GeoLogic NY, P.C.
P. O. Box 350 • 37 Copeland Ave. • Homer, NY 13077 • 607-749-5000

2019 PERIODIC REVIEW REPORT (PRR)
FORMER SCM - CORTLANDVILLE
839 NYS ROUTE 13
CORTLANDVILLE, NEW YORK 13045
SITE NO.: 712006

Prepared For:
New York State Department of Environmental Conservation
625 Broadway, BURE
Albany, New York 12233

Owner:
Cortland Commerce Center, LLC.
Attn: Mr. David Yaman
Crescent Commons
163 Main Street, Suite 1
Cortland, New York 13045

Prepared By:
GeoLogic NY, P.C.
37 Copeland Avenue
P.O. Box 350
Homer, New York 13077

January 2020
GeoLogic Project No. 210087

GeoLogic

TABLE OF CONTENTS

APPENDICES

APPENDIX A: Institutional and Engineering Controls Certification Forms & Permits

APPENDIX B: Drawings

Drawing 1: Site Location Plan;
Drawing 2: Monitoring Well Locations Plan;
Drawing 3: November 2019 Shallow Wells Groundwater Contours;
Drawing 4: November 2019 Deep Wells Groundwater Contours.

APPENDIX C: Tables

Table 1: Field Observations: 2019 Annual Groundwater Sampling Event;
Table 2: Summary of Groundwater Analytical Results;
Table 3: Monthly Analytical Results May 2001 – December 2019;
Table 4: Comparison of TCE Concentrations in Groundwater;
Table 5: Comparison of TCE Concentrations in SSD/SVE Exhaust;

APPENDIX D: Charts

Charts 1 - 4: Remediation System TCE Concentrations;
Charts 5 & 6: TCE Concentrations in Perimeter Shallow Wells;
Charts 7 & 8: TCE Concentrations in Perimeter Deep Wells;
Charts 9 & 10: TCE Concentrations in Interior Shallow Wells;
Charts 11 & 12: TCE Concentrations in Interior Deep Wells;
Chart 13: TCE Concentrations in Monitoring Well MW-L16;
Charts 14 & 15: 2015, 2016, 2017, 2018 & 2019 Recovery Well Pumping Rates & Groundwater Elevations;
Chart 16: SSD/SVE Exhaust TCE Concentrations.

APPENDIX E: Analytical Results from 2019 Annual Sampling Event, November and December Monthly Sampling Events

APPENDIX F: SSD/SVE Analytical Results from the 2019 Sampling Event

1 INTRODUCTION

This report provides the basis for review and certification of the groundwater treatment system and the institutional and engineering controls (ICs/ECs) implemented at Site No. 712006. Signed Institutional and Engineering Controls Certification Forms are included in Appendix A.

The Site is currently owned by Cortland Commerce Center, LLC (CCC) and this report is prepared and submitted at the direction of CCC, consistent with the Site's remedial program as approved by the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH). The reporting period addressed in this report is January 1, 2019 to January 1, 2020.

1.1 Summary of Site

Former manufacturing activities at the Site resulted in contamination of soil and groundwater with chlorinated organic solvents, primarily trichloroethylene (TCE) and its decomposition products. In 1986, the contaminant plume was found to extend approximately 1.5 miles downgradient (north) of the Site. The potential contaminant sources identified included a 3,000-gallon aboveground storage tank (AST) that formerly contained TCE, a 20,000-gallon underground storage tank (UST) that formerly contained tramp oil and four areas of stained surface soil associated with past material handling practices. Additionally, a former tumbling area was identified within the building footprint (adjacent to monitoring well MW-L16).

Remedial measures implemented at the Site have included installing a soil vapor extraction (SVE) system and a groundwater pump and treat system. The SVE system was activated in 1990 and subsequently dismantled at an unknown date between 1996 and 1998. The groundwater remediation system is currently in operation. In June 1994, the Classification of the Site was changed from 2 to 4 (site properly closed – required continued management).

2 SITE OVERVIEW

2.1 Site Location and Description

The Site is located at 839 NYS Route 13, Town of Cortlandville, County of Cortland and State of New York (Appendix B, Drawing No. 1).

The Site is currently approximately 46 acres in size. The Site boundaries have been modified multiple times to remove parcels, which were not impacted by the contamination. The Site is developed with a one-story building occupying approximately 415,000 square feet. The building is utilized for office space, warehouse storage and manufacturing. The remainder of the Site consists of employee parking areas, several small outbuildings, treated water infiltration lagoons and vacant undeveloped land.

The Site is bordered on the north by Lime Hollow Road and a predominately residential area. It is bordered on the east by NYS Route 13 and a predominately commercial area. It is bordered on the south by a cemetery and the JM Murray Center (formerly part of the

Smith Corona complex). It is bordered on the west by a mixture of undeveloped land, agricultural land and some residential properties.

2.2 Site History

The Site was formerly owned and operated by Smith Corona Corporation (SCC), previously known as SCM Corporation (SCM). SCC utilized the Site for the purposes of manufacturing typewriters. Trichloroethylene (TCE) was used on the Site by SCC during manufacturing processes.

In 1999, S. C. W. P., LLC. (SCWP) purchased land and buildings from SCC and assumed operational responsibilities for the groundwater remediation system.

Cortland Commerce Center, LLC. (CCC) purchased the Site in May of 2010 from SCWP and assumed operational responsibilities for the groundwater remediation system.

2.3 Nature and Extent of Contamination

The Site overlies the Otter Creek/Dry Creek aquifer. Town of Cortlandville municipal water wells are located approximately 2,300 feet west of the Site and the City of Cortland municipal water wells are located approximately 1.5 miles north-northeast of the Site.

In or around 1986 a plume of contaminated groundwater was detected during the investigation of an unrelated petroleum spill. This plume extended from the Site approximately 1.5 miles downgradient (generally north) toward the City of Cortland municipal well field. The contaminants in this plume were identified as TCE and related decomposition products.

In accordance with the 1989 Settlement Agreement, monitoring of off-site groundwater contamination has been conducted periodically by the NYSDEC, Cortland County Soil and Water Conservation District and the Cortland County Health Department.

2.4 Chronology of Site Remedial Program

The remediation system, consisting of a recovery well, aeration tower, pipeline, rock cascade and an infiltration lagoon system, remains in place and has not been modified since its original construction.

A brief summary of the Site remediation activities undertaken over the past 25 years is presented below[1]:

- October 1986 - March 1987: Use of TCE was discontinued. Various ASTs and USTs containing TCE, tramp oil, fuel oil and muriatic acid were removed. Visibly contaminated soil encountered during the tank work was also removed. In addition, four areas of stained soil related to past material handling practices were excavated and disposed of off-site.

- January 1989: The Settlement Agreement for remediation of the Site was signed between the NYSDEC, other parties, and SCC on January 12, 1989.

- September – December 1989: Approval of the remediation Phase I design was obtained from the NYSDEC on September 22, 1989. Phase I consisted of investigation, design, construction and installation of a groundwater recovery well. The groundwater recovery well came on-line on December 29, 1989. The water from the recovery well was utilized for non-contact cooling purposes and discharged into an existing sewer line until the Phase II system could be completed.

- May 1990: Approval of the remediation Phase II design was obtained from the NYSDEC on May 29, 1990. Phase II included installation of a SVE system and groundwater remediation system. The groundwater remediation system consisted of an air stripping column (aeration tower), distribution piping (water from recovery well to the air stripper and from the air stripper to the rock cascade and infiltration lagoons), a rock cascade and engineered infiltration lagoons.

- August 1990: The SVE system came on-line.

- October 1990: The groundwater remediation system came on-line.

- 1996-1998: At an unknown date, the SVE system was shut down and decommissioned. GeoLogic has not located or reviewed documentation related to the shutdown of the SVE system.

- 1997-1998: At an unknown date, the well monitoring frequency was reduced to annual. GeoLogic has not located or reviewed documentation related to the modification of the sampling frequency.

- April 1999: SCWP purchased the SCC land and buildings and assumed operational responsibilities for the groundwater remediation system.

- May 2001: With the permission of the NYSDEC, the stripping tower blower was turned off. The influent TCE concentration had reduced to the point that the tower was able to reduce TCE levels adequately to meet discharge limits without forced airflow. Sampling frequency for the tower influent, tower discharge and outfall cascade was increased from quarterly to monthly.

- December 2008: a former tumbling area was identified within the building footprint and a groundwater monitoring well (MW-L16) was installed in this area.

- May 2010: CCC purchased the SCWP land and buildings and assumed operational responsibilities for the groundwater remediation system.

- January 2012: A sub-slab depressurization (SSD)/SVE system was energized in the former tumbling area located adjacent to monitoring well MW-L16.

2.5 Cleanup and Site Closure Criteria

The site-wide groundwater cleanup criteria for the Site are the New York State Class GA groundwater quality standards. Currently, the standard for TCE is 5 micrograms per liter (µg/L).

Site wells are required to be monitored until all wells meet the clean-up criteria. When all wells meet the clean-up criteria, the remediation system may be shut-down.

Groundwater monitoring will continue for a period of five years after the remedial system is shut-down. If at any time during the post-remediation monitoring period any of the samples exceed the site-wide clean-up criteria, the system will be restarted. For the first two years, post-remediation monitoring will occur quarterly, then semi-annual for the next two years and finally once in the fifth year. If the remedial system must be restarted for any reason, the five-year post shut-down monitoring program will be restarted once the site-wide cleanup criteria has been re-achieved.

3 INSTITUTIONAL AND ENGINEERING CONTROLS

Signed Institutional and Engineering Controls Certification Forms are included in Appendix A.

3.1 Summary of Institutional Controls (ICs)

No ICs are identified in the Settlement Agreement or Record of Decision.

3.2 Summary of Engineering Controls (ECs)

The ECs implemented at the Site are described below:

- A groundwater remediation system consisting of an air stripping column (aeration tower), distribution piping (water from recovery well to the aeration tower and from the aeration tower to the infiltration lagoons) and an engineered rock cascade and infiltration lagoons has been operating at the Site since 1990.

Periodic monitoring of system performance is performed. The system will continue to operate until groundwater quality meets the clean-up criteria for the Site. It should also be noted that although not required to be operated at present, the blowers (primary and back up) for the air stripper must remain in place and in good working order.

3.2.1 Summary of ECs Operations During Reporting Period

Site Monitoring & Groundwater Treatment System

The groundwater remediation system has operated without major breakdown during this reporting period. The pumping rate was checked during monthly sampling events and the average flow rate for the year was 561 gallons per minute (gpm), which is less than the design standard of 700 to 1,000 gpm[2]. On September 27, 2019, the groundwater remediation system was taken off-line and a liquid descaler was circulated in the heat exchanger. The system was returned to service later in the same day. The procedure was successful and resulted in an increase in the pumping rate, and a decrease in the pumping pressure. Routine maintenance of the system components will continue to be completed on

an as-needed basis. Charts 14 and 15, located in Appendix D, depict a comparison of recovery well groundwater elevations and pumping rates for 2014 through 2019.

Both the primary and back-up blowers were energized and determined to be operational on December 17, 2019.

During the annual sampling event, all wells (except MW-2D and MW-4S), were in good working order and were able to be sampled. The PVC riser at MW-4S was broken approximately three feet below ground surface. This damage occurred sometime between November 2018 (the last time the well was accessed) and the 2019 Annual Sampling Event. MW-2D remains blocked at a depth of approximately 50 feet. It is likely that large gravel entered the well when it was originally damaged and that the gravel has become lodged in the well casing. Quarterly monitoring of well MW-10D continues to supplement the monitoring of conditions at the down gradient property boundary.

Sub-Slab Depressurization (SSD)/Soil Vapor Extraction (SVE) System

The SSD/SVE system, installed in the vicinity of the former tumbling pit, has operated without major breakdown during this reporting period. The system consists of a single extraction point (well MW-L16) connected at a Gast Model R6P350A regenerative blower that extracts 218 cubic feet per minute (cfm) of vapor from under and around the former tumbling pit. Routine maintenance has been performed on system components on an as-needed basis.

A sample of the system emissions was obtained on November 20, 2019. The TCE concentration was reported at 8,100 µg/m^3. The 2019 concentration is a 55% decline from the initial concentration of 18,000 µg/m^3 detected in the sample collected on January 10, 2012. It is noted that the 2019 concentration is the second highest concentration observed since the initial concentration. This increase may be associated with the lower groundwater elevation observed in November 2019. The analytical results continue to demonstrate that the system has been and remains effective in removing residual contamination from under and around the former tumbling pit. Table 5 and Chart 16 located in Appendix C and Appendix D respectively, depict the TCE concentrations observed in the SSD/SVE exhaust samples collected since the system was energized in January 2012. The 2019 SSD/SVE analytical results are included in Appendix F.

3.3 Boundary Modification

In March 2018 the NYSDEC approved a boundary modification for the Site. CCC petitioned the NYSDEC to modify the Site boundary given the specified parcel was not directly involved with the original contamination, was only used as a parking lot and consisted of a small percentage of the overall Site. The parcel is in the northeast quadrant of the Site and consists of 1.955 acres. The parcel was combined with another parcel, 1.550 acres in size, previously removed from the Site in 2008 to form the new Lot 3. Lot 3 is 3.505 acres in size. After the boundary modification, the Site is 46.226 acres in size.

4 MONITORING PLAN

4.1 Monitoring Plan Components

In their letter dated, March 7, 2018, the NYSDEC approved modification of the annual groundwater sampling recommended in the 2017 PRR prepared for the Site. The modification resulted in monitoring wells MW-2S, MW-4S, MW-4D, MW-5S, MW-5D, MW-9 and MW-12D being sampled biennially (every other year). These wells were not sampled in 2018 but were sampled in 2019.

For this reporting period, monitoring at the Site consists of monthly sampling of the groundwater remediation system, quarterly monitoring of MW-10D and annual sampling of seventeen (17) groundwater monitoring wells (locations depicted on Drawing No. 2, Appendix B). Sampling event data trends and supporting charts are discussed in Section 5.

In their letter, dated February 13, 2019, the NYSDEC requested sampling for Emerging Contaminants (ECs) at the Site. ECs sampling was completed at the Site in November 2019. The results will be submitted to the NYSDEC under separate cover.

4.2 Summary of Monitoring Completed During Reporting Period

The following sampling events have taken place during this reporting period:

- Annual Sampling of Groundwater Monitoring Wells (11/21/2019 - 11/22/2019):
    - Interior Shallow Wells: MW-6, MW-7, MW-8, MW-11 and MW-12S;
    - Interior Deep Wells: MW-9 and MW-12D;
    - Perimeter Shallow Wells: MW-1S, MW-2S, MW-4S (no sample – damaged), MW-5S and MW-10S;
    - Perimeter Deep Wells: MW-1D, MW-2D (no sample – damaged), MW-4D, MW-5D and MW-10D;
    - Facility Well: MW-L16 (installed in 2008);
    - Quarterly Monitoring of MW-10D (February 2019, May 2019 and August 2019, plus November 2019 annual sampling).
- Monthly Groundwater Remediation System (36 total samples in 2019):
    - Treatment System Influent (12 samples in 2019);
    - Tower Discharge (12 samples in 2019);
    - Cascade Outfall (12 samples in 2019).

All groundwater samples were submitted for analysis to Life Science Laboratories, Inc. (LSL). LSL Central Lab is located at 5854 Butternut Drive, East Syracuse, New York. The groundwater samples were analyzed for specific Volatile Organic Compounds (VOCs) (1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethene, Trichloroethene, Tetrachloroethene and Vinyl Chloride) utilizing EPA Method 8260B.

4.2.1 Summary of Monthly Remediation System Sampling

Each month samples are collected at the Tower Influent, Tower Discharge and Cascade Outfall. The pumping rate is also recorded during each monthly sampling event. Samples are submitted for laboratory analysis, results are reviewed, and monitoring reports are submitted to the NYSDEC and NYSDOH after each monthly sampling event.

4.2.2 Summary of Annual Sampling Event

The depth to groundwater was measured in all seventeen (17) monitoring wells during the November 21 and November 22, 2019 annual sampling event. Water level measurements were collected prior to groundwater sampling. Based on recorded water levels, shallow and deep groundwater contour maps were prepared (Drawing No. 3 and No. 4, Appendix B). The 2019 water levels were lower than the last two years but not the lowest observed at the Site to date. Generally, the groundwater flow under non-pumping conditions for the Site is to the north-northwest. The recovery well continues to depress the water table sufficiently to influence groundwater flow at the Site.

The field observations, including water levels, for the 2019 annual sampling event are summarized in Table 1, located in Appendix C.

Groundwater samples are submitted for laboratory analysis, the results are reviewed, and the results are detailed in the annual PRR for the Site. The laboratory reports for the 2019 Annual Sampling event and the monthly monitoring results (for November and December 2019) are included in Appendix E. Section 5 below provides an analysis of the data.

The results for the 2019 annual sampling event have been up-loaded to the NYSDEC EQuIS database.

4.3 Monitoring Deficiencies

During the annual sampling event (November 21 and November 22, 2019), the following deficiencies were noted:

- Monitoring well MW-4S was unable to be sampled due to the PVC riser being broken at a depth of approximately 3 feet below ground surface (bgs). No TCE concentrations above 5 µg/L have ever been observed at this well; the maximum TCE concentration of 2 µg/L was observed in November of 1990 and August of 1991. Although the well is not able to be sampled, water levels will continue to be collected from this well.

- Monitoring well MW-2D was unable to be sampled due to blockage within the well at a depth of approximately 50 feet bgs. Quarterly monitoring of well MW-10D continues to supplement the monitoring of conditions at the down gradient property boundary.

5 DATA TRENDS AND REMEDIAL EFFECTIVENESS

5.1 Data Summary

Data from the annual groundwater sampling event and monthly remediation system sampling events are summarized in the following tables and charts and are included in Appendix C and Appendix D.

- APPENDIX C: Tables
    - Table 1: Groundwater Sampling Field Observations;
    - Table 2: Summary of Groundwater Analytical Results;
    - Table 3: Monthly Analytical Results May 2001 – December 2019;
    - Table 4: Comparison of TCE Concentrations in Groundwater.
- APPENDIX D: Charts
    - Charts 1 through 4: Remediation System TCE Concentrations;
    - Charts 5 & 6: TCE Concentrations in Perimeter Shallow Wells;
    - Charts 7 & 8: TCE Concentrations in Perimeter Deep Wells;
    - Charts 9 & 10: TCE Concentrations in Interior Shallow Wells;
    - Charts 11 &12: TCE Concentrations in Interior Deep Wells;
    - Chart 13: TCE Concentrations in MW-L16;
    - Charts 14 & 15: 2015, 2016, 2017, 2018 & 2019 Recovery Well Pumping Rates & Groundwater Elevations;
    - Chart 16: SSD/SVE Exhaust TCE Concentrations.

The monitoring wells are categorized into four (4) groups (Perimeter Shallow, Perimeter Deep, Interior Shallow and Interior Deep). Charts 5 through 12 depict the TCE concentrations for both the last 10 years and 30 years for each well group (Appendix D).

Monitoring well MW-L16 was installed in December 2008 and is located inside the facility adjacent to a former tumbling pit. The data from this well is included in Table 2, located in Appendix C. Chart 13 depicts the TCE concentrations detected in groundwater samples collected from MW-L16 (Appendix D).

5.2 Remediation System Data Trends

A total of twelve-monthly sampling events were completed during this reporting period. Each remediation system sampling event consists of collecting samples from three (3) locations: Cascade Outfall, Tower Discharge and Tower Influent. Charts 1 through 3, located in Appendix D, depict the TCE concentrations for each of the three sample locations from December 2001 to December 2019. As indicated in Charts 1, 2 and 3 the TCE concentration at each of the sample locations exhibits a continued downward trend. The Tower Influent TCE concentration has been below 5 µg/L since May 2019. A steady decline in the Tower Influent TCE concentration was observed in January through August 2019 and remained around 1 µg/L through the end of the year. Chart 4, located in Appendix D, depicts the monthly Tower Influent TCE concentrations observed over the last five years (2015 through 2019).

The average TCE concentrations for the 2019 samples are listed below:

- Tower Influent: 3.60 µg/L
- Tower Discharge: 1.53 µg/L
- Cascade Outfall: 0.61 µg/L.

5.3 Groundwater Quality Data Trends

Groundwater quality data trends are broken-down by the four groups of monitoring wells indicated below:

- **Perimeter Shallow Wells (MW-1S, MW-2S, MW-4S, MW-5S and MW-10S)**

  Four (4) of the five (5) perimeter shallow wells were sampled in 2019; MW-4S could not be sampled due to the broken PVC riser. All wells sampled were below the TCE cleanup objective of 5 µg/L. All perimeter shallow wells continue to indicate a long-term downward trend. Charts 5 and 6, located in Appendix D, depict 10-Year and 30-Year TCE concentrations for the perimeter shallow wells.

- **Perimeter Deep Wells (MW-1D, MW-2D, MW-4D, MW-5D and MW-10D)**

  Four (4) of the five (5) perimeter deep wells were sampled in 2019; MW-2D could not be sampled due to a blockage. All wells sampled were below the TCE cleanup objective of 5 µg/L. All perimeter deep wells continue to indicate a long-term downward trend. Charts 7 and 8, located in Appendix D, depict 10-Year and 30-Year TCE concentrations for the perimeter deep wells.

- **Interior Shallow Wells (MW-6, MW-7, MW-8, MW-11 and MW-12S)**

  All five (5) interior shallow wells were sampled in 2019. All wells were below the TCE cleanup objective of 5 µg/L. All interior shallow wells continue to indicate a long-term downward trend. Charts 9 and 10, located in Appendix D, depict 10-Year and 30-Year TCE concentrations for the interior shallow wells.

- **Interior Deep Wells (MW-9 and MW-12D)**

  Both of the interior deep wells were sampled in 2019. Both wells were below the TCE cleanup objective of 5 µg/L. All interior deep wells continue to indicate a long-term downward trend. Charts 11 and 12, located in Appendix D, depict 10-Year and 30-Year TCE Concentrations for the interior deep wells.

Table No. 4, located in Appendix C, compares the highest TCE concentration detected in each of the monitoring wells to the TCE concentration detected during the 2019 annual groundwater sampling event. At wells where the TCE concentrations initially exceeded groundwater standards, the TCE concentrations have decreased by at least 86.5%.

Overall, the TCE concentrations detected in the wells continue to indicate a decreasing trend over a 30-year span since the current groundwater treatment system was activated.

5.4 Performance and Effectiveness of the ICs/ECs

The groundwater remediation system continued to be effective in 2019 as demonstrated by the continued decreasing trend of TCE concentrations in the monitoring wells over time.

The groundwater recovery well came on-line on December 29, 1989 and has operated continuously for the last 30 years with only routine maintenance. The average withdrawal rate for 2019 was 561 gpm, which is less than the original design standard of 700 to 1,000 gpm[2]. The average withdrawal rate had been declining and the pumping rate was not at or above 700 gpm since September 2014. The heat exchanger was cleaned (descaled) in September 2019 and the flow rate increased to over 700 gpm. However, the flow rate may decline in the future as mineral scale reaccumulates. Maintenance will continue to be completed on an as needed basis.

Recovery well groundwater elevations and pumping rates for 2015, 2016, 2017, 2018 and 2019 are depicted on Charts 13 and 14, located in Appendix D. A correlation between seasonal variation of groundwater elevation and pumping rate is evident. However, the increase in pumping rate observed after the heat exchanger was cleaned indicates the decline in pumping rates observed is likely caused by accumulation of mineral scale within the groundwater remediation system and the age of the system.

As stated in Section 5.3, contaminant concentrations have shown a declining trend over the past 30 years. This is particularly evident at the wells along Lime Hollow Road, the downgradient side of the Site (wells MW-1S & MW-1D, MW-2S & MW-2D, MW-4S & MW-4D, and MW-10S & MW-10D). In 1990, the highest yearly average concentration of TCE in these wells was observed at well cluster MW-10S & MW-10D, 76 µg/L and 36 µg/L respectively. Over the past three years (2017-2019), the highest average concentration of TCE has been 5.00 µg/L at MW-10S and 3.59 µg/L at MW-10D. This represents a greater than 93% decline at MW-10S and greater than 90% decline at MW-10D over the past 30 years.

Contaminant trends in the interior wells (MW-6, MW-7, MW-8, MW-9, MW-11, MW-12S and MW-12D) echo those along the downgradient boundary. The highest average TCE concentration in 1989 was 10,000 µg/L at MW-11. Over the past three years (2017-2019), the highest average concentration has been 15.00 µg/L at MW-12S. This represents a greater than 99% decline over the past 30 years.

Given that contaminant concentrations at the Site have declined by an average of greater than 98% over the past 30 years, the system continues to be effective at removing contamination from the subsurface.

5.5 Contaminant Mass Removal

Contaminant mass removal was calculated, for this reporting period, using the following data:

- Average pumping rate = 561 gpm
- Average influent concentration of TCE = 3.60 µg/L
- Density of TCE = 1.465 g/mL

The system removal rates for this reporting period are:

- Total volume of water pumped = 291,843,000 gallons.
- Total mass of TCE removed= 3.98 Kg or 8.77 lb.
- Total volume of TCE removed = 2.7 L or 0.7 gal.

