Periodic Review Report

(February 13, 2024 to February 13, 2025)

January 2025
Revised May 2025

TRC Project No.: 599178.0000.0000

Vanchlor Landfill Site
NYSDEC Site No. 932039
Lockport, New York

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1.0 Site Overview

1.1 Site Location & Description

The Vanchlor Landfill Site (herein referred to as the "Site" or "Landfill Site") is located at 600 Mill Street in the Town of Lockport, County of Niagara, New York and is identified as SBL #95.17-1-56.11 on the Town of Lockport Tax Map (see **Figures 1 and 2**). The Site is located along the top of the Niagara Escarpment and consists of a 2.5-acre landfill, which is a portion of a larger 16.44-acre parcel, that was used to dispose of process wastes from the nearby VanDeMark Chemical Inc. (VDM) Facility from 1957 until 1982. Eighteen Mile Creek is located to the south and west and approximately 100-feet vertically below the Site at the base of the Escarpment. In 1999, Vanchlor Chemical Inc. (Vanchlor) purchased the aluminum chloride manufacturing facility (located at 555 West Jackson Street, Lockport, NY) from VDM. The VDM's primary Facility (located at 400 Mill Street, Lockport, NY) is approximately ¼ mile to the east-southeast and the aluminum chloride Vanchlor Facility is located southeast of the landfill (see **Figure 2**).

The Site is bounded by Mill Street to the north, Somerset Railroad Corp corridor to the southeast, Twin Lakes Chemical Inc. beyond the rail corridor to the east, Plank Road, and the City of Lockport Wastewater Treatment facility to the west.

1.2 Regulatory Status

The Site is monitored under the New York State Inactive Hazardous Waste Disposal Site Remedial Program administered by the New York State Department of Environmental Conservation (NYSDEC) and has been assigned Site No. 932039. Based on historic use, the NYSDEC designated the Site as a Class 4 Inactive Hazardous Waste Disposal Site, which indicates that the Site was properly closed, but requires continued management. Following the expiration of the Post-Closure Resource Conservation Recovery Act (RCRA) Permit #9-2909-00049/0003 in September 2013, the NYSDEC requested that Vanchlor (the current property holder) enter into an Order on Consent which was executed July 10, 2014 (Order). The Order replaced the permit as the legal basis for continued fulfillment of operation, maintenance, and monitoring requirements previously contained in the permit and to be consistent with the provisions of the existing deed restrictions on the property recorded with the Niagara County Clerk on October 5, 1999.

Residual contamination in groundwater and monitoring of Eighteen Mile Creek surface water is currently being managed under a NYSDEC-approved Site Management Plan (SMP) dated January 2015 (Ref. 1).

1.3 Nature & Extent of Contamination

Landfilling activities at the Site began in 1957 and continued until 1982 which reportedly consisted primarily of waste by-products from the manufacture of silicon tetrachloride (from NYSDEC Module III, Part 373 Permit, July 2008). The landfilled wastes were deposited in 55-gallon drums and placed in trenches with crushed limestone (to enhance the neutralization of the acidic wastes).

Prior to remediation, the contaminants of primary concern (COPCs) were by-products from the manufacture of silicon tetrachloride. The results of the initial investigation, and on-going post-closure SMP groundwater monitoring activities indicate elevated residual concentrations of metals and chlorinated volatile organic compounds (cVOCs) in groundwater within the landfill

footprint. None of these constituents have been detected in downgradient surface water of Eighteen Mile Creek.

1.4 Site Remedial Program

In August 1987, the Landfill Site closure was completed in accordance with a NYSDEC-approved Closure Plan (July 1982) that included the installation of a final cover system consisting of two feet of compacted clay overlain by a drainage layer of sand and loam soil with a vegetative cover (i.e., grass). Currently, wooded areas surround the capped, grass-covered landfill. The following construction activities were performed to complete the approved cover system:

- Site grading and proof rolling;
- Installation of a pan-lysimeter;
- Lime application;
- Installation of an interceptor trench in perimeter ditch;
- Construction of a two-foot clay cover including lining of the ditch with clay;
- Addition of loam and sand drainage layers; and
- Addition of topsoil layer and seeding.

Following closure and since January 1987, groundwater from six monitoring wells, identified as D-55, VDM-9 (1987 to 2013) and replacement well VDM-9R (2014 to present), VDM-10, VDM-11, VDM-12 (typically dry), and VDM-14 (1987 to 2007) and replacement well VDM-14R (2008 to present), along with surface water from Eighteen Mile Creek, have been monitored semi-annually (*January 1987 to October 2014, approximately 27 years*) and annually (*July 2015 to present, approximately 9 years*) to determine the long-term efficacy of the final cover system.

1.5 Purpose

This Periodic Review Report (PRR) presents information on the maintenance, monitoring, and compliance activities for the Vanchlor Landfill for the period from **February 13, 2024 to February 13, 2025**. Required environmental elements under the Order are the development and implementation of the SMP incorporating required institutional and engineering controls (IC/ECs).

- **Institutional Controls (ICs)** mean any non-physical means of enforcing a restriction on the use of real property that limits human and environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a remedial site.
- **Engineering Controls (ECs)** mean any physical barrier or method employed to actively or passively contain, stabilize, or monitor contamination, restrict the movement of contamination to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to contamination. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, provision of alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water supplies, and installing filtration devices on private water supplies.

The SMP provides a detailed description of the procedures required to manage remaining contamination at the Site including: (1) implementation/management of the IC/ECs; and (2) performance of periodic monitoring and inspections, certification of results, and submittal of PRRs. The required elements of the SMP include the periodic submittal of information, recommendations, and certifications to NYSDEC via implementation of a long-term monitoring plan that incorporates annual groundwater and surface water analysis along with annual inspections of the Site to assess the performance and effectiveness of the selected remedy. Specifically, the annual inspections are to focus on the condition and integrity of the cover system, drainage ditch, and groundwater monitoring system. The SMP may only be revised with the approval of the NYSDEC.

The results of the required monitoring activities and annual inspection for the current certifying period are presented within this PRR in the following Sections:

- Section 2.0 – Remedial System Compliance
- Section 3.0 – IC Compliance
- Section 4.0 – EC Compliance
- Section 5.0 – Monitoring Compliance
- Section 6.0 – Summary
- Section 7.0 – Signature of Environmental Professional
- Section 8.0 – Declaration / Limitations
- Section 9.0 – References

2.0 Remedial Systems Compliance

There are no remedial treatment systems currently operating at the Vanchlor Landfill Site (Site #932039). As such, there is no action required.

3.0 Institutional Control (IC) Compliance

Since hazardous waste remains within the Site, ICs are required to protect human health and the environment. The IC Plan is a component of the SMP and describes the procedures for the implementation and management of all ICs at the Site. The goals of the ICs are to: (1) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (2) limit the use and development of the Site to industrial uses only (the most restrictive use as defined in DER 10).

Methods necessary to ensure compliance with the ICs are specified in the SMP and required by the Deed Restrictions for contamination that remains at the Site.

3.1 Description of Institutional Controls

The Institutional Controls include:

- Compliance with the Deed Restrictions and this SMP by the Granter and the Grantor's successors and assigns;
- Performance of environmental or public health monitoring as defined in the SMP, if applicable;
- Implementation and documentation of the soil/fill management procedures provided in the Excavation Work Plan (EWP), when required;
- Reporting of information pertinent to Site Management of the Controlled Property must be performed at the frequency and in a manner defined in the SMP;

The Site has a series of ICs in the form of site restrictions. Site restrictions that apply to the Controlled Property include:

- The property may only be used for restricted industrial use provided that the long-term Institutional Controls included in this SMP are employed;
- The property may not be used for a higher level of use, such as restricted commercial use without additional remediation and amendment of the Deed Restriction, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited;
- Vegetable gardens and farming on the property are prohibited;
- The Site owner or remedial party will submit to NYSDEC a written statement that certifies under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by the Site owner or an expert that the NYSDEC finds acceptable.

The deed restriction summarizing the site-use restrictions and requirements for the Site was executed by the Department on March 6, 2013 and filed with the Erie County Clerk on July 15, 2013.

3.2 Status of ICs

During the current certifying period covered by this PRR, all ICs were in place and effective in meeting their objectives. There are no corrective measures required to address deficiencies in the ICs at this time based on the results of the monitoring and annual inspection performed.

4.0 Engineering Control (EC) Compliance

Since hazardous waste remains below the final cover system at the Site, ECs are required to protect human health and the environment. The EC Plan is a component of the SMP and describes the procedures for the implementation and management of all ECs at the Site.

4.1 Description of Engineering Controls (ECs)

Engineering Controls (ECs) at the Site consist of a low-permeable, clay lined drainage ditch leading to an interceptor trench for stormwater management and a low-permeable final cover system placed over the entire landfill to prevent exposure to remaining contamination. The final cover system is comprised of a ±24-inch compacted clay layer overlain by a ±6-inch drainage layer topped with vegetative growth.

An *Excavation Work Plan* (Appendix C of the SMP) outlines the procedures required to be implemented in the event the cover system is breached, penetrated, or temporarily removed and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of the final cover are provided in the *Site Monitoring Plan* (Section 3.0 of the SMP), which also addresses severe condition inspections in the event that a severe condition, which may affect the cover system at the Site, occurs. Procedures for maintaining the soil cover system are documented in the Operation and Maintenance Plan (Section 4.0 of the SMP) for the Site.

4.2 Status of ECs

During the current certifying period covered by this PRR, the Site ECs were in place and effective in meeting their objectives. The soil cover system is a permanent control, and the quality and integrity of this system was observed as part of the annual groundwater monitoring event in conjunction with the PRR. Based on the results of the monitoring and annual inspection performed during the current certifying period, there are no corrective measures required to address deficiencies of the ECs at this time. Additionally, no intrusive work was performed on the Site during the certifying period covered by this PRR.

Photograph documentation of the final cover inspection is provided in **Appendix A**.

5.0 Site Monitoring Plan (SMP) Compliance

The SMP describes the measures for evaluating the conditions at the Site and conformance with the Deed Restrictions to reduce or mitigate impacts from residual contamination at the Site and affected site media identified below. The SMP may only be revised with the approval of NYSDEC.

5.1 Schedule

In September 2014, Vanchlor petitioned the Department for a reduction in the frequency of groundwater and surface water sampling from a semi-annual to an annual basis. The Department approved this request on October 3, 2014. As such and since July 2015, annual groundwater (and surface water) monitoring has been performed in accordance with the SMP on the landfill monitoring well network established under the former Part 373 permit for the Site. In accordance with the SMP and approved frequency modification, annual groundwater monitoring events and inspections of the groundwater monitoring system are conducted to assess the performance and effectiveness of the remedy and the overall reduction in contamination on-site. The Monitoring program schedule is summarized in **Table 1**.

5.2 Monitoring Program

5.2.1 Routine Monitoring

On August 12, 2024, five of the six monitoring wells, identified as D-55, VDM-9R, VDM-10, VDM-11, and VDM-14R, were purged to dryness (see **Figure 3**). Purge water was contained in a plastic 55-gallon drum and disposed of at Vanchlor's water treatment facility. Allowing for adequate recovery (but within 24-hours) and on August 13 to 14, 2024, the five monitoring wells, and one off-site surface water location (on Eighteen Mile Creek), were sampled by Vanchlor in accordance with the *Groundwater Monitoring Plan* (Appendix E of the SMP). The sixth well, identified as VDM-12, was dry and not sampled; as it had been in previous years. The surface water sample was collected from Eighteen Mile Creek at a location downstream from the Site, but upstream of the City of Lockport Wastewater treatment plant SPDES discharge point (see **Figure 3** for approximate location). Poor groundwater recovery at well VDM-10, extended routine sampling to August 14, 2024 for this location.

Routine groundwater and surface water samples were analyzed for eleven volatile organic compounds (VOCs), four total metals, chloride, and field measured pH in accordance with the specified analytical methods described more fully in the SMP. VOCs included 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2-dichloroethane, bromochloromethane, chloroform, methylene chloride, tetrachloroethene (PCE), toluene, trans-1,2-dichloroethene, trichloroethene (TCE), and vinyl chloride (VC) and total metals included chromium, copper, iron, and zinc.

5.2.2 Emerging Contaminant Monitoring

Per NYSDEC/NYSDOH's February 12, 2024 Comment #2 (and Vanchlor/TRC's March 14, 2024 response) to the 2023 PRR submittal, a Sampling Work Plan for Emerging Contaminants was prepared in accordance with current NYSDEC protocols. On August 13, 2024 and following purging activities described in the *Routine Monitoring* Section above and prior to filling the routine parameter bottles, emerging contaminant sampling was performed at upgradient monitoring well D-55, and downgradient wells VDM-10 and VDM-14R in accordance with this Work Plan.

Groundwater samples were analyzed for 1,4-dioxane (via USEPA Method 8270D SIM) and per- and polyfluoroalkyl substances (PFAS) (via USEPA Method 1633). Quality Control (QC) samples

were also collected, including one (1) blind duplicate, one (1) matrix spike/matrix spike duplicate (MS/MSD), and one (1) field (equipment) blank.

5.3 Monitoring Results

5.3.1 Routine Monitoring Results

Table 2 presents a summary of the routine analytical results from the August 2024 sampling event compared to NYSDEC Ambient Water Quality Standards and Guidance Values (AWQSs/GVs) per NYSDEC T.O.G.S 1.1.1 (June 1998, January 1999, April 2000, June 2004, October 2021, and March 2023); Class GA for groundwater and Class D H(FC) for surface water. Several detections were noted in groundwater at concentrations above the NYSDEC Class GA Groundwater AWQSs during the current annual sampling event, including:

- VOC 1,2-dichloroethane and chloroform in wells VDM-10 and VDM-14R. The VDM-14R sample results were qualified with a "D" due to sample dilution.
- VOCs 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, tetrachloroethene, trans-1,2-dichloroethene, trichloroethene, and vinyl chloride, in well VDM-14R. The VDM-14R sample results were qualified with a "D" due to sample dilution.
- Copper in wells VDM-10 and VDM-11.
- Iron in wells VDM-9R, VDM-10, VDM-11, VDM-14R, and D-55.
- Chloride in wells VDM-9R, VDM-10, VDM-11, and VDM-14R. Each of these sample results were qualified with a "D" due to sample dilution.

