal Cleaners
Laboratory: Eurofins TestAmerica Buffalo – Amherst, NY
SDG Nos.: 480-175175-1
Parameters: Volatile Organic Compounds (VOCs)
Data Reviewer: Kristen Morin/TRC
Peer Reviewer: Elizabeth Denly/TRC
Date: November 20, 2020

Samples Reviewed and Evaluation Summary

6 Groundwater Samples: CC-MW-1, CC-MW-2, CC-MW-3, CC-MW-4, CC-MW-5, CC-MW-6

1 Trip Blank Sample: TRIP BLANK

The above-listed groundwater and trip blank samples were collected on September 14 and 15, 2020 and were analyzed for VOCs by SW-846 Method 8260C. The data validation was performed in accordance with *USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-017-002),* January 2017, modified for the SW-846 methodology utilized.

The data were evaluated based on the following parameters:

	• Overall Evaluation of Data and Potential Usability Issues
	• Data Completeness
*	• Holding Times and Sample Preservation
*	• Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
	• Initial and Continuing Calibrations
*	• Blanks
*	• Surrogate Recoveries
*	• Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
*	• Laboratory Control Sample (LCS) Results
NA	• Field Duplicate Results
*	• Internal Standard Performance
	• Sample Results and Reported Quantitation Limits (QLs)
*	• Target Compound Identification
*	• Tentatively Identified Compounds (TICs)

* All criteria were met.
NA A field duplicate pair was not submitted with this sample set.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. Qualifications applied to the data as a result of sampling error were not required. Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

Appendix D

- The nondetect results for carbon tetrachloride in all samples were qualified as estimated (UJ) due to a continuing calibration nonconformance. These results can be used for project objectives as nondetects with estimated QLs, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level IV data deliverable package with the following exception. The laboratory did not report LCS and MS/MSD percent recoveries (%Rs), relative percent differences (RPDs), or laboratory acceptance criteria for total xylenes on the summary forms. The %Rs and RPDs were calculated and the laboratory acceptance limits were provided by the laboratory during validation of previous projects; no validation actions were taken on this basis.

Holding Times and Sample Preservation

All holding time and sample preservation criteria were met.

GC/MS Tunes

All criteria were met.

Initial and Continuing Calibrations

All relative response factors (RRFs), correlation coefficients, and percent relative standard deviations were within the acceptance criteria in the initial calibrations associated with the samples in this data set.

The RRFs were within the acceptance criteria in the continuing calibration (CC) standard associated with the samples in this data set. The following table summarizes the percent difference (%D) that did not meet the method acceptance criteria in the CC standard associated with the samples in this data set and the validation actions.

Instrument/ CC	Compound	%D	Validation Actions
HP5975T/ CCVIS 480-550111/3	Carbon tetrachloride	21.5	The nondetect results for carbon tetrachloride were qualified as estimated (UJ) in the associated samples.
Associated samples: CC-MW-1, CC-MW-2, CC-MW-3, CC-MW-4, CC-MW-5, CC-MW-6, TRIP BLANK			

Blanks

Target compounds were not detected in the laboratory method blanks or trip blank.

Surrogate Recoveries

The surrogate %Rs met the laboratory acceptance criteria.

MS/MSD Results

MS/MSD analyses were performed on sample CC-MW-1 for VOCs. The %Rs and RPDs were within the laboratory acceptance criteria.

Note that the laboratory did not report MS/MSD %Rs and RPD for total xylenes. The %Rs and RPD were calculated during validation and were within the laboratory's acceptance criteria.

LCS Results

An LCS was analyzed each day prior to samples. The %Rs were within the laboratory's acceptance criteria.

Note that the laboratory did not report the LCS %Rs for total xylenes. The %Rs were calculated during validation and were within the laboratory's acceptance criteria.

Field Duplicate Results

A field duplicate pair was not submitted with this sample set.

Internal Standard Performance

All criteria were met.

Sample Results and Reported Quantitation Limits

Select results for VOCs were reported below the lowest calibration standard level and QL. These results were qualified as estimated (J) in the associated samples by the laboratory.

Sample calculations were spot-checked; there were no errors noted. The following table summarizes the dilution performed on one of the samples in this data set. The QLs were elevated accordingly.