6 RECOMMENDATIONS

In accordance with the Cleanup and Site Closure Criteria listed in Section 2.5, all wells met the clean-up criteria in 2019 and the groundwater remediation system may be shut down.

GeoLogic requests a meeting with NYSDEC to discuss the shut-down process and the subsequent post remediation groundwater monitoring.

7 REFERENCES

[1]*2009 Periodic Review* Report, February 2010, Buck Engineering, LLC.

[2] Remediation *System As-Built Report*, December 1991, O'Brien & Gere.

[3] *Focused Feasibility Study*, May 1988, O'Brien & Gere.

8 CERTIFICATION

Signed Institutional and Engineering Controls Certification Forms are included in Appendix A.

We certify that to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in 312.10 of 40 CFR 312. We further certify this report to be factually presented to the best of our knowledge and belief.

Prepared by,

GeoLogic NY, P.C.

Christopher T. Gabriel
Project Manager

Senior Author
Forrest C. Earl, P.G.
President / Principal Hydrogeologist

Senior Reviewer
Kenneth J. Teter, P.E./K. Teter Consulting, LLC
NYS LN 081583

P:\PROJECTS\2010\210087-CCC\REPORT\2019 Annual PRR\2019 Periodic Review Report for CCC TEXT.docx

APPENDIX A

INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORMS

Enclosure 2

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

Site Details **Box 1**

Site No. **712006**

Site Name SCM - Cortlandville

Site Address: 839 Route 13 South Zip Code: 13045
City/Town: Cortlandville
County: Cortland
Site Acreage: 46.226

Reporting Period: January 01, 2019 to January 01, 2020

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

Box 2

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

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

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

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 712006 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
95.00-10-01.100	David Yaman Realty Services	
		Site Management Plan

Decision Document (ROD), Site Management Plan (SMP).

Box 4

Description of Engineering Controls

Parcel	Engineering Control
95.00-10-01.100	Vapor Mitigation Groundwater Treatment System Groundwater Containment

The ROD identified engineering controls required for OU1 (onsite). These controls include the continued operation and maintenance of the groundwater extraction & treatment system until groundwater quality meets the cleanup criteria of 5 ug/L for TCE for all wells.
The groundwater monitoring wells must be sampled at periodic intervals (currently annually). As outlined in 2001 correspondence, the groundwater extraction & treatment system may be operated without the blower component as long as effluent concentrations remain below 5 ug/L for TCE, and with monthly monitoring of the groundwater extraction & treatment system influent & effluent. The blower and a backup blower must remain in place and in working condition. The groundwater extraction system also acts as the onsite groundwater containment system, designed to eliminate contaminant migration offsite.
A Soil Vapor Extraction system was installed as part of the remedial program. The SVE was operational from August 1990 until operation was discontinued sometime after May 1994.
A sub-slab depressurization system (SSDS) is installed in portions of the main warehouse building in the area of the former Tumbling Pit. The SSDS is required to operate continuously.

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

YES	NO
☑	☐

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

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

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

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

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

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

YES	NO
☑	☐

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

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

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 712006

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

I Forrest C Earl (print name) at GeoLogic NY, PC PO Box 350 Homer, NY 13077. (print business address)

am certifying as Designated Representative (Owner or Remedial Party)

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

Forrest C Earl P.G.
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

1-28-2020
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

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

I KENNETH J. TETER at 32 CLINTON ST. HOMER, N.Y. 13077,
print name — print business address

am certifying as a Professional Engineer for the OWNER
(Owner or Remedial Party)

STATE OF NEW YORK
KENNETH J. TETER
No. 081583
LICENSED PROFESSIONAL ENGINEER

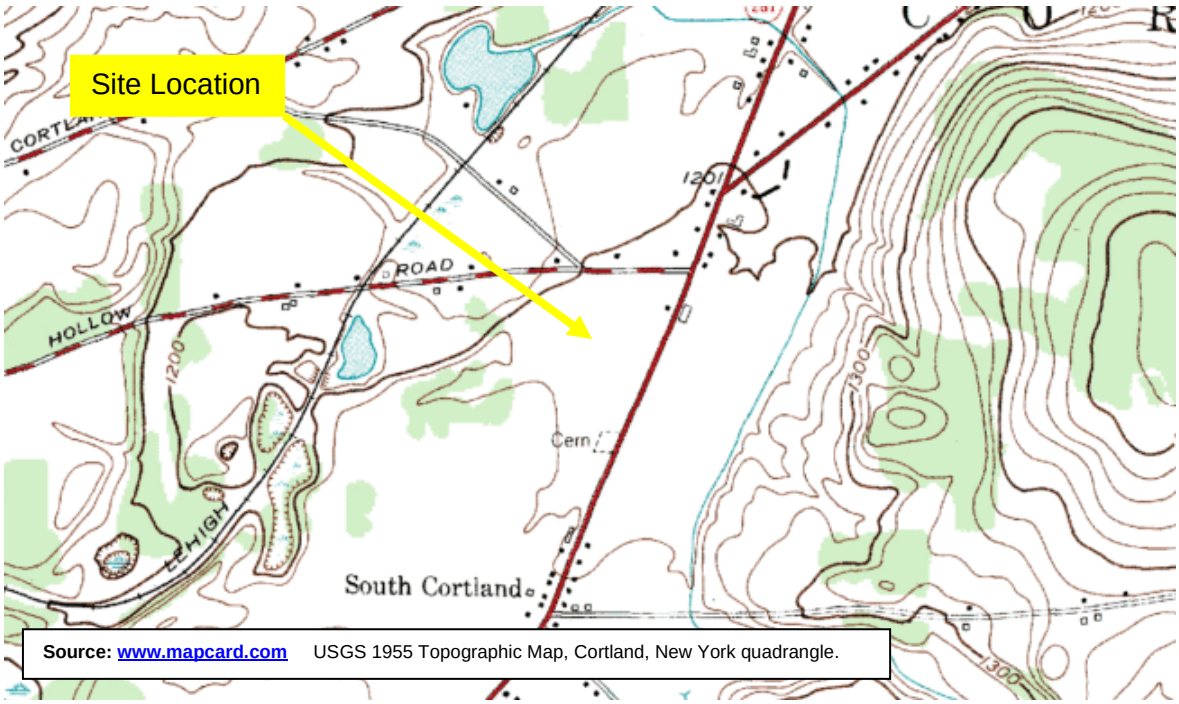
Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

Date: 1/20/2020

APPENDIX B

DRAWINGS



Source: www.mapcard.com USGS 1955 Topographic Map, Cortland, New York quadrangle.

Source: www.earth.google.com

N

Project North

GeoLogic

GeoLogic NY, P.C.

SITE LOCATION PLAN
SITE #: 712006
FORMER SCM-CORTLANDVILLE
839 NYS ROUTE 13, CORTLANDVILLE, NY

DRAWN BY:	SCALE:	PROJECT NO:
CTG	Not To Scale	210087
REVIEWED BY:	DATE:	DRAWING NO:
FCE	JAN. 2019	1

LIME HOLLOW ROAD

CL

STUPKE ROAD

N

WELL 5-D

WELL 5-S

BACK-UP LAGOON

LAGOON

LAGOON

STORM WATER LAGOON

MW-1S

MW-1D

MW-10D

MW-10S

MW-2S

MW-2D

MW-4D

MW-4S

Lot 3
1.550 Acres
Removed in 2008

Lot 3
1.955 Acres
Removed in 2018

RECOVERY

PIEZOMETER

MW-12S

MW-12D

MW-7

MW-9

MW-11

MW-6

MW-8

MW-L16

CHAIN LINK FENCE

WATER STORAGE TANKS FOR FIRE PROTECTION

AWNINGS

S.C.W.P. BUILDING

"ADVANCE AUTO PARTS" RETAIL STORE

FIRST NATIONAL BANK OF DRYDEN

N.Y.S. ROUTE 13

WELL CATEGORY TABLE	
WELL	CATEGORY
MW-1S	Shallow
MW-1D	Deep
MW-2S	Shallow
MW-2D	Deep
MW-3	Shallow
MW-4S	Shallow
MW-4D	Deep
MW-5S	Shallow
MW-5D	Deep
MW-6	Shallow
MW-7	Shallow
MW-8	Shallow
MW-9	Deep
MW-10S	Shallow
MW-10D	Deep
MW-11	Shallow
MW-12S	Shallow
MW-12D	Deep
Piezometer	Shallow
Recovery Well	Shallow & Deep
MW-L16	Shallow

LEGEND:

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- PIEZOMETER LOCATION
- APPROXIMATE SITE BOUNDARY
- LOT 3 APPROXIMATE BOUNDARY
- DELISTED APPROXIMATE BOUNDARY

\...\210087\TECH\BASE MAP 12-2019.DWG

APPROXIMATE SCALE:

0' 10' 70' 140' 280'

NOTE: Drawing based on Stockwin Surveying, 69 James Street, Homer, NY, Drawing, Dated 02/22/06.

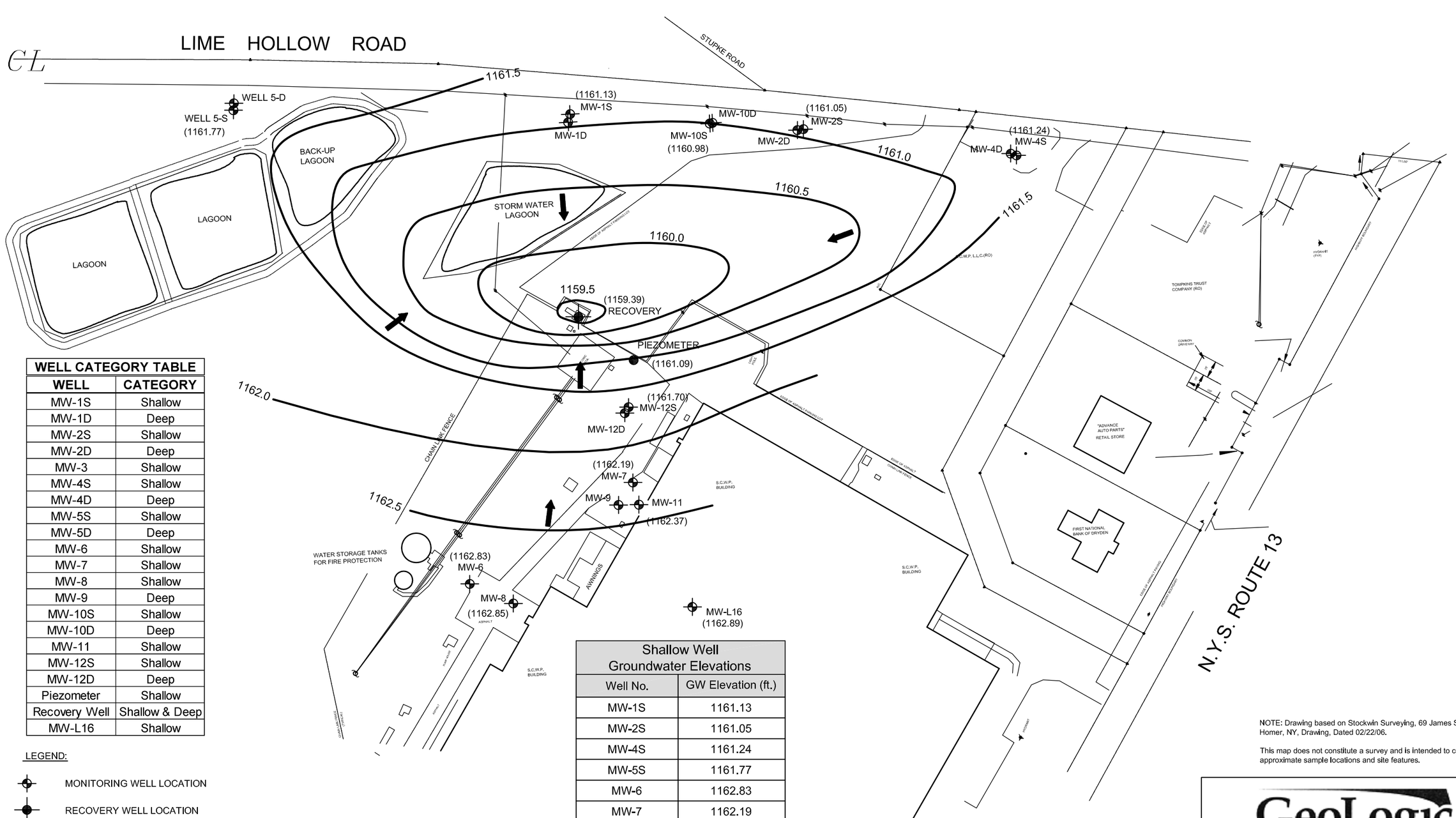
This map does not constitute a survey and is intended to convey approximate sample locations and site features.

GeoLogic

GeoLogic NY, PC, Homer, New York

MONITORING WELL LOCATION PLAN
FORMER SCM-CORTLANDVILLE (NYSDEC SITE NO. 712006)
839 NYS ROUTE 13
CORTLANDVILLE, NEW YORK

DRAWN BY:	SCALE:	PROJECT NO.:
SDW/CTG	AS SHOWN	210087
REVIEWED BY:	DATE:	DRAWING NO.:
FCE	NOV. 2019	2



WELL CATEGORY TABLE	
WELL	CATEGORY
MW-1S	Shallow
MW-1D	Deep
MW-2S	Shallow
MW-2D	Deep
MW-3	Shallow
MW-4S	Shallow
MW-4D	Deep
MW-5S	Shallow
MW-5D	Deep
MW-6	Shallow
MW-7	Shallow
MW-8	Shallow
MW-9	Deep
MW-10S	Shallow
MW-10D	Deep
MW-11	Shallow
MW-12S	Shallow
MW-12D	Deep
Piezometer	Shallow
Recovery Well	Shallow & Deep
MW-L16	Shallow

LEGEND:

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- PIEZOMETER LOCATION
- (1164.99) GROUNDWATER ELEVATION (FT.) FOR 11/21/2019 & 11/22/2019.
- 1162.0 GROUNDWATER ELEVATION CONTOUR FOR 11/21/2019 & 11/22/2019.
- DIRECTION OF GROUNDWATER FLOW

\..\210087\TECH\DRAWINGS\SHALLOW WELL GW CONTOUR MAP 11-27-18 & 11-28-18.DWG

Shallow Well Groundwater Elevations	
Well No.	GW Elevation (ft.)
MW-1S	1161.13
MW-2S	1161.05
MW-4S	1161.24
MW-5S	1161.77
MW-6	1162.83
MW-7	1162.19
MW-8	1162.85
MW-10S	1160.98
MW-11	1162.37
MW-12S	1161.70
Piezometer	1161.09
Recovery Well	1159.39
MW-L16	1162.89

APPROXIMATE SCALE:

0' 10' 70' 140' 280'

NOTE: Drawing based on Stockwin Surveying, 69 James Street, Homer, NY, Drawing, Dated 02/22/06.

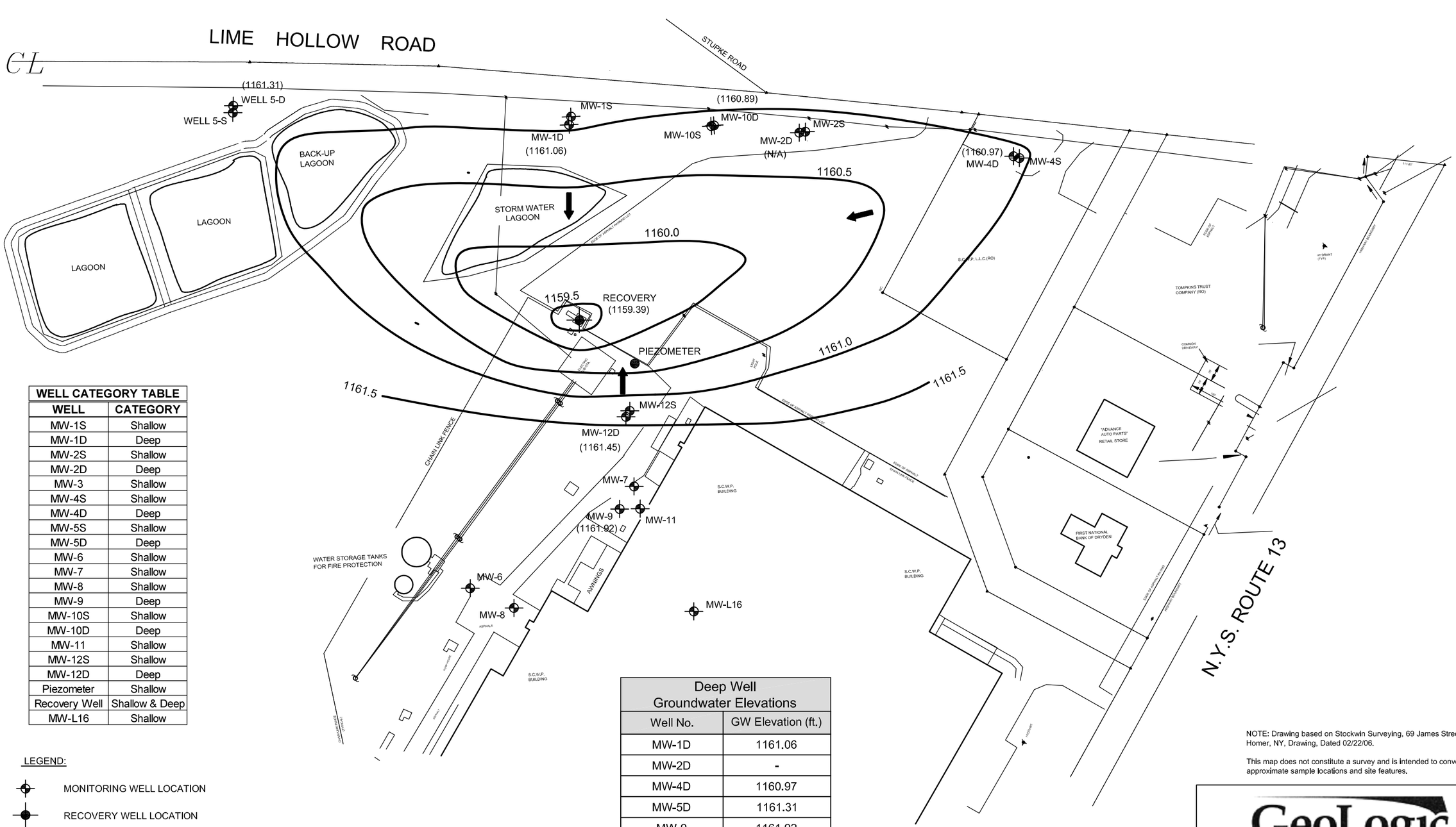
This map does not constitute a survey and is intended to convey approximate sample locations and site features.

GeoLogic

GeoLogic NY, PC, Homer, New York

SHALLOW WELL GROUNDWATER CONTOUR MAP
FOR 11/21/2019 & 11/22/2019
FORMER SCM-CORTLANDVILLE (NYSDEC SITE NO. 712006)
839 NYS ROUTE 13
CORTLANDVILLE, NEW YORK

DRAWN BY:	SCALE:	PROJECT NO.:
RTS/CTG	AS SHOWN	210087
REVIEWED BY:	DATE:	DRAWING NO.:
FCE	NOV. 2019	3



WELL CATEGORY TABLE	
WELL	CATEGORY
MW-1S	Shallow
MW-1D	Deep
MW-2S	Shallow
MW-2D	Deep
MW-3	Shallow
MW-4S	Shallow
MW-4D	Deep
MW-5S	Shallow
MW-5D	Deep
MW-6	Shallow
MW-7	Shallow
MW-8	Shallow
MW-9	Deep
MW-10S	Shallow
MW-10D	Deep
MW-11	Shallow
MW-12S	Shallow
MW-12D	Deep
Piezometer	Shallow
Recovery Well	Shallow & Deep
MW-L16	Shallow

LEGEND:

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- PIEZOMETER LOCATION
- (1164.99) GROUNDWATER ELEVATION (FT.) FOR 11/21/2019 & 11/22/2019.
- 1162.0 GROUNDWATER ELEVATION CONTOUR FOR 11/21/2019 & 11/22/2019.
- DIRECTION OF GROUNDWATER FLOW

\..\210087\TECH\DRAWING\DEEP WELL GW CONTOUR MAP 11-27-18 & 11-28-18.DWG

Deep Well Groundwater Elevations	
Well No.	GW Elevation (ft.)
MW-1D	1161.06
MW-2D	-
MW-4D	1160.97
MW-5D	1161.31
MW-9	1161.92
MW-10D	1160.89
MW-12D	1161.45
Recovery Well	1159.39

APPROXIMATE SCALE:

0' 10' 70' 140' 280'

NOTE: Drawing based on Stockwin Surveying, 69 James Street, Homer, NY, Drawing, Dated 02/22/06.

This map does not constitute a survey and is intended to convey approximate sample locations and site features.

GeoLogic

GeoLogic NY, PC, Homer, New York

DEEP WELL GROUNDWATER CONTOUR MAP
11/21/2019 & 11/22/2019
FORMER SCM-CORTLANDVILLE (NYSDEC SITE NO. 712006)
839 NYS ROUTE 13
CORTLANDVILLE, NEW YORK

DRAWN BY:	SCALE:	PROJECT NO.:
RTS/CTG	AS SHOWN	210087
REVIEWED BY:	DATE:	DRAWING NO.:
FCE	NOV. 2019	4

APPENDIX C

TABLES

TABLE 1.

Field Observations: 2019 Annual Groundwater Sampling Event

Field Observations: Annual Groundwater Sampling Event: November 21 and 22, 2019								
Well#	CATEGORY	**TOP PVC ELEVATION	TOP PVC WATER LEVEL (FT)	GW ELEVATION	DEPTH OF WELL (FT)	VOLUME (GAL.) of WATER in WELL	APPROX. VOLUME PURGED (GAL.)	Notes
MW-1S	Shallow -Perimeter	1185.75	24.62	1161.13	39.50	2.4	7.5	Cloudy.
MW-1D	Deep - Perimeter	1185.85	24.79	1161.06	70.50	7.3	30	Clear.
MW-2S	Shallow -Perimeter	1210.91	49.86	1161.05	70.20	3.3	10	Light brown.
MW-2D	Deep - Perimeter	1211.61	-	-	104.00	-	-	No sample or water level. Well damaged.
MW-4S	Shallow -Perimeter	1209.72	48.48	1161.24	73.79	4.0	0	No sample, water level only. Well damaged.
MW-4D	Deep - Perimeter	1210.14	49.17	1160.97	104.23	8.8	30	Clear.
MW-5S	Shallow -Perimeter	1178.46	16.69	1161.77	40.00	3.7	11.5	Cloudy.
MW-5D	Deep - Perimeter	1178.86	17.55	1161.31	71.88	8.7	30	Clear.
MW-6	Shallow - Interior	1211.42	48.59	1162.83	56.50	1.3	4	Light brown.
MW-7	Shallow - Interior	1211.56	49.37	1162.19	58.75	1.5	5	Brown & turbid.
MW-8	Shallow - Interior	1212.76	49.91	1162.85	61.42	1.8	5.75	Light brown.
MW-9	Deep - Interior	1212.94	51.02	1161.92	100.46	7.9	30	Clear.
MW-10S	Shallow -Perimeter	1207.23	46.25	1160.98	62.00	2.5	7.75	Light brown.
MW-10D	Deep - Perimeter	1207.52	46.63	1160.89	99.00	8.4	30	Clear.
MW-11	Shallow - Interior	1214.44	52.07	1162.37	59.50	1.2	4	Dark brown, turbid & sheen.
MW-12S	Shallow - Interior	1212.94	51.24	1161.70	62.00	1.7	5.5	Clear.
MW-12D	Deep - Interior	1212.80	51.35	1161.45	89.00	6.0	25	Clear.
MW-L16	Shallow	1212.99	50.10	1162.89	60.00	1.6	5	Brown.
Piezometer	Shallow	1212.59	51.50	1161.09		N/A	N/A	No sample, water level only.
Recovery Well	Shallow & Deep	1205.62	46.23	1159.39	94.00	N/A	N/A	No sample, water level only.

Notes:
** Top of PVC elevations were determined from survey by Jim Stockwin, LS, 2006.
N/A = Not applicable.