Iron was the only reported exceedance of the NYSDEC Class GA Groundwater AWQSs/GVs at upgradient well D-55 and the only reported exceedance of the Class D H(FC) Surface Water AWQSs/GVs at the surface water sample collected from Eighteen Mile Creek.

A copy of the laboratory analytical reports for groundwater and surface water analyses performed during the current reporting period is provided in **Appendix B**. Groundwater purge and sample field forms are provided in **Appendix C**.

5.3.2 Emerging Contaminants Monitoring Results

Table 3 presents a summary of the August 2024 emerging contaminant analytical results for wells VDM-10, VDM-14R, and D-55 compared to NYSDEC AWQSs, NYSDOH maximum contaminant levels (MCLs), and USEPA MCLs. Only a few detections were noted in groundwater at concentrations above these regulatory limits during the current annual sampling event, including:

- 1,4-dioxane exceeded the NYSDEC AWQS and NYSDOH MCL in landfill well VDM-10 and upgradient well D-55.
- Perfluorooctanoic acid (PFOA) was detected at a concentration exceeding the NYSDEC AWQS, NYSDOH MCL, and USEPA MCL at well VDM-14R. The PFOA concentration only exceeded the USEPA MCL at upgradient well D-55.

The *Hazard Index* is a long-established approach the USEPA regularly uses to determine the health concerns associated with exposure to chemical mixtures. Because of the additive health

effects of mixtures, low levels of multiple PFAS compounds that individually would not likely result in adverse health effects may pose health concerns when combined in a mixture. USEPA's Hazard Index MCL is 1 (unitless) and applies to any mixture containing two or more of perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS), perfluorobutanesulfonic acid (PFBS), and hexafluoropropylene oxide dimer acid (HFPO-DA) (known as "*GenX chemicals*"). These four compounds are shaded **green** on **Table 3**, along with the calculated Hazard Index for each monitoring point. Each of the EC monitoring points received a Hazard Index well below the value of 1. It is worth noting, regulated drinking water system compliance with the Hazard Index MCL is typically determined by a running annual average.

A copy of the laboratory analytical report for emerging contaminant groundwater analyses performed during the current reporting period is provided in **Appendix B**. Groundwater purge and sample field forms are provided in **Appendix C**.

5.4 Historical Trend Analysis

Groundwater monitoring has been performed at the Vanchlor Landfill since July 1987, prior to being closed and capped in 1988. Overall, contaminant concentration trends in groundwater samples from wells VDM-9R, VDM-10, VDM-11, and VDM-14R have been downward over time. Except for well VDM-14R, most analyzed compounds have either been reported at concentrations well below the individual AWQSs/GVs or non-detect for the latest 6 to 10 years of monitoring, which is an indication of a neutral trend (i.e., neither increasing nor decreasing). As such and with NYSDEC approval following the 2023 PRR submission, trend analysis has been discontinued for the following:

- VDM-9R and VDM-11: 1,1,2,2-tetrachloroethane, 1,2-dichloroethane, chloroform, methylene chloride, tetrachloroethene, toluene, trans-1,2-dichloroethene, trichloroethene, vinyl chloride, chromium, copper, and zinc.
- VDM-10: 1,1,2,2-tetrachloroethane, methylene chloride, tetrachloroethene, toluene, trans-1,2-dichloroethene, trichloroethene, vinyl chloride, chromium, and zinc.
- VDM-14R: methylene chloride, copper, and zinc.

Should any of these parameters be detected at either a concentration exceeding the individual AWQS/GV for one annual monitoring event or indicate an increasing trend for three consecutive monitoring events, then the compound will be re-instated as a trend tracked parameter.

The remaining contaminant concentration trends for wells VDM-10 and VDM-14R are identified in **Table 2**, (*including copper which was re-instated for VDM-11 due to a concentration exceeding the AWQS during the 2024 monitoring event*), primarily focused on the more recent 6 to 10 years, and in some instances nearly the entire history, of analytical data for each monitoring location. Historically, laboratory detection limits for many analytes were above the AWQSs/GVs values (e.g., 10 ug/L for many VOCs), the detection limit values of which are used as the default detected concentration in wells with non-detect results ("U" qualified), potentially making the compound concentration trend data plots appear to be above individual AWQSs. These instances were considered when evaluating the historical trend analysis.

A copy of the updated graphical historical trend analyses for each tracked parameter, per monitoring location, is provided in **Appendix D**. Each trend graph has been updated to include

the best fit 1-year moving average trend line and the trend assessment for each compound is provided in **Table 2**. Additionally, and where appropriate, some trend graph concentration scales were modified to better reveal the more recent trend (latest 6 to 10 years) by removing the scaling effects of outliers; the outlier value, however, is still provided in the corresponding table.

Evaluation of the current 2024 analytical results compared to historical results for each tracked compound (by monitoring well) is provided below with the historical concentration versus time plots presented in **Appendix D**.

- **VDM-10:**
  - 1,2-Dichloroethane has been reported at a concentration slightly above the individual AWQS with an apparent decreasing trend since October 2014 (nearly 11 years).
  - Chloroform has been reported at a concentration fluctuating slightly above and below the individual AWQS with an apparent neutral trend (i.e., neither increasing nor decreasing) since October 2001 (nearly 23 years).
  - Copper has been reported at a concentration at or below the individual AWQS since July 2016 (nearly 8 years) with an apparent neutral trend (i.e., neither increasing nor decreasing) with only two exceptions; one exceedance detected in July 2018 and the other in August 2022.

- **VDM-11:**
  - Copper has been reported at a concentration below the individual AWQS since July 2016 (nearly 7 years), however in 2024, the reported concentration was slightly above the AWQS. Aside from this exceedance, the trend for copper at VDM-11 since July 2016 still indicates an apparent neutral trend (i.e., neither increasing nor decreasing). Due to the exceedance of the individual AWQS in 2024, the trend for this parameter will continue to be tracked going forward.

- **VDM-14R:**
  - 1,1,2,2-Tetrachloroethane (1,1,2,2-TCA) has been reported at a concentration above the individual AWQS with an apparent decreasing trend since October 2014 (nearly 10 years).
  - 1,1,2-Trichloroethane (1,1,2-TCA), which has only been analyzed since 2017, has been reported at a concentration above the individual AWQS with an apparent increasing trend since September 2017 (nearly 7 years).
  - 1,2-Dichloroethane (1,2-DCA) has been reported at a concentration above the individual AWQS with an apparent neutral trend (i.e., neither increasing nor decreasing) since May 2012 (nearly 12 years).
  - Chloroform has been reported at a concentration above the individual AWQS with an apparent decreasing trend since October 2008 (nearly 16 years).
  - Tetrachloroethene (PCE) has been reported at a concentration above the individual AWQS with an apparent decreasing trend since May 2007 (nearly 17 years).
  - Toluene has been reported at a concentration above and below the individual AWQS with an apparent neutral trend (i.e., neither increasing nor decreasing) since May 2012 (nearly 12 years).
  - trans-1,2-Dichloroethene (trans-1,2-DCE) has been reported at a concentration above the individual AWQS with an apparent neutral trend (i.e., neither increasing nor decreasing) since July 2015 (nearly 9 years).

- Trichloroethene (TCE) has been reported at a concentration above the individual AWQS with an apparent increasing trend since January 1994 (nearly 29 years).
- Vinyl chloride (VC) has been reported at a concentration above the individual AWQS with an apparent increasing trend since October 1995 (nearly 29 years).
- Chromium has been reported at a concentration above (and currently below for the second straight year) the individual AWQS with an apparent decreasing trend since May 2007 (nearly 17 years).

Based on historical comparisons of analytical data and in general, the monitoring well groundwater data will continue to be assessed for trends as additional analytical data is collected during future annual monitoring events.

5.5 Groundwater Flow & Well Integrity

Depth to water measurements and calculated groundwater elevations measured from the six on-site monitoring wells are summarized in **Table 4**. A shallow groundwater isopotential map, presented as **Figure 3**, was prepared using data from the August 12, 2024 static depth to water measurements and calculated groundwater elevations. The groundwater flow, as depicted in **Figure 3**, indicates shallow groundwater flow is in a southwesterly direction, generally toward Eighteen Mile Creek located ±400 feet south of the Site. This flow direction is consistent with previously reported determinations since the landfill was capped in 1987 (some 37 years ago).

Additionally, the NYSDEC requested that deeper bedrock groundwater flow be determined. So, on August 12, 2024, TRC measured the depth to groundwater from wells VDM-5, VDM-6, D-52, D-56, and D-59; all screened within the deeper Queenston Shale bedrock unit. Well D-59 was inadvertently not sounded and mistaken for well D-61, which is screened within the Grimsby/Power Glen bedrock unit, located above the Queenston Shale. Depth to water measurements and calculated groundwater elevations measured from the six additional deep bedrock on-site monitoring wells are summarized in **Table 4**. The groundwater flow, as depicted in **Figure 4**, indicates deep bedrock groundwater flow is in a west/southwest direction, generally mimicking the shallow groundwater flow toward Eighteen Mile Creek located ±400 feet south of the Site.

Each of the six network monitoring wells were checked for integrity of their concrete surface seals, J-plugs or caps, and steel protective casings; each well was in good condition during the current reporting period and did not require any maintenance.

5.6 Site Inspection Results

An annual inspection of the Site was performed on August 12, 2024 in accordance with the SMP Monitoring Program requirements. TRC and NYSDEC representatives were present for much of the groundwater monitoring event. All areas of the Site were inspected to assess the condition of the cover and groundwater monitoring system integrity to determine any evidence of erosion or related deterioration of the Site soils. Based on this inspection, no erosion or deterioration in any areas was noted during the August monitoring event.

No corrective actions were required following the inspection for the current reporting period.

6.0 Summary

6.1 Conclusions

Based on the monitoring and inspection results described in Section 5.0 and conducted during the reporting period of this PRR, compliance with all relevant components of the SMP EC/ICs were achieved. Please refer to completed Institutional & Engineering Controls Certification Form (**Appendix E**). At the time of the current annual groundwater monitoring event, the Site was compliant with the IC/ECs described in the SMP and no intrusive activities were performed during the reporting period. Except for three notable exceptions, monitoring analytical results reported during the current reporting period were below NYSDEC standards and/or exhibited apparent neutral or decreasing concentrations in both Site groundwater and surface water (see **Table 2**); only 1,1,2-trichloroethane, trichloroethane, and vinyl chloride exhibited an apparent increasing trend at well VDM-14R.

The following conclusions can be drawn from the current monitoring period monitoring results:

- Historically, VOCs analyzed for and detected in VDM-14R have exceeded NYS groundwater standards and continue to do so for eight VOCs. Based on the 2024 sampling results, of these eight compounds three appear to be increasing in concentration based on the 1-yr moving average trends (1,1,2-TCA, TCE and VC) while the remaining five VOCs are either neutral or decreasing in concentration.
- Downgradient concentrations of VOCs, especially 1,1,2-DCA, TCE and VC, in wells VDM-9 (1987-2013), VDM-9R (2014 -Present), and VDM -10, as well as cross-gradient well VDM-11 and surface water collected in Eighteen Mile Creek, consistently demonstrate that the localized contamination in the vicinity of VDM-14R is not impacting downgradient groundwater and/or potential off-site receptors.
- In general, the concentration trends for individual parameters in network monitoring wells have fluctuated (both increasing and decreasing) since monitoring began in 1987. However, most parameters where trend analysis has been performed, concentrations have either been reported as non-detect, at a concentration well below the individual AWQS/GV for the latest 6 to 10 years of monitoring, or indicate an apparent neutral/decreasing trend below the individual AWQS/GV.

Since 1987, groundwater and surface water sampling completed at the Site has successfully assessed the long-term trends of contaminant concentrations to evaluate the performance of the remedy. Groundwater and surface water sample results over the last thirty-seven (37) years, and the overall condition of the Site and integrity of the soil cover system, provide evidence that the remedy is achieving its intended goals of minimizing, to the extent feasible, exposure of remaining contamination to the environment through groundwater and surface water runoff and associated sediment erosion.

The next annual SMP monitoring event is scheduled for the third quarter of 2025. An inspection of the landfill cover system, including drainage, vegetative cover, indications of erosion or other deterioration of the soil cover, security fencing and the condition of monitoring wells will be performed in conjunction with this sampling and monitoring event.

6.2 Recommendations

TRC offers the following recommendations for future planned monitoring events at the Vanchlor Landfill for Department consideration and approval:

- Wells VDM-9R, VDM-10, VDM-11, and VDM-14R should continue to be monitored as they collectively provide effective detection for downgradient and potential off-site migration of COPCs. However, we recommend the frequency of monitoring be modified from the current annual basis (every year) to bi-annually (every two years).
- Due to consistent reporting of VOCs and total metals (chromium, copper, and zinc) at concentrations either well below the individual AWQSs/GVs or as non-detect for several decades, we recommend discontinuing sampling of upgradient well D-55 and the Eighteen Mile Creek surface water.
- Should any of the monitored groundwater parameters be detected at either a concentration exceeding the individual AWQS/GV for two consecutive annual monitoring events or indicate an increasing trend for three (or more) consecutive monitoring events, then the compound will be included as a trend tracked parameter.
- Site inspections to verify the IC/ECs employed at the Site are unchanged from the original design and/or previous certifications as well as the mowing and fence maintenance activities should continue on an annual basis (every year).
- We also recommend the reporting frequency requirement be modified to bi-annual reporting (every two years) to coincide with our bi-annual groundwater monitoring recommendation (see the first bullet). This bi-annual report will include the findings of the inspection and maintenance activities performed annually.
- Per NYSDEC Comment #4 in their April 25, 2025 Comment Letter to the Draft 2024 PRR submittal, cis-1,2-dichloroethene will replace bromomethane on the required analytical VOC list for groundwater analysis for the next planned sampling event in July/August 2026 and subsequent events going forward.

7.0 Signature of Environmental Professional

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR 312.10. I have the specific qualifications based on education, training, and experience to undertake this Periodic Review Report (PRR) of the property identified as the Vanchlor Landfill Site (NYSDEC Site #932039), 600 Mill Street, Lockport, New York on behalf of the current Owner, Vanchlor Company, Inc.