Sample ID	Dilution	Reason for Dilution
CC-MW-2	2-fold	A 2-fold dilution was performed due to the concentration of tetrachloroethene, which would have exceeded the calibration range if analyzed undiluted.

Target Compound Identification

All criteria were met.

Tentatively Identified Compounds

There were no issues noted regarding VOC TIC identifications.

There were no TICs found in the groundwater samples, trip blank, or method blanks.

QUALIFIED FORM 1s

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-1 Lab Sample ID: 480-175175-1

Matrix: Water Lab File ID: T6884.D

Analysis Method: 8260C Date Collected: 09/14/2020 14:35

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	~~ND~~	UJ	1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-1 Lab Sample ID: 480-175175-1

Matrix: Water Lab File ID: T6884.D

Analysis Method: 8260C Date Collected: 09/14/2020 14:35

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	99		73-120
1868-53-7	Dibromofluoromethane (Surr)	103		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-1 Lab Sample ID: 480-175175-1

Matrix: Water Lab File ID: T6884.D

Analysis Method: 8260C Date Collected: 09/14/2020 14:35

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-2 Lab Sample ID: 480-175175-2

Matrix: Water Lab File ID: T6885.D

Analysis Method: 8260C Date Collected: 09/15/2020 12:15

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:26

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
75-34-3	1,1-Dichloroethane	ND		2.0	0.76
75-35-4	1,1-Dichloroethene	ND		2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	ND		20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND		2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	~~ND~~	UJ	2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	ND		2.0	0.68
74-87-3	Chloromethane	ND		2.0	0.70
156-59-2	cis-1,2-Dichloroethene	3.4		2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
75-71-8	Dichlorodifluoromethane	ND		2.0	1.4
100-41-4	Ethylbenzene	ND		2.0	1.5
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-2 Lab Sample ID: 480-175175-2

Matrix: Water Lab File ID: T6885.D

Analysis Method: 8260C Date Collected: 09/15/2020 12:15

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:26

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	2.2		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	140		2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	6.5		2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	101		73-120
1868-53-7	Dibromofluoromethane (Surr)	100		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-2 Lab Sample ID: 480-175175-2

Matrix: Water Lab File ID: T6885.D

Analysis Method: 8260C Date Collected: 09/15/2020 12:15

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:26

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-3 Lab Sample ID: 480-175175-3

Matrix: Water Lab File ID: T6886.D

Analysis Method: 8260C Date Collected: 09/15/2020 13:30

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	~~ND~~	UJ	1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	1.3		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-3 Lab Sample ID: 480-175175-3

Matrix: Water Lab File ID: T6886.D

Analysis Method: 8260C Date Collected: 09/15/2020 13:30

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	29		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	0.72	J	1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		77-120
460-00-4	4-Bromofluorobenzene (Surr)	99		73-120
1868-53-7	Dibromofluoromethane (Surr)	105		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-3 Lab Sample ID: 480-175175-3

Matrix: Water Lab File ID: T6886.D

Analysis Method: 8260C Date Collected: 09/15/2020 13:30

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 12:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-5 Lab Sample ID: 480-175175-4

Matrix: Water Lab File ID: T6887.D

Analysis Method: 8260C Date Collected: 09/15/2020 15:25

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 13:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	~~ND~~	UJ	1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-5 Lab Sample ID: 480-175175-4

Matrix: Water Lab File ID: T6887.D

Analysis Method: 8260C Date Collected: 09/15/2020 15:25

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 13:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	0.42	J	1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		77-120
460-00-4	4-Bromofluorobenzene (Surr)	99		73-120
1868-53-7	Dibromofluoromethane (Surr)	103		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-5 Lab Sample ID: 480-175175-4

Matrix: Water Lab File ID: T6887.D

Analysis Method: 8260C Date Collected: 09/15/2020 15:25

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 13:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-4 Lab Sample ID: 480-175175-5

Matrix: Water Lab File ID: T6888.D

Analysis Method: 8260C Date Collected: 09/15/2020 16:25

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 13:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	~~ND~~	UJ	1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-4 Lab Sample ID: 480-175175-5