Table 2: Page 1 of 2
Summary of Groundwater Analytical Results

		Aug-89	Feb-90	Aug-90	Nov-90	Feb-91	May-91	Aug-91	Nov-91	Feb-92	May-92	Aug-92	Nov-92	Feb-93	May-93	Aug-93	Nov-93	Feb-94	Jun-94	Sep-94	Nov-94	Feb-95	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	May-98	Nov-98	Aug-99	Jan-00	Nov-01	Nov-02	Jun-03	Nov-03	Nov-04	Dec-05	Sep-06	Nov-06	May-07	Nov-07	Nov-08	Nov-09	Dec-10	Nov-11	Nov-12	Nov-13	Nov-14	Nov-15	Nov-16	Nov-17	Nov-18	Nov-19
MW-1S																																																					
	TCE	69	<1	47	41	25	17	19	12	9	13	15	2	11	26	3	13	7	19	13	9	11	8	11	5	8	10	11	15	8	7	5	6	8	6	11	6	7	4	3.38	2	5	4	4.20	5.40	5.46	4.69	2.96	5.37	10.10	5.60	1.26	1.01
	TCE Yearly Avg				32				18				10				13				13			10							7				6	11	6		4														
	Total VOC's	89	<1	47	41	25	21	23	13	9	15	17	2	13	34	3	13	7	22	15	9	13	8	11	5	8	10	11	16	8	7	5	6	8	6	11	6	7	4	3.38	2	5	4	4.20	5.40	5.59	4.82 J	2.96	5.37	10.37 J	5.74 J	1.26	1.01
	Total VOC Yearly Avg				32				21				11				16				13			11							7				6	11	6		4														
MW-1D																																																				
	TCE	45	32	<1	25	25	18	19	12	13	13	14	13	14	13	12	16	12	13	9	11	12	12	13	7	10	7	8	7	7	8	3	3	1	2	3	5	NS	3	NS	4	5	4	2.70	4.40	5.65	3.49	3.78	4.57	4.53	3.42	1.65	0.72
	TCE Yearly Avg				21				19				13				14				11			12							9				2	3	5		3														
	Total VOC's	66	32	<1	25	25	24	24	12	13	14	16	15	16	16	115	17	13	13	10	13	14	14	13	7	11	7	8	7	7	8	3	3	3	2	3	5	3	4	5	4	2.70	4.40	5.85	3.60 J	4.36	4.57	4.53	3.52 J	1.65	0.72
	Total VOC Yearly Avg				21				21				15				16				12			14							9				2	3	5		3														
MW-2S																																																			
	TCE	8	4	5	6	8	6	8	10	5	7	5	5	5	7	7	4	4	4	3	4	4	4	NA	4	NA	3	NA	4	NA	4	2	2	2	2	2	2	2	2	3	2	2	2	1.70	1.80	1.66	1.48	1.27	1.90	1.88	1.77	NS	1.35
	TCE Yearly Avg				5				8				6				6				4			4		4		3		4	2	2	2	2	2	2	2	2														
	Total VOC's	8	4	5	6	8	6	8	12	5	7	8	5	5	7	7	4	4	4	3	4	4	4	NA	4	NA	3	NA	4	NA	4	2	2	2	2	2	2	2	2	3	2	2	2	1.70	1.80	1.66	1.48	1.27	1.90	1.88	1.77	NS	1.35
	Total VOC Yearly Avg				5				9				6				6				4			3		4		3		4	4	2	2	2	2	2	2	2														
MW-2D																																																			
	TCE	11	6	9	8	7	5	7	9	5	5	5	5	3	4	6	3	3	2	3	2	2	3	NA	2	NA	2	NA	1	NA	3	Damaged	Damaged	Damaged		Damaged	Damaged	Damaged	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TCE Yearly Avg				7				7				5				4				3			3		2		2		1	3	Damaged	Damaged	Damaged		Damaged	Damaged	Damaged																
	Total VOC's	12	6	9	8	7	5	7	10	5	5	5	5	3	4	6	3	3	2	6	2	2	3	NA	2	NA	2	NA	1	NA	3	Damaged	Damaged	Damaged		Damaged	Damaged	Damaged																
	Total VOC Yearly Avg				7				7				5				4				3			2		2		2		1	3	Damaged	Damaged	Damaged		Damaged	Damaged	Damaged																
MW-3																																																			
	TCE	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	4	<1	<1	<1	<1	NA	19	NA	2	<1	8	NA	<1	<1	<1	<1		2	1	<1	NS	2	NS	<1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TCE Yearly Avg				0				0				0				0				1			1		19		1		8	<1	<1	<1	<1		2	1	<1		2														
	Total VOC's	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	1	<1	<1	<1	<1	4	<1	<1	<1	<1	NA	33	NA	2	<1	12	NA	<1	<1	<1	<1		3	1	2		5		<1												
	Total VOC Yearly Avg				0				0				1				0				1			0		33		1		12	<1	<1	<1	<1		3	1	2		5														
MW-4S																																																			
	TCE	<1	<1	<1	2	<1	1	2	1	<1	1	1	1	<1	1	<1	<1	NA	<1	<1	<1	<1	1	NA	<1	NA	<1	NA	<1	NA	<1	<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.61	0.46	0.52	0.63	0.58	0.48	NS	NS
	TCE Yearly Avg				1				1				1				0				0			1		0		0		0	<1	<1	<1	<1		<1	<1	<1	<1	<1														
	Total VOC's	<1	<1	<1	2	<1	1	2	1	<1	1	1	1	<1	1	<1	<1	NA	<1	<1	<1	<1	1	NA	<1	NA	<1	NA	<1	NA	<1	<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.61	0.46 J	0.52	0.63	0.58	0.48 J	NS	NS
	Total VOC Yearly Avg				1				1				1				0				0			0		0		0		0	<1	<1	<1	<1		<1	<1	<1	<1	<1														
MW-4D																																																			
	TCE	<1	<1	1	<1	1	<1	1	1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1	NA	<1	NA	<1	NA	<1	NA	<1	<1	<1	<1		<1	<1	<1	NS	<1	NS	<1	<1	<1	<1	<1	0.46	0.38	0.38	0.54	0.39	0.48	NS	<1
	TCE Yearly Avg				1				1				0				0				0			1		0		0		0	<1	<1	<1	<1		<1	<1	<1		<1														
	Total VOC's	<1	<1	1	<1	1	<1	1	1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	<1	NA	<1	NA	<1	NA	<1	NA	<1	<1	<1	<1		<1	<1	<1		<1		<1	<1	<1	<1	<1	0.46	0.38 J	0.38 J	0.54	0.39 J	0.48 J	NS	<1
	Total VOC Yearly Avg				1				1				0				0				0			0		0		0		0	<1	<1	<1	<1		<1	<1	<1		<1														
MW-5S																																																			
	TCE	1	1	2	3	<1	1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	<1	NA	<1	NA	<1	<1	<1	1		1	2	1	2	1	1.25	<1	<1	<1	<1	1.00	0.72	0.91	0.83	0.85	0.62	0.72	NS	<0.5
	TCE Yearly Avg				2				1				0				0				0			1		0		0		0	<1	<1	<1	1		1	2	1		1														
	Total VOC's	1	1	3	3	<1	1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	NA	<1	NA	<1	NA	<1	NA	<1	<1	<1	2		1	2	1	2	1	1.25	<1	<1	<1	<1	1.00	0.72	0.91	0.83	0.85	0.62	0.72	NS	<0.5
	Total VOC Yearly Avg				2				1				0				0				0			0		0		0		0	<1	<1	<1	2		1	2	1		1														
MW-5D																																																			
	TCE	3	2	3	5	3	3	3	1	<1	1	2	1	<1	2	2	<1	<1	<1	<1	<1	<1	1	NA	2	NA	2	NA	<1	NA	<1	<1	<1	1		1	2	1	NS	1	NS	<1	2	1	1.10	1.30	1.62	1.17	1.56	2.00	1.60	2.12	NS	2.08
	TCE Yearly Avg				3				3				1				1				0			1		2		2		<1	<1	<1	<1	1		1	2	1		1														
	Total VOC's	3	2	8	5	3	3	3	1	<1	1	2	1	<1	2	2	<1	<1	<1	<1	<1	<1	2	NA	2	NA	2	NA	<1	NA	<1	<1	<1	2		1	2	1		1		<1	2	1	1.10	1.30	1.62	1.17	1.56	2.00	1.60	2.12	NS	2.08
	Total VOC Yearly Avg				5				3				1				1				0			1		2		2		<1	<1	<1	<1	2		1	2	1		1														
MW-6																																																			
	TCE	230	NA	43	35	38	62	8	NA	18	30	40	21	21	70	32	19	45	50	20	17	18	14	7	34	14	18	7	<1	10	5	11	4	14		16	20	15	NS	8	NS	10	6	5	35.00	8.60	2.29	6.54	5.68	8.74	2.31	7.30	6.14	1.11
	TCE Yearly Avg				35				36				27				36				33			13		24		13		5	5	11	4	14		16	20	15		8														
	Total VOC's	235	NA	43	35	38	62	8	NA	18	30	40	21	21	70	32	19	45	50	20	17	18	14	7	34	14	18	7	<1	10	5	11	4	15		16	20	15		8		10	6	5	35.00	8.60	2.29	6.54	5.68	8.74	2.31	7.30	6.14	1.11
	Total VOC Yearly Avg				26				27				27				36				33			13		24		13		5	5	11	4	15		16	20	15		8														
MW-7																																																			
	TCE	230	290	19	63	190	57	19	NA	11	57	130	130	120	67	25	18	85	60	49	49	45	23	NA	56	NA	25	NA	26	NA	24	24	12	4		9	5	19	NS	6	NS	8	3	2	6.40	7.20	2.14	3.08	2.00	4.32	4.23	7.84	8.37	1.83
	TCE Yearly Avg				168				89				82				58				61			34		56		25		26	24	24	12	4		9	5	19		6														
	Total VOC's	1,941	290	19	63	190	157	30	NA	15	167	250	250	175	136	25	19	137	153	84	82	84	25	NA	73	NA	35	NA	39	NA	31	30	23	5		13	5	30		8		8	3	2	6.40	7.20	2.24	3.08	2.00	4.32	4.43 J	8.3 J	8.37	1.83
	Total VOC Yearly Avg				168				94				171				89				114			55		73		35		39	31	30	23	5		13	5	30		8														
MW-8																																																			
	TCE	240	70	10	48	31	110	8	3	31	31	48	16	12	14	18	10	61	11	10	12	9	8	3	98	6	8	2	10	3	2	2	<1	2		3	5	3	NS	3	NS	3	5	2	41.00	2.50	1.01	1.72	1.19	5.46	0.87	2.14	2.95	1.44
	TCE Yearly Avg				97				38				32				14				24			7		52		5		7	2	2	<1	2		3	5	3		3														
	Total VOC's	243	70	10	48	31	110	8	3	31	31	48	16	12	14	18	10	61	11	10	12	9	8	3	98	6	8	2	10	3	2	2	<1	2		3	5	3		3		3	5	2	41.00	2.50	1.01	1.72	1.19	5.46	0.87	2.14	2.95	1.44
	Total VOC Yearly Avg				103				38				32				14				24			7		52		5		7	2	2	<1	2		3	5	3		3														
MW-9																																																			
	TCE	4	16	5	10	4	11	3	4	3	3	4	4	4	33	8	1	2	24	5	3	5	5	<1	18	2	1	<1	<1	5	7	5	4	5		7	17	6	NS	11	NS	5	<1	<1	<1	<1	0.86	0.54	0.78	1.72	0.69	0.70	NS	0.74
	TCE Yearly Avg				9				6				4				12				9			3		10		1		3	7	5	4	5		7	17	6		11														
	Total VOC's	4	16	5	10	4	14	3	4	3	3	4	4	4	42	8	1	2	24	5	3	5	5	<1	22	2	1	<1	<1	5	7	5	4	5		7	17	6		12		5	<1	<1	<1	<1	0.86	0.54	0.78	1.72	0.69	0.70	NS	0.74
	Total VOC Yearly Avg				9				6				4				14				9			3		12		1		3	7	5	4	5		7	17	6		12														
MW-10S																																																			
	TCE	200	73	110	59	63	27	32	50	44	170	40	32	26	25	37	27	28	31	24	15	16	16	23	17	18	13	13	15	19	16	17	9	19		10	10	10	NS	7	6	8	6	7	6.70	5.80	6.56	6.76	6.02	12.40	6.42	7.79	5.61	1.59
	TCE Yearly Avg				76				43				72				29				25			18		18		13		18	16	17	9	19		10	10	10		7														
	Total VOC's	553	73	110	59	110	33	44	62	57	228	46	37	29	32	37	31	31	31	27	16	17	18	25	18	20	13	13	17	19	17	17	9	21		10	10	11		7	6	8	6	7	6.70	5.80	6.83	7.10 J	6.63	13.76	6.74 J	8.22 J	5.61	1.73J
	Total VOC Yearly Avg				76				62				92				32				26			20		19		13		18	17	17	9	21		10	10	11		7														
MW-10D																																																			
	TCE	71	23	33	60	33	54	31	40	30	10	41	37	32	19	32	25	21	21	22	22	30	23	19	10	16	12	18	10	20	13	11	8	7		8	5	5	NS	6		6	7	8	4.70	5.40	9.49	6.85	6.25	18.40	7.59	5.36	3.73	1.69
	TCE Yearly Avg				36				40				30				27				23			24		13		15		15	13	11	8	7		8	5	5		6							6.67	5.90	5.40	8.97	5.95	4.09	4.14	3.03
	Total VOC's	136	23	33	60	33	66	39	45	35	12	46	43	36	21	32	28	22	21	25	24	32	26	19	10	16	12	18	10	20	13	11	8	7		8	5	5		6		6	7	8	4.70	5.40	9.75	7.02 J	6.85	19.70	7.80 J	5.50 J	3.73	1.69
	Total VOC Yearly Avg				36				46				34				29				23			26		13		15		15	13	11	8	7		8	5	5		6							6.77	6.02 J	5.62 J	9.43	6.05 J	4.16 J	4.14	3.03
MW-11																																																			
	TCE	10,000	2600	44	3400	480	290	31	NA	50	420	29	<50	54	170	<50	<50	72	<50	51	51	42	38	19	170	85	46	10	27	11	14	5	7	6		21	11	12	NS	18		8	6	6	38.00	15.00	4.32	3.60	5.01	5.80	2.93	7.27	20.80	4.40
	TCE Yearly Avg				1549				267				125				56				44			33		128		28		19	14	5	7	6		21	11	12		18														
	Total VOC's	18,320	2600	44	3400	480	5090	141	NA	440	630	375	230	344	1170	1700	<50	1062	1260	105	130	101	87	144	300	415	96	41	49	11	35	5	31	6		49	11	32		40		8	6	6	81.00	15.00	5.28	4.14 J	5.79	7.00	3.47	8.22	22.54	5.22
	Total VOC Yearly Avg				1549				1428				419				804				639			111		358		69		30	35	5	31	6		49	11	32		40														
MW-12S																																																			
	TCE	270	190	280	120	270	190	100	21	46	50	150	140	150	150	180	100	110	170	88	88	100	NA	24	82	60	82	11	80	23	11	59	10	44		62	46	27	NS	44		25	17	12	22.00	37.00	5.60	32.20	18.40	24.80	3.08	29.3	13.8	1.91
	TCE Yearly Avg				203				145				97				145				114			62		71		47		52	11	59	10	44		62	46	27		44														
	Total VOC's	1,970	190	280	120	270	330	137	23	83	62	196	179	172	183	180	109	119	192	99	102	101	NA	57	93	73	88	11	102	23	11	59	10	46		67	49	30		46		25	17	12	23.10	37.00	5.78	32.85	19.07	25.54	3.19 J	29.9	13.8	2.06J
	Total VOC Yearly Avg				203				190				130				161				128			56		83		50		63	11	59	10	46		67	49	30		46														
MW-12D																																																			
	TCE	21	21	17	23	17	12	12	13	10	45	10	9	13	11	15	8	7	16	9	5	7	6	6	5	5	5	4	2	8	11	8	10	5		4	10	3	NS	6		4	3	2	1.70	<1	2.86	1.51	2.71	2.50	2.05	2.39	NS	1.62
	TCE Yearly Avg				19				14				19				11				9			6		5		5		5	11	8	10	5		4	10	3		6														
	Total VOC's	27	21	17	23	17	14	12	13	11	52	12	9	13	13	15	8	7	16	9	5	7	6	6	5	5	5	4	2	8	12	8	12	7		4	10	3		6		4	3	2	1.70	<1	2.86	1.51	2.71	2.50	2.05	2.39	NS	1.62
	Total VOC Yearly Avg				19				14				21				12				9			6		5		5		5	12	8	12	7		4	10	3		6														
MW-L16																																																			
	TCE																																													41	20	14.00	3.50	1.95	1.69	1.11	2.97	3.00	4.07	4.63	2.03
	TCE Yearly Avg																																																			
	Total VOC's																																												42	21	14.00	3.50	1.95	1.69	1.11	2.97	3.17 J	4.07	4.63	2.03
	Total VOC Yearly Avg																																																			

Table 2: Page 2 of 2
Summary of Groundwater Analytical Results

		Feb-90	Aug-90	Nov-90	Feb-91	May-91	Aug-91	Nov-91	Feb-92	May-92	Aug-92	Nov-92	Feb-93	May-93	Aug-93	Nov-93	Feb-94	Jun-94	Sep-94	Dec-94	Feb-95	May-95	Nov-95	May-96	Nov-96	May-97	Nov-97	May-98	Nov-98	Aug-99	Nov-00	Nov-01	Nov-02	Jun-03	Nov-03	Nov-04	Dec-05	Sep-06	Nov-06	May-07	Nov-07	Nov-08	Nov-09	Dec-10	Nov-11	May-12	Nov-12	Nov-13	Nov-14	Nov-15	Nov-16	Nov-17	Nov-18	Nov-19
MW-BE1																																																					
	TCE																												<1	NA	NA	NA	<1	NA	NA	NA																		
	Total VOC's																												<1	NA	NA	NA	<1	NA	NA	NA																		
MW-BE2																																																					
	TCE																												<1	NA	NA	NA	<1	NA	NA	NA																		
	Total VOC's																												<1	NA	NA	NA	1.2	NA	NA	NA																		
DEC-01S																																																				
	TCE																																							1.28													
	Total VOC's																																																		
DEC-02S																																																			
	TCE																																							3.73							3.3						
	Total VOC's																																																		
DEC-03S																																																			
	TCE																																							3.18													
	Total VOC's																																																		
DEC-04S																																																			
	TCE																																							5.88													
	Total VOC's																																																		
DEC-05S																																																			
	TCE																																							12.9													
	Total VOC's																																																		
DEC-07																																																			
	TCE																																							0.82							1.7						
	Total VOC's																																																		
DEC-08																																																			
	TCE																																							8.69													
	Total VOC's																																																		
DEC-09																																																			
	TCE																																							21.2							18						
	Total VOC's																																																		
DEC-10																																																			
	TCE																																							7.87													
	Total VOC's																																																		
DEC-11																																																			
	TCE																																							11.6													
	Total VOC's																																																		
DEC-12																																																			
	TCE																																							16.6							16						
	Total VOC's																																																		
DEC-13																																																			
	TCE																																							10.2													
	Total VOC's																																																		
DEC-14																																																			
	TCE																																							0.23							ND						
	Total VOC's																																																		
DEC-15																																																			
	TCE																																							3.91													
	Total VOC's																																																		
DEC-16																																																			
	TCE																																							12.2													
	Total VOC's																																																		
DEC-17																																																			
	TCE																																							8.51													
	Total VOC's																																																		
DEC-18																																																			
	TCE																																							2.26													
	Total VOC's																																																		
DEC-19																																																			
	TCE																																							3.83													
	Total VOC's																																																		
DEC-20																																																			
	TCE																																							1.45													
	Total VOC's																																																		
DEC-21																																																			
	TCE																																							ND													
	Total VOC's																																																		
DEC-22																																																			
	TCE																																							ND													
	Total VOC's																																																		
DEC-23																																																			
	TCE																																							0.25													
	Total VOC's																																																		
DEC-24																																																			
	TCE																																							0.79													
	Total VOC's																																																		
DEC-25																																																			
	TCE																																							2.33							1.8						
	Total VOC's																																							2.33													
DEC-26																																																			
	TCE																																							7.44							4.7						
	Total VOC's																																							7.44													
DEC-27																																																			
	TCE																																							3.28													
	Total VOC's																																																		
DEC-28																																																			
	TCE																																							2.85													
	Total VOC's																																																		
DEC-29																																																			
	TCE																																							1.81													
	Total VOC's																																																		
DEC-30																																																			
	TCE																																							1.17													
	Total VOC's																																																		
DEC-31																																																			
	TCE																																							0.78													
	Total VOC's																																																		
DEC-32																																																			
	TCE																																							1.04													
	Total VOC's																																																		
DEC-33																																																			
	TCE																																							6.15													
	Total VOC's																																																		
DEC-34																																																			
	TCE																																							13.3													
	Total VOC's																																																		
DEC-35																																																			
	TCE																																							10.2													
	Total VOC's																																																		
DEC-36																																																			
	TCE																																							0.57													
	Total VOC's																																																		

Notes:
ND = Not Detected.
NS = Not Sampled.
1. Units are µg/L.
2. All data prior to 2010 provided to GeoLogic NY, P.C. by others including Buck Engineering, LLC., the NYSDEC and URS (Figure 3.3, dated May 2007).

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
5/17/2001	Trichloroethene	19.0	7.6	5	3.5
	Total VOC's	19.0	7.6		3.5
6/4/2001	Trichloroethene	14.0	5.6	5	2.3
	Total VOC's	14.0	5.6		2.3
7/10/2001	Trichloroethene	9.7	3.5	5	1.8
	Total VOC's	9.7	3.5		1.8
8/2/2001	Trichloroethene	13.0	5.4	5	3.0
	Total VOC's	13.0	5.4		3.0
9/7/2001	Trichloroethene	8.3	1.7	5	1.4
	Total VOC's	8.3	1.7		1.4
10/9/2001	Trichloroethene	8.0	ND<1	5	ND<1
	Total VOC's	8.0	ND<1		ND<1
11/13/2001	Trichloroethene	6.0	1.9	5	ND<1
	Total VOC's	6.0	1.9		ND<1
12/13/2001	Trichloroethene	5.7	2.6	5	1.2
	Total VOC's	5.7	2.6		1.2
1/9/2002	Trichloroethene	6.6	3.0	5	1.3
	Total VOC's	6.6	3.0		1.3
2/15/2002	Trichloroethene	9.4	2.6	5	1.6
	Total VOC's	10.6	2.6		1.6
3/8/2002	Trichloroethene	9.9	5.7	5	2.1
	Total VOC's	9.9	5.7		2.1
4/2/2002	Trichloroethene	11.0	4.4	5	2.2
	Total VOC's	11.0	4.4		2.2
5/1/2002	Trichloroethene	13.0	6.7	5	3.4
	Total VOC's	14.1	6.7		3.4
6/24/2002	Trichloroethene	14.0	4.7	5	3.4
	Total VOC's	14.0	4.7		3.4
7/9/2002	Trichloroethene	4.3	1.6	5	ND<1
	Total VOC's	4.3	1.6		1.3
8/12/2002	Trichloroethene	16.0	5.9	5	3.1
	Total VOC's	16.0	5.9		3.1
9/9/2002	Trichloroethene	12.0	3.9	5	1.8
	Total VOC's	12.0	3.9		1.8
10/3/2002	Trichloroethene	11.0	4.1	5	1.3
	Total VOC's	11.0	4.1		1.3
11/14/2002	Trichloroethene	10.0	4.3	5	2.0
	Total VOC's	10.0	4.3		2.0
12/31/2002	Trichloroethene	12.0	5.1	5	2.0
	Total VOC's	12.0	5.1		2.0

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
1/13/2003	Trichloroethene	13.0	5.8	5	2.1
	Total VOC's	13.0	5.8		2.1
2/19/2003	Trichloroethene	14.0	5.1	5	2.1
	Total VOC's	14.0	5.1		2.1
3/12/2003	Trichloroethene	14.0	5.9	5	2.2
	Total VOC's	14.0	5.9		2.2
4/9/2003	Trichloroethene	18.0	8.0	5	3.1
	Total VOC's	18.0	8.0		3.1
5/2/2003	Trichloroethene	16.0	5.8	5	3.0
	Total VOC's	16.0	5.8		3.0
6/20/2003	Trichloroethene	18.0	7.2	5	3.4
	Total VOC's	18.0	7.2		3.4
7/1/2003	Trichloroethene	16.0	5.8	5	2.4
	Total VOC's	16.0	5.8		2.4
8/14/2003	Trichloroethene	14.0	4.7	5	2.4
	Total VOC's	14.0	4.7		2.4
9/11/2003	Trichloroethene	9.6	3.5	5	1.8
	Total VOC's	9.6	3.5		1.8
10/2/2003	Trichloroethene	12.0	5.5	5	2.4
	Total VOC's	12.0	5.5		2.4
11/24/2003	Trichloroethene	10.0	1.1	5	1.4
	Total VOC's	10.0	1.1		1.4
12/3/2003	Trichloroethene	13.0	6.5	5	3.0
	Total VOC's	13.0	6.5		3.0
1/5/2004	Trichloroethene	12.0	6.4	5	3.0
	Total VOC's	12.0	6.4		3.0
2/2/2004	Trichloroethene	14.0	7.0	5	3.1
	Total VOC's	14.0	7.0		3.1
3/1/2004	Trichloroethene	13.0	4.8	5	2.0
	Total VOC's	13.0	4.8		2.0
4/2/2004	Trichloroethene	16.0	6.0	5	2.7
	Total VOC's	16.0	6.0		2.7
5/6/2004	Trichloroethene	14.0	5.3	5	2.5
	Total VOC's	14.0	5.3		2.5
6/3/2004	Trichloroethene	12.0	4.9	5	2.5
	Total VOC's	12.0	4.9		2.5
7/1/2004	Trichloroethene	13.0	4.6	5	2.0
	Total VOC's	13.0	4.6		2.0
8/17/2004	Trichloroethene	12.0	4.7	5	1.9
	Total VOC's	12.0	4.7		1.9