Bryan C. Hann, P.G. (NY)
Senior Project Manager

8.0 Declaration / Limitation

TRC Environmental Corporation personnel conducted the annual site inspection of the Vanchlor Landfill Site (NYSDEC Site #932039) located in Lockport, New York, according to generally accepted practices. This report has been prepared for the exclusive use of and has complied with the scope of work provided to the owner, Vanchlor Company, Inc. The contents of this report are limited to information available at the time of the Site inspection. The findings herein may be relied upon only at the discretion of Vanchlor Company, Inc. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission from TRC Environmental Corporation.

9.0 References

1. Golder Associates Inc., Site Management Plan, Vanchlor Company, Inc., NYSDEC Site No. 932039, prepared for Vanchlor Company, Inc., January 2015.

TABLES

TABLE 1

MONITORING / INSPECTION PROGRAM SCHEDULE

Periodic Review Report
February 13, 2024 to February 13, 2025
Vanchlor Landfill Site (932039)
Lockport, New York

Monitoring Program	Frequency [1]	Matrix Description	Analyses
Annual Groundwater & Surface Water Monitoring	Annual (during 3rd quarter)	Sample groundwater from wells: D-55 VDM-9R VDM-10 VDM-11 VDM-12 VDM-14R Sample surface water from Eighteen Mile Creek (just downstream of Site)	Volatile Organic Compounds (VOCs), Method 8260 Metals, Method 6010 Chloride, 9251 Field measured pH
Annual Site & Groundwater System Inspection	Annual (during 3rd quarter)	Inspect cover system integrity, vegetation condition, ditch lining, security fence and signage, monitoring well condition.	Check for iron staining in drainage ditch and visible seeps in the cliff face

Notes:
1. The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

TABLE 2

GROUNDWATER & SURFACE WATER ANALYTICAL SUMMARY

Periodic Review Report
February 13, 2024 to February 13, 2025
Vanchlor Landfill Site (932039)
Lockport, New York

Parameter	CasNum	NY-AWQS [1] Class GA	NY-AWQS [1] Class D H(FC) & A(A)	Units	Monitoring Location, Sample Date, Lab Data Package No.									
					VDM-9R		VDM-10		VDM-11		VDM-14R		D-55	Eighteen Mile Creek
					08/13/2024 L2445707-05 Qual	Trend [2]	08/14/2024 L2445935-01 Qual	Trend [2]	08/13/2024 L2445707-01 Qual	Trend [2]	08/13/2024 L2445707-02 Qual	Trend [2]	08/13/2024 L2445707-04 Qual	08/13/2024 L2445707-03 Qual
Field Measurements														
Field pH	NA	**6.5 - 8.5**	**6.5 - 8.5**	S.U	6.04	--	6.33	--	6.24	--	5.63	--	7.29	6.95
Temperature	NA	--	--	DEG C	17.4	--	18.2	--	17.9	--	NA	--	17.2	22.8
Appearance & Odor	NA	--	--	visual/olfactory	*floating solids, none*	--	*clear, none*	--	*clear, sl. odor*	--	*sl. orange, none*	--	*clear, none*	*clear, none*
Volume purged (to dryness)	NA	--	--	gallons	± 0.75	--	± 3.5	--	± 0.5	--	± 5.5	--	± 4.5	NA
Wet Chemistry														
Chloride	NA	**250,000**	**--**	ug/L	6,900,000 D	--	4,400,000 D	--	1,000,000 D	--	3,100,000 D	--	16,000	49,000
TCL Volatile Organic Compounds (VOCs)														
1,1,2,2-Tetrachloroethane	79-34-5	**5**	**--**	ug/L	0.50 J	*see Note 3*	0.5 U	*see Note 3*	0.99	*see Note 3*	53 D	D (10)	0.5 U	0.5 U
1,1,2-Trichloroethane	79-00-5	**1**	**--**	ug/L	1.5 U	--	1.5 U	--	1.5 U	--	37 D	I	1.5 U	1.5 U
1,2-Dichloroethane	107-06-2	**0.6**	**--**	ug/L	0.24 J	*see Note 3*	1.1	D (11)	0.27 J	*see Note 3*	11 D	N (12)	0.5 U	0.5 U
Bromochloromethane	74-97-5	**5**	**--**	ug/L	2.5 U	--	2.5 U	--	2.5 U	--	5.0 U	--	2.5 U	2.5 U
Chloroform	67-66-3	**7**	**--**	ug/L	2.5 U	*see Note 3*	9	N (23)	2.4 J	*see Note 3*	20 D	D (16)	2.5 U	2.5 U
Methylene chloride	75-09-2	**5**	**200**	ug/L	2.5 U	*see Note 3*	2.5 U	*see Note 3*	2.5 U	*see Note 3*	1.8 JD	*see Note 3*	2.5 U	2.5 U
Tetrachloroethene	127-18-4	**5**	**1***	ug/L	0.66	*see Note 3*	0.5 U	*see Note 3*	4.4	*see Note 3*	170 D	D (17)	0.5 U	0.5 U
Toluene	108-88-3	**5**	**6,000**	ug/L	2.5 U	*see Note 3*	2.5 U	*see Note 3*	2.5 U	*see Note 3*	5.0 U	N (12)	2.5 U	2.5 U
trans-1,2-Dichloroethene	156-60-5	**5**	**--**	ug/L	2.5 U	*see Note 3*	2.5 U	*see Note 3*	2.5 U	*see Note 3*	16 D	N (9)	2.5 U	2.5 U
Trichloroethene	79-01-6	**5**	**40**	ug/L	0.4 J	*see Note 3*	0.2 J	*see Note 3*	1	*see Note 3*	81 D	I	0.5 U	0.5 U
Vinyl chloride	75-01-4	**2**	**--**	ug/L	0.51 J	*see Note 3*	1.0 U	*see Note 3*	1.0 U	*see Note 3*	41 D	I	1.0 U	1.0 U
Total Metals														
Chromium, Total	NA	**50**	**--**	ug/L	1.82	*see Note 3*	15.29	*see Note 3*	32.3	*see Note 3*	16.8	D (17)	1.49	0.52 J
Copper, Total	NA	**200**	**--**	ug/L	56.88	*see Note 3*	673.7	N (8)	245.4	N (7)	14.53	*see Note 3*	9.26	4.5
Iron, Total	NA	**300**	**300**	ug/L	120,000	--	21,600	--	22,900	--	468,000	--	964	458
Zinc, Total	NA	**2,000***	**--**	ug/L	65.64	*see Note 3*	460.8	*see Note 3*	135.6	*see Note 3*	317.1	*see Note 3*	9.2 J	7.77 J

Notes:

1. NYS Ambient Water Quality Standards/Guidance Values; NYSDEC June 1998 Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. Guidance values are marked with a " * ". Class GA for groundwater and Class D H(FC) and A(A) for surface water.
2. The value shown in parentheses indicates the number of years the concentration indicates neither an increasing or decreasing trend (N = Neutral) OR the value indicates the number of years of a decreasing concentration trend (D = Decreasing). An " I " indicates the trend is increasing.
3. Based on historical analysis, this parameter was removed from trend analysis reporting and assessment in 2023 per NYSDEC approval.

Qualifier Key:

D = Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
-- = does not apply to this parameter
H(FC) = Human Consumption of Firsh (fresh waters)
HA(A) = Fish Survivial (fresh waters)

Color Code:

= concentration exceeds the NYSDEC Class GA AWQS/GV or NYSDEC Class D H(FC) / A(A) Surface Water Standard/Guidance Value.
= based on trend analysis, this parameter is recommended to continue trend analysis reporting.

Trend Definitions:

Increasing (I) - significant increasing trend identified on the plot for that parameter.
Decreasing (D) - significant decreasing trend identified on the plot for that parameter.
Neutral (N) - no significant increasing or decreasing trend identified on the plot for that parameter.

TABLE 3

SUMMARY OF GROUNDWATER EMERGING CONTAMINANT RESULTS
AUGUST 2024

Periodic Review Report
February 13, 2024 to February 13, 2025
Vanchlor Landfill Site (932039)
Lockport, New York

Parameter	Abbreviation	CasNum	NYSDEC AWQS/GV [1]	NYSDOH MCL	USEPA MCL	Units	2024		
							VDM-10 L2445727-01 08/13/2024	VDM-14R L2445727-02 08/13/2024	D-55 L2445727-03 08/13/2024
							Qual	Qual	Qual
1,4 Dioxane by 8270D-SIM (2018) and 8270E-SIM (2024)									
1,4-Dioxane	--	123-91-1	350	1,000	--	ng/L	1,130	205	110,000
Perfluorinated Alkyl Acids by EPA Modified 537 (2018) and EPA 1633 (2024)									
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9	--	--	--	ng/L	5.75 U	21.3 U	6.06 U
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4	--	--	--	ng/L	5.75 U	21.3 U	6.06 U
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4	--	--	--	ng/L	5.75 U	21.3 U	6.06 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2	--	--	--	ng/L	5.75 U	21.3 U	6.06 U
2H,2H,3H,3H-Perfluorooctanoic acid	5:3FTCA	914637-49-3	--	--	--	ng/L	35.9 U	133 U	37.8 U
3-Perfluoroheptyl propanoic acid	7:3FTCA	812-70-4	--	--	--	ng/L	35.9 U	133 U	37.8 U
3-Perfluoropropyl propanoic acid	3:3FTCA	356-02-5	--	--	--	ng/L	7.19 U	26.7 U	7.57 U
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	--	--	--	ng/L	5.75 U	21.3 U	6.06 U
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1	--	--	--	ng/L	5.75 U	21.3 U	6.06 U
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	--	--	10	ng/L	5.75 U	21.3 U	6.06 U
N-ethyl perfluorooctanesulfonamide	NEtFOSA	4151-50-2	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
N-ethyl perfluorooctanesulfonamido ethanol	NEtFOSE	1691-99-2	--	--	--	ng/L	14.4 U	53.3 U	15.1 U
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
N-methyl perfluorooctanesulfonamide	NMeFOSA	31506-32-8	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
N-methyl perfluorooctanesulfonamido ethanol	NMeFOSE	24448-09-7	--	--	--	ng/L	14.4 U	53.3 U	15.1 U
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6	--	--	--	ng/L	2.87 U	10.7 U	3.03 U
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7	--	--	--	ng/L	2.87 U	10.7 U	3.03 U
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1	--	--	--	ng/L	2.87 U	10.7 U	3.03 U
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5	--	--	--	ng/L	2.87 U	10.7 U	3.03 U
Perfluorobutanesulfonic acid	PFBS	375-73-5	--	--	--	ng/L	3.13	5.33 U	1.19 J
Perfluorobutanoic acid	PFBA	375-22-4	--	--	--	ng/L	26	11 J	8.12
Perfluorodecanesulfonic acid	PFDS	335-77-3	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluorodecanoic acid	PFDA	335-76-2	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluorododecanesulfonic acid	PFDoS	79780-39-5	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluorododecanoic acid	PFDoA	307-55-1	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluoroheptanesulfonic acid	PFHpS	375-92-8	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluoroheptanoic acid	PFHpA	375-85-9	--	--	--	ng/L	0.395 J	1.28 J	0.833 J
Perfluorohexanesulfonic acid	PFHxS	355-46-4	--	--	10	ng/L	1.44 U	5.33 U	1.51 U
Perfluorohexanoic acid	PFHxA	307-24-4	--	--	--	ng/L	0.791 J	1.76 J	0.908 J
Perfluorononanesulfonic acid	PFNS	68259-12-1	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluorononanoic acid	PFNA	375-95-1	--	--	10	ng/L	1.44 U	5.33 U	0.538 J
Perfluorooctanesulfonamide	PFOSA	754-91-6	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluorooctanesulfonic acid	PFOS	1763-23-1	2.7	10	4	ng/L	1.44 U	5.33 U	1.36 J
Perfluorooctanoic acid	PFOA	335-67-1	6.7	10	4	ng/L	1.49	17.2	6.49
Perfluoropentanoic acid	PFPeA	2706-90-3	--	--	--	ng/L	0.819 J	10.7 U	0.833 J

TABLE 3

SUMMARY OF GROUNDWATER EMERGING CONTAMINANT RESULTS
AUGUST 2024

Periodic Review Report
February 13, 2024 to February 13, 2025
Vanchlor Landfill Site (932039)
Lockport, New York

Parameter	Abbreviation	CasNum	NYSDEC AWQS/GV [1]	NYSDOH MCL	USEPA MCL	Units	2024		
							VDM-10 L2445727-01 08/13/2024	VDM-14R L2445727-02 08/13/2024	D-55 L2445727-03 08/13/2024
							Qual	Qual	Qual
Perfluoropentansulfonic acid	PFPeS	2706-91-4	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluorotetradecanoic acid	PFTeDA	376-06-7	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluorotridecanoic acid	PFTrDA	72629-94-8	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
Perfluoroundecanoic acid	PFUnA	2058-94-8	--	--	--	ng/L	1.44 U	5.33 U	1.51 U
USEPA Hazard Index (sum of two or more of PFHxS, PFNA, HFPO-DA, & PFBS)	**--**	**--**	**--**	**--**	**1**	**unitless**	**0.002**	**0.000**	**0.054**

Notes:
1. NYS Ambient Water Quality Class GA Groundwater Quality Standards/Guidance Values (AWQS/GV); NYSDEC June 1998 Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1.
2. PFAS compounds used to calculate the USEPA Hazard Index are shaded green.

Qualifier Key:
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
-- = There is no value for this parameter.

Color Code:
= concentration exceeds both the NYSDEC Class GA Ambient Water Quality Guidance Value (AWQGV) and the NYSDOH Maximum Contaminant Level (MCL).
= concentration exceeds the USEPA MCL.
= concentration exceeds the NYSDEC Class GA Ambient Water Quality Guidance Value (AWQGV), the NYSDOH Maximum Contaminant Level (MCL), and USEPA MCL.