Matrix: Water Lab File ID: T6888.D

Analysis Method: 8260C Date Collected: 09/15/2020 16:25

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 13:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		77-120
460-00-4	4-Bromofluorobenzene (Surr)	100		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-4 Lab Sample ID: 480-175175-5

Matrix: Water Lab File ID: T6888.D

Analysis Method: 8260C Date Collected: 09/15/2020 16:25

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 13:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-6 Lab Sample ID: 480-175175-6

Matrix: Water Lab File ID: T6889.D

Analysis Method: 8260C Date Collected: 09/15/2020 17:40

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 14:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	~~ND~~	UJ	1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-6 Lab Sample ID: 480-175175-6

Matrix: Water Lab File ID: T6889.D

Analysis Method: 8260C Date Collected: 09/15/2020 17:40

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 14:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	0.44	J	1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		77-120
460-00-4	4-Bromofluorobenzene (Surr)	99		73-120
1868-53-7	Dibromofluoromethane (Surr)	100		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-6 Lab Sample ID: 480-175175-6

Matrix: Water Lab File ID: T6889.D

Analysis Method: 8260C Date Collected: 09/15/2020 17:40

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 14:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: TRIP BLANK Lab Sample ID: 480-175175-8

Matrix: Water Lab File ID: T6890.D

Analysis Method: 8260C Date Collected: 09/15/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 14:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	~~ND~~	UJ	1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: TRIP BLANK Lab Sample ID: 480-175175-8

Matrix: Water Lab File ID: T6890.D

Analysis Method: 8260C Date Collected: 09/15/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 14:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	99		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		77-120
460-00-4	4-Bromofluorobenzene (Surr)	97		73-120
1868-53-7	Dibromofluoromethane (Surr)	100		75-123

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: TRIP BLANK Lab Sample ID: 480-175175-8

Matrix: Water Lab File ID: T6890.D

Analysis Method: 8260C Date Collected: 09/15/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 09/18/2020 14:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 550111 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
	Tentatively Identified Compound		None		

QC NONCONFORMANCE DOCUMENTATION

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Lab Sample ID: CCVIS 480-550111/3 Calibration Date: 09/18/2020 10:00