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
9/7/2004	Trichloroethene	11.0	3.9	5	1.5
	Total VOC's	11.0	3.9		1.5
10/18/2004	Trichloroethene	12.0	2.2	5	2.1
	Total VOC's	12.0	2.2		2.1
11/18/2004	Trichloroethene	13.0	4.6	5	2.2
	Total VOC's	13.0	4.6		2.2
12/8/2004	Trichloroethene	11.0	2.8	5	1.3
	Total VOC's	11.0	2.8		1.3
1/11/2005	Trichloroethene	13.0	6.5	5	2.7
	Total VOC's	13.0	6.5		2.7
2/8/2005	Trichloroethene	9.0	5.0	5	2.0
	Total VOC's	9.0	5.0		2.0
3/3/2005	Trichloroethene	13.0	3.3	5	1.6
	Total VOC's	13.0	3.3		1.6
4/4/2005	Trichloroethene	15.0	6.2	5	2.2
	Total VOC's	15.0	6.2		2.2
5/5/2005	Trichloroethene	11.0	4.5	5	1.9
	Total VOC's	11.0	4.5		1.9
6/8/2005	Trichloroethene	5.6	2.4	5	1.0
	Total VOC's	5.6	2.4		1.0
7/11/2005	Trichloroethene	12.0	4.3	5	2.0
	Total VOC's	12.0	4.3		2.0
8/1/2005	Trichloroethene	9.9	3.5	5	1.7
	Total VOC's	9.9	3.5		1.7
9/6/2005	Trichloroethene	7.2	2.8	5	1.1
	Total VOC's	7.2	2.8		1.1
10/14/2005	Trichloroethene	6.0	2.3	5	ND<1
	Total VOC's	6.0	2.3		ND<1
11/18/2005	Trichloroethene	7.1	3.2	5	1.2
	Total VOC's	7.1	3.2		1.2
12/5/2005	Trichloroethene	7.4	3.1	5	1.2
	Total VOC's	7.4	3.1		1.2
1/3/2006	Trichloroethene	8.9	4.0	5	1.5
	Total VOC's	8.9	4.0		1.5
2/2/2006	Trichloroethene	9.5	4.0	5	1.7
	Total VOC's	9.5	4.0		1.7
3/20/2006	Trichloroethene	9.2	1.6	5	1.1
	Total VOC's	9.2	1.6		1.1
4/19/2006	Trichloroethene	10.0	4.0	5	1.6
	Total VOC's	10.0	4.0		1.6
5/4/2006	Trichloroethene	10.0	3.9	5	1.7
	Total VOC's	10.0	3.9		1.7

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
6/2/2006	Trichloroethene	9.6	3.6	5	1.7
	Total VOC's	9.6	3.6		1.7
7/6/2006	Trichloroethene	10.0	4.0	5	1.8
	Total VOC's	10.0	4.0		1.8
8/4/2006	Trichloroethene	10.0	4.2	5	1.7
	Total VOC's	10.0	4.2		1.7
9/5/2006	Trichloroethene	11.0	4.4	5	1.8
	Total VOC's	11.0	4.4		1.8
10/5/2006	Trichloroethene	11.0	4.4	5	1.8
	Total VOC's	11.0	4.4		1.8
11/20/2006	Trichloroethene	10.0	4.2	5	1.9
	Total VOC's	10.0	4.2		1.9
12/6/2006	Trichloroethene	11.0	2.9	5	1.2
	Total VOC's	11.0	2.9		1.2
1/8/2007	Trichloroethene	10.0	4.4	5	1.8
	Total VOC's	10.0	4.4		1.8
2/6/2007	Trichloroethene	12.0	3.1	5	ND<1
	Total VOC's	12.0	3.1		ND<1
3/21/2007	Trichloroethene	11.0	4.6	5	1.8
	Total VOC's	11.0	4.6		1.8
4/5/2007	Trichloroethene	10.0	4.8	5	1.6
	Total VOC's	10.0	4.8		1.6
5/18/2007	Trichloroethene	11.0	4.5	5	2.0
	Total VOC's	11.0	4.5		2.0
6/13/2007	Trichloroethene	12.0	4.3	5	2.0
	Total VOC's	12.0	4.3		2.0
7/9/2007	Trichloroethene	10.0	4.1	5	1.4
	Total VOC's	10.0	4.1		1.4
8/8/2007	Trichloroethene	9.2	3.4	5	1.4
	Total VOC's	9.2	3.4		1.4
9/7/2007	Trichloroethene	6.2	2.4	5	1.0
	Total VOC's	6.2	2.4		1.0
10/4/2007	Trichloroethene	5.9	2.2	5	1.2
	Total VOC's	5.9	2.2		1.2
11/26/2007	Trichloroethene	6.3	2.9	5	1.2
	Total VOC's	6.3	2.9		1.2
12/26/2007	Trichloroethene	10.0	4.8	5	1.9
	Total VOC's	10.0	4.8		3.0

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
1/11/2008	Trichloroethene	11.0	5.0	5	2.0
	Total VOC's	11.0	5.0		2.0
2/15/2008	Trichloroethene	8.9	3.5	5	1.3
	Total VOC's	8.9	3.5		1.3
3/24/2008	Trichloroethene	11.0	4.4	5	1.9
	Total VOC's	11.0	4.4		1.9
4/16/2008	Trichloroethene	9.6	3.9	5	1.7
	Total VOC's	9.6	3.9		1.7
5/21/2008	Trichloroethene	10.0	4.8	5	2.0
	Total VOC's	10.0	4.8		2.0
6/26/2008	Trichloroethene	8.5	3.4	5	1.7
	Total VOC's	8.5	3.4		1.7
7/22/2008	Trichloroethene	8.1	3.5	5	1.6
	Total VOC's	8.1	3.5		1.6
8/21/2008	Trichloroethene	6.0	3.0	5	1.3
	Total VOC's	6.0	3.0		1.3
9/18/2008	Trichloroethene	5.9	2.7	5	1.0
	Total VOC's	5.9	2.7		1.0
10/23/2008	Trichloroethene	3.5	2.2	5	<1
	Total VOC's	3.5	2.2		<1
11/26/2008	Trichloroethene	4.0	2.2	5	1.0
	Total VOC's	4.0	2.2		1.0
12/16/2008	Trichloroethene	4.2	2.2	5	1.1
	Total VOC's	4.2	2.2		1.1
1/20/2009	Trichloroethene	6.2	3.5	5	1.5
	Total VOC's	6.2	3.5		1.5
2/23/2009	Trichloroethene	5.0	2.1	5	<1
	Total VOC's	5.0	2.1		<1
3/17/2009	Trichloroethene	5.7	3.6	5	1.5
	Total VOC's	5.7	3.6		1.5
4/16/2009	Trichloroethene	6.0	3.5	5	1.8
	Total VOC's	6.0	3.5		1.8
5/19/2009	Trichloroethene	6.4	3.5	5	1.6
	Total VOC's	6.4	3.5		1.6
6/18/2009	Trichloroethene	6.2	2.8	5	1.6
	Total VOC's	6.2	2.8		1.6
7/14/2009	Trichloroethene	4.3	2.7	5	1.4
	Total VOC's	4.3	2.7		1.4
8/31/2009	Trichloroethene	3.7	1.9	5	1.0
	Total VOC's	3.7	1.9		1.0

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
9/24/2009	Trichloroethene	3.7	2.0	5	1.0
	Total VOC's	3.7	2.0		1.0
10/20/2009	Trichloroethene	3.9	2.0	5	1.0
	Total VOC's	3.9	2.0		1.0
11/30/2009	Trichloroethene	3.2	2.2	5	1.0
	Total VOC's	3.2	2.2		1.0
12/29/2009	Trichloroethene	5.1	1.7	5	<1
	Total VOC's	5.1	1.7		<1
1/28/2010	Trichloroethene	5.9	2.7	5	1.3
	Total VOC's	5.9	2.7		1.3
2/24/2010	Trichloroethene	6.9	2.9	5	1.4
	Total VOC's	6.9	2.9		1.4
3/30/2010	Trichloroethene	8.0	3.7	5	1.7
	Total VOC's	8.0	3.7		1.7
4/29/2010	Trichloroethene	8.6	3.5	5	1.7
	Total VOC's	8.6	3.5		1.7
5/27/2010	Trichloroethene	8.5	3.1	5	1.8
	Total VOC's	8.5	3.1		1.8
6/30/2010	Trichloroethene	8.0	3.1	5	1.6
	Total VOC's	8.0	3.1		1.6
7/29/2010	Trichloroethene	6.8	2.5	5	1.2
	Total VOC's	6.8	2.5		1.2
8/31/2010	Trichloroethene	4.6	2.0	5	1.1
	Total VOC's	4.6	2.0		1.1
9/29/2010	Trichloroethene	4.9	1.9	5	1.0
	Total VOC's	4.9	1.9		1.0
10/28/2010	Trichloroethene	5.4	2.2	5	1.0
	Total VOC's	5.4	2.2		1.0
11/29/2010	Trichloroethene	6.4	2.5	5	1.2
	Total VOC's	6.4	2.5		1.2
12/31/2010	Trichloroethene	9.9	3.7	5	1.3
	Total VOC's	9.9	3.7		1.3
1/24/2011	Trichloroethene	9.6	5.1	5	2.3
	Total VOC's	9.6	5.1		2.3
2/25/2011	Trichloroethene	8.0	5.3	5	2.0
	Total VOC's	8.0	5.3		2.0
3/31/2011	Trichloroethene	11.0	4.4	5	2.0
	Total VOC's	11.0	4.4		2.0
4/28/2011	Trichloroethene	11.0	4.1	5	1.9
	Total VOC's	11.0	4.1		1.9

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
5/31/2011	Trichloroethene	14.0	4.5	5	2.3
	Total VOC's	14.0	4.5		2.3
6/29/2011	Trichloroethene	12.0	4.5	5	2.2
	Total VOC's	12.0	4.5		2.2
7/29/2011	Trichloroethene	9.9	3.4	5	1.8
	Total VOC's	9.9	3.4		1.8
8/19/2011	Trichloroethene	9.8	3.5	5	1.8
	Total VOC's	9.8	3.5		1.8
9/27/2011	Trichloroethene	8.9	3.2	5	1.5
	Total VOC's	8.9	3.2		1.5
10/26/2011	Trichloroethene	9.7	3.9	5	1.7
	Total VOC's	9.7	3.9		1.7
11/22/2011	Trichloroethene	8.8	3.8	5	1.5
	Total VOC's	8.8	3.8		1.5
12/27/2011	Trichloroethene	10.4	4.3	5	1.7
	Total VOC's	10.7	4.5		1.7
1/27/2012	Trichloroethene	10.3	4.1	5	1.6
	Total VOC's	10.5	4.3		1.6
2/24/2012	Trichloroethene	12.0	5.0	5	2.1
	Total VOC's	12.3	5.2		2.1
3/27/2012	Trichloroethene	11.9	4.7	5	2.0
	Total VOC's	11.9	4.7		2.6
4/23/2012	Trichloroethene	10.2	4.2	5	1.9
	Total VOC's	10.4	4.3		1.9
5/31/2012	Trichloroethene	9.6	3.6	5	1.8
	Total VOC's	9.7	3.7		1.8
6/25/2012	Trichloroethene	8.3	3.4	5	1.4
	Total VOC's	8.4	3.5		1.4
7/26/2012	Trichloroethene	7.7	2.7	5	1.5
	Total VOC's	7.8	2.7		1.5
8/29/2012	Trichloroethene	5.5	2.0	5	0.9
	Total VOC's	5.5	2.0		0.9
9/25/2012	Trichloroethene	5.0	1.9	5	0.8
	Total VOC's	5.0	1.9		0.8
10/29/02012	Trichloroethene	3.8	1.6	5	0.6
	Total VOC's	3.8	1.6		0.6
11/21/2012	Trichloroethene	4.3	1.9	5	0.7
	Total VOC's	4.3	1.9		0.7
12/18/2012	Trichloroethene	4.04	1.71	5	0.74
	Total VOC's	4.04	1.71		0.74

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
1/24/2013	Trichloroethene	6.25	1.68	5	1.08
	Total VOC's	6.25	1.68		1.08
2/26/2013	Trichloroethene	6.97	2.83	5	1.17
	Total VOC's	7.10	2.83		1.17
3/21/2013	Trichloroethene	7.91	3.85	5	1.33
	Total VOC's	8.09 J	3.97 J		1.33
4/29/2013	Trichloroethene	7.57	3.08	5	1.36
	Total VOC's	7.73 J	3.18 J		1.36
5/21/2013	Trichloroethene	10.0	3.53	5	1.60
	Total VOC's	10.22 J	3.67 J		1.60
6/26/2013	Trichloroethene	7.42	2.56	5	1.27
	Total VOC's	7.56 J	2.56		1.27
7/29/2013	Trichloroethene	8.50	3.20	5	1.57
	Total VOC's	8.50	3.30 J		1.57
8/27/2013	Trichloroethene	10.60	3.78	5	1.65
	Total VOC's	10.75 J	3.78		1.65
9/25/2013	Trichloroethene	9.47	3.95	5	1.51
	Total VOC's	9.62 J	3.95		1.51
10/25/2013	Trichloroethene	9.23	4.18	5	1.62
	Total VOC's	9.41 J	4.31 J		1.62
11/26/2013	Trichloroethene	8.84	3.89	5	1.51
	Total VOC's	8.84	3.89		1.51
12/26/2013	Trichloroethene	10.00	4.71	5	1.77
	Total VOC's	10.14 J	4.71		1.77
1/29/2014	Trichloroethene	10.50	4.26	5	2.00
	Total VOC's	10.64 J	4.26		2.00
2/24/2014	Trichloroethene	10.90	1.94	5	1.35
	Total VOC's	11.1 J	1.94		1.35
3/28/2014	Trichloroethene	10.60	4.57	5	1.60
	Total VOC's	10.78 J	4.69 J		1.60
4/25/2014	Trichloroethene	11.20	4.34	5	1.62
	Total VOC's	11.35 J	4.34		1.62
5/29/2014	Trichloroethene	9.76	3.51	5	1.44
	Total VOC's	9.76	3.51		1.44
6/24/2014	Trichloroethene	10.40	3.50	5	1.64
	Total VOC's	10.52 J	3.50		1.64
7/23/2014	Trichloroethene	8.78	2.91	5	1.48
	Total VOC's	8.92 J	2.91		1.48
8/27/2014	Trichloroethene	8.10	2.77	5	1.31
	Total VOC's	8.22 J	2.77		1.31

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
9/23/2014	Trichloroethene	6.99	2.76	5	1.11
	Total VOC's	6.99	2.76		1.11
10/28/2014	Trichloroethene	6.05	2.20	5	0.86
	Total VOC's	6.05	2.20		0.86
11/20/2014	Trichloroethene	5.93	2.78	5	0.94
	Total VOC's	6.48	2.78		0.94
12/23/2014	Trichloroethene	4.97	1.97	5	0.84
	Total VOC's	4.97	1.97		0.84
1/27/2015	Trichloroethene	6.06	2.18	5	1.18
	Total VOC's	6.06	2.18		1.18
2/18/2015	Trichloroethene	6.05	2.98	5	1.24
	Total VOC's	6.17 J	2.98		1.24
3/27/2015	Trichloroethene	6.20	2.91	5	1.17
	Total VOC's	6.34 J	3.01		1.17
4/23/2015	Trichloroethene	7.85	3.43	5	1.39
	Total VOC's	7.97 J	3.43		1.39
5/28/2015	Trichloroethene	8.03	2.88	5	1.34
	Total VOC's	8.16 J	2.88		1.34
6/23/2015	Trichloroethene	8.57	2.68	5	1.47
	Total VOC's	9.19	2.68		1.47
7/21/2015	Trichloroethene	9.85	3.27	5	1.49
	Total VOC's	9.85	3.27		1.49
8/19/2015	Trichloroethene	8.63	2.72	5	1.37
	Total VOC's	8.83 J	2.84 J		1.37
9/28/2015	Trichloroethene	6.58	2.35	5	1.03
	Total VOC's	6.58	2.35		1.03
10/26/2015	Trichloroethene	6.26	2.41	5	0.93
	Total VOC's	6.26	2.41		0.93
11/25/2015	Trichloroethene	4.68	1.87	5	0.81
	Total VOC's	4.68	1.87		0.81
12/17/2015	Trichloroethene	4.99	2.22	5	0.83
	Total VOC's	4.99	2.22		0.83
1/21/2016	Trichloroethene	4.89	2.77	5	0.95
	Total VOC's	4.89	2.77		0.95
2/29/2016	Trichloroethene	6.79	3.26	5	1.12
	Total VOC's	6.79	3.26		1.12
3/30/2016	Trichloroethene	6.50	2.83	5	1.20
	Total VOC's	6.61 J	2.83		1.20
4/27/2016	Trichloroethene	8.04	3.48	5	1.43
	Total VOC's	8.04	3.48		1.43

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
5/26/2016	Trichloroethene	8.38	2.90	5	1.35
	Total VOC's	8.38	2.90		1.35
6/28/2016	Trichloroethene	6.21	2.16	5	1.06
	Total VOC's	6.21	2.16		1.06
7/28/2016	Trichloroethene	4.70	1.67	5	0.74
	Total VOC's	4.70	1.67		0.74
8/29/2016	Trichloroethene	3.71	1.43	5	0.60
	Total VOC's	3.71	1.43		0.60
9/26/2016	Trichloroethene	3.27	1.48	5	0.57
	Total VOC's	3.27	1.48		0.57
10/27/2016	Trichloroethene	2.69	1.30	5	0.54
	Total VOC's	2.69	1.30		0.54
11/16/2016	Trichloroethene	3.36	1.46	5	0.65
	Total VOC's	3.36	1.46		0.65
12/19/2016	Trichloroethene	3.70	2.07	5	0.78
	Total VOC's	3.70	2.07		0.78
1/18/2017	Trichloroethene	5.02	2.90	5	0.98
	Total VOC's	5.12 J	2.90		0.98
2/23/2017	Trichloroethene	5.90	2.81	5	1.12
	Total VOC's	5.90	2.81		1.12
3/24/2017	Trichloroethene	7.15	2.51	5	1.54
	Total VOC's	7.28 J	2.51		1.54
4/25/2017	Trichloroethene	8.87	3.92	5	1.69
	Total VOC's	8.98 J	3.92		1.69
5/31/2017	Trichloroethene	9.32	3.59	5	1.68
	Total VOC's	9.43 J	3.59		1.68
6/26/2017	Trichloroethene	9.37	3.75	5	1.69
	Total VOC's	9.47 J	3.75		1.69
7/24/2017	Trichloroethene	9.50	3.30	5	1.51
	Total VOC's	9.50	3.30		1.51
8/23/2017	Trichloroethene	11.5	4.02	5	1.84
	Total VOC's	11.64 J	4.02		1.84
9/26/2017	Trichloroethene	9.39	3.34	5	1.39
	Total VOC's	9.39	3.34		1.39
10/20/2017	Trichloroethene	7.69	2.97	5	1.15
	Total VOC's	7.79 J	2.97		1.15
11/17/2017	Trichloroethene	7.59	2.30	5	0.77
	Total VOC's	7.71 J	2.30		0.77
12/11/2017	Trichloroethene	7.09	4.21	5	1.43
	Total VOC's	7.21 J	4.21		1.43

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
1/12/2018	Trichloroethene	7.39	2.05	5	0.71
	Total VOC's	7.50 J	2.05		0.71
2/21/2018	Trichloroethene	8.08	3.17	5	1.26
	Total VOC's	8.20 J	3.17		1.26
3/16/2018	Trichloroethene	7.75	0.61	5	0.40 J
	Total VOC's	8.14 J	0.61		0.40 J
4/12/2018	Trichloroethene	9.09	3.28	5	1.44
	Total VOC's	9.20 J	3.28		1.44
5/15/2018	Trichloroethene	10.1	3.32	5	1.67
	Total VOC's	10.1	3.32		1.67
6/12/2018	Trichloroethene	10.7	3.62	5	1.65
	Total VOC's	10.7	3.62		1.65
7/20/2018	Trichloroethene	7.80	3.32	5	1.29
	Total VOC's	7.80	3.32		1.29
8/14/2018	Trichloroethene	8.88	2.80	5	1.05
	Total VOC's	8.88	2.80		1.05
9/18/2018	Trichloroethene	6.88	2.58	5	1.07
	Total VOC's	6.88	2.58		1.07
10/16/2018	Trichloroethene	6.70	3.13	5	1.10
	Total VOC's	6.70	3.13		1.10
11/28/2018	Trichloroethene	7.53	0.51	5	0.24 J
	Total VOC's	7.53	0.51		0.24 J
12/18/2018	Trichloroethene	8.52	3.42	5	0.64
	Total VOC's	8.52	3.42		0.64
1/15/2019	Trichloroethene	7.51	4.11	5	1.53
	Total VOC's	7.51	4.11		1.53
2/12/2019	Trichloroethene	7.18	2.56	5	1.00
	Total VOC's	7.18	2.56		1.00
3/20/2019	Trichloroethene	6.34	2.90	5	0.97
	Total VOC's	6.34	2.90		0.97
4/16/2019	Trichloroethene	5.16	2.58	5	1.00
	Total VOC's	5.16	2.58		1.00
5/17/2019	Trichloroethene	4.26	1.58	5	0.64
	Total VOC's	4.26	1.58		0.64
6/18/2019	Trichloroethene	3.10	1.01	5	0.52
	Total VOC's	3.10	1.01		0.52
7/16/2019	Trichloroethene	2.44	0.67	5	0.34 J
	Total VOC's	2.44	0.67		0.34 J
8/16/2019	Trichloroethene	1.73	0.55	5	0.26 J
	Total VOC's	1.73	0.55		0.26 J

Table No. 3
Monthly Analytical Results May 2001- December 2019
Former SCM - Cortlandville
Site No. 712006

Sampling Date	Compound	Tower Influent	Tower Discharge	Reg Limit	Outfall at Cascade
9/13/2019	Trichloroethene	1.01	0.38 J	5	0.17 J
	Total VOC's	1.01	0.38 J		0.17 J
10/15/2019	Trichloroethene	1.43	0.59	5	0.26 J
	Total VOC's	1.43	0.59		0.26 J
11/21/2019	Trichloroethene	1.32	0.57	5	0.26 J
	Total VOC's	1.32	0.57		0.26 J
12/17/2019	Trichloroethene	1.66	0.80	5	0.31 J
	Total VOC's	1.66	0.80		0.31 J

Note: All results in µg/L.

Table 4:
Comparison of TCE Concentrations in Groundwater

Well #	Highest TCE Concentration[1]	Date Highest TCE Observed[2]	Nov. 2019 TCE Concentration[3]	Highest TCE vs. Nov. 2019 % Change[4]
Perimeter Shallow Wells				
MW-1S	69	Aug-1989	1.01	-98.54%
MW-2S	10	Nov-1991	1.35	-86.50%
MW-4S	2	Nov-1990 & Aug-1991	NS	NA
MW-5S	3	Nov-1990	<0.5 ND	-100.0%
MW-10S	200	Aug-1989	1.59	-99.21%
Perimeter Deep Wells				
MW-1D	45	Aug-1989	0.72	-98.40%
MW-2D	11	Aug-1989	NS	NA
MW-4D	1	Aug-1990	<1.0 ND	-100.0%
MW-5D	5	Nov-1990	2.08	-58.40%
MW-10D	71	Aug-1989	1.69	-97.62%
Interior Shallow Wells				
MW-6	230	Aug-1989	1.11	-99.52%
MW-7	290	Feb-1990	1.83	-99.37%
MW-8	240	Aug-1989	1.44	-99.40%
MW-11	10,000	Aug-1989	4.40	-99.96%
MW-12S	280	Aug-1990	1.91	-99.32%
Interior Deep Wells				
MW-9	33	May-1993	0.74	-97.76%
MW-12D	45	May-1992	1.62	-96.40%
Facility Well (Installed 2008)				
MW-L16	41	Nov-2008	2.03	-95.05%

Notes:
All concentrations in parts per billion (ppb).
Highlighted cell indicated decrease in TCE Concentration.
[1] Highest TCE concentration observed, per Table 2.
[2] Date the highest TCE concentration was observed, per Table 2.
[3] TCE concentration detected in November 2019, per Table 2.
[4] Percent change in TCE concentration between highest concentration and November 2019.
NA = Not Applicable.
ND = Not detected at the reporting limit.
NS = Not sampled.

Table 5:
Comparison of TCE Concentrations in SSD/SVE Exhaust Samples

TCE Concentrations in SSD/SVE Exhaust Samples		
Sample Date	**TCE Concentration[1]**	**TCE Concentration % Change vs. Jan. 2012[2]**
1/10/2012	**18,000**	**NA**
5/31/2012	3,500	-80.6%
11/27/2012	3,200	-82.2%
11/26/2013	10,000	-44.4%
11/17/2014	2,700	-85.0%
11/1/2015	780	-95.7%
11/15/2016	2,200	-87.8%
12/11/2017	3,300	-81.7%
11/28/2018	2,600	-85.6%
11/20/2019	8,100	-55.0%

Notes:
All TCE concentrations in micrograms per cubic meter ($\mu g/m^3$).
[1] TCE concentration detected in SSD/SVE exhaust samples.
[2] Percent change in TCE concentration vs. January 2012.
NA = Not Applicable.
SSD/SVE system energized in January 2012.