TABLE 4

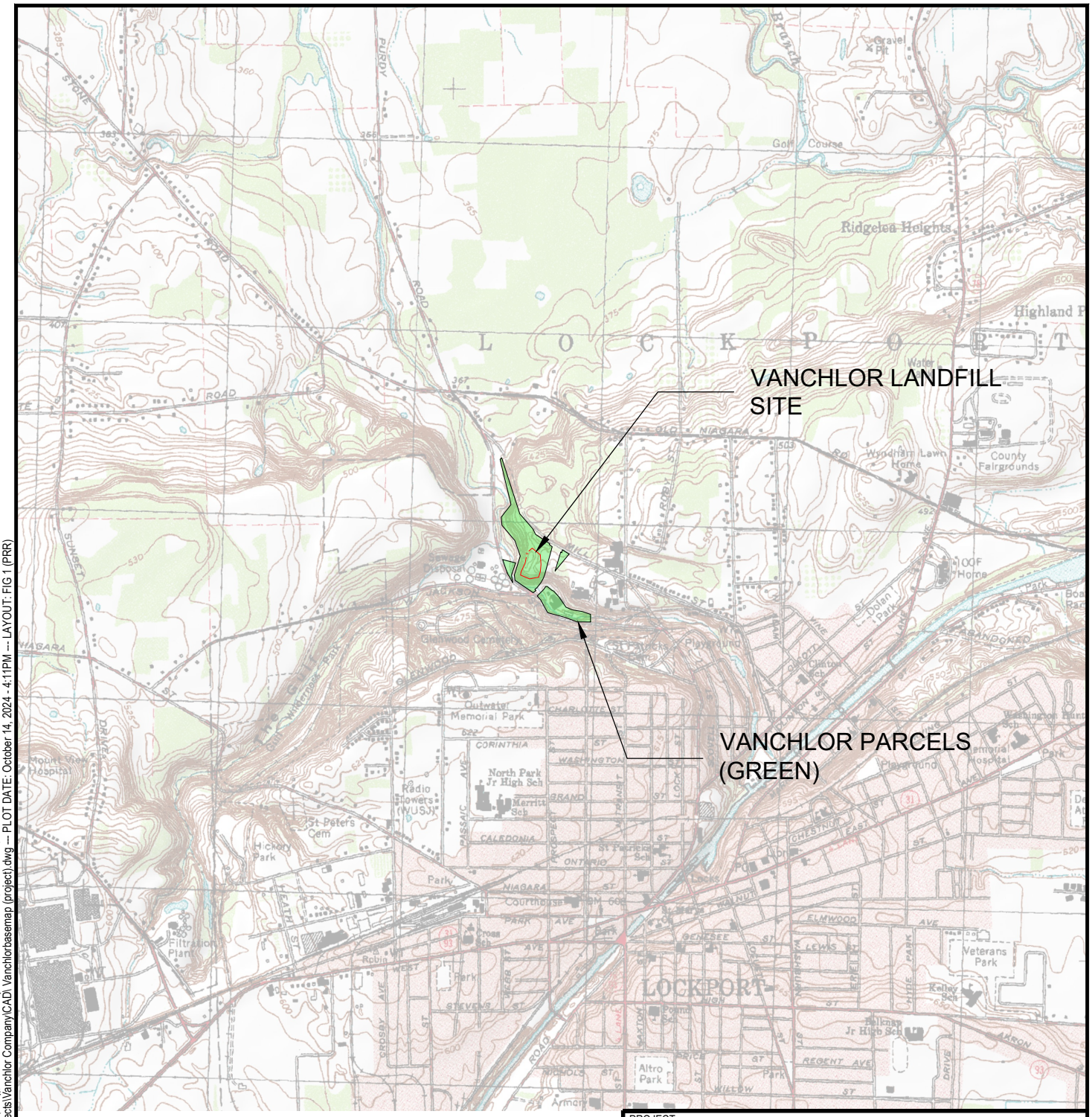
SUMMARY OF GROUNDWATER ELEVATIONS
08/12/2024

Periodic Review Report
February 13, 2024 to February 13, 2025
Vanchlor Landfill Site (932039)
Lockport, New York

Well No.	Date	Top of Riser Elevation [2] (fmsl)	Total Depth (fbTOR)	SWL [3] (fbTOR)	GWE [4] (fmsl)	Monitored Hydrostratigraphic Unit
VDM-9R	08/12/2024	448.58	39.15	34.55	414.03	*Whirlpool*
VDM-10	08/12/2024	444.46	46.69	33.27	411.19	*Queenston Shale (upper)*
VDM-11	08/12/2024	450.33	22.85	19.71	430.62	*Power Glen*
VDM-12	08/12/2024	451.01	13.18	dry [5]	dry [5]	*Overburden: sandy silt, angular rock fragments and green slag*
VDM-14R	08/12/2024	444.74	11.60	9.84	434.90	*Overburden: sandy silt, angular rock fragments and green slag*
D-55	08/12/2024	468.76	47.23	36.63	432.13	*Grimsby-Power Glen Contact*
VDM-5	08/12/2024	367.60	17.35	6.70	360.90	*Queenston Shale*
VDM-6	08/12/2024	367.60	7.00	6.95	360.65	*Queenston Shale*
D-52	08/12/2024	468.69	66.46	57.33	411.36	*Whirlpool / Queenston (upper)*
D-56 [6]	08/12/2024	469.44	107.00	57.99	411.45	*Whirlpool / Queenston (upper)*
D-59 [7]	08/12/2024	467.25	100.00	NA	NA	*Whirlpool / Queenston (upper)*
D-61 [7]	08/12/2024	467.40	48.40	57.00	410.40	*Grimsby / Power Glen*

Notes:
1. Ground surface elevation are based on 2020 GPS measurements (accuracy +/- 0.09FT).
2. Top of riser (TOR) elevation.
3. SWL = static water level.
4. GWE = groundwater elevation.
5. dry = monitoring well was dry during the current monitoring event
6. Well D-56 total depth exceeded the water level indicator limit; total depth shown is from the well construction log.
7. Well D-61 was mistakenly sounded on August 12, 2024 instead of well D-59. No data was obtained from well D-59.
8. Wells screened into the Queenston Hydrostratigraphic Unit are color **BLUE**.

FIGURES



N

2500' 0' 2500' 5000'

SCALE: 1 INCH = 2500 FEET
SCALE IN FEET
(approximate)

PROJECT:

2024 PERIODIC REVIEW REPORT
VANCHLOR LANDFILL SITE (NO. 932039)
LOCKPORT, NEW YORK

TITLE:

SITE LOCATION & VICINITY MAP

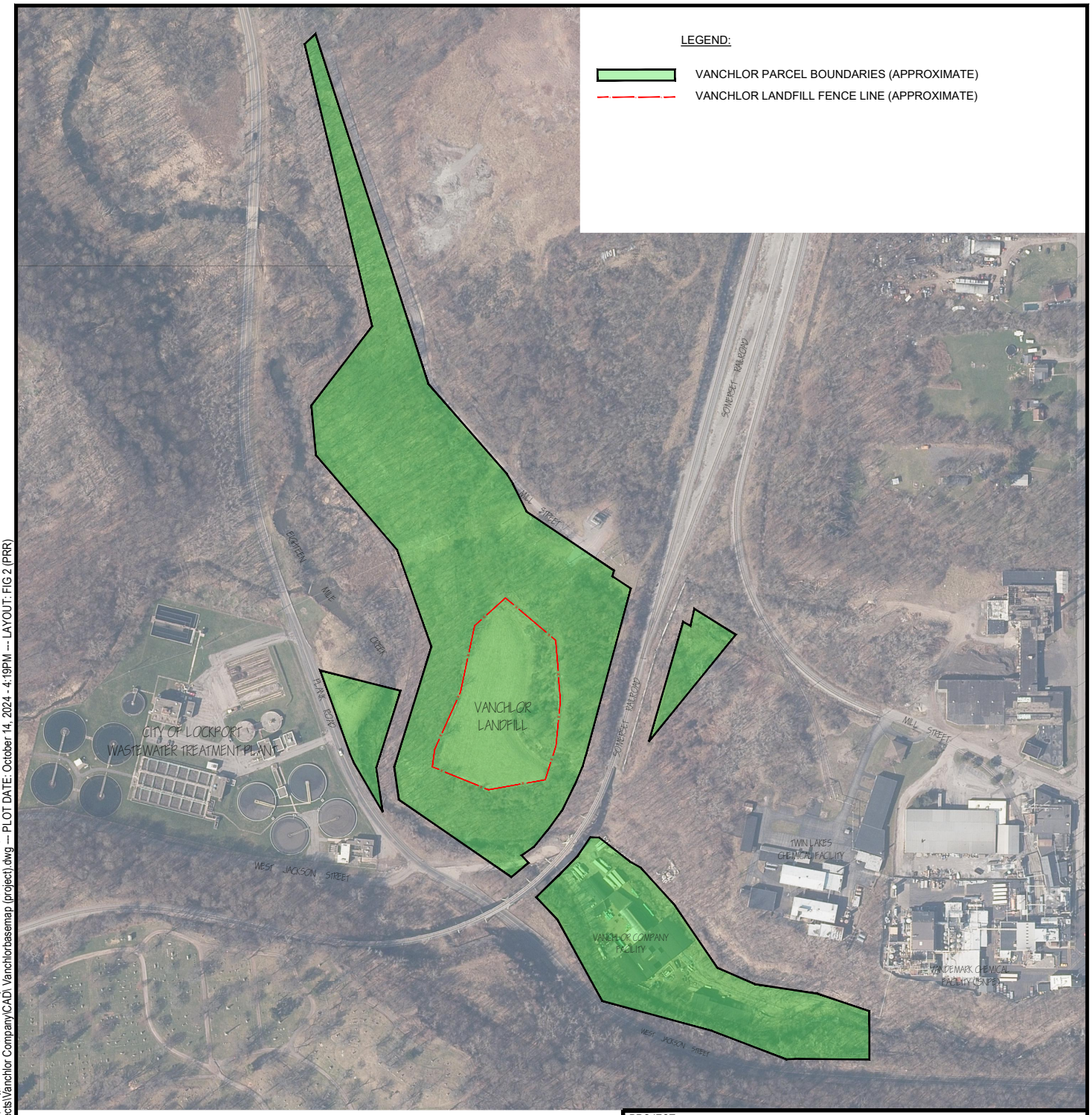
DRAWN BY:		PROJ NO.:	599178.0000.0000
CHECKED BY:	BCH		
APPROVED BY:	BCH		**FIGURE 1**
DATE:	OCTOBER 2024		

TRC
1090 Union Road
Suite 280
West Seneca, NY 14224
Phone: 716.289.2409
www.trccompanies.com

FILE NO.: Vanchlorbasemap (project).dwg

8.5x11 --- USER: BHann --- ATTACHED XREFS: --- ATTACHED IMAGES: Figure 2: Site Plan from SPR (Facility); PARCEL MAP; Vanchlor facility and chlorine lead line from VDM; VanChlor TOPO;
DRAWING NAME: C:\Users\BHann\OneDrive - TRC\Documents\0 - Projects\Vanchlor Company\CAD\ Vanchlorbasemap (project).dwg --- PLOT DATE: October 14, 2024 - 4:11PM --- LAYOUT: FIG 1 (PRR)

Version: 2017-10-21



N

400' 0' 400' 800'

SCALE: 1 INCH = 400 FEET
SCALE IN FEET
(approximate)

PROJECT:

2024 PERIODIC REVIEW REPORT
VANCHLOR LANDFILL SITE (NO. 932039)
LOCKPORT, NEW YORK

TITLE:

SITE PLAN

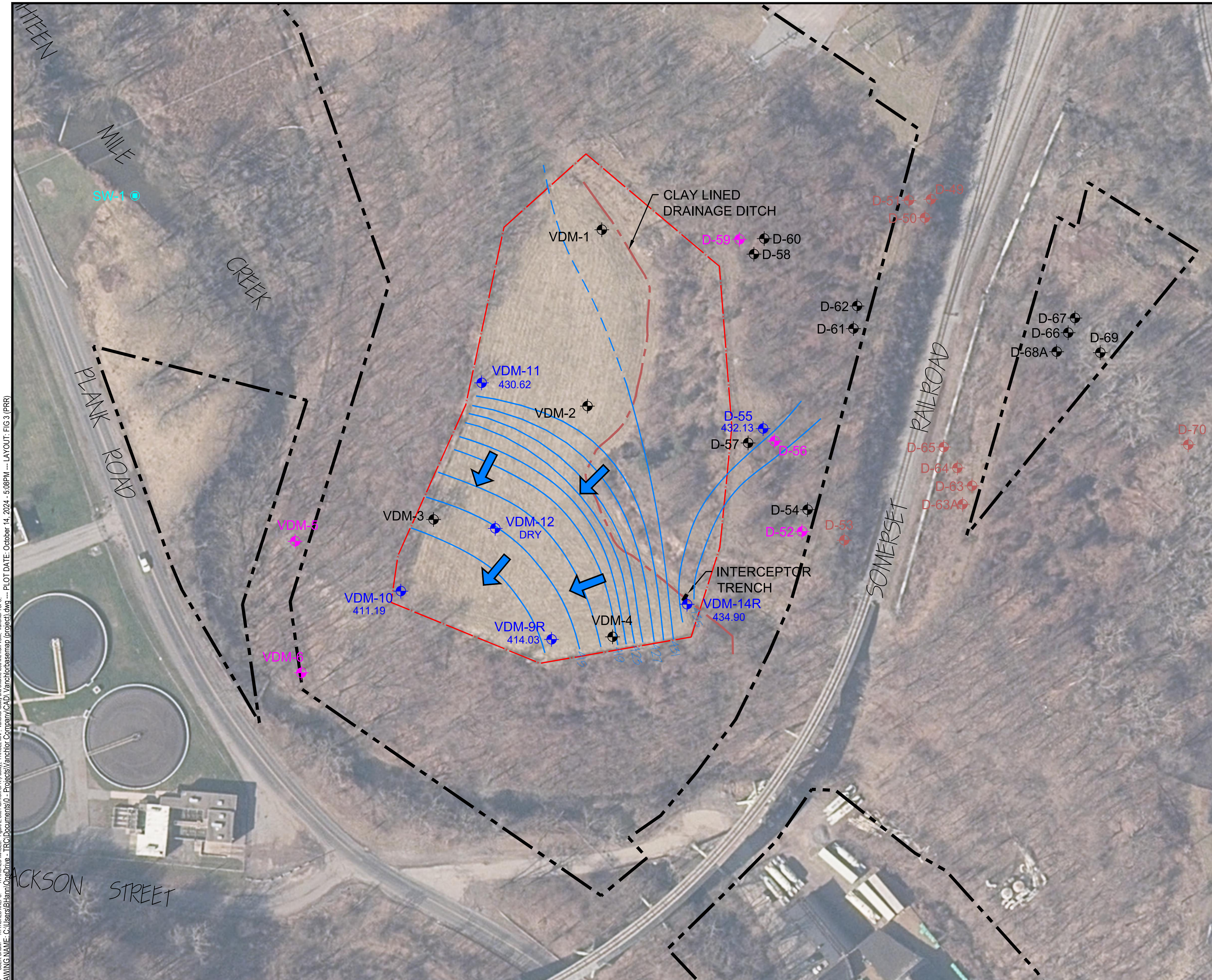
DRAWN BY:		PROJ NO.:	599178.0000.0000
CHECKED BY:	BCH		
APPROVED BY:	BCH		**FIGURE 2**
DATE:	OCTOBER 2024		