Instrument ID: HP5975T Calib Start Date: 09/16/2020 13:41

GC Column: ZB-624 (20) ID: 0.18(mm) Calib End Date: 09/16/2020 16:31

Lab File ID: T6879.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	1.823	1.795	0.1000	24.6	25.0	-1.6	50.0
Chloromethane	Ave	1.850	1.890	0.1000	25.5	25.0	2.1	20.0
Butadiene	Ave	1.685	1.682		25.0	25.0	-0.2	20.0
Vinyl chloride	Ave	1.782	1.845	0.1000	25.9	25.0	3.5	20.0
Bromomethane	Ave	1.167	1.183	0.1000	25.3	25.0	1.4	50.0
Chloroethane	Ave	1.093	1.033	0.1000	23.6	25.0	-5.5	50.0
Dichlorofluoromethane	Ave	2.583	2.617		25.3	25.0	1.3	20.0
Trichlorofluoromethane	Ave	2.238	2.371	0.1000	26.5	25.0	5.9	20.0
Ethyl ether	Ave	1.301	1.280		24.6	25.0	-1.7	20.0
Acrolein	Ave	0.1802	0.1745		121	125	-3.1	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.151	1.374	0.1000	29.9	25.0	19.4	20.0
1,1-Dichloroethene	Ave	1.104	1.248	0.1000	28.3	25.0	13.1	20.0
Acetone	Ave	0.5409	0.4865	0.1000	112	125	-10.1	50.0
Iodomethane	Ave	2.027	2.236		27.6	25.0	10.3	20.0
Carbon disulfide	Ave	3.907	4.483	0.1000	28.7	25.0	14.7	20.0
Allyl chloride	Ave	2.046	2.262		27.6	25.0	10.5	20.0
Methyl acetate	Ave	1.319	1.250	0.1000	47.4	50.0	-5.3	50.0
Methylene Chloride	Lin1		1.479	0.1000	25.2	25.0	0.8	20.0
2-Methyl-2-propanol	Ave	0.1747	0.2003		287	250	14.7	50.0
Methyl tert-butyl ether	Ave	4.374	4.550	0.1000	26.0	25.0	4.0	20.0
trans-1,2-Dichloroethene	Ave	1.312	1.413	0.1000	26.9	25.0	7.7	20.0
Acrylonitrile	Ave	0.6362	0.6427		253	250	1.0	20.0
Hexane	Ave	2.034	2.331		28.6	25.0	14.6	20.0
1,1-Dichloroethane	Ave	2.353	2.628	0.2000	27.9	25.0	11.7	20.0
Vinyl acetate	Ave	3.159	3.244		51.3	50.0	2.7	20.0
2,2-Dichloropropane	Ave	1.935	2.193		28.3	25.0	13.3	20.0
cis-1,2-Dichloroethene	Ave	1.476	1.544	0.1000	26.1	25.0	4.6	20.0
2-Butanone (MEK)	Ave	0.8098	0.7831	0.1000	121	125	-3.3	20.0
Chlorobromomethane	Ave	0.7479	0.7850		26.2	25.0	5.0	20.0
Tetrahydrofuran	Lin1		0.5360		47.7	50.0	-4.5	20.0
Chloroform	Ave	2.440	2.533	0.2000	26.0	25.0	3.8	20.0
1,1,1-Trichloroethane	Ave	2.001	2.307	0.1000	28.8	25.0	15.3	20.0
Cyclohexane	Ave	2.292	2.692	0.1000	29.4	25.0	17.4	20.0
1,1-Dichloropropene	Ave	1.720	2.019		29.3	25.0	17.4	20.0
Carbon tetrachloride	Ave	1.533	1.863	0.1000	30.4	25.0	21.5*	20.0
Benzene	Ave	5.132	5.594	0.5000	27.3	25.0	9.0	20.0
Isobutyl alcohol	Ave	0.0638	0.0727		712	625	14.0	50.0
1,2-Dichloroethane	Ave	2.196	2.205	0.1000	25.1	25.0	0.4	20.0
n-Heptane	Ave	2.340	2.481		26.5	25.0	6.0	20.0
Trichloroethene	Ave	1.359	1.478	0.2000	27.2	25.0	8.7	20.0

Data Usability Summary Report

Site: Crystal Cleaners
Laboratory: Eurofins TestAmerica – Amherst, NY and Burlington, VT
SDG No.: 480-175175-1
Parameters: Per- and Poly-fluoroalkyl Substances (PFAS), 1,4-Dioxane
Data Reviewer: Kristen Morin/TRC
Peer Reviewer: Elizabeth Denly/TRC
Date: November 19, 2020

Samples Reviewed and Evaluation Summary

3 Groundwater Samples: CC-MW-1, CC-MW-2, CC-MW-4

1 Equipment Blank Sample: CC-Equipment Blank*

*analyzed for PFAS only

The above-listed groundwater and equipment blank samples were collected on September 14-16, 2020 and were analyzed for one or more of the following parameters:

- 1,4-Dioxane by SW-846 8270D with Selective Ion Monitoring (SIM)
- PFAS (21 target analytes) based on EPA Method 537.1 (modified) using Test America – Burlington, VT standard operating procedure (SOP) BR-LC-009, revision 4.0, effective date 04/12/19.

The samples were analyzed for 1,4-dioxane by Eurofins TestAmerica – Amherst, NY and for PFAS by Eurofins TestAmerica – Burlington, VT. The data validation was performed in accordance with the following guidance, modified for the methodologies utilized:

- USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-2017-002), January 2017
- USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA-542-B-16-001), April 2016
- USEPA Data Review and Validation Guidelines for PFAS Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018
- New York State Department of Environmental Conservation Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids, October 2020

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
* • Data Completeness
* • Holding Times and Sample Preservation
* • GC/MS Tunes (1,4-Dioxane only)
* • Initial and Continuing Calibrations
* • Blanks
* • Surrogate Recoveries (1,4-Dioxane only)
* • Isotopically Labeled Surrogate Results (PFAS only)
* • Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

* • Laboratory Control Sample (LCS) Results
* • Internal Standards
NA • Field Duplicate Results
• Sample Results and Reported Quantitation Limits (QLs)
* • Target Compound Identification

* - All criteria were met.
NA - Field duplicates were not associated with this sample set.

Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. There were no qualifications applied to the data because of sampling error. Qualifications applied to the data because of analytical error are discussed below.

- Potential uncertainty exists for select results for PFAS that were below the lowest calibration standard and QL. These results were qualified as estimated (J) in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

Data Completeness

The data package was a complete Level IV data deliverable.

Holding Times and Sample Preservation

All holding time and sample preservation criteria were met.

GC/MS Tunes (1,4-Dioxane only)

All criteria were met in the 1,4-dioxane analyses.

Initial and Continuing Calibrations

The percent relative standard deviations were within the method acceptance criteria in the initial calibrations. The percent differences met the method acceptance criteria in the continuing calibration standards associated with the samples in this data set.

Blanks

Target compounds were not detected in the associated method blanks and equipment blank.

Surrogate Recoveries (1,4-Dioxane only)

The surrogate percent recoveries (%Rs) met the laboratory acceptance criteria.

Isotopically Labeled Surrogate Results (PFAS only)

Eighteen isotopically labeled surrogates were spiked into the samples prior to extraction for isotope dilution quantitation. The %Rs were within the acceptance criteria.

MS/MSD Results

MS/MSD analyses were performed on sample CC-MW-1 for 1,4-dioxane and PFAS. The %Rs and relative percent differences met the laboratory acceptance criteria.

LCS Results

The LCS %Rs were within the laboratory acceptance criteria for the 1,4-dioxane and PFAS analyses.

Internal Standards

1,4-Dioxane

The %Rs for the internal standard 1,4-dichlorobenzene-d_4 met the laboratory limits of 50-150% in the 1,4-dioxane analyses.

PFAS

The isotopically labeled internal standard 13C2-PFOA was added to each sample prior to injection to monitor for ion suppression/enhancement at the instrument level. The %Rs met the laboratory limits of 50-150% in the PFAS analyses.

Field Duplicate Results

There were no field duplicates associated with this data set.

Sample Results and Reported Quantitation Limits

Select results for PFAS were reported below the lowest calibration standard level and QL. These results were qualified as estimated (J) in the associated samples by the laboratory.

Sample calculations were spot-checked; there were no errors noted. There were no dilutions performed on samples in this data set.

Target Compound Identification

1,4-Dioxane

All criteria were met for 1,4-dioxane.

PFAS

Extracted ion chromatograms were reviewed to verify the target compound identifications. The laboratory manually integrated several peaks to ensure the inclusion of linear and branched isomers for PFOA, PFOS, NEtFOSAA, NMeFOSAA, and/or PFHxS; and/or to ensure proper integration of all PFAS.

Two precursor/product ion transitions were used for identification for all compounds except for PFBA, PFPeA, PFOSA, NMeFOSAA, NEtFOSAA, 6:2 FTS, and 8:2 FTS which only used one

precursor/product ion transition for identification. The ratios between the two precursor/product ion transitions for detected results met the laboratory acceptance criteria.

QUALIFIED FORM 1s

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-1 Lab Sample ID: 480-175175-1

Matrix: Water Lab File ID: Z002509.D

Analysis Method: 8270D SIM ID Date Collected: 09/14/2020 14:35

Extract. Method: 3510C Date Extracted: 09/18/2020 08:21

Sample wt/vol: 1030(mL) Date Analyzed: 09/23/2020 00:59

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 550627 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.19	0.097

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	28		15-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-2 Lab Sample ID: 480-175175-2

Matrix: Water Lab File ID: Z002512.D

Analysis Method: 8270D SIM ID Date Collected: 09/15/2020 12:15

Extract. Method: 3510C Date Extracted: 09/18/2020 08:21

Sample wt/vol: 1050(mL) Date Analyzed: 09/23/2020 02:07

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 550627 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.19	0.095

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	26		15-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-4 Lab Sample ID: 480-175175-5

Matrix: Water Lab File ID: Z002513.D

Analysis Method: 8270D SIM ID Date Collected: 09/15/2020 16:25

Extract. Method: 3510C Date Extracted: 09/18/2020 08:21

Sample wt/vol: 1050(mL) Date Analyzed: 09/23/2020 02:30

Con. Extract Vol.: 1(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 550627 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.19	0.095