APPENDIX D

CHARTS

Chart 1: Tower Influent TCE Concentrations (µg/L)
December 2001 to December 2019

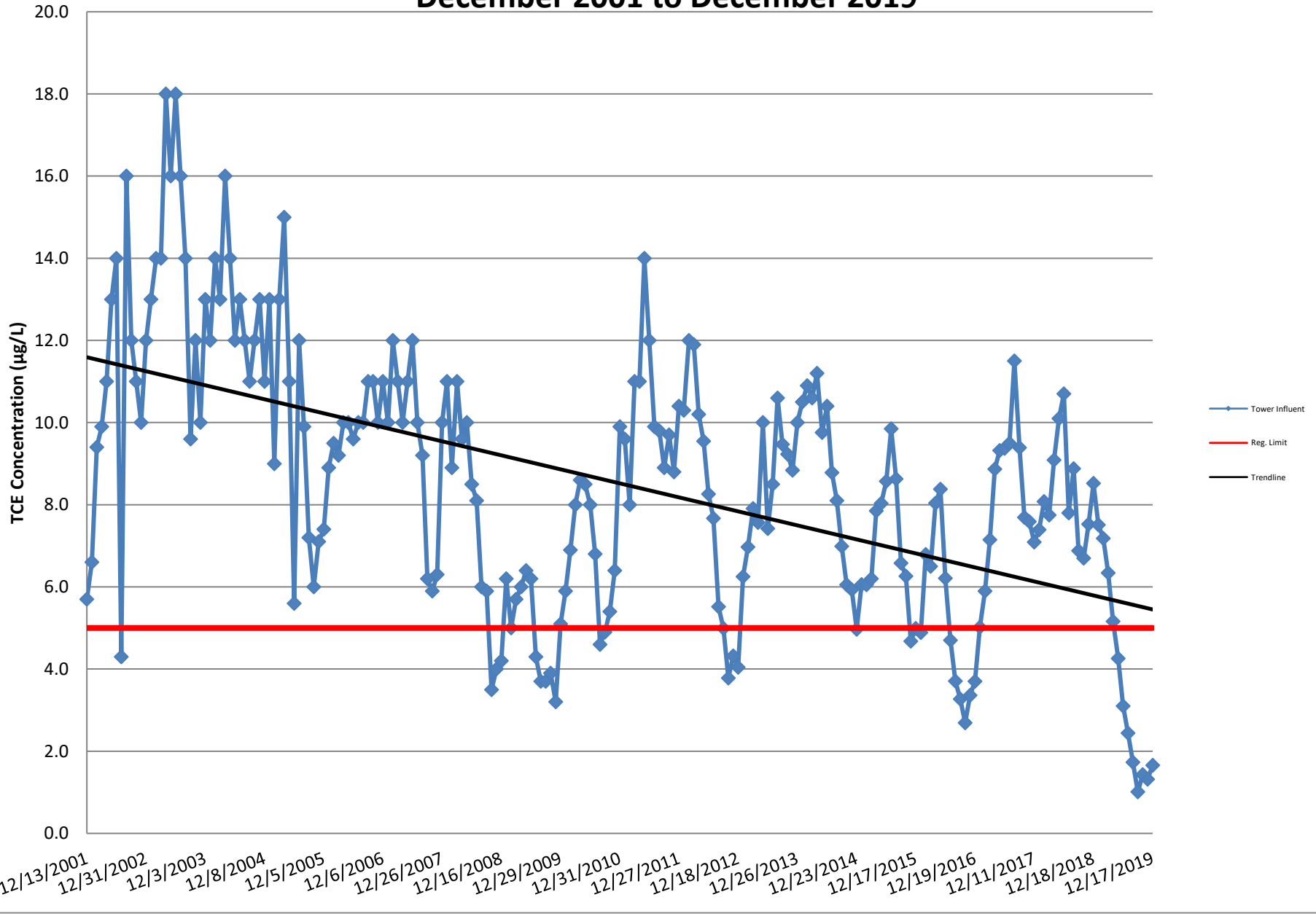


Chart 2: Tower Discharge TCE Concentrations (µg/L)
December 2001 to December 2019

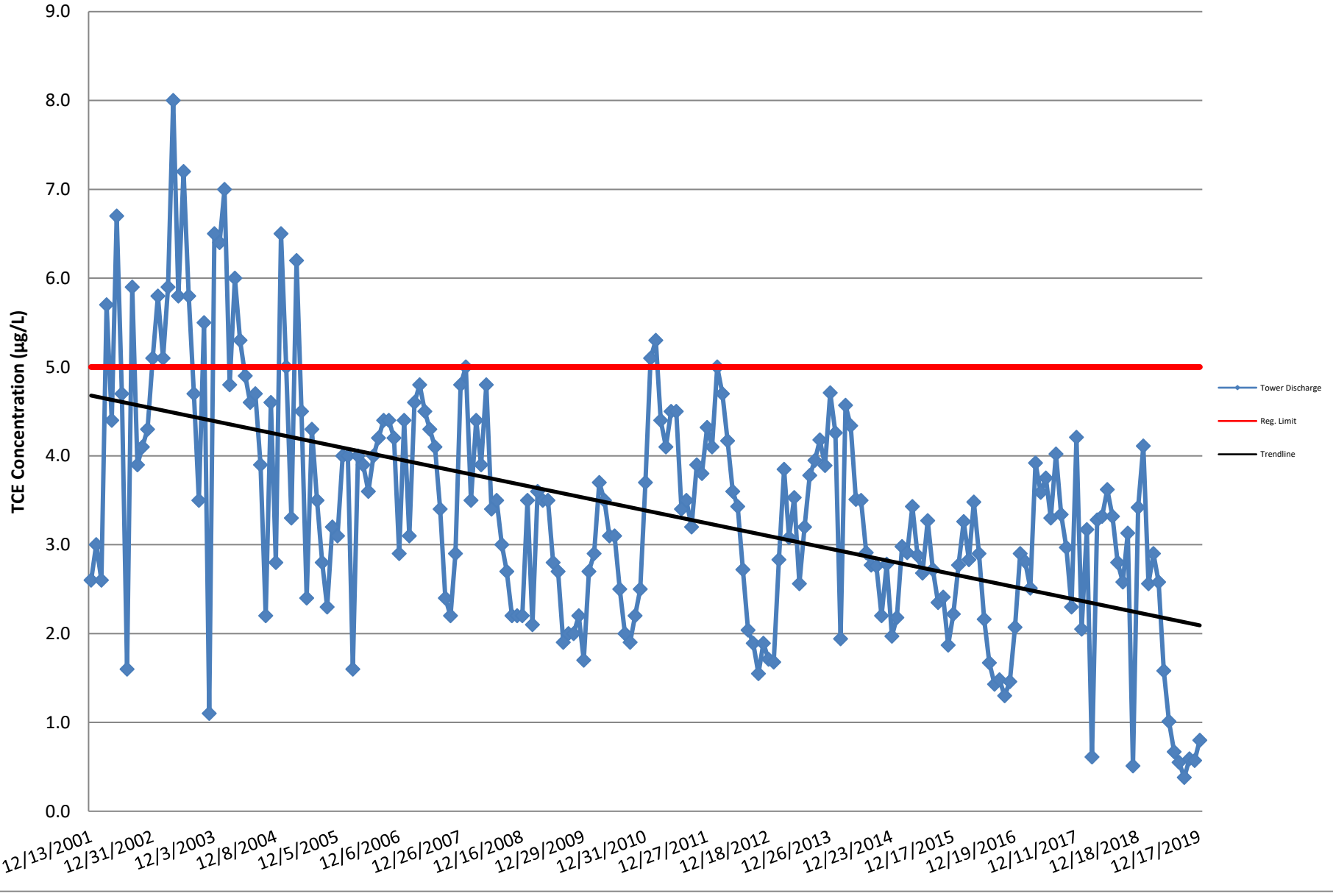


Chart 3: Cascade Outfall TCE Concentrations (µg/L)
December 2001 to December 2019

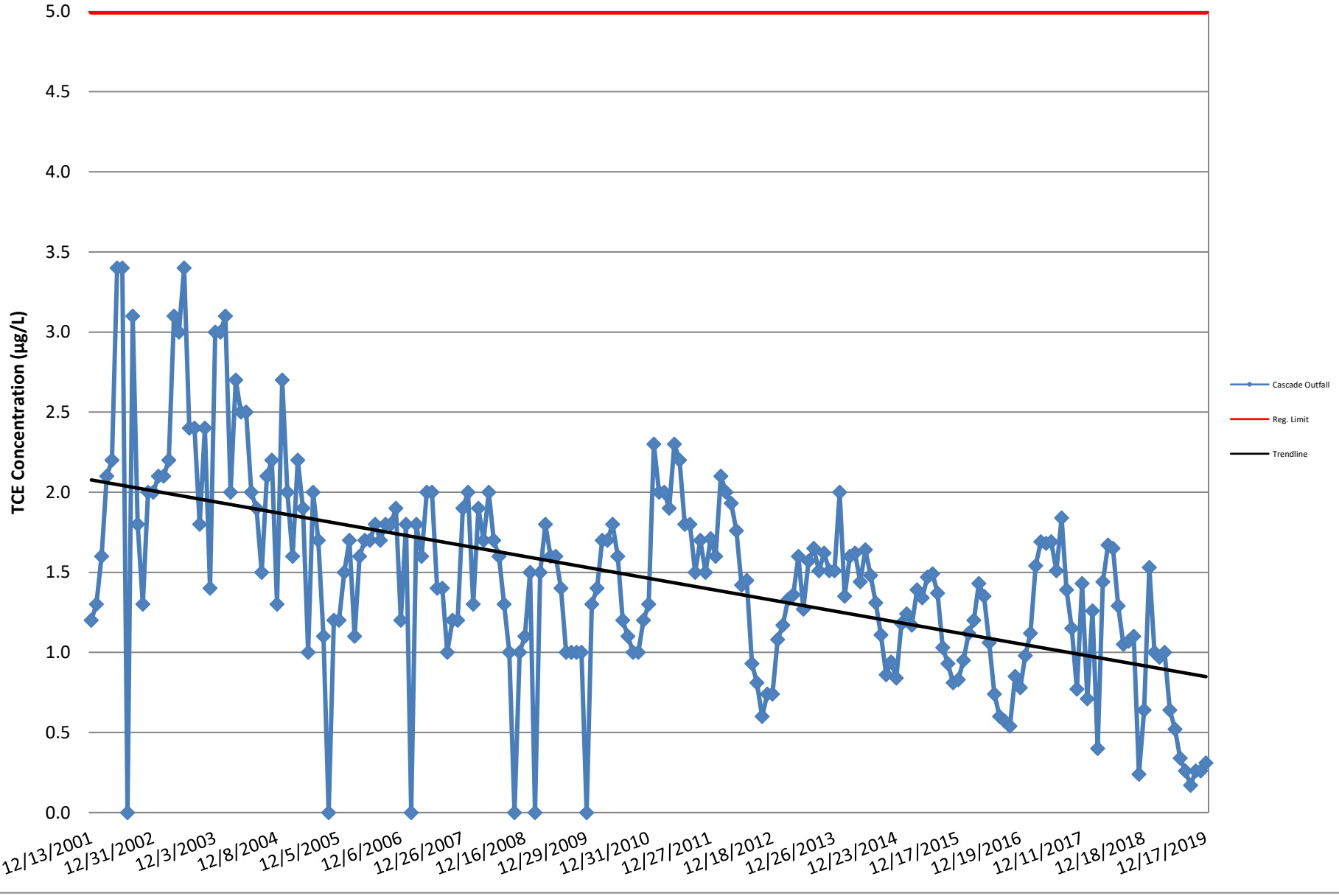


Chart 4: Tower Influent TCE Concentrations (µg/L)
2015, 2016, 2017, 2018 & 2019

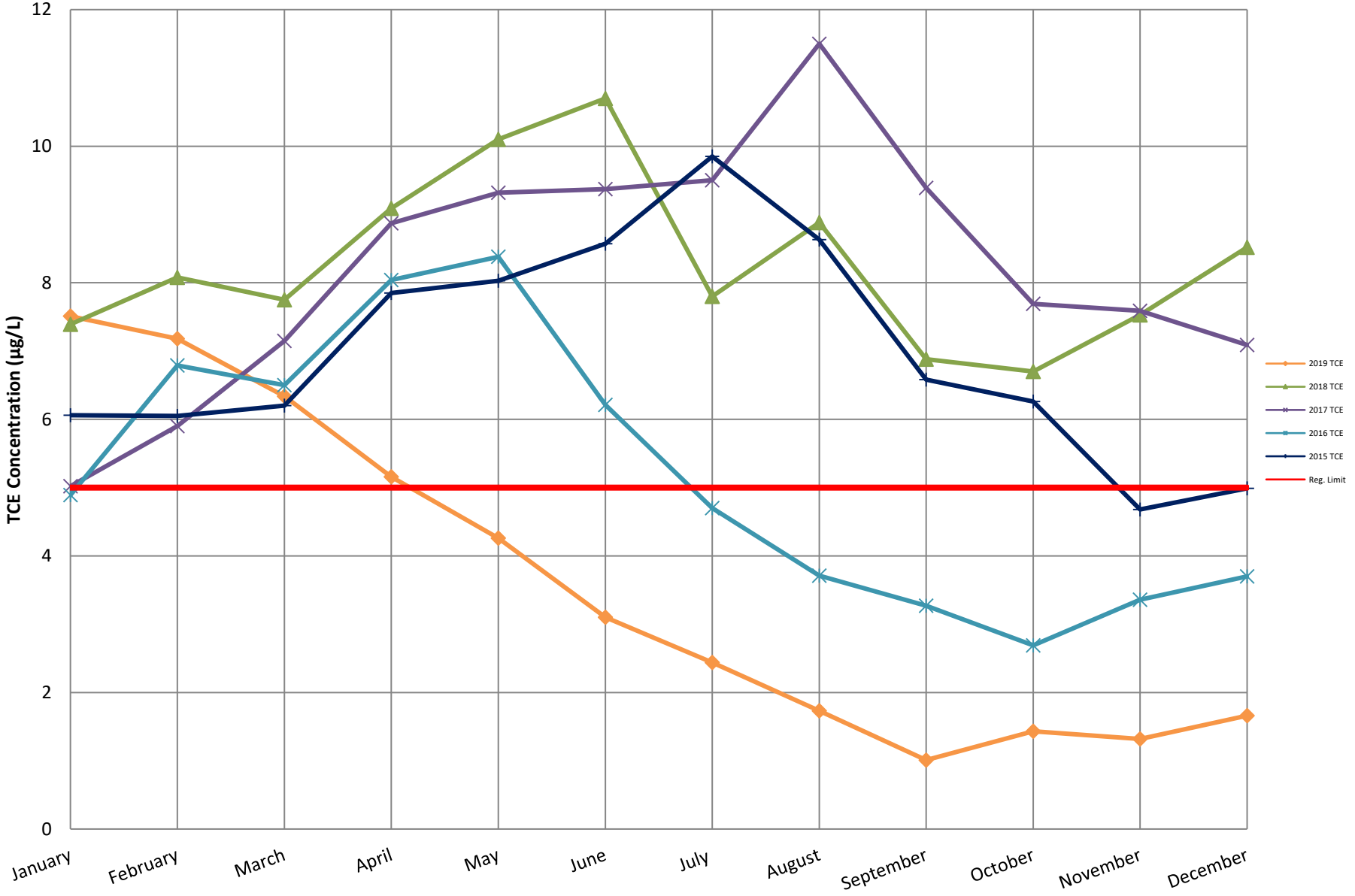


Chart 5: Perimeter Shallow Wells
10-Year TCE Concentrations (µg/L)

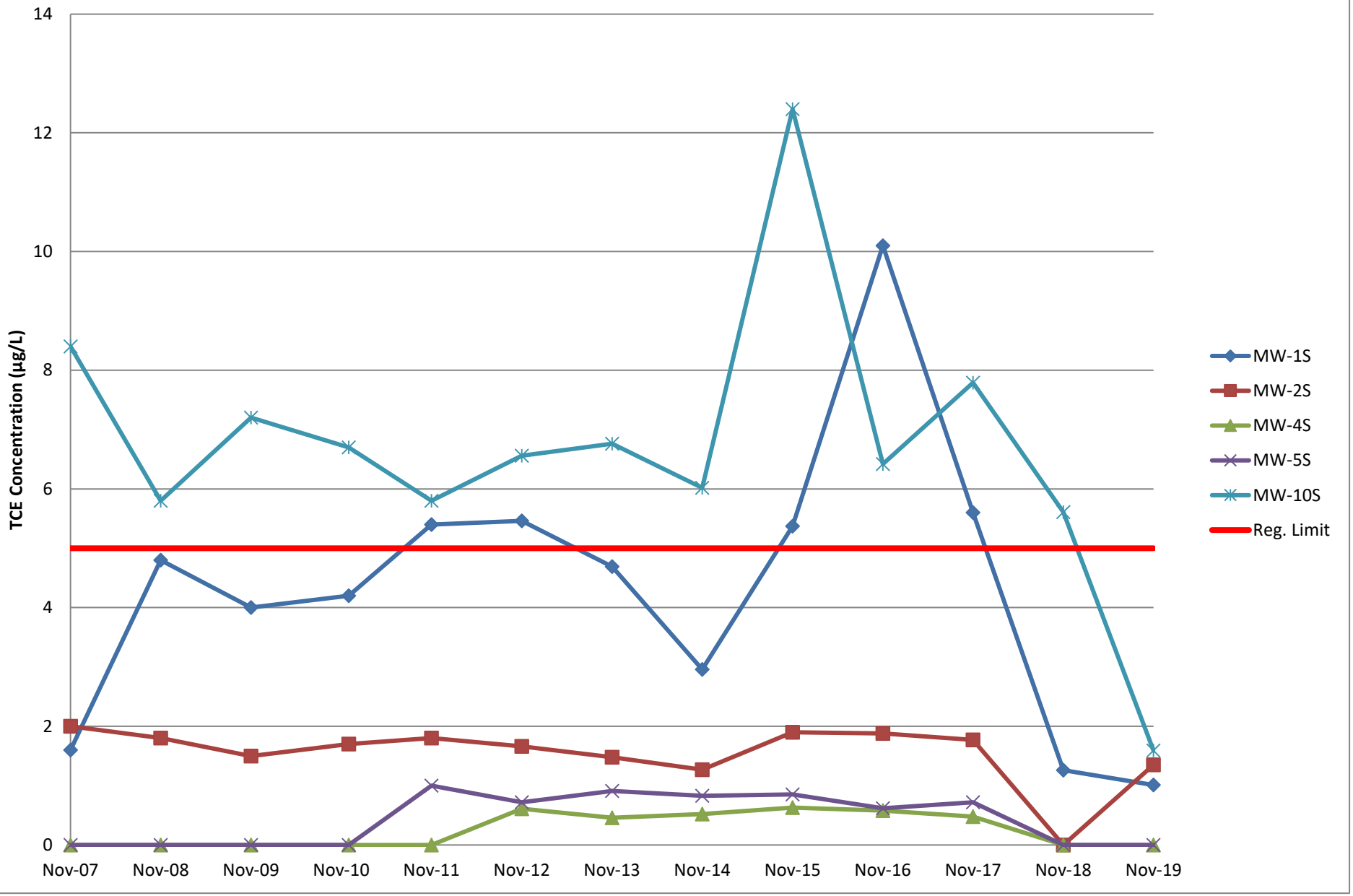


Chart 6: Perimeter Shallow Wells
30-Year TCE Conentrations (µg/L)

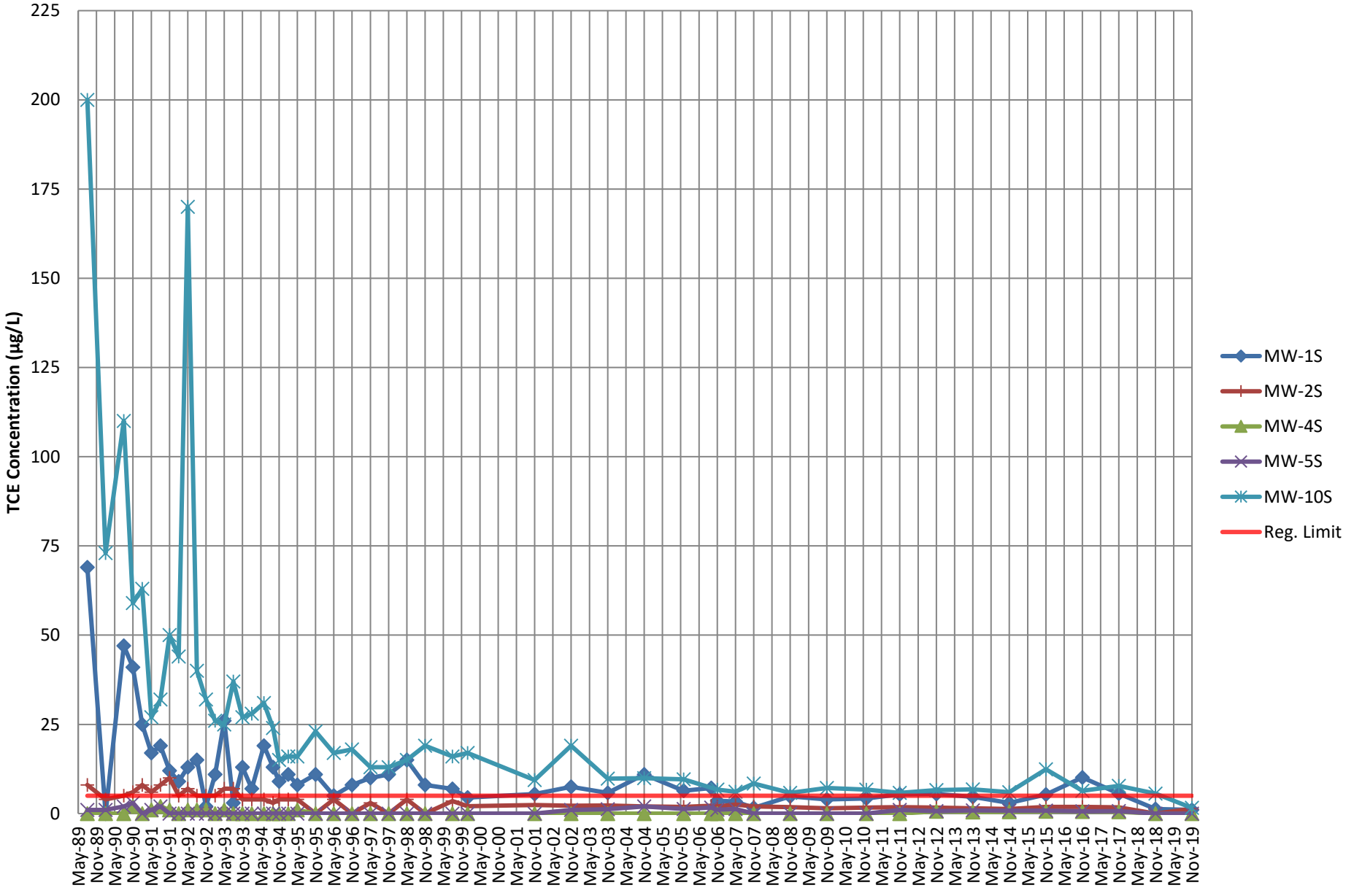


Chart 7: Perimeter Deep Wells
10-Year TCE Concentrations (µg/L)