TRC
1090 Union Road
Suite 280
West Seneca, NY 14224
Phone: 716.289.2409
www.trccompanies.com

FILE NO.: Vanchlorbasemap (project).dwg

8.5x11 -- USER: BHann -- ATTACHED XREFS: -- ATTACHED IMAGES: Figure 2: Site Plan from SPR (Facility); PARCEL MAP: Vanchlor facility and chlorine feed line from VDM; VanChlor TOPO;
DRAWING NAME: C:\Users\BHann\OneDrive - TRC\Documents\0 - Projects\Vanchlor Company\CAD\ Vanchlorbasemap (project).dwg -- PLOT DATE: October 14, 2024 - 4:19PM -- LAYOUT: FIG 2 (PRR)

Version: 2017-10-21



LEGEND:

- VANCHLOR PARCEL BOUNDARIES (APPROXIMATE)
- VANCHLOR LANDFILL FENCE LINE (APPROXIMATE)
- VDM-9R — NETWORK MONITORING WELL
- VDM-2 — NON-NETWORK MONITORING WELL (ON-SITE)
- VDM-5 — NON-NETWORK MONITORING WELL (ON-SITE) (2024 WATER LEVEL)
- D-50 — NON-NETWORK MONITORING WELL (OFF-SITE)
- SW-1 — SURFACE WATER SAMPLE
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

N

100' 0' 100' 200'

SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)

PROJECT:
2024 PERIODIC REVIEW REPORT
VANCHLOR LANDFILL SITE (NO. 932039)
LOCKPORT, NEW YORK

TITLE:
SHALLOW GROUNDWATER ISOPOTENTIAL MAP AUGUST 12, 2024

DRAWN BY:	BCH	PROJ NO.:	599178.0000.0000
CHECKED BY:	BCH	**FIGURE 3**	
APPROVED BY:	BCH		
DATE:	OCTOBER 2024		

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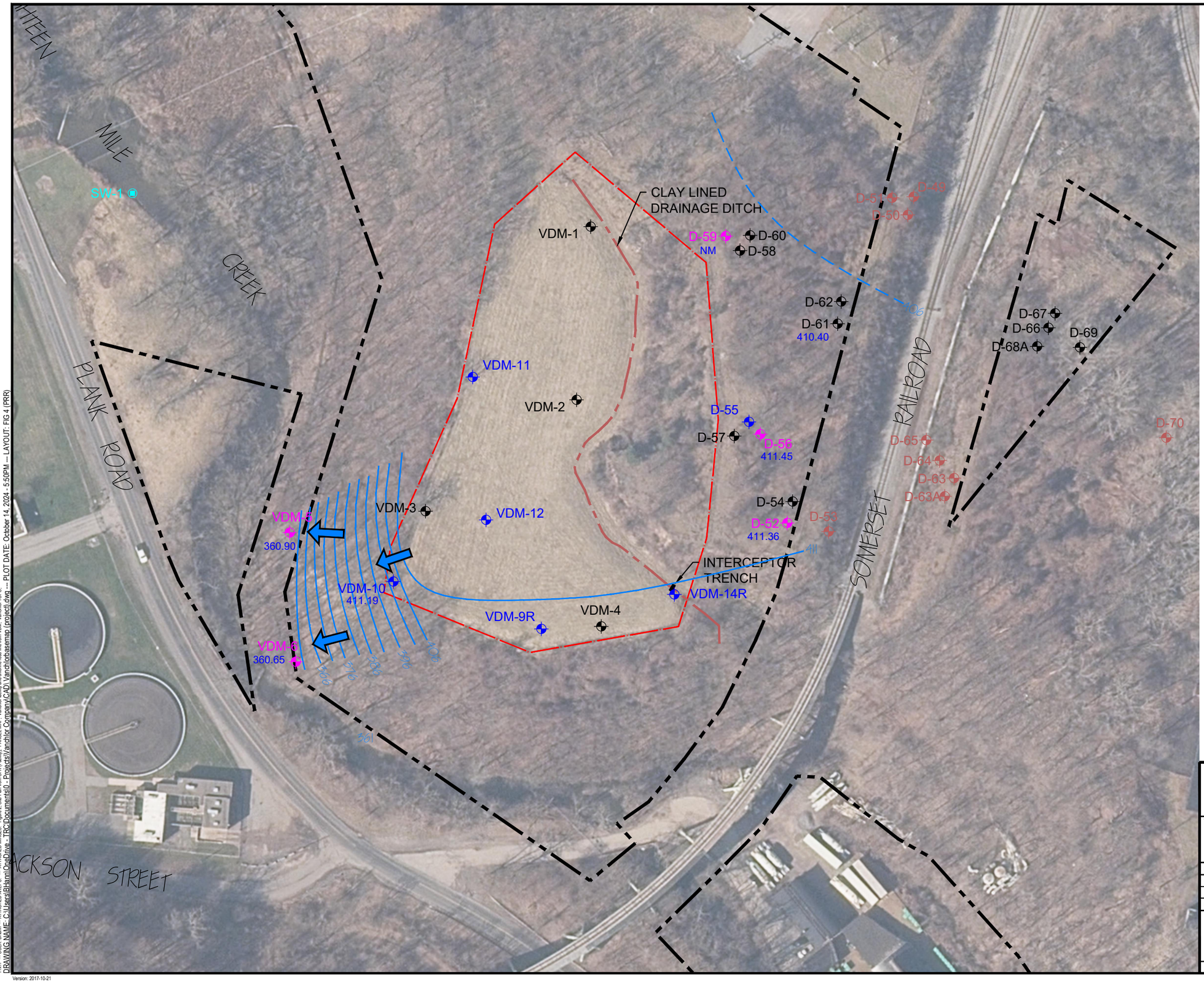
FILE NO.: Vanchlorbasemap (project).dwg

DRAWING NAME: C:\Users\BHam\OneDrive - TRC\Documents\0 - Projects\Vanchlor Company\CAD\Vanchlorbasemap (project).dwg --- PLOT DATE: October 14, 2024 - 5:08PM --- LAYOUT: FIG 3 (PRR)

Version: 2017-10-21



LEGEND:

- VANCHLOR PARCEL BOUNDARIES (APPROXIMATE)
- VANCHLOR LANDFILL FENCE LINE (APPROXIMATE)
- VDM-9R — NETWORK MONITORING WELL
- VDM-2 — NON-NETWORK MONITORING WELL (ON-SITE)
- VDM-5 — NON-NETWORK MONITORING WELL (ON-SITE) (2024 WATER LEVEL)
- D-50 — NON-NETWORK MONITORING WELL (OFF-SITE)
- SW-1 — SURFACE WATER SAMPLE
- 410 — DEEP BEDROCK GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- DEEP BEDROCK GROUNDWATER FLOW DIRECTION

N

100' 0' 100' 200'

SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)

PROJECT:
2024 PERIODIC REVIEW REPORT
VANCHLOR LANDFILL SITE (NO. 932039)
LOCKPORT, NEW YORK

TITLE:
DEEP BEDROCK GROUNDWATER ISOPOTENTIAL MAP AUGUST 12, 2024

DRAWN BY:	BCH	PROJ NO.:	599178.0000.0000
CHECKED BY:	BCH		
APPROVED BY:	BCH		**FIGURE 4**
DATE:	OCTOBER 2024		

TRC
1090 Union Road
Suite 280
West Seneca, NY 14224
Phone: 716.289.2409
www.trccompanies.com

FILE NO.: Vanchlorbasemap (project).dwg

Appendix A

Inspection Photolog

SITE PHOTOGRAPHS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1. Exterior, looking south at landfill cap and fence (west side).

Photo 2. Exterior, looking north at landfill cap and fence (west side).

Photo 3. Exterior, looking east at landfill cap and fence (south side).

Photo 4. Exterior, looking west at landfill cap and fence (south and west sides).

Vanchlor Landfill Site (932039) Lockport, New York Photo Date: August 12, 2024	TRC

SITE PHOTOGRAPHS

Photo 5:

Photo 6:

Photo 7:

Photo 8:

Photo 5. Exterior, looking west at landfill cap and fence (south side)

Photo 6. Exterior, looking northwest at landfill cap (south side).

Photo 7. Exterior, looking north at landfill cap, interceptor trench, and monitoring well VDM-14R (at right).

Photo 8. Exterior, looking north at landfill cap and interceptor trench (east side).

SITE PHOTOGRAPHS

Photo 9:

Photo 10:

Photo 11:

Photo 12:

Photo 9. Exterior, looking north at main gate, landfill cap, and fence (west and north sides).

Photo 10. Exterior, looking north at main gate, landfill cap, and fence (north side).

Photo 11. Exterior, looking north at main gate and fence line (north side).

Photo 12. Exterior, looking south at monitoring well VDM-9R.

SITE PHOTOGRAPHS

Photo 13:

Photo 14:

Photo 15:

Photo 16:

Photo 13. Exterior, looking south at monitoring well VDM-10.

Photo 14. Exterior, looking north at monitoring well VDM-11.

Photo 15. Exterior, looking south at monitoring well VDM-12.

Photo 16. Exterior, looking east at monitoring well VDM-14R.

SITE PHOTOGRAPHS

Photo 17:

Photo 18:

Photo 19:

Photo 20:

Photo 17. Exterior, looking at upgradient monitoring well D-55.

Photo 18. Exterior, looking northeast at upgradient monitoring well D-55.

Photo 19. Exterior, looking south along east side fence line.

Photo 20. Exterior, looking north along east side fence line.

SITE PHOTOGRAPHS

Photo 21:

Photo 22:

Photo 23:

Photo 24:

Photo 21. Exterior, looking north at central portion of landfill.

Photo 22. Exterior, looking south at central portion of landfill.

Photo 23. Exterior, looking southeast at water level monitoring well D-52.

Photo 24. Exterior, looking southwest at water level monitoring well D-56.

SITE PHOTOGRAPHS

Photo 25:

Photo 26:

Photo 27:

Photo 28:

Photo 25. Exterior, looking north at water level monitoring well VDM-5.

Photo 26. Exterior, looking south at water level monitoring well VDM-6.

Photo 27. Exterior, looking south at water level monitoring well VDM-6.

Photo 28. Exterior, looking south at water level monitoring well VDM-6.

Appendix B

Laboratory Analytical Data Summary Packages

ANALYTICAL REPORT

Lab Number:	L2445707
Client:	Vanchlor Co., Inc. 45 Main Street Lockport, NY 14094
ATTN:	Brian Law
Phone:	(716) 434-2200
Project Name:	ANNUAL GROUNDWATER MONITORING
Project Number:	Not Specified
Report Date:	08/20/24

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

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

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2445707-01	VDM-11	WATER	LOCKPORT, NY	08/13/24 09:15	08/13/24
L2445707-02	VDM-14	WATER	LOCKPORT, NY	08/13/24 10:15	08/13/24
L2445707-03	EIGHTEEN MILE CREEK	WATER	LOCKPORT, NY	08/13/24 12:40	08/13/24
L2445707-04	D-55	WATER	LOCKPORT, NY	08/13/24 11:02	08/13/24
L2445707-05	VDM-9	WATER	LOCKPORT, NY	08/13/24 10:00	08/13/24
L2445707-06	FIELD DUP	WATER	LOCKPORT, NY	08/13/24 10:15	08/13/24
L2445707-07	TRIP BLANK	WATER	LOCKPORT, NY	08/13/24 00:00	08/13/24

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445707
Project Number:	Not Specified	**Report Date:**	08/20/24

Case Narrative

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

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

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

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

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

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

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445707
Project Number:	Not Specified	**Report Date:**	08/20/24

Case Narrative (continued)

Report Submission

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

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

Volatile Organics

L2445707-02D and -06D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Chloride

The WG1960456-4 MS recovery for chloride (0%), performed on L2445707-01, does not apply because the sample concentration is greater than four times the spike amount added.