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	30		15-110

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-1 Lab Sample ID: 480-175175-1

Matrix: Water Lab File ID: PA200924B10.d

Analysis Method: 537 (modified) Date Collected: 09/14/2020 14:35

Extraction Method: 3535 Date Extracted: 09/24/2020 07:00

Sample wt/vol: 276.6(mL) Date Analyzed: 09/24/2020 17:28

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 159169 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		4.5	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.8	0.98
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.8	0.75
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.42
335-67-1	Perfluorooctanoic acid (PFOA)	ND		1.8	0.89
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.8	0.52
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.42
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.66
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.42
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.39
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.53
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.8		1.8	0.57
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.61
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.43
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.8	0.79
754-91-6	Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.52
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5	0.71
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5	0.84
27619-97-2	6:2 FTS	ND		4.5	0.65
39108-34-4	8:2 FTS	ND		1.8	0.60

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-2 Lab Sample ID: 480-175175-2

Matrix: Water Lab File ID: PA200924B13.d

Analysis Method: 537 (modified) Date Collected: 09/15/2020 12:15

Extraction Method: 3535 Date Extracted: 09/24/2020 07:00

Sample wt/vol: 281.3(mL) Date Analyzed: 09/24/2020 17:53

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 159169 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	2.2	J	4.4	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	2.1		1.8	0.96
307-24-4	Perfluorohexanoic acid (PFHxA)	2.0		1.8	0.74
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.90	J	1.8	0.41
335-67-1	Perfluorooctanoic acid (PFOA)	2.5		1.8	0.87
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.8	0.52
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.41
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.65
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.41
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.38
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.52
375-73-5	Perfluorobutanesulfonic acid (PFBS)	4.2		1.8	0.56
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.5	J	1.8	0.60
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.43
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.7	J	1.8	0.77
754-91-6	Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.51
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.4	0.70
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.4	0.83
27619-97-2	6:2 FTS	ND		4.4	0.64
39108-34-4	8:2 FTS	ND		1.8	0.59

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-MW-4 Lab Sample ID: 480-175175-5

Matrix: Water Lab File ID: PA200924B14.d

Analysis Method: 537 (modified) Date Collected: 09/15/2020 16:25

Extraction Method: 3535 Date Extracted: 09/24/2020 07:00

Sample wt/vol: 280.6(mL) Date Analyzed: 09/24/2020 18:01

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 159169 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	3.1	J	4.5	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	5.1		1.8	0.96
307-24-4	Perfluorohexanoic acid (PFHxA)	4.2		1.8	0.74
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.6		1.8	0.41
335-67-1	Perfluorooctanoic acid (PFOA)	4.2		1.8	0.87
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.8	0.52
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.41
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.65
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.41
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.38
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.53
375-73-5	Perfluorobutanesulfonic acid (PFBS)	4.9		1.8	0.56
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	2.9		1.8	0.60
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.43
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.78
754-91-6	Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.51
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5	0.70
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5	0.83
27619-97-2	6:2 FTS	ND		4.5	0.64
39108-34-4	8:2 FTS	ND		1.8	0.59

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-175175-1

SDG No.:

Client Sample ID: CC-EQUIPMENT BLANK Lab Sample ID: 480-175175-7

Matrix: Water Lab File ID: PA200924B15.d

Analysis Method: 537 (modified) Date Collected: 09/16/2020 08:55

Extraction Method: 3535 Date Extracted: 09/24/2020 07:00

Sample wt/vol: 279.5(mL) Date Analyzed: 09/24/2020 18:09

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 159169 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		4.5	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.8	0.97
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.8	0.74
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.41
335-67-1	Perfluorooctanoic acid (PFOA)	ND		1.8	0.88
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.8	0.52
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.41
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.65
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.41
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.38
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.53
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.56
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.60
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.43
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.78
754-91-6	Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.51
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5	0.71
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5	0.83
27619-97-2	6:2 FTS	ND		4.5	0.64
39108-34-4	8:2 FTS	ND		1.8	0.59

QC NONCONFORMANCE DOCUMENTATION

Not applicable to this SDG.