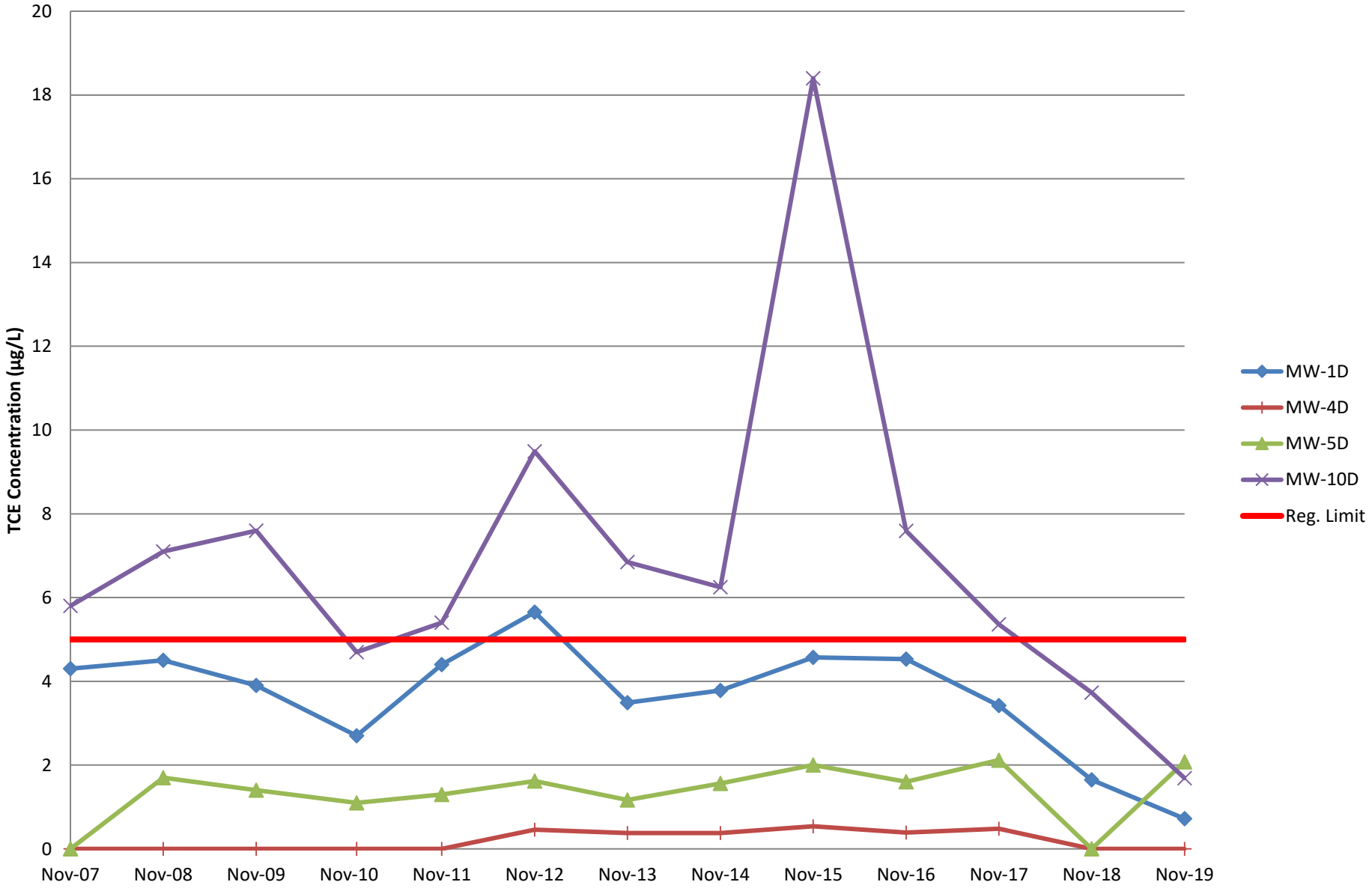


Chart 8: Perimeter Deep Wells
30-Year TCE Concentrations (µg/L)

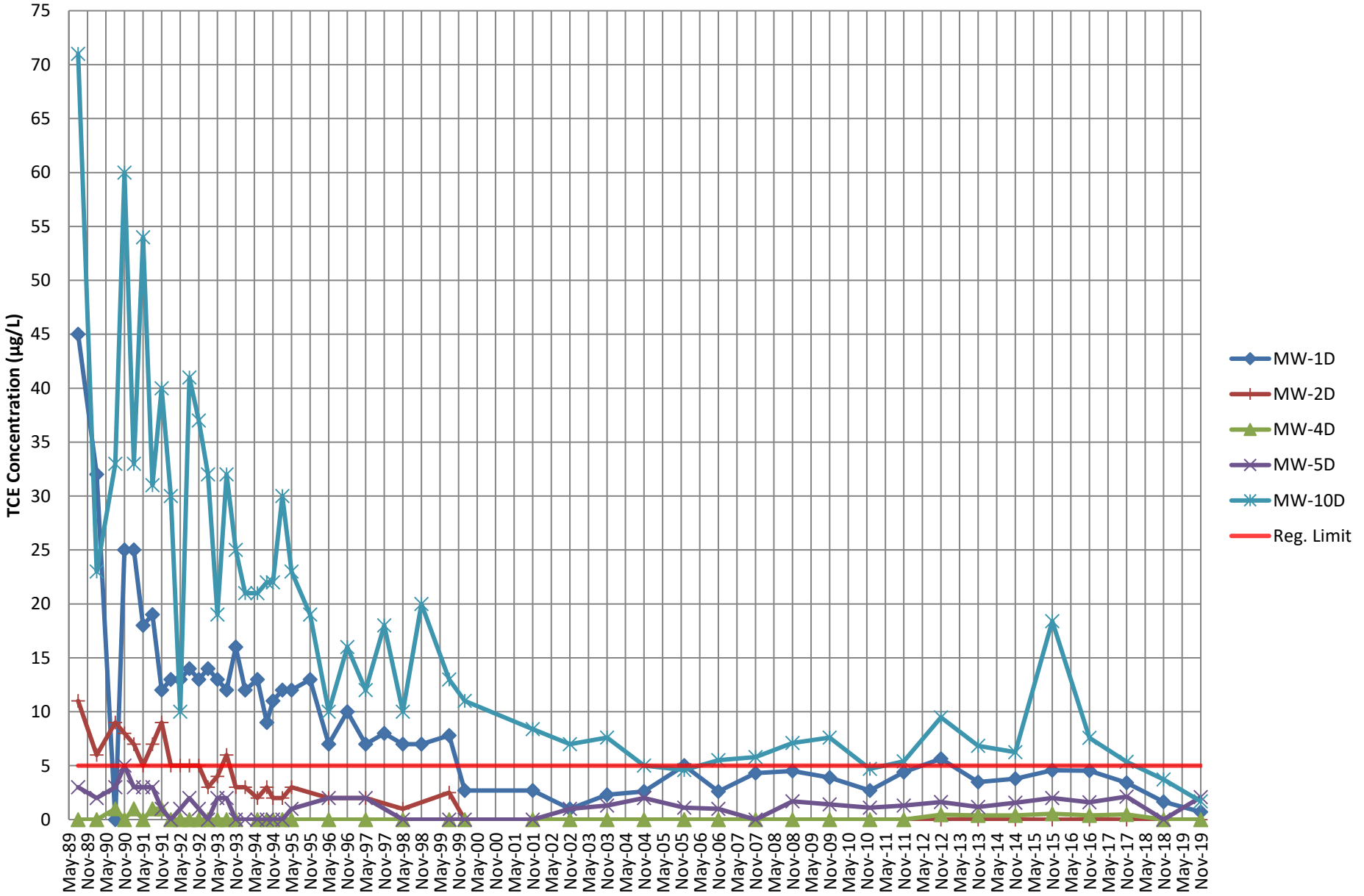


Chart 9: Interior Shallow Wells
10-Year TCE Concentrations (µg/L)

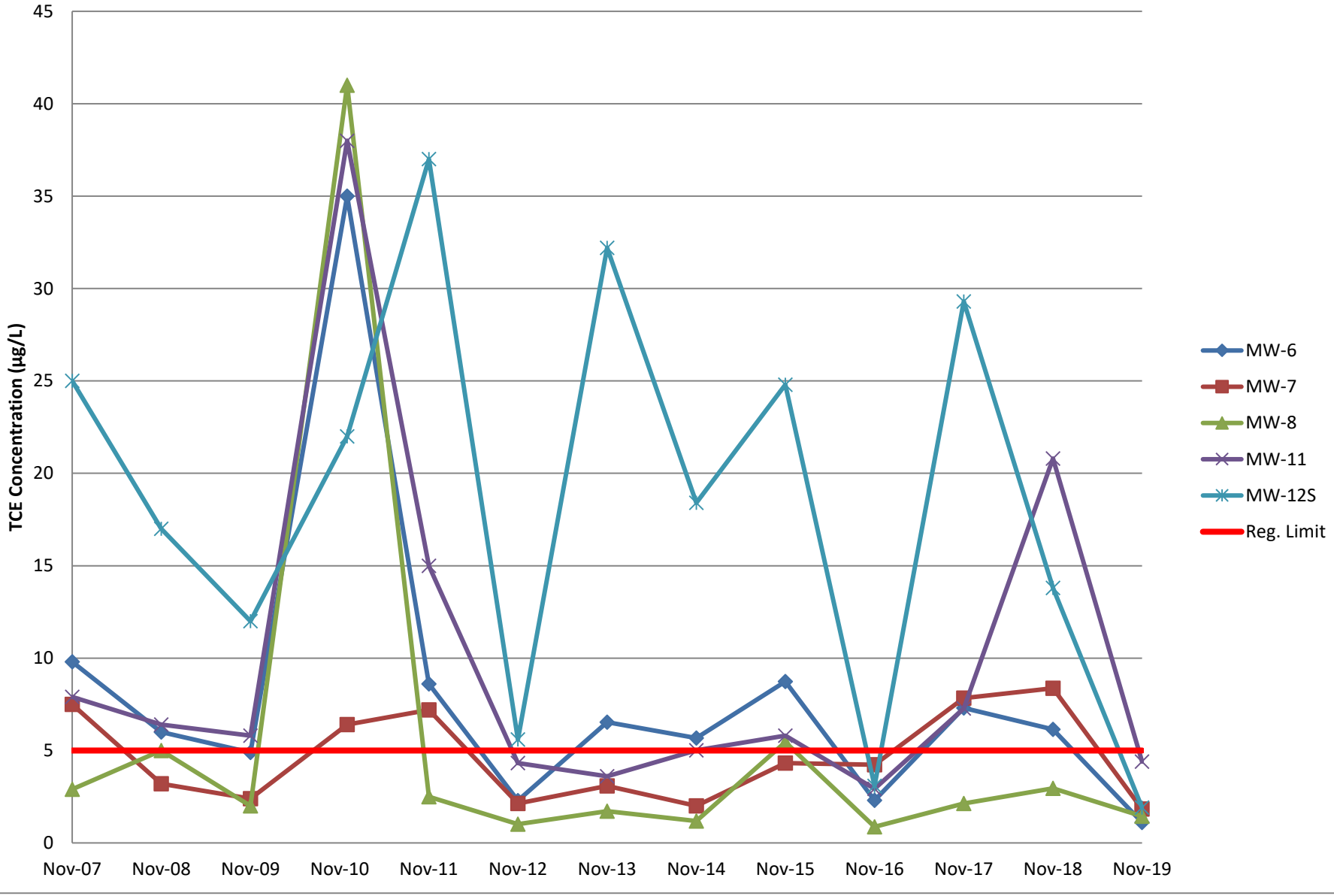


Chart 10: Interior Shallow Wells
30-Year TCE Conentrations (µg/L)

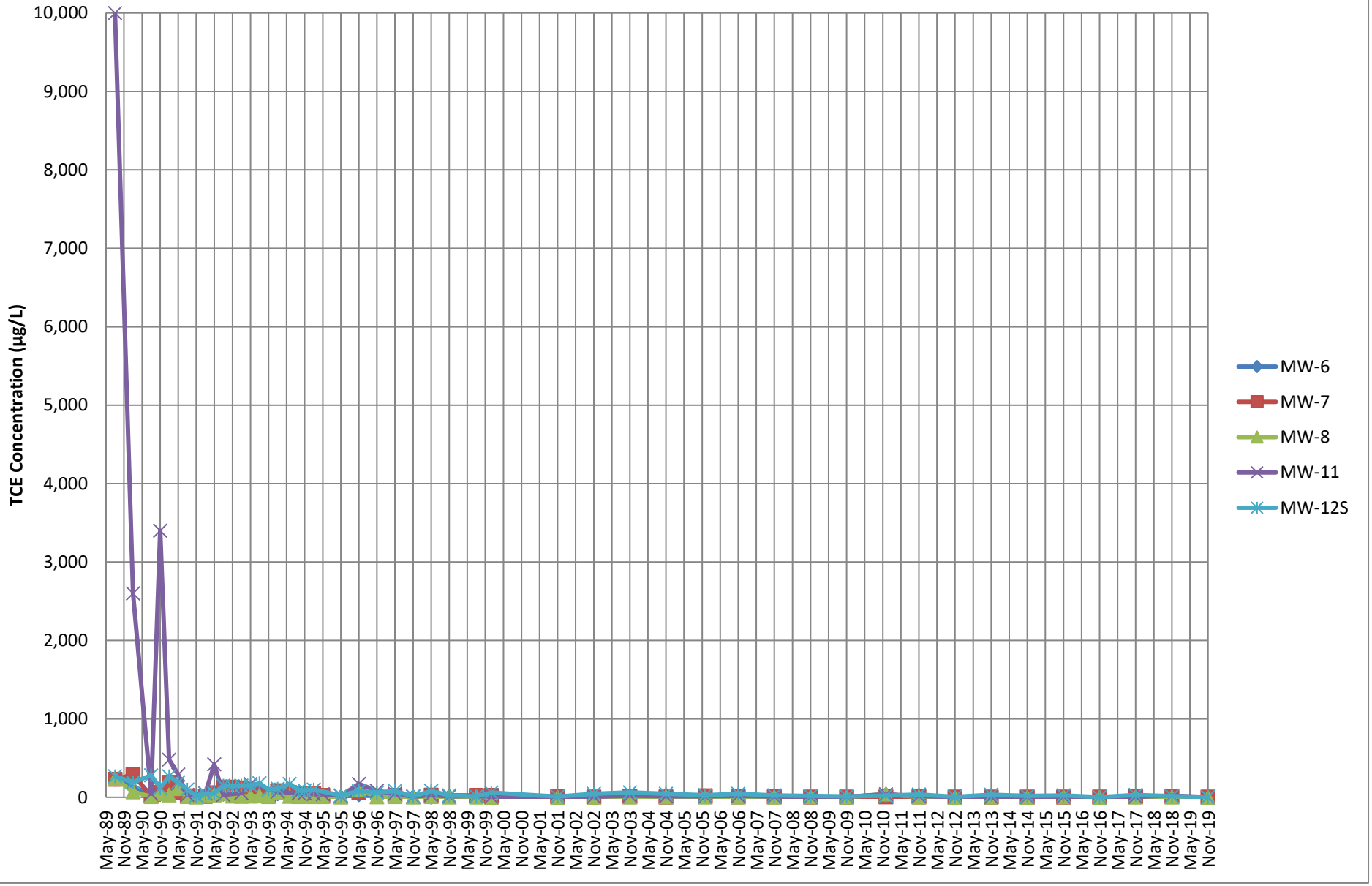


Chart 11: Interior Deep Wells
10-Year TCE Concentration (µg/L)

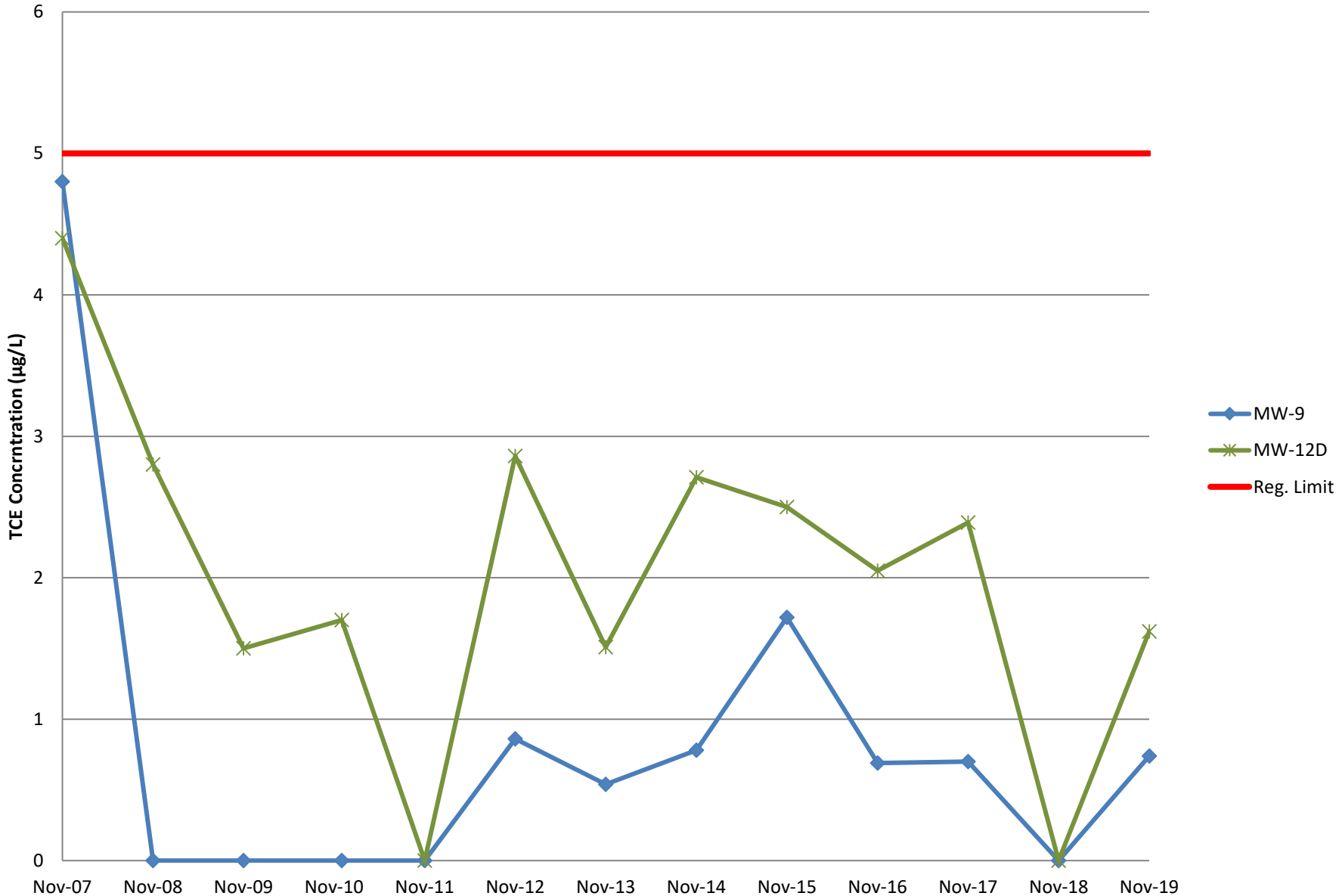


Chart 12: Interior Deep Wells
30-Year TCE Concentrations (µg/L)

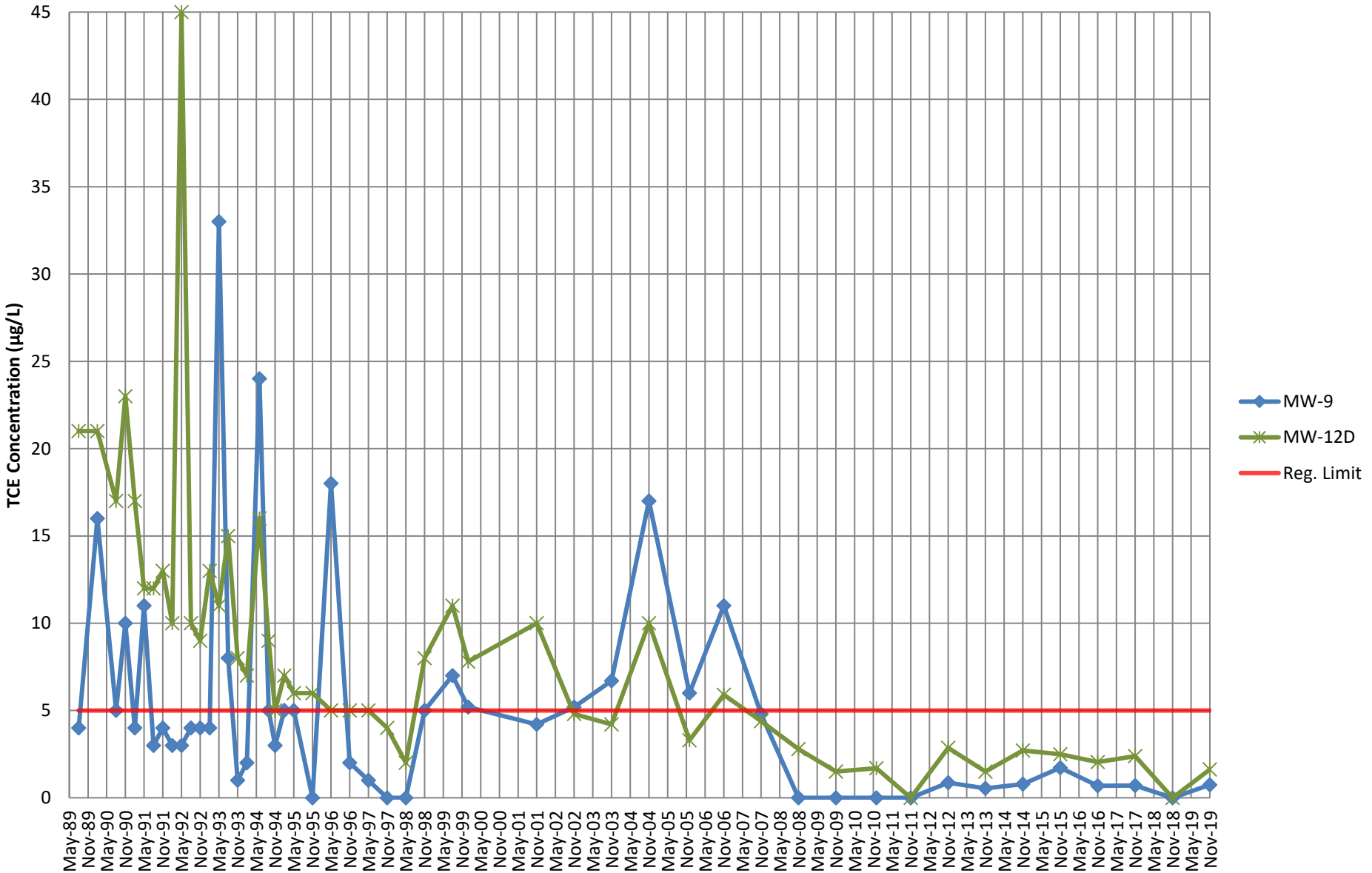


Chart 13: MW-L16 Interior Shallow Well
10-Year TCE Concentrations (µg/L)

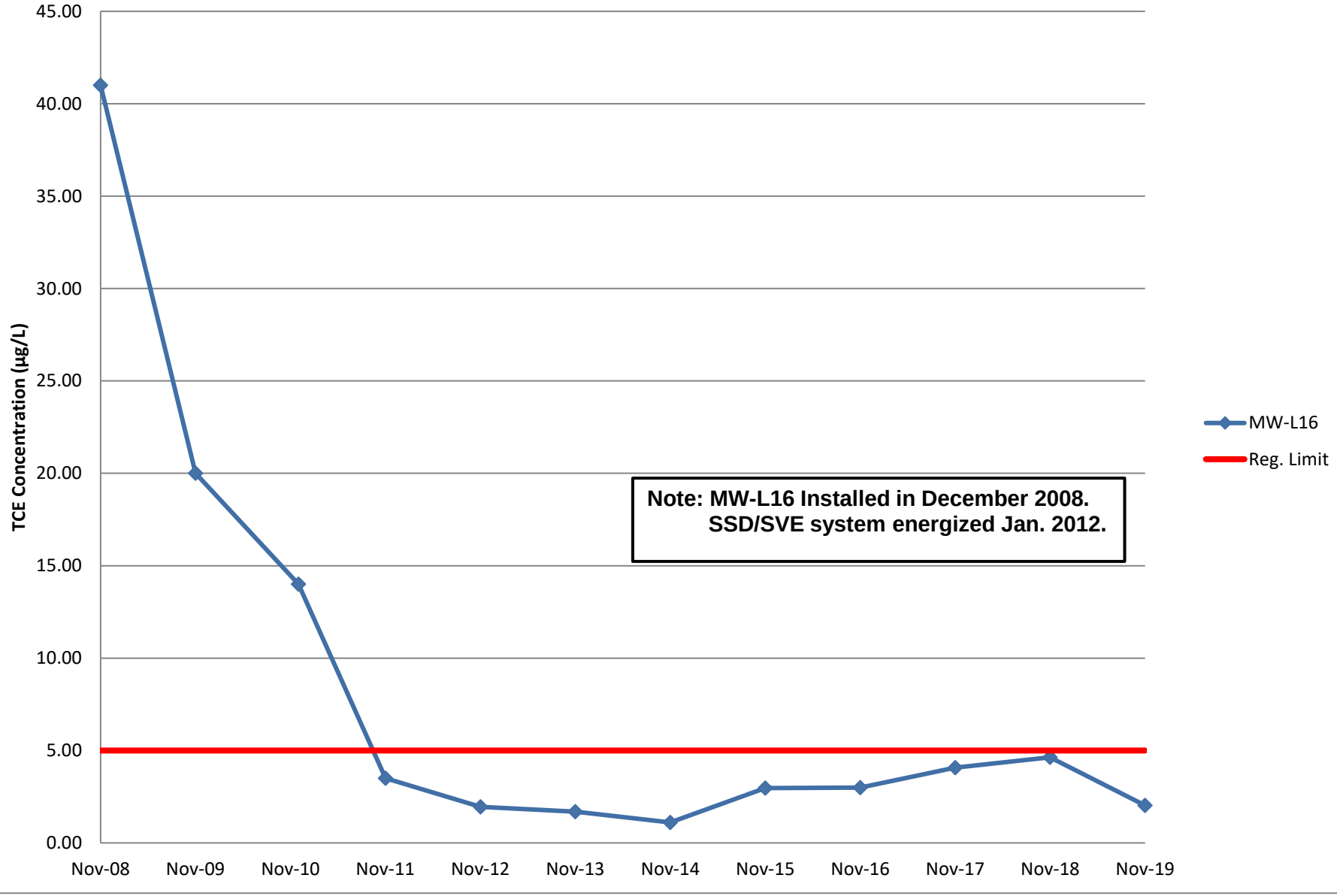


Chart 14: 2015, 2016, 2017, 2018 & 2019 Pumping Rates vs. Design Minimum Pumping Rate