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

Authorized Signature: Caitlin Walukevich

Caitlin Walukevich

Title: Technical Director/Representative Date: 08/20/24

VOLATILES

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-01
Client ID: VDM-11
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 09:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/16/24 10:23
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
Chloroform	2.4	J	ug/l	2.5	0.70	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	4.4		ug/l	0.50	0.18	1
1,2-Dichloroethane	0.27	J	ug/l	0.50	0.13	1
1,1,2,2-Tetrachloroethane	0.99		ug/l	0.50	0.17	1
Toluene	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	1.0		ug/l	0.50	0.18	1
Bromochloromethane	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	105		70-130

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-02 D
Client ID: VDM-14
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/16/24 10:46
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	1.8	J	ug/l	5.0	1.4	2
Chloroform	20		ug/l	5.0	1.4	2
1,1,2-Trichloroethane	37		ug/l	3.0	1.0	2
Tetrachloroethene	170		ug/l	1.0	0.36	2
1,2-Dichloroethane	11		ug/l	1.0	0.26	2
1,1,2,2-Tetrachloroethane	53		ug/l	1.0	0.33	2
Toluene	ND		ug/l	5.0	1.4	2
Vinyl chloride	41		ug/l	2.0	0.14	2
trans-1,2-Dichloroethene	16		ug/l	5.0	1.4	2
Trichloroethene	81		ug/l	1.0	0.35	2
Bromochloromethane	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	106		70-130

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-03
Client ID: EIGHTEEN MILE CREEK
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 12:40
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/16/24 11:34
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Toluene	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
Bromochloromethane	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	104		70-130

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-04
Client ID: D-55
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 11:02
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/16/24 11:57
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Toluene	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
Bromochloromethane	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	108		70-130

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-05
Client ID: VDM-9
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:00
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/16/24 12:21
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.66		ug/l	0.50	0.18	1
1,2-Dichloroethane	0.24	J	ug/l	0.50	0.13	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Toluene	ND		ug/l	2.5	0.70	1
Vinyl chloride	0.51	J	ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.40	J	ug/l	0.50	0.18	1
Bromochloromethane	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	107		70-130

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-06 D
Client ID: FIELD DUP
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/16/24 11:10
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	1.8	J	ug/l	5.0	1.4	2
Chloroform	21		ug/l	5.0	1.4	2
1,1,2-Trichloroethane	38		ug/l	3.0	1.0	2
Tetrachloroethene	170		ug/l	1.0	0.36	2
1,2-Dichloroethane	11		ug/l	1.0	0.26	2
1,1,2,2-Tetrachloroethane	54		ug/l	1.0	0.33	2
Toluene	ND		ug/l	5.0	1.4	2
Vinyl chloride	43		ug/l	2.0	0.14	2
trans-1,2-Dichloroethene	16		ug/l	5.0	1.4	2
Trichloroethene	84		ug/l	1.0	0.35	2
Bromochloromethane	ND		ug/l	5.0	1.4	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	103		70-130

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-07
Client ID: TRIP BLANK
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 00:00
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/16/24 12:45
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Toluene	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
Bromochloromethane	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	104		70-130

METALS

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-01 Date Collected: 08/13/24 09:15

Client ID: VDM-11 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.03230		mg/l	0.00100	0.00017	1	08/16/24 13:12	08/18/24 16:45	EPA 3005A	1,6020B	WKP
Copper, Total	0.2454		mg/l	0.01000	0.00384	10	08/16/24 13:12	08/18/24 17:50	EPA 3005A	1,6020B	WKP
Iron, Total	22.9		mg/l	0.0500	0.0191	1	08/16/24 13:12	08/18/24 16:45	EPA 3005A	1,6020B	WKP
Zinc, Total	0.1356		mg/l	0.01000	0.00341	1	08/16/24 13:12	08/18/24 16:45	EPA 3005A	1,6020B	WKP

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-02 Date Collected: 08/13/24 10:15

Client ID: VDM-14 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.01680		mg/l	0.01000	0.00178	10	08/16/24 13:12	08/18/24 16:49	EPA 3005A	1,6020B	WKP
Copper, Total	0.01453		mg/l	0.01000	0.00384	10	08/16/24 13:12	08/18/24 16:49	EPA 3005A	1,6020B	WKP
Iron, Total	468.		mg/l	0.500	0.191	10	08/16/24 13:12	08/18/24 16:49	EPA 3005A	1,6020B	WKP
Zinc, Total	0.3171		mg/l	0.1000	0.03410	10	08/16/24 13:12	08/18/24 16:49	EPA 3005A	1,6020B	WKP

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-03 Date Collected: 08/13/24 12:40

Client ID: EIGHTEEN MILE CREEK Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00052	J	mg/l	0.00100	0.00017	1	08/16/24 13:12	08/18/24 16:54	EPA 3005A	1,6020B	WKP
Copper, Total	0.00450		mg/l	0.00100	0.00038	1	08/16/24 13:12	08/18/24 16:54	EPA 3005A	1,6020B	WKP
Iron, Total	0.458		mg/l	0.0500	0.0191	1	08/16/24 13:12	08/18/24 16:54	EPA 3005A	1,6020B	WKP
Zinc, Total	0.00777	J	mg/l	0.01000	0.00341	1	08/16/24 13:12	08/18/24 16:54	EPA 3005A	1,6020B	WKP

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-04 Date Collected: 08/13/24 11:02

Client ID: D-55 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00149		mg/l	0.00100	0.00017	1	08/16/24 13:12	08/18/24 16:58	EPA 3005A	1,6020B	WKP
Copper, Total	0.00926		mg/l	0.00100	0.00038	1	08/16/24 13:12	08/18/24 16:58	EPA 3005A	1,6020B	WKP
Iron, Total	0.964		mg/l	0.0500	0.0191	1	08/16/24 13:12	08/18/24 16:58	EPA 3005A	1,6020B	WKP
Zinc, Total	0.00920	J	mg/l	0.01000	0.00341	1	08/16/24 13:12	08/18/24 16:58	EPA 3005A	1,6020B	WKP

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-05 Date Collected: 08/13/24 10:00

Client ID: VDM-9 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.00182		mg/l	0.00100	0.00017	1	08/16/24 13:12	08/18/24 17:03	EPA 3005A	1,6020B	WKP
Copper, Total	0.05688		mg/l	0.00100	0.00038	1	08/16/24 13:12	08/18/24 17:03	EPA 3005A	1,6020B	WKP
Iron, Total	120.		mg/l	0.0500	0.0191	1	08/16/24 13:12	08/18/24 17:03	EPA 3005A	1,6020B	WKP
Zinc, Total	0.06564		mg/l	0.01000	0.00341	1	08/16/24 13:12	08/18/24 17:03	EPA 3005A	1,6020B	WKP

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445707

Project Number: Not Specified **Report Date:** 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-06 Date Collected: 08/13/24 10:15

Client ID: FIELD DUP Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.02142		mg/l	0.01000	0.00178	10	08/16/24 13:12	08/18/24 17:07	EPA 3005A	1,6020B	WKP
Copper, Total	0.01578		mg/l	0.01000	0.00384	10	08/16/24 13:12	08/18/24 17:07	EPA 3005A	1,6020B	WKP
Iron, Total	452.		mg/l	0.500	0.191	10	08/16/24 13:12	08/18/24 17:07	EPA 3005A	1,6020B	WKP
Zinc, Total	0.2996		mg/l	0.1000	0.03410	10	08/16/24 13:12	08/18/24 17:07	EPA 3005A	1,6020B	WKP

INORGANICS
&
MISCELLANEOUS

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-01
Client ID: VDM-11
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 09:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	1000		mg/l	100	89.	100	-	08/17/24 08:35	1,9251	MRM

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-02
Client ID: VDM-14
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	3100		mg/l	100	89.	100	-	08/17/24 09:02	1,9251	MRM

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-03
Client ID: EIGHTEEN MILE CREEK
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 12:40
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	49.		mg/l	1.0	0.89	1	-	08/17/24 09:03	1,9251	MRM

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-04
Client ID: D-55
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 11:02
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	16.		mg/l	1.0	0.89	1	-	08/17/24 09:04	1,9251	MRM

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified
Lab Number: L2445707
Report Date: 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-05
Client ID: VDM-9
Sample Location: LOCKPORT, NY
Sample Depth:
Matrix: Water
Date Collected: 08/13/24 10:00
Date Received: 08/13/24
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	6900		mg/l	100	89.	100	-	08/17/24 09:06	1,9251	MRM

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

SAMPLE RESULTS

Lab ID: L2445707-06
Client ID: FIELD DUP
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	3300		mg/l	100	89.	100	-	08/17/24 11:10	1,9251	MRM

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445707-01A	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-01B	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-01C	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-01D	Plastic 60ml unpreserved	A	7	7	4.1	Y	Absent		CL-9251(28)
L2445707-01E	Plastic 250ml HNO3 preserved	A	<2	<2	4.1	Y	Absent		FE-6020T(180),CR-6020T(180),CU-6020T(180),ZN-6020T(180)
L2445707-02A	Vial HCl preserved	B	NA		3.3	Y	Absent		NYTCL-8260(14)
L2445707-02B	Vial HCl preserved	B	NA		3.3	Y	Absent		NYTCL-8260(14)
L2445707-02C	Vial HCl preserved	B	NA		3.3	Y	Absent		NYTCL-8260(14)
L2445707-02D	Plastic 60ml unpreserved	B	7	7	3.3	Y	Absent		CL-9251(28)
L2445707-02E	Plastic 250ml HNO3 preserved	B	<2	<2	3.3	Y	Absent		FE-6020T(180),CR-6020T(180),ZN-6020T(180),CU-6020T(180)
L2445707-03A	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-03B	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-03C	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-03D	Plastic 120ml unpreserved	A	7	7	4.1	Y	Absent		CL-9251(28)
L2445707-03E	Plastic 250ml HNO3 preserved	A	<2	<2	4.1	Y	Absent		FE-6020T(180),CR-6020T(180),ZN-6020T(180),CU-6020T(180)
L2445707-04A	Vial HCl preserved	C	NA		4.3	Y	Absent		NYTCL-8260(14)
L2445707-04B	Vial HCl preserved	C	NA		4.3	Y	Absent		NYTCL-8260(14)
L2445707-04C	Vial HCl preserved	C	NA		4.3	Y	Absent		NYTCL-8260(14)
L2445707-04D	Plastic 60ml unpreserved	C	7	7	4.3	Y	Absent		CL-9251(28)

*Values in parentheses indicate holding time in days

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445707
Report Date: 08/20/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445707-04E	Plastic 250ml HNO3 preserved	C	<2	<2	4.3	Y	Absent		FE-6020T(180),CR-6020T(180),CU-6020T(180),ZN-6020T(180)
L2445707-05A	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-05B	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-05C	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-05D	Plastic 60ml unpreserved	A	7	7	4.1	Y	Absent		CL-9251(28)
L2445707-05E	Plastic 250ml HNO3 preserved	A	<2	<2	4.1	Y	Absent		FE-6020T(180),CR-6020T(180),CU-6020T(180),ZN-6020T(180)
L2445707-06A	Vial HCl preserved	B	NA		3.3	Y	Absent		NYTCL-8260(14)
L2445707-06B	Vial HCl preserved	B	NA		3.3	Y	Absent		NYTCL-8260(14)
L2445707-06C	Vial HCl preserved	B	NA		3.3	Y	Absent		NYTCL-8260(14)
L2445707-06D	Plastic 60ml unpreserved	B	7	7	3.3	Y	Absent		CL-9251(28)
L2445707-06E	Plastic 250ml HNO3 preserved	B	<2	<2	3.3	Y	Absent		FE-6020T(180),CR-6020T(180),ZN-6020T(180),CU-6020T(180)
L2445707-07A	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)
L2445707-07B	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445707
Project Number:	Not Specified	**Report Date:**	08/20/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC w/'J' Qual

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445707
Project Number:	Not Specified	**Report Date:**	08/20/24

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

Report Format: DU Report - No QC w/'J' Qual

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445707
Project Number:	Not Specified	**Report Date:**	08/20/24

Data Qualifiers

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445707
Project Number:	Not Specified	**Report Date:**	08/20/24

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:08202416:32

L2445707 20AUG24
VANCHLOR

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab 8/14/24

Client Information

Client: Vanchlor Company Inc.
Address: 45 Main St.
Lockport, NY 14094
Phone: 716-434-2200
Fax:
Email: blaw@vanchlor.com

Project Information

Project Name: Annual Groundwater Monitoring
Project Location: Lockport, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Brian Law
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☑ Same as Client Info
PO #

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

☐ These samples have been previously analyzed by Alpha

Other project specific requirements/comments:

Client Code: VANCHLOR

Metals List - Cr, Cu, Fe, Zn

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL-8260 (2172)	*Metals	Chloride		Field pH/Temp				Sample Specific Comments	Total # Bottles
	VDM-10			Water		X	X	X							5
45707 -01	VDM-11	8-13-24	915	Water	KN	X	X	X							5
02	VDM-14	8-13-24	1015	Water	NK	X	X	X							5
	VDM-12			Water		X	X	X						dry no Sample	5
03	Eighteen Mile Creek	8-13-24	1240	Water	AMF	X	X	X							5
04	D-55	8-13-24	1102	Water	NK	X	X	X							5
05	VDM-9	8-13-24	1000	Water	KN	X	X	X							5
06	Field DUP	8-13-24	1015	Water	NK	X	X	X							5
07	Trip Blank	8-13-24		DI Water		X									2

Container Type: V P P
Preservative: B C A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	8-13-24/1430	Buffalo Service Center	8-13-24/1430
Russell B Bixby	8-13-24 2000		8-13-24 2330
	8-13-24 2350		8/14/24 3:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2445727
Client:	Vanchlor Co., Inc. 45 Main Street Lockport, NY 14094
ATTN:	Brian Law
Phone:	(716) 434-2200
Project Name:	EMERGING CONTAMINANTS
Project Number:	Not Specified
Report Date:	08/27/24

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (9110), MN (025-999-495), NJ (MA015), NY (11627), NC (685), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708A1), USFWS (Permit #A24920).

Project Name: EMERGING CONTAMINANTS
Project Number: Not Specified

Lab Number: L2445727
Report Date: 08/27/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2445727-01	VDM-10	WATER	LOCKPORT, NY	08/13/24 09:29	08/13/24
L2445727-02	VDM-14	WATER	LOCKPORT, NY	08/13/24 10:15	08/13/24
L2445727-03	D-55	WATER	LOCKPORT, NY	08/13/24 11:02	08/13/24
L2445727-04	VDM-14 DUPLICATE	WATER	LOCKPORT, NY	08/13/24 10:15	08/13/24
L2445727-05	EQUIPMENT BLANK	WATER	LOCKPORT, NY	08/13/24 10:15	08/13/24
L2445727-06	FIELDBLANK	WATER	LOCKPORT, NY	08/13/24 10:15	08/13/24

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445727
Project Number:	Not Specified	**Report Date:**	08/27/24

Case Narrative

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

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

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

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

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

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

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445727
Project Number:	Not Specified	**Report Date:**	08/27/24

Case Narrative (continued)

Report Submission

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

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

Sample Receipt

The analyses performed were specified by the client.

Perfluorinated Alkyl Acids by 1633

L2445727-02 and -04: The sample has elevated detection limits due to the limited sample volume utilized during extraction, as required by the sample matrix.