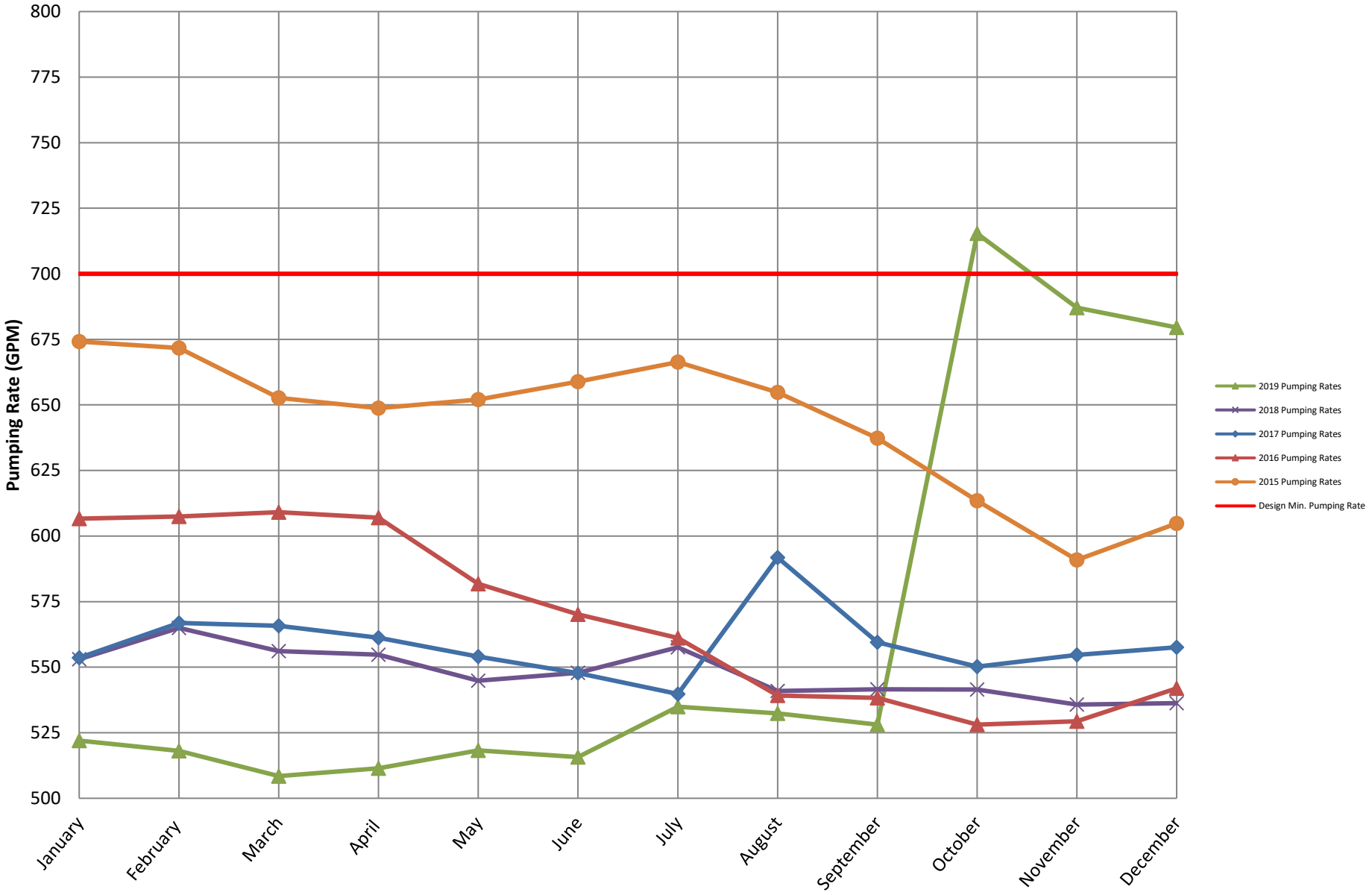


Chart 15: Recovery Well Groundwater Elevations: 2015, 2016, 2017, 2018 & 2019

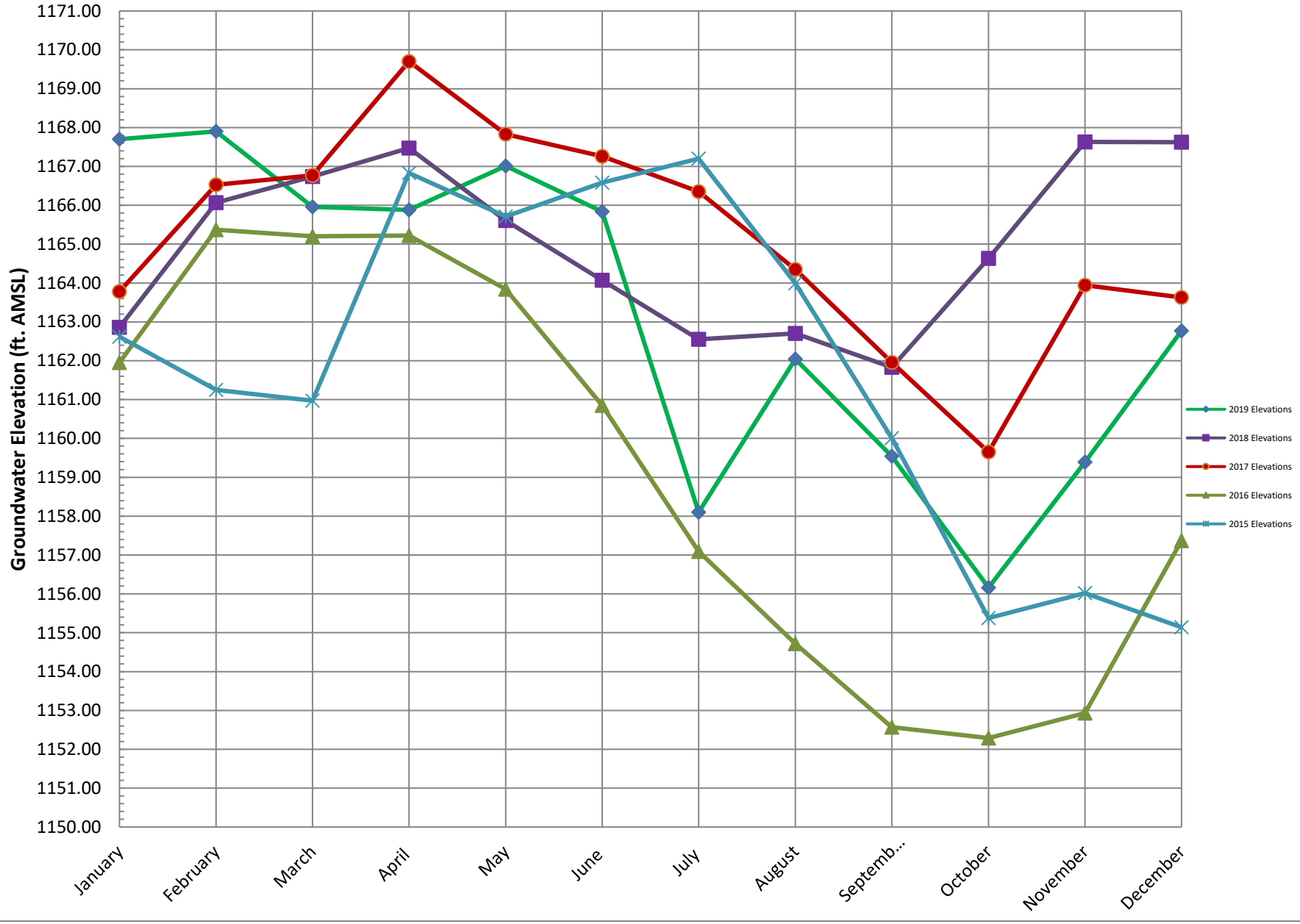
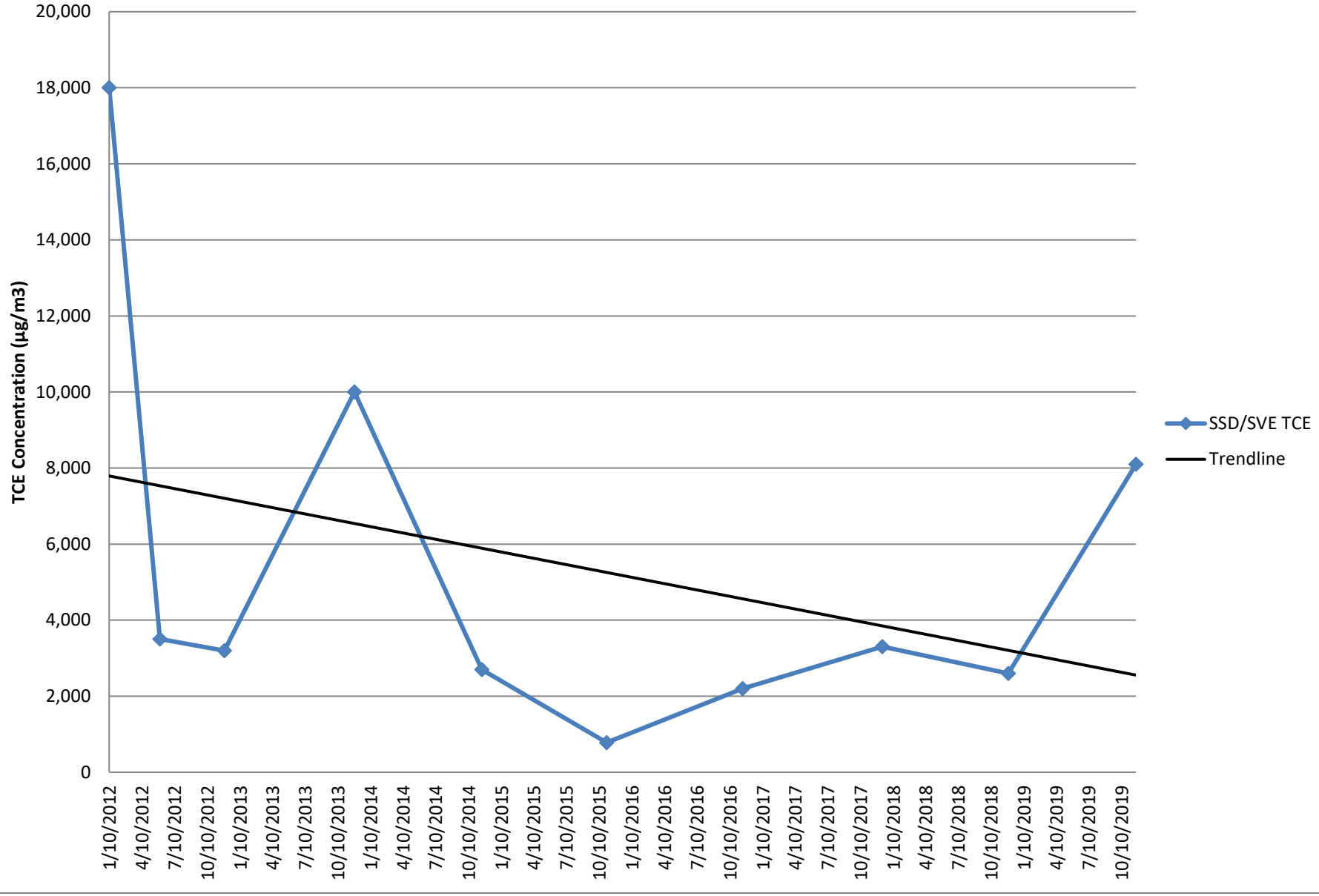


Chart 16: SSD/SVE Exhaust
TCE Concentrations (µg/m3)



APPENDIX E

ANALYTICAL RESULTS FROM 2019 ANNUAL SAMPLING EVENT, NOVEMBER AND DECEMBER 2019 MONTHLY SAMPLING EVENTS

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Wednesday, December 04, 2019

Mr. Christopher Gabriel
GeoLogic NY, Inc.
37 Copeland Ave.
Homer, NY 13077

TEL: 607 749-5000

Project: 210087 2019 ANNUAL
RE: Analytical Results Order No.: 1919795

Dear Mr. Christopher Gabriel:

Life Science Laboratories, Inc. received 18 sample(s) on 11/26/2019 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

David J Prichard
Project Manager

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-001A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-1S*
W Order:	1919795	**Collection Date:**	11/21/19 15:15
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9493.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	11/27/19 16:35
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	11/27/19 16:35
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 16:35
Tetrachloroethene	ND		0.50	0.10	µg/L	1	11/27/19 16:35
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 16:35
Trichloroethene	1.01		0.50	0.10	µg/L	1	11/27/19 16:35
Vinyl chloride	ND		1.00	0.33	µg/L	1	11/27/19 16:35
Surr: 1,2-Dichloroethane-d4	125		75-130	0.16	%REC	1	11/27/19 16:35
Surr: Toluene-d8	92		75-125	0.10	%REC	1	11/27/19 16:35
Surr: 4-Bromofluorobenzene	100		75-125	0.10	%REC	1	11/27/19 16:35

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-002A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-1D*
W Order:	1919795	**Collection Date:**	11/21/19 15:20
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9494.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	11/27/19 17:07
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	11/27/19 17:07
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 17:07
Tetrachloroethene	ND		0.50	0.10	µg/L	1	11/27/19 17:07
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 17:07
Trichloroethene	0.72		0.50	0.10	µg/L	1	11/27/19 17:07
Vinyl chloride	ND		1.00	0.33	µg/L	1	11/27/19 17:07
Surr: 1,2-Dichloroethane-d4	132	S	75-130	0.16	%REC	1	11/27/19 17:07
Surr: Toluene-d8	91		75-125	0.10	%REC	1	11/27/19 17:07
Surr: 4-Bromofluorobenzene	104		75-125	0.10	%REC	1	11/27/19 17:07

Qualifiers:					
	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-003A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-2S*
W Order:	1919795	**Collection Date:**	11/22/19 9:20
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9495.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	11/27/19 17:39
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	11/27/19 17:39
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 17:39
Tetrachloroethene	ND		0.50	0.10	µg/L	1	11/27/19 17:39
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 17:39
Trichloroethene	1.35		0.50	0.10	µg/L	1	11/27/19 17:39
Vinyl chloride	ND		1.00	0.33	µg/L	1	11/27/19 17:39
Surr: 1,2-Dichloroethane-d4	128		75-130	0.16	%REC	1	11/27/19 17:39
Surr: Toluene-d8	94		75-125	0.10	%REC	1	11/27/19 17:39
Surr: 4-Bromofluorobenzene	103		75-125	0.10	%REC	1	11/27/19 17:39

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 12/04/19 7:48 913633 **Project Supervisor:** David J Prichard

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-004A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-4D*
W Order:	1919795	**Collection Date:**	11/21/19 17:35
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9588.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		10.0	2.00	µg/L	20	12/03/19 16:27
1,1-Dichloroethene	ND		10.0	3.20	µg/L	20	12/03/19 16:27
cis-1,2-Dichloroethene	ND		10.0	2.00	µg/L	20	12/03/19 16:27
Tetrachloroethene	ND		10.0	2.00	µg/L	20	12/03/19 16:27
trans-1,2-Dichloroethene	ND		10.0	2.00	µg/L	20	12/03/19 16:27
Trichloroethene	ND		10.0	2.00	µg/L	20	12/03/19 16:27
Vinyl chloride	ND		20.0	6.60	µg/L	20	12/03/19 16:27
Surr: 1,2-Dichloroethane-d4	105		75-130	3.20	%REC	20	12/03/19 16:27
Surr: Toluene-d8	97		75-125	2.00	%REC	20	12/03/19 16:27
Surr: 4-Bromofluorobenzene	107		75-125	2.00	%REC	20	12/03/19 16:27

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-005A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-5S*
W Order:	1919795	**Collection Date:**	11/21/19 14:10
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1131.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/02/19 22:57
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/02/19 22:57
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/02/19 22:57
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/02/19 22:57
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/02/19 22:57
Trichloroethene	ND		0.50	0.10	µg/L	1	12/02/19 22:57
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/02/19 22:57
Surr: 1,2-Dichloroethane-d4	109		75-130	0.16	%REC	1	12/02/19 22:57
Surr: Toluene-d8	98		75-125	0.10	%REC	1	12/02/19 22:57
Surr: 4-Bromofluorobenzene	101		75-125	0.10	%REC	1	12/02/19 22:57

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 12/04/19 7:48 913643 **Project Supervisor:** David J Prichard

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-006A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-5D*
W Order:	1919795	**Collection Date:**	11/21/19 14:25
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9589.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 16:59
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 16:59
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 16:59
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 16:59
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 16:59
Trichloroethene	2.08		0.50	0.10	µg/L	1	12/03/19 16:59
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 16:59
Surr: 1,2-Dichloroethane-d4	107		75-130	0.16	%REC	1	12/03/19 16:59
Surr: Toluene-d8	97		75-125	0.10	%REC	1	12/03/19 16:59
Surr: 4-Bromofluorobenzene	107		75-125	0.10	%REC	1	12/03/19 16:59

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-007A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-6*
W Order:	1919795	**Collection Date:**	11/21/19 11:25
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1133.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 0:06
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 0:06
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 0:06
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 0:06
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 0:06
Trichloroethene	1.11		0.50	0.10	µg/L	1	12/03/19 0:06
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 0:06
Surr: 1,2-Dichloroethane-d4	114		75-130	0.16	%REC	1	12/03/19 0:06
Surr: Toluene-d8	97		75-125	0.10	%REC	1	12/03/19 0:06
Surr: 4-Bromofluorobenzene	100		75-125	0.10	%REC	1	12/03/19 0:06

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-008A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-7*
W Order:	1919795	**Collection Date:**	11/22/19 14:00
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1134.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 0:41
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 0:41
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 0:41
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 0:41
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 0:41
Trichloroethene	1.83		0.50	0.10	µg/L	1	12/03/19 0:41
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 0:41
Surr: 1,2-Dichloroethane-d4	116		75-130	0.16	%REC	1	12/03/19 0:41
Surr: Toluene-d8	95		75-125	0.10	%REC	1	12/03/19 0:41
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	12/03/19 0:41

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-009A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-8*
W Order:	1919795	**Collection Date:**	11/21/19 12:00
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1135.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 1:15
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 1:15
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 1:15
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 1:15
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 1:15
Trichloroethene	1.44		0.50	0.10	µg/L	1	12/03/19 1:15
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 1:15
Surr: 1,2-Dichloroethane-d4	116		75-130	0.16	%REC	1	12/03/19 1:15
Surr: Toluene-d8	93		75-125	0.10	%REC	1	12/03/19 1:15
Surr: 4-Bromofluorobenzene	100		75-125	0.10	%REC	1	12/03/19 1:15

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-010A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-9*
W Order:	1919795	**Collection Date:**	11/22/19 14:15
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73 **Sample Size:** NA	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R33581
Revision:	12/04/19 7:48 **TestCode:** 8260W	**FileID:**	1-SAMP-n1136.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 1:50
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 1:50
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 1:50
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 1:50
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 1:50
Trichloroethene	0.74		0.50	0.10	µg/L	1	12/03/19 1:50
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 1:50
Surr: 1,2-Dichloroethane-d4	117		75-130	0.16	%REC	1	12/03/19 1:50
Surr: Toluene-d8	95		75-125	0.10	%REC	1	12/03/19 1:50
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	12/03/19 1:50

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-011A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-10S*
W Order:	1919795	**Collection Date:**	11/21/19 16:15
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73 **Sample Size:** NA	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R33581
Revision:	12/04/19 7:48 **TestCode:** 8260W	**FileID:**	1-SAMP-n1137.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 2:25
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 2:25
cis-1,2-Dichloroethene	0.14	J	0.50	0.10	µg/L	1	12/03/19 2:25
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 2:25
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 2:25
Trichloroethene	1.59		0.50	0.10	µg/L	1	12/03/19 2:25
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 2:25
Surr: 1,2-Dichloroethane-d4	121		75-130	0.16	%REC	1	12/03/19 2:25
Surr: Toluene-d8	94		75-125	0.10	%REC	1	12/03/19 2:25
Surr: 4-Bromofluorobenzene	103		75-125	0.10	%REC	1	12/03/19 2:25

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-012A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-10D*
W Order:	1919795	**Collection Date:**	11/21/19 16:20
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1138.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 2:59
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 2:59
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 2:59
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 2:59
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 2:59
Trichloroethene	1.69		0.50	0.10	µg/L	1	12/03/19 2:59
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 2:59
Surr: 1,2-Dichloroethane-d4	120		75-130	0.16	%REC	1	12/03/19 2:59
Surr: Toluene-d8	95		75-125	0.10	%REC	1	12/03/19 2:59
Surr: 4-Bromofluorobenzene	99		75-125	0.10	%REC	1	12/03/19 2:59

Qualifiers:					
	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-013A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-11*
W Order:	1919795	**Collection Date:**	11/22/19 13:00
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73 **Sample Size:** NA	**PrepDate:**	
ColumnID:	Rtx-VMS **%Moisture:**	**BatchNo:**	R33581
Revision:	12/04/19 7:48 **TestCode:** 8260W	**FileID:**	1-SAMP-n1139.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 3:34
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 3:34
cis-1,2-Dichloroethene	0.82		0.50	0.10	µg/L	1	12/03/19 3:34
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 3:34
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 3:34
Trichloroethene	4.40		0.50	0.10	µg/L	1	12/03/19 3:34
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 3:34
Surr: 1,2-Dichloroethane-d4	121		75-130	0.16	%REC	1	12/03/19 3:34
Surr: Toluene-d8	94		75-125	0.10	%REC	1	12/03/19 3:34
Surr: 4-Bromofluorobenzene	104		75-125	0.10	%REC	1	12/03/19 3:34

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-014A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-12S*
W Order:	1919795	**Collection Date:**	11/21/19 10:55
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1140.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 4:08
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 4:08
cis-1,2-Dichloroethene	0.15	J	0.50	0.10	µg/L	1	12/03/19 4:08
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 4:08
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 4:08
Trichloroethene	1.91		0.50	0.10	µg/L	1	12/03/19 4:08
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 4:08
Surr: 1,2-Dichloroethane-d4	124		75-130	0.16	%REC	1	12/03/19 4:08
Surr: Toluene-d8	94		75-125	0.10	%REC	1	12/03/19 4:08
Surr: 4-Bromofluorobenzene	103		75-125	0.10	%REC	1	12/03/19 4:08

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-015A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-12D*
W Order:	1919795	**Collection Date:**	11/22/19 13:20
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1141.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 4:42
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 4:42
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 4:42
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 4:42
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 4:42
Trichloroethene	1.62		0.50	0.10	µg/L	1	12/03/19 4:42
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 4:42
Surr: 1,2-Dichloroethane-d4	123		75-130	0.16	%REC	1	12/03/19 4:42
Surr: Toluene-d8	94		75-125	0.10	%REC	1	12/03/19 4:42
Surr: 4-Bromofluorobenzene	103		75-125	0.10	%REC	1	12/03/19 4:42

Qualifiers:				
	*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
	E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
	P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-016A**
Project:	210087 2019 Annual	**Client Sample ID:**	*MW-L16*
W Order:	1919795	**Collection Date:**	11/22/19 15:15
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1142.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 5:17
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 5:17
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 5:17
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 5:17
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 5:17
Trichloroethene	2.03		0.50	0.10	µg/L	1	12/03/19 5:17
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 5:17
Surr: 1,2-Dichloroethane-d4	129		75-130	0.16	%REC	1	12/03/19 5:17
Surr: Toluene-d8	95		75-125	0.10	%REC	1	12/03/19 5:17
Surr: 4-Bromofluorobenzene	100		75-125	0.10	%REC	1	12/03/19 5:17

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.