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

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 08/27/24

SEMIVOLATILES

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-01
Client ID: VDM-10
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 09:29
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 08/24/24 15:14
Analyst: ANH

Extraction Method: EPA 1633
Extraction Date: 08/21/24 17:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	26.2		ng/l	5.75	0.920	1
Perfluoropentanoic Acid (PFPeA)	0.819	J	ng/l	2.87	0.769	1
Perfluorobutanesulfonic Acid (PFBS)	3.13		ng/l	1.44	0.482	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.75	1.50	1
Perfluorohexanoic Acid (PFHxA)	0.791	J	ng/l	1.44	0.424	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.44	0.252	1
Perfluoroheptanoic Acid (PFHpA)	0.395	J	ng/l	1.44	0.287	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.44	0.345	1
Perfluorooctanoic Acid (PFOA)	1.49		ng/l	1.44	0.625	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.75	1.94	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.44	0.388	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.44	0.453	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.44	0.654	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.44	0.582	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.75	2.24	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.44	0.446	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.44	0.783	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.44	0.625	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.44	0.331	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.44	0.388	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.44	0.776	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.44	0.661	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.44	0.539	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.44	0.381	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.75	0.805	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.75	0.906	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.44	0.546	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-01 Date Collected: 08/13/24 09:29

Client ID: VDM-10 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.75	1.18	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.75	1.18	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.44	0.625	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.44	0.661	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.4	3.38	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.4	1.76	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.87	0.410	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.87	0.381	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.87	0.316	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.87	1.70	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.19	2.37	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	35.9	8.41	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	35.9	5.67	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-01 Date Collected: 08/13/24 09:29

Client ID: VDM-10 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	82		41-123
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	88		29-123
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	85		41-125
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	269		10-290
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	94		40-121
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	88		27-156
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	83		46-115
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	89		39-121
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	122		10-261
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	84		38-114
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	79		32-114
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	83		28-115
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	169		10-213
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	60		10-172
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	85		16-123
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	95		14-108
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	100		10-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	101		10-126
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	88		10-145
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	81		35-142
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	71		11-94
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	69		11-97
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	103		10-137
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	94		10-130

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-02
Client ID: VDM-14
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 08/19/24 18:44
Analyst: GRS

Extraction Method: EPA 3510C
Extraction Date: 08/16/24 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	205.		ng/l	142	32.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	42		15-110

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-02
Client ID: VDM-14
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 08/24/24 14:11
Analyst: ANH

Extraction Method: EPA 1633
Extraction Date: 08/21/24 17:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	11.3	J	ng/l	21.3	3.41	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	10.7	2.85	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	5.33	1.79	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	21.3	5.57	1
Perfluorohexanoic Acid (PFHxA)	1.76	J	ng/l	5.33	1.57	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	5.33	0.933	1
Perfluoroheptanoic Acid (PFHpA)	1.28	J	ng/l	5.33	1.07	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	5.33	1.28	1
Perfluorooctanoic Acid (PFOA)	17.2		ng/l	5.33	2.32	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	21.3	7.20	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	5.33	1.44	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	5.33	1.68	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	5.33	2.43	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	5.33	2.16	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	21.3	8.29	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	5.33	1.65	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	5.33	2.91	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	5.33	2.32	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	5.33	1.23	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	5.33	1.44	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	5.33	2.88	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	5.33	2.45	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	5.33	2.00	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	5.33	1.41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	21.3	2.99	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	21.3	3.36	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	5.33	2.03	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-02 Date Collected: 08/13/24 10:15

Client ID: VDM-14 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	21.3	4.40	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	21.3	4.40	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	5.33	2.32	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	5.33	2.45	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	53.3	12.5	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	53.3	6.53	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	10.7	1.52	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	10.7	1.41	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	10.7	1.17	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	10.7	6.29	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	26.7	8.80	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	133	31.2	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	133	21.0	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-02 Date Collected: 08/13/24 10:15

Client ID: VDM-14 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	88		41-123
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	83		29-123
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	85		41-125
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	185		10-290
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	87		40-121
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	82		27-156
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	85		46-115
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	89		39-121
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	102		10-261
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	80		38-114
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	85		32-114
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	78		28-115
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	151		10-213
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	78		10-172
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	80		16-123
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	99		14-108
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	102		10-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	95		10-126
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	85		10-145
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	77		35-142
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	62		11-94
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	65		11-97
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	128		10-137
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	106		10-130

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-03
Client ID: D-55
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 11:02
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 08/19/24 19:53
Analyst: GRS

Extraction Method: EPA 3510C
Extraction Date: 08/16/24 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	110000		ng/l	150	33.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-03
Client ID: D-55
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 11:02
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 08/24/24 15:58
Analyst: ANH

Extraction Method: EPA 1633
Extraction Date: 08/21/24 17:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	8.12		ng/l	6.06	0.969	1
Perfluoropentanoic Acid (PFPeA)	0.833	J	ng/l	3.03	0.810	1
Perfluorobutanesulfonic Acid (PFBS)	1.19	J	ng/l	1.51	0.507	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.06	1.58	1
Perfluorohexanoic Acid (PFHxA)	0.908	J	ng/l	1.51	0.447	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.51	0.265	1
Perfluoroheptanoic Acid (PFHpA)	0.833	J	ng/l	1.51	0.303	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.51	0.363	1
Perfluorooctanoic Acid (PFOA)	6.49		ng/l	1.51	0.659	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.06	2.04	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.51	0.409	1
Perfluorononanoic Acid (PFNA)	0.538	J	ng/l	1.51	0.477	1
Perfluorooctanesulfonic Acid (PFOS)	1.36	J	ng/l	1.51	0.689	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.51	0.613	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.06	2.35	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.51	0.469	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.51	0.825	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.51	0.659	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.51	0.348	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.51	0.409	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.51	0.818	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.51	0.696	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.51	0.568	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.51	0.401	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.06	0.848	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.06	0.954	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.51	0.575	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-03 Date Collected: 08/13/24 11:02

Client ID: D-55 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.06	1.25	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.06	1.25	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.51	0.659	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.51	0.696	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	15.1	3.56	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	15.1	1.85	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.03	0.432	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.03	0.401	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.03	0.333	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.03	1.79	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.57	2.50	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	37.8	8.86	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	37.8	5.97	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-03 Date Collected: 08/13/24 11:02

Client ID: D-55 Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	90		41-123
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	83		29-123
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	86		41-125
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	173		10-290
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	86		40-121
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	83		27-156
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	85		46-115
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	90		39-121
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	105		10-261
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	83		38-114
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	83		32-114
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	89		28-115
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	117		10-213
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	59		10-172
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	80		16-123
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	85		14-108
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	81		10-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	85		10-126
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	85		10-145
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	79		35-142
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	67		11-94
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	63		11-97
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	90		10-137
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	81		10-130

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-04
Client ID: VDM-14 DUPLICATE
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 08/19/24 20:16
Analyst: GRS

Extraction Method: EPA 3510C
Extraction Date: 08/16/24 20:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	167.		ng/l	147	33.2	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	43		15-110

Project Name: EMERGING CONTAMINANTS
Project Number: Not Specified
Lab Number: L2445727
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-04
Client ID: VDM-14 DUPLICATE
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 08/24/24 16:10
Analyst: ANH

Extraction Method: EPA 1633
Extraction Date: 08/21/24 17:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	12.1	J	ng/l	32.0	5.12	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	16.0	4.28	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	8.00	2.68	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	32.0	8.36	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	8.00	2.36	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	8.00	1.40	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	8.00	1.60	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	8.00	1.92	1
Perfluorooctanoic Acid (PFOA)	19.9		ng/l	8.00	3.48	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	32.0	10.8	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	8.00	2.16	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	8.00	2.52	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	8.00	3.64	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	8.00	3.24	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	32.0	12.4	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	8.00	2.48	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	8.00	4.36	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	8.00	3.48	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	8.00	1.84	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	8.00	2.16	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	8.00	4.32	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	8.00	3.68	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	8.00	3.00	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	8.00	2.12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	32.0	4.48	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	32.0	5.04	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	8.00	3.04	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-04 Date Collected: 08/13/24 10:15

Client ID: VDM-14 DUPLICATE Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	32.0	6.60	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	32.0	6.60	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	8.00	3.48	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	8.00	3.68	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	80.0	18.8	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	80.0	9.80	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	16.0	2.28	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	16.0	2.12	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	16.0	1.76	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	16.0	9.44	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	40.0	13.2	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	200	46.8	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	200	31.6	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-04 Date Collected: 08/13/24 10:15

Client ID: VDM-14 DUPLICATE Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	85		41-123
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	80		29-123
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	82		41-125
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	114		10-290
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	79		40-121
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	78		27-156
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	84		46-115
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	87		39-121
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	85		10-261
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	80		38-114
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	79		32-114
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	75		28-115
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	84		10-213
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	62		10-172
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	75		16-123
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	75		14-108
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	69		10-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	83		10-126
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	83		10-145
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	74		35-142
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	66		11-94
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	64		11-97
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	93		10-137
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	82		10-130

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-05
Client ID: EQUIPMENT BLANK
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 08/19/24 20:39
Analyst: GRS

Extraction Method: EPA 3510C
Extraction Date: 08/16/24 20:00

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	44		15-110

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-05
Client ID: EQUIPMENT BLANK
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 08/24/24 16:23
Analyst: ANH

Extraction Method: EPA 1633
Extraction Date: 08/21/24 17:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	5.76	0.922	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.88	0.771	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.44	0.483	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	5.76	1.50	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.44	0.425	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.44	0.252	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.44	0.288	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.44	0.346	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.44	0.627	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	5.76	1.94	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.44	0.389	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.44	0.454	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.44	0.656	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.44	0.584	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	5.76	2.24	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.44	0.447	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.44	0.785	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.44	0.627	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.44	0.331	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.44	0.389	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.44	0.778	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.44	0.663	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.44	0.540	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.44	0.382	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	5.76	0.807	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	5.76	0.908	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.44	0.548	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-05 Date Collected: 08/13/24 10:15

Client ID: EQUIPMENT BLANK Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	5.76	1.19	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	5.76	1.19	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.44	0.627	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.44	0.663	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	14.4	3.39	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	14.4	1.76	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	2.88	0.411	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	2.88	0.382	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	2.88	0.317	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	2.88	1.70	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	7.20	2.38	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	36.0	8.43	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	36.0	5.68	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-05 Date Collected: 08/13/24 10:15

Client ID: EQUIPMENT BLANK Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	87		41-123
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	100		29-123
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	95		41-125
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	121		10-290
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	86		40-121
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	88		27-156
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	88		46-115
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	92		39-121
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	95		10-261
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	76		38-114
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	89		32-114
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	81		28-115
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	112		10-213
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	73		10-172
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	82		16-123
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	93		14-108
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	86		10-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	94		10-126
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	81		10-145
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	88		35-142
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	79		11-94
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	75		11-97
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	114		10-137
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	100		10-130

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-06
Client ID: FIELDBLANK
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 08/21/24 12:41
Analyst: GRS

Extraction Method: EPA 3510C
Extraction Date: 08/20/24 15:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	150	33.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	41		15-110

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445727
Project Number: Not Specified
Report Date: 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-06
Client ID: FIELDBLANK
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 10:15
Date Received: 08/13/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 144,1633
Analytical Date: 08/24/24 16:36
Analyst: ANH

Extraction Method: EPA 1633
Extraction Date: 08/21/24 17:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	6.63	1.06	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	3.31	0.886	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.66	0.555	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	6.63	1.73	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.66	0.489	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.66	0.290	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.66	0.331	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.66	0.398	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.66	0.721	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	6.63	2.24	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.66	0.447	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.66	0.522	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.66	0.754	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.66	0.671	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	6.63	2.58	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.66	0.514	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.66	0.903	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.66	0.721	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.66	0.381	1
Perfluorooctanesulfonamide (PFOSA)	ND		ng/l	1.66	0.447	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.66	0.894	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.66	0.762	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.66	0.621	1
Perfluorotetradecanoic Acid (PFTeDA)	ND		ng/l	1.66	0.439	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	6.63	0.928	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	6.63	1.04	1
Perfluorododecanesulfonic Acid (PFDoS)	ND		ng/l	1.66	0.629	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-06 Date Collected: 08/13/24 10:15

Client ID: FIELDBLANK Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 1633 - Mansfield Lab						
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	6.63	1.37	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	6.63	1.37	1
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	ND		ng/l	1.66	0.721	1
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	ND		ng/l	1.66	0.762	1
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	ND		ng/l	16.6	3.89	1
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	ND		ng/l	16.6	2.03	1
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	ND		ng/l	3.31	0.472	1
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	ND		ng/l	3.31	0.439	1
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	ND		ng/l	3.31	0.364	1
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	ND		ng/l	3.31	1.95	1
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	ND		ng/l	8.28	2.73	1
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	ND		ng/l	41.4	9.69	1
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	ND		ng/l	41.4	6.54	1