5854 Butternut Drive

East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919795-017A**
Project:	210087 2019 Annual	**Client Sample ID:**	*Trip Blank*
W Order:	1919795	**Collection Date:**	09/09/19 0:00
Matrix:	WATER Q	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-n1143.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 5:51
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 5:51
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 5:51
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 5:51
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 5:51
Trichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 5:51
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 5:51
Surr: 1,2-Dichloroethane-d4	124		75-130	0.16	%REC	1	12/03/19 5:51
Surr: Toluene-d8	98		75-125	0.10	%REC	1	12/03/19 5:51
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	12/03/19 5:51

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT: GeoLogic NY, Inc.
Project: 210087 2019 Annual
W Order: 1919795
Matrix: EQUIPMENT BLANK
Inst. ID: MS04_73 **Sample Size:** NA
ColumnID: Rtx-VMS **%Moisture:**
Revision: 12/04/19 7:48 **TestCode:** 8260W
Col Type:

Lab ID: 1919795-018A
Client Sample ID: *Equipment Blank*
Collection Date: 11/22/19 16:35
Date Received: 11/26/19 14:30
PrepDate:
BatchNo: R33581
FileID: 1-SAMP-n1144.D

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/03/19 6:26
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/03/19 6:26
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 6:26
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/03/19 6:26
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 6:26
Trichloroethene	ND		0.50	0.10	µg/L	1	12/03/19 6:26
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/03/19 6:26
Surr: 1,2-Dichloroethane-d4	127		75-130	0.16	%REC	1	12/03/19 6:26
Surr: Toluene-d8	92		75-125	0.10	%REC	1	12/03/19 6:26
Surr: 4-Bromofluorobenzene	101		75-125	0.10	%REC	1	12/03/19 6:26

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

GeoLogic NY, P.C.
CHAIN OF CUSTODY RECORD

1919795

CLIENT: GeoLogic

SAMPLER NAME: C. T. Gabriel

PROJECT: 210087 2019 Annual Sampling 1of 2

SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			NO. of SAMPLES	ANALYSIS REQUIRED
			WATER	SOIL	AIR		
001 MW-1S	11-21	15:15	X			2	See Below
002 MW-1D	11-21	15:20	X			2	See Below
003 MW-2S	11-22	9:20	X			2	See Below
004 MW-4D	11-21	17:35	X			2	See Below
005 MW-5S	11-21	14:10	X			2	See Below
006 MW-5D	11-21	14:25	X			2	See Below
007 MW-6	11-21	11:25	X			2	See Below
008 MW-7	11-22	14:00	X			2	See Below
009 MW-8	11-21	12:00	X			2	See Below

Relinquished by: [signature] of GeoLogic	Date 11/22/19	Time 16:45	Received by: GeoLogic Sample Refrigerator	Date 11/22/19	Time 16:45
Relinquished by: GeoLogic Sample Refrigerator	Date 11/26/19	Time 12:00	Received by: [signature]	Date 11/26/19	Time 1240
Relinquished by: [signature]	Date	Time	Received for Lab by: [signature]	Date 11-26-19	Time 14:30

Method of Shipment: LAB PICK-UP X TEMP 2.6°C Samples Received On Ice

COMMENTS:

Sample Analysis (1 µg/L reporting limit)

EPA 8260B for

1,1,1-Trichloroethane

1,1-Dichloroethene

1,2-Dichloroethene

Trichloroethene

Tetrachloroethene

Vinyl Chloride

P.O. BOX 350 HOMER, NEW YORK 13077 (607) 749-5000 FAX (607) 749-5063

GeoLogic NY, P.C.
CHAIN OF CUSTODY RECORD

1919795

CLIENT: GeoLogic

SAMPLER NAME:

PROJECT: 210087 2019 Annual Sampling 2of 2

C. T. Gabriel

SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			NO. of SAMPLES	ANALYSIS REQUIRED
			WATER	SOIL	AIR		
010 MW-9	11-22	14:15	X			2	See Below
011 MW-10S	11-21	16:15	X			2	See Below
012 MW-10D	11-21	16:20	X			2	See Below
013 MW-11	11-22	13:00	X			2	See Below
014 MW-12S	11-21	10:55	X			2	See Below
015 MW-12D	11-22	13:20	X			2	See Below
016 MW-L16	11-22	15:15	X			2	See Below
017 Trip Blank	9-9		X			2	See Below
018 Equipment Blank	11-22	16:35	X			2	See Below

Relinquished by:	Date	Time	Received by:	Date	Time
Board of Geologic	11/22/19	16:45	Geologic Sample Refrigerator	11/22/19	16:45
Relinquished by:	Date	Time	Received by:	Date	Time
Geologic Sample Refrigerator	11/26/19	12:10		11/26/19	12:10
Relinquished by:	Date	Time	Received for Lab by:	Date	Time
				11-26-19	14:30

Method of Shipment: LAB PICK-UP X TEMP 2.6°c Samples Received On Ice

COMMENTS:

Sample Analysis (1 µg/L reporting limit)

EPA 8260B for

1,1,1-Trichloroethane

1,1-Dichloroethene

1,2-Dichloroethene

Trichloroethene

Tetrachloroethene

Vinyl Chloride

P.O. BOX 350 HOMER, NEW YORK 13077 (607) 749-5000 FAX (607) 749-5063

Life Science Laboratories, Inc.

Sample Receipt Checklist

Client Name: **GEOLOGIC**

Date and Time Received: **11/26/2019 2:30:00 PM**

Work Order Number: **1919795**

Received by: gis

Checklist completed by: JS 11-26-19 (Initials / Date) Reviewed by: ~~DXP~~ 11/27 (Initials / Date)

Delivery Method: Courier

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Applicable ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Comments:

Corrective Action:

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Wednesday, December 04, 2019

Mr. Christopher Gabriel
GeoLogic NY, Inc.
37 Copeland Ave.
Homer, NY 13077

TEL: 607 749-5000

Project: 210087
RE: Analytical Results Order No.: 1919793

Dear Mr. Christopher Gabriel:

Life Science Laboratories, Inc. received 4 sample(s) on 11/26/2019 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

David J Prichard
Project Manager

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919793-001A**
Project:	210087	**Client Sample ID:**	*Cascade*
W Order:	1919793	**Collection Date:**	11/21/19 9:30
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9489.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	11/27/19 14:28
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	11/27/19 14:28
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 14:28
Tetrachloroethene	ND		0.50	0.10	µg/L	1	11/27/19 14:28
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 14:28
Trichloroethene	0.26	J	0.50	0.10	µg/L	1	11/27/19 14:28
Vinyl chloride	ND		1.00	0.33	µg/L	1	11/27/19 14:28
Surr: 1,2-Dichloroethane-d4	118		75-130	0.16	%REC	1	11/27/19 14:28
Surr: Toluene-d8	94		75-125	0.10	%REC	1	11/27/19 14:28
Surr: 4-Bromofluorobenzene	104		75-125	0.10	%REC	1	11/27/19 14:28

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.

5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919793-002A**
Project:	210087	**Client Sample ID:**	*Tower Discharge*
W Order:	1919793	**Collection Date:**	11/21/19 9:45
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9490.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	11/27/19 14:59
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	11/27/19 14:59
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 14:59
Tetrachloroethene	ND		0.50	0.10	µg/L	1	11/27/19 14:59
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 14:59
Trichloroethene	0.57		0.50	0.10	µg/L	1	11/27/19 14:59
Vinyl chloride	ND		1.00	0.33	µg/L	1	11/27/19 14:59
Surr: 1,2-Dichloroethane-d4	122		75-130	0.16	%REC	1	11/27/19 14:59
Surr: Toluene-d8	93		75-125	0.10	%REC	1	11/27/19 14:59
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	11/27/19 14:59

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 12/04/19 7:52 913628 **Project Supervisor:** David J Prichard

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919793-003A**
Project:	210087	**Client Sample ID:**	*Tower Influent*
W Order:	1919793	**Collection Date:**	11/21/19 9:55
Matrix:	WATER	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9491.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	11/27/19 15:31
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	11/27/19 15:31
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 15:31
Tetrachloroethene	ND		0.50	0.10	µg/L	1	11/27/19 15:31
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 15:31
Trichloroethene	1.32		0.50	0.10	µg/L	1	11/27/19 15:31
Vinyl chloride	ND		1.00	0.33	µg/L	1	11/27/19 15:31
Surr: 1,2-Dichloroethane-d4	124		75-130	0.16	%REC	1	11/27/19 15:31
Surr: Toluene-d8	93		75-125	0.10	%REC	1	11/27/19 15:31
Surr: 4-Bromofluorobenzene	104		75-125	0.10	%REC	1	11/27/19 15:31

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1919793-004A**
Project:	210087	**Client Sample ID:**	*Trip Blank*
W Order:	1919793	**Collection Date:**	09/19/19 0:00
Matrix:	WATER Q	**Date Received:**	11/26/19 14:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33581
Revision:	12/04/19 7:48	**TestCode:** 8260W	**FileID:** 1-SAMP-R9492.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	11/27/19 16:03
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	11/27/19 16:03
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 16:03
Tetrachloroethene	ND		0.50	0.10	µg/L	1	11/27/19 16:03
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 16:03
Trichloroethene	ND		0.50	0.10	µg/L	1	11/27/19 16:03
Vinyl chloride	ND		1.00	0.33	µg/L	1	11/27/19 16:03
Surr: 1,2-Dichloroethane-d4	130		75-130	0.16	%REC	1	11/27/19 16:03
Surr: Toluene-d8	93		75-125	0.10	%REC	1	11/27/19 16:03
Surr: 4-Bromofluorobenzene	102		75-125	0.10	%REC	1	11/27/19 16:03

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 12/04/19 7:59 913630 **Project Supervisor:** David J Prichard

GeoLogic NY, P.C.
CHAIN OF CUSTODY RECORD

1919793

CLIENT: GeoLogic

PROJECT: 210087

SAMPLERS NAME(S):

C. T. Gabriel

	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			NO. of SAMPLES	ANALYSIS REQUIRED
				WATER	SOIL	AIR		
001	Cascade	11-21	9:30	X			2	See Below
002	Tower Discharge	11-21	9:45	X			2	"
003	Tower Influent	11-21	9:55	X			2	"
004	Trip Blank	9-19		X			2	"

Relinquished by:	Date	Time	Received by:	Date	Time
Board of Geologists	11/21/19	13:45	Geologic Sample Refrigerator	11/21/19	13:45
Relinquished by:	Date	Time	Received by:	Date	Time
Geologic Sample Refrigerator	11/26/19	12:10		11/26/19	1210
Relinquished by:	Date	Time	Received for Lab by:	Date	Time
				11-26-19	14:30

Method of Shipment: LAB PICK UP X TEMP 2.6° Samples Received On Ice

COMMENTS:

Sample Analysis (1 µg/L reporting limit)

EPA 8260B for

1,1,1-Trichloroethane

1,1-Dichloroethene

1,2-Dichloroethene

Trichloroethene

Tetrachloroethene

Vinyl Chloride

P.O. BOX 350 HOMER, NEW YORK 13077 (607) 749-5000 FAX (607) 749-5063

Life Science Laboratories, Inc.

Sample Receipt Checklist

Client Name: **GEOLOGIC**

Date and Time Received: **11/26/2019 2:30:00 PM**

Work Order Number: **1919793**

Received by: gis

Checklist completed by: JS (Initials) 11-26-19 (Date)

Reviewed by: DP (Initials) 11/27/19 (Date)

Delivery Method: Courier

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Applicable ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Comments:

Corrective Action:

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 **(315) 445-1900**

Tuesday, December 24, 2019

Mr. Christopher Gabriel
GeoLogic NY, Inc.
37 Copeland Ave.
Homer, NY 13077

TEL: 607 749-5000

Project: 210087
RE: Analytical Results Order No.: 1921049

Dear Mr. Christopher Gabriel:

Life Science Laboratories, Inc. received 4 sample(s) on 12/18/2019 for the analyses presented in the following report. Sample results relate only to the samples as received by the laboratory.

Very truly yours,
Life Science Laboratories, Inc.

David J Prichard
Project Manager

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1921049-001A**
Project:	210087	**Client Sample ID:**	*Cascade*
W Order:	1921049	**Collection Date:**	12/17/19 8:45
Matrix:	WATER	**Date Received:**	12/18/19 17:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33619
Revision:	12/24/19 8:23	**TestCode:** 8260W	**FileID:** 1-SAMP-R9780.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/19/19 18:47
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/19/19 18:47
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 18:47
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/19/19 18:47
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 18:47
Trichloroethene	0.31	J	0.50	0.10	µg/L	1	12/19/19 18:47
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/19/19 18:47
Surr: 1,2-Dichloroethane-d4	126		75-130	0.16	%REC	1	12/19/19 18:47
Surr: Toluene-d8	90		75-125	0.10	%REC	1	12/19/19 18:47
Surr: 4-Bromofluorobenzene	106		75-125	0.10	%REC	1	12/19/19 18:47

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 12/24/19 8:24 915021 **Project Supervisor:** David J Prichard

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1921049-002A**
Project:	210087	**Client Sample ID:**	*Tower Discharge*
W Order:	1921049	**Collection Date:**	12/17/19 9:15
Matrix:	WATER	**Date Received:**	12/18/19 17:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33619
Revision:	12/24/19 8:23	**TestCode:** 8260W	**FileID:** 1-SAMP-R9781.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/19/19 19:19
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/19/19 19:19
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 19:19
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/19/19 19:19
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 19:19
Trichloroethene	0.80		0.50	0.10	µg/L	1	12/19/19 19:19
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/19/19 19:19
Surr: 1,2-Dichloroethane-d4	123		75-130	0.16	%REC	1	12/19/19 19:19
Surr: Toluene-d8	89		75-125	0.10	%REC	1	12/19/19 19:19
Surr: 4-Bromofluorobenzene	110		75-125	0.10	%REC	1	12/19/19 19:19

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 12/24/19 8:24 915022 **Project Supervisor:** David J Prichard

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1921049-003A**
Project:	210087	**Client Sample ID:**	*Tower Influent*
W Order:	1921049	**Collection Date:**	12/17/19 9:25
Matrix:	WATER	**Date Received:**	12/18/19 17:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33619
Revision:	12/24/19 8:23	**TestCode:** 8260W	**FileID:** 1-SAMP-R9782.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/19/19 19:51
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/19/19 19:51
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 19:51
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/19/19 19:51
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 19:51
Trichloroethene	1.66		0.50	0.10	µg/L	1	12/19/19 19:51
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/19/19 19:51
Surr: 1,2-Dichloroethane-d4	126		75-130	0.16	%REC	1	12/19/19 19:51
Surr: Toluene-d8	88		75-125	0.10	%REC	1	12/19/19 19:51
Surr: 4-Bromofluorobenzene	112		75-125	0.10	%REC	1	12/19/19 19:51

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Life Science Laboratories, Inc.
5854 Butternut Drive
East Syracuse, NY 13057 (315) 445-1900

Analytical Results

StateCertNo: 10248

CLIENT:	GeoLogic NY, Inc.	**Lab ID:**	**1921049-004A**
Project:	210087	**Client Sample ID:**	*Trip Blank*
W Order:	1921049	**Collection Date:**	09/09/19 0:00
Matrix:	WATER Q	**Date Received:**	12/18/19 17:30
Inst. ID:	MS04_73	**Sample Size:** NA	**PrepDate:**
ColumnID:	Rtx-VMS	**%Moisture:**	**BatchNo:** R33619
Revision:	12/24/19 8:23	**TestCode:** 8260W	**FileID:** 1-SAMP-R9783.D
Col Type:			

Analyte	Result	Qual	PQL	MDL	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS					**SW8260C/5030C**		
1,1,1-Trichloroethane	ND		0.50	0.10	µg/L	1	12/19/19 20:23
1,1-Dichloroethene	ND		0.50	0.16	µg/L	1	12/19/19 20:23
cis-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 20:23
Tetrachloroethene	ND		0.50	0.10	µg/L	1	12/19/19 20:23
trans-1,2-Dichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 20:23
Trichloroethene	ND		0.50	0.10	µg/L	1	12/19/19 20:23
Vinyl chloride	ND		1.00	0.33	µg/L	1	12/19/19 20:23
1,2-Dichloroethane-d4	12.9		0.10	0.16	µg/L	1	12/19/19 20:23
Toluene-d8	9.07		0.10	0.10	µg/L	1	12/19/19 20:23
4-Bromofluorobenzene	11.1		0.10	0.10	µg/L	1	12/19/19 20:23

Qualifiers:

*	Value may exceed the Acceptable Level	B	Analyte detected in the associated Method Blank
E	Value exceeds the instrument calibration range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below the PQL	ND	Not Detected at the Practical Quantitation Limit (PQL)
P	Prim./Conf. column %D or RPD exceeds limit	S	Spike Recovery outside accepted recovery limits

Print Date: 12/24/19 8:29 915024 **Project Supervisor:** David J Prichard

GeoLogic NY, P.C.

CHAIN OF CUSTODY RECORD

1921049

CLIENT: GeoLogic

PROJECT: 210087

SAMPLERS NAME(S):

C. T. Gabriel

	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			NO. of SAMPLES	ANALYSIS REQUIRED
				WATER	SOIL	AIR		
001	Cascade	12-17	8:45	X			2	See Below
002	Tower Discharge	12-17	9:15	X			2	"
003	Tower Influent	12-17	9:25	X			2	"
004	Trip Blank	9-9		X			2	"

Relinquished by:	Date	Time	Received by:	Date	Time
Geologic NY P.C.	12/17/19	11:30	Geologic Sample Refrigerator	12/17/19	11:30
Relinquished by:	Date	Time	Received by:	Date	Time
Geologic Sample Refrigerator	12/18/19	1535	Bill Donaldson	12/18/19	1535
Relinquished by:	Date	Time	Received for Lab by:	Date	Time
Bill Donaldson	12/18/19			12-18-19	17:30

Method of Shipment: LAB PICK UP X TEMP 3.2°C

COMMENTS:

Sample Analysis (1 µg/L reporting limit)

EPA 8260B for

1,1,1-Trichloroethane

1,1-Dichloroethene

1,2-Dichloroethene (cis- & trans-)

Trichloroethene

Tetrachloroethene

Vinyl Chloride

P.O. BOX 350 HOMER, NEW YORK 13077 (607) 749-5000 FAX (607) 749-5063

Life Science Laboratories, Inc.

Sample Receipt Checklist

Client Name: **GEOLOGIC** Date and Time Received: **12/18/2019 5:30:00 PM**

Work Order Number: **1921049** Received by: gis

Checklist completed by: YS 12-18-19 Reviewed by: DP 12/19/19
Initials Date Initials Date

Delivery Method: Courier

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Applicable ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Comments:

Corrective Action:

APPENDIX F

SSD/SVE ANALYTICAL RESULTS FROM 2019 SAMPLING EVENT

CENTEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, NY 13206
Phone (315) 431-9730 * Emergency 24/7 (315) 416-2752
NYSDOH ELAP Certificate No. 11830

Analytical Report

Chris Gabriel
GeoLogic NY, PC
37 Copeland Ave.
Homer, NY 13077

TEL: 607-749-5000
FAX 607-749-5063

RE: 210087

Tuesday, November 26, 2019
Order No.: C1911041

Dear Chris Gabriel:

Centek Laboratories, LLC received 1 sample(s) on 11/21/2019 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Centek Laboratories performs all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services. Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

Thank you for using Centek Laboratories. This report can not be reproduced except in its entirety, without prior written authorization.

Sincerely,

William Dobbin
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable

for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, Tetrahydrofuran, 4-PCH, sulfur derived and silcon series compounds.

Centek Laboratories, LLC Terms and Conditions

Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website www.CentekLabs.com. Samples received after 3:00pm are considered to be a part of the next day's business.

Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit

application on file to extend credit. Purchase orders or checks information must be submitted for us to release results

Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:
Same day TAT = 200%
Next business day TAT by Noon = 150%
Next business day TAT by 6:00pm = 100%
Second business day TAT by 6:00pm = 75%
Third business day TAT by 6:00pm = 50%
Fourth business day TAT by 6:00pm = 35%
Fifth business day = Standard

Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage to property and claims of third parties.

CENTEK LABORATORIES, LLC

Date: *02-Dec-19*

CLIENT: GeoLogic NY, PC

Project: 210087

Lab Order: C1911041

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80
Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

NYSDEC ASP samples:
Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg (±2", vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg (±1", vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg,±1". Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

Centek Labs - Chain of Custody

Centek Laboratories
143 Midler Park Drive
Syracuse, NY 13206
315-431-9730
www.CentekLabs.com

Vapor Intrusion & IAQ

Site Name:
Project: 210087
PO#: ~~210078~~ C to 210087
Quote # Q-SP
Canister Order #: 8127

Detection Limit	Report Level
☐ 5ppbv	☑ Level I
☑ 1ug/M3	☐ Level II
☐ 1ug/M3 + 0.2 NYS	☐ Cat "B" Like
☐	☐

TAT Turnaround Time:	Check One	Rush TAT Surcharge %	Due Date:
5 Business Days	☑	0%	
4 Business Days	☐	25%	
3 Business Days	☐	50%	
2 Business Days	☐	75%	
*Next Day by 5pm	☐	100%	
*Next Day by Noon	☐	150%	
*Same Day	☐	200%	

*For Same and Next Day TAT Please Notify Lab

Company: Geologic NY, P.C
Report to:
Address: P.O. Box 350
City, State, Zip Homer, NY 13077
Email: Geologic NY @ Geologic.NET
CRESS @ Geologic.NET
Phone: 607-749-5000

Company:
Check Here If Same: ☑
Invoice to:
Address:
City, State, Zip
Email:
Phone:

Sample ID	Date Sampled	Canister Number	Regulator Number	Analysis Request	Field Vacuum Start / Stop	Labs Vacuum** Rec'V/Analysis	Comments
SSD/SVE	11-20-2019	298	1462	TO-15 Analysis	-30 / -6	-6 / -6	Sample Time: 15:35
				for the following	/	/	
				only:	/	/	
				1,1,1-Trichloroethane	/	/	
				1,1-Dichloroethene	/	/	
				1,2-Dichloroethene (Cis & Trans)	/	/	
				Trichloroethene	/	/	
				Tetrachloroethene	/	/	
				Vinyl chloride	/	/	
					/	/	
					/	/	
					/	/	
					/	/	
					/	/	
					/	/	
					/	/	
					/	/	
					/	/	
					/	/	

Chain of Custody	Print Name	Signature	Date/Time	Courier: CIRCLE ONE
Sampled by:	C.F. GABRIEL of Geologic NY		11/20/19 17:45	FedEx UPS Pickup/Dropoff
Relinquished by:	Geologic to FedEx	FedEx 778188825765	11/21/19 17:45	**For LAB USE ONLY
Received at Lab by:	R. PELLEGRINO		11/21/19	Work Order # C1911041

***Chain of Custody must be completed in full. Lack of any missing information will affect your Turn Around Times (TAT)

*** By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.

CENTEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name: **GEOLOGIC** Date and Time Received **11/21/2019**

Work Order Number **C1911041** Received by: RG

Checklist completed by Robin Gushke 11/22/19 (Signature / Date) Reviewed by WD 11/22/19 (Initials / Date)

Matrix: Carrier name: UPS - Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
COC signed when relinquished and received?	Yes ☑	No ☐	
COC agrees with sample labels?	Yes ☑	No ☐	
COC completely filled out?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section bel

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

QC'd By: WD DATE: 12/2/19

CENTEK LABORATORIES, LLC

Date: *02-Dec-19*

CLIENT: GeoLogic NY, PC
Project: 210087
Lab Order: C1911041

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1911041-001A	SSD/SVE	288, 1462	11/20/2019	11/21/2019

Centek Laboratories, LLC

02-Dec-19

Lab Order: C1911041
Client: GeoLogic NY, PC
Project: 210087

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1911041-001A	SSD/SVE	11/20/2019	Air	1ug/M3 by Method TO15			11/25/2019
				1ug/M3 by Method TO15			11/23/2019
				1ug/M3 by Method TO15			11/22/2019

Centek Laboratories, LLC

Date: *26-Nov-19*

CLIENT:	GeoLogic NY, PC	**Client Sample ID:**	SSD/SVE
Lab Order:	C1911041	**Tag Number:**	288, 1462
Project:	210087	**Collection Date:**	11/20/2019
Lab ID:	C1911041-001A	**Matrix:**	AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		**FLD**				Analyst:
Lab Vacuum In	-6			"Hg		11/21/2019
Lab Vacuum Out	-30			"Hg		11/21/2019
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	2.1	0.15		ppbV	1	11/22/2019 5:43:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	11/22/2019 5:43:00 PM
cis-1,2-Dichloroethene	9.5	1.5		ppbV	10	11/23/2019 11:06:00 PM
Tetrachloroethylene	3.6	1.5		ppbV	10	11/23/2019 11:06:00 PM
trans-1,2-Dichloroethene	0.13	0.15	J	ppbV	1	11/22/2019 5:43:00 PM
Trichloroethene	1500	360		ppbV	2430	11/25/2019 11:10:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	11/22/2019 5:43:00 PM
Surr: Bromofluorobenzene	89.0	70-130		%REC	1	11/22/2019 5:43:00 PM

Qualifiers:

SC	Sub-Contracted	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	DL	Detection Limit

Centek Laboratories, LLC

Date: *26-Nov-19*

CLIENT:	GeoLogic NY, PC	**Client Sample ID:**	SSD/SVE
Lab Order:	C1911041	**Tag Number:**	288, 1462
Project:	210087	**Collection Date:**	11/20/2019
Lab ID:	C1911041-001A	**Matrix:**	AIR

Analyses	Result	DL	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		**TO-15**				Analyst: **RJP**
1,1,1-Trichloroethane	11	0.82		ug/m3	1	11/22/2019 5:43:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	11/22/2019 5:43:00 PM
cis-1,2-Dichloroethene	38	5.9		ug/m3	10	11/23/2019 11:06:00 PM
Tetrachloroethylene	24	10		ug/m3	10	11/23/2019 11:06:00 PM
trans-1,2-Dichloroethene	0.52	0.59	J	ug/m3	1	11/22/2019 5:43:00 PM
Trichloroethene	8100	1900		ug/m3	2430	11/25/2019 11:10:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	11/22/2019 5:43:00 PM

Qualifiers:

SC	Sub-Contracted	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	DL	Detection Limit