Project Name: EMERGING CONTAMINANTS **Lab Number:** L2445727

Project Number: Not Specified **Report Date:** 08/27/24

SAMPLE RESULTS

Lab ID: L2445727-06 Date Collected: 08/13/24 10:15

Client ID: FIELDBLANK Date Received: 08/13/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[13C4]Butanoic Acid (13C4-PFBA)	80		41-123
Perfluoro-n-[13C5]Pentanoic Acid (13C5-PFPeA)	80		29-123
Perfluoro-1-[2,3,4-13C3]Butanesulfonic Acid (13C3-PFBS)	77		41-125
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Hexanesulfonic Acid (13C2-4:2FTS)	150		10-290
Perfluoro-n-[1,2,3,4,6-13C5]Hexanoic Acid (13C5-PFHxA)	74		40-121
Perfluoro-n-[1,2,3,4-13C4]Heptanoic Acid (13C4-PFHpA)	73		27-156
Perfluoro-1-[1,2,3-13C3]Hexanesulfonic Acid (13C3-PFHxS)	79		46-115
Perfluoro-n-[13C8]Octanoic Acid (13C8-PFOA)	83		39-121
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Octanesulfonic Acid (13C2-6:2FTS)	91		10-261
Perfluoro-n-[13C9]Nonanoic Acid (13C9-PFNA)	76		38-114
Perfluoro-1-[13C8]Octanesulfonic Acid (13C8-PFOS)	76		32-114
Perfluoro-n-[1,2,3,4,5,6-13C6]Decanoic Acid (13C6-PFDA)	76		28-115
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2]Decanesulfonic Acid (13C2-8:2FTS)	117		10-213
N-Methyl-d3-perfluoro-1-octanesulfonamidoacetic Acid (D3-NMeFOSAA)	63		10-172
Perfluoro-n-[1,2,3,4,5,6,7-13C7]Undecanoic Acid (13C7-PFUnA)	78		16-123
Perfluoro-1-[13C8]Octanesulfonamide (13C8-PFOSA)	86		14-108
N-Ethyl-d5-perfluoro-1-octanesulfonamidoacetic Acid (D5-NEtFOSAA)	77		10-150
Perfluoro-n-[1,2-13C2]Dodecanoic Acid (13C2-PFDoA)	84		10-126
Perfluoro-n-[1,2-13C2]Tetradecanoic Acid (13C2-PFTeDA)	78		10-145
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	73		35-142
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (D3-NMeFOSA)	64		11-94
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (D5-NEtFOSA)	66		11-97
N-Methyl-d7-Perfluorooctanesulfonamidoethanol (D7-NMeFOSE)	99		10-137
N-Ethyl-d9-Perfluorooctanesulfonamidoethanol (D9-NEtFOSE)	89		10-130

Project Name: EMERGING CONTAMINANTS
Project Number: Not Specified

Lab Number: L2445727
Report Date: 08/27/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445727-01A	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-01B	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-01C	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-02A	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02A1	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02A2	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02B	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02B1	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02B2	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02C	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02C1	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02C2	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-02D	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-02D1	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-02D2	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-02E	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-02E1	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-02E2	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-03A	Plastic 500ml unpreserved	C	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-03B	Plastic 500ml unpreserved	C	NA		4.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-03C	Plastic 500ml unpreserved	C	NA		4.3	Y	Absent		A2-1633-DRAFT(28)

*Values in parentheses indicate holding time in days

Project Name: EMERGING CONTAMINANTS
Project Number: Not Specified

Lab Number: L2445727
Report Date: 08/27/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445727-03D	Amber 250ml unpreserved	C	6	6	4.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-03E	Amber 250ml unpreserved	C	6	6	4.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-04A	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-04B	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-04C	Plastic 500ml unpreserved	B	NA		3.3	Y	Absent		A2-1633-DRAFT(28)
L2445727-04D	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-04E	Amber 250ml unpreserved	B	6	6	3.3	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-05A	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-05B	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-05C	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-05D	Amber 250ml unpreserved	A	6	6	4.1	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-05E	Amber 250ml unpreserved	A	6	6	4.1	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-06A	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-06B	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-06C	Plastic 500ml unpreserved	A	NA		4.1	Y	Absent		A2-1633-DRAFT(28)
L2445727-06D	Amber 250ml unpreserved	A	6	6	4.1	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445727-06E	Amber 250ml unpreserved	A	6	6	4.1	Y	Absent		A2-1,4-DIOXANE-SIM(7)

*Values in parentheses indicate holding time in days

Project Name: EMERGING CONTAMINANTS
Project Number:

Lab Number: L2445727
Report Date: 08/27/24

PFAS PARAMETER SUMMARY

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

Project Name: EMERGING CONTAMINANTS
Project Number:

Lab Number: L2445727
Report Date: 08/27/24

PFAS PARAMETER SUMMARY

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

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445727
Project Number:	Not Specified	**Report Date:**	08/27/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC w/'J' Qual

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445727
Project Number:	Not Specified	**Report Date:**	08/27/24

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

Report Format: DU Report - No QC w/'J' Qual

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445727
Project Number:	Not Specified	**Report Date:**	08/27/24

Data Qualifiers

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445727
Project Number:	Not Specified	**Report Date:**	08/27/24

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

144 Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. Draft EPA Method 1633, EPA Document 821-D-22-001, June 2022.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 8/14/24

ALPHA Job #: L2445727

Client Information
Client: Vanchlor
Address: 45 Main St.
Lockport, NY 14094
Phone: 716-434-2200
Fax:
Email: blaw@vanchlor.com

Project Information
Project Name: Emerging Contaminants
Project Location: Lockport, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Brian Law
ALPHAQuote #: 5621

Turn-Around Time
Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
No Js

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 Dioxane - 8270 SIM	PFAs - 1633	Field pH/Temp						Sample Specific Comments	Total Bottles
45727-01	VDM-10	8-13-24	929	Water	KN	X	X								5
-02	VDM-14	"	1015	Water	NK	X	X								5
-03	D-55	"	1102	Water	KN	X	X								5
-02	VDM-14 MS	"	1015	Water	NK	X	X								5
-02	VDM-14 MSD	"	"	Water	KN	X	X								5
-04	VDM-14 DUPLICATE	"	"	Water	KN	X	X								5
-05	Equipment Blank	"	"	Water	NK	X	X								5
-06	Field Blank	"	"	Water	AF	X	X							1 bottle PFAs / 2 Dioxane	3

Container Type: A P
Preservative: A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature] Vanchlor	8-13-24/1430	Buffalo Service Center	8-13-24/1430
Russell B. Baby	8-13-24 2000	[signature]	8-13-24 2350
[signature]	8-14-24 0730	[signature]	8/14/24 3:00
[signature] 8/14/24 1930	[signature] Mendoza ASL 8/14/24 1935		
[signature] Mendoza 2nd 8/14/24 2130	[signature] 8/14/24 21:30		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2445935
Client:	Vanchlor Co., Inc. 45 Main Street Lockport, NY 14094
ATTN:	Brian Law
Phone:	(716) 434-2200
Project Name:	ANNUAL GROUNDWATER MONITORING
Project Number:	Not Specified
Report Date:	08/21/24

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

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

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445935
Report Date: 08/21/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2445935-01	VDM-10	WATER	LOCKPORT, NY	08/14/24 08:30	08/14/24

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445935
Project Number:	Not Specified	**Report Date:**	08/21/24

Case Narrative

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

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

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

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

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

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

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445935
Project Number:	Not Specified	**Report Date:**	08/21/24

Case Narrative (continued)

Report Submission

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

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

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

Authorized Signature: Kelly O'Neill

Title: Technical Director/Representative Date: 08/21/24

VOLATILES

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445935

Project Number: Not Specified **Report Date:** 08/21/24

SAMPLE RESULTS

Lab ID: L2445935-01
Client ID: VDM-10
Sample Location: LOCKPORT, NY

Date Collected: 08/14/24 08:30
Date Received: 08/14/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/19/24 12:17
Analyst: MJV

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
Chloroform	9.0		ug/l	2.5	0.70	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloroethane	1.1		ug/l	0.50	0.13	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Toluene	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	0.20	J	ug/l	0.50	0.18	1
Bromochloromethane	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	105		70-130

METALS

Project Name: ANNUAL GROUNDWATER MONITORING **Lab Number:** L2445935

Project Number: Not Specified **Report Date:** 08/21/24

SAMPLE RESULTS

Lab ID: L2445935-01 Date Collected: 08/14/24 08:30

Client ID: VDM-10 Date Received: 08/14/24

Sample Location: LOCKPORT, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Chromium, Total	0.01529		mg/l	0.00100	0.00017	1	08/20/24 20:20	08/21/24 11:55	EPA 3005A	1,6020B	EJF
Copper, Total	0.6737		mg/l	0.00100	0.00038	1	08/20/24 20:20	08/21/24 11:55	EPA 3005A	1,6020B	EJF
Iron, Total	21.6		mg/l	0.500	0.191	10	08/20/24 20:20	08/21/24 13:19	EPA 3005A	1,6020B	EJF
Zinc, Total	0.4608		mg/l	0.01000	0.00341	1	08/20/24 20:20	08/21/24 11:55	EPA 3005A	1,6020B	EJF

INORGANICS
&
MISCELLANEOUS

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445935
Report Date: 08/21/24

SAMPLE RESULTS

Lab ID: L2445935-01
Client ID: VDM-10
Sample Location: LOCKPORT, NY

Date Collected: 08/14/24 08:30
Date Received: 08/14/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chloride	4400		mg/l	100	89.	100	-	08/20/24 23:25	1,9251	TLH

Project Name: ANNUAL GROUNDWATER MONITORING
Project Number: Not Specified

Lab Number: L2445935
Report Date: 08/21/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445935-01A	Vial HCl preserved	A	NA		5.4	Y	Absent		NYTCL-8260(14)
L2445935-01B	Vial HCl preserved	A	NA		5.4	Y	Absent		NYTCL-8260(14)
L2445935-01C	Vial HCl preserved	A	NA		5.4	Y	Absent		NYTCL-8260(14)
L2445935-01D	Plastic 60ml unpreserved	A	7	7	5.4	Y	Absent		CL-9251(28)
L2445935-01E	Plastic 250ml HNO3 preserved	A	<2	<2	5.4	Y	Absent		FE-6020T(180),CR-6020T(180),CU-6020T(180),ZN-6020T(180)

*Values in parentheses indicate holding time in days

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445935
Project Number:	Not Specified	**Report Date:**	08/21/24

GLOSSARY

Acronyms

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

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

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

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

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

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

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

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

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

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

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

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

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

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

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

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

Report Format: DU Report - No QC w/'J' Qual

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445935
Project Number:	Not Specified	**Report Date:**	08/21/24

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

Report Format: DU Report - No QC w/'J' Qual

Project Name:	ANNUAL GROUNDWATER MONITORING	**Lab Number:**	L2445935
Project Number:	Not Specified	**Report Date:**	08/21/24

Data Qualifiers

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 8/15/24

ALPHA Job #: L2445935

Client Information

Client: Vanchlor Company Inc.
Address: 45 Main St.
Lockport, NY 14094
Phone: 716-434-2200
Fax:
Email: blaw@vanchlor.com

Project Information

Project Name: Annual Groundwater Monitoring
Project Location: Lockport, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Brian Law
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Client Code: VANCHLOR

Metals List - Cr, Cu, Fe, Zn

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL-8260 (2172)	*Metals	Chloride		Field pH/Temp				Sample Specific Comments	Total # Bottles
45935-01	VDM-10	8-14-24	930	Water	AMF	X	X	X							5
															5

Container Type: V P P
Preservative: B C A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
DACF	8-14-24 1055	Buffalo Service Center	8-14-24 1055
Russell B Bixby	8-14-24 2030		8-14-24 2331
	8-14-24 2330		
			8-15-24

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

02:38

ANALYTICAL REPORT

Lab Number:	L2445936
Client:	Vanchlor Co., Inc. 45 Main Street Lockport, NY 14094
ATTN:	Brian Law
Phone:	(716) 434-2200
Project Name:	EMERGING CONTAMINANTS
Project Number:	Not Specified
Report Date:	08/22/24

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Project Name: EMERGING CONTAMINANTS
Project Number: Not Specified

Lab Number: L2445936
Report Date: 08/22/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2445936-01	VDM-10	WATER	LOCKPORT, NY	08/13/24 09:29	08/14/24

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445936
Project Number:	Not Specified	**Report Date:**	08/22/24

Case Narrative

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

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

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

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

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

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

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445936
Project Number:	Not Specified	**Report Date:**	08/22/24

Case Narrative (continued)

Report Submission

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

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

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

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 08/22/24

SEMIVOLATILES

Project Name: EMERGING CONTAMINANTS
Lab Number: L2445936
Project Number: Not Specified
Report Date: 08/22/24

SAMPLE RESULTS

Lab ID: L2445936-01
Client ID: VDM-10
Sample Location: LOCKPORT, NY

Date Collected: 08/13/24 09:29
Date Received: 08/14/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 08/21/24 13:02
Analyst: GRS

Extraction Method: EPA 3510C
Extraction Date: 08/20/24 15:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	1130		ng/l	139	31.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	39		15-110

Project Name: EMERGING CONTAMINANTS
Project Number: Not Specified

Lab Number: L2445936
Report Date: 08/22/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445936-01A	Amber 250ml unpreserved	A	7	7	5.4	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2445936-01B	Amber 250ml unpreserved	A	7	7	5.4	Y	Absent		A2-1,4-DIOXANE-SIM(7)

*Values in parentheses indicate holding time in days

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445936
Project Number:	Not Specified	**Report Date:**	08/22/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC w/'J' Qual

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445936
Project Number:	Not Specified	**Report Date:**	08/22/24

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

Report Format: DU Report - No QC w/'J' Qual

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445936
Project Number:	Not Specified	**Report Date:**	08/22/24

Data Qualifiers

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report - No QC w/'J' Qual

Project Name:	EMERGING CONTAMINANTS	**Lab Number:**	L2445936
Project Number:	Not Specified	**Report Date:**	08/22/24

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 8/15/24

ALPHA Job #: L2445936

Client Information

Client: Vanchlor
Address: 45 Main St.
Lockport, NY 14094
Phone: 716-434-2200
Fax:
Email: blaw@vanchlor.com

Project Information

Project Name: Emerging Contaminants
Project Location: Lockport, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Brian Law
ALPHAQuote #: 5621

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☑ Same as Client Info
PO #

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

No Js

Please specify Metals or TAL.

ANALYSIS

Sample Filtration

☐ Done
☐ Lab to do

Preservation

☐ Lab to do

(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1, 4 Dioxane - 8270 SIM			Field pH/Temp					Sample Specific Comments	Total # Bottles
45936-01	VDM-10	8-13-24	929	Water	KN	x									5
															5
															5
															5
															5
															5
															5
														1 bottle PFOAs / 2 Dioxane	3

Container Type: A, P
Preservative: A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
FAKE	8-14-24 1055	Buffalo Service Center	8-14-24 1055
	8-14-24 2013		8-14-24 2330
	8-14-24		
	0238	Tyler Foster	8-14

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.

Form No: 01-25 (rev. 30-Sept-2013)

8-15-24 02:38

Appendix C

Field Forms

8/12/2024

APPENDIX E

Attachment 1-B

Groundwater Monitoring System Inspection Plan and Form

A. Inspections of the groundwater monitoring system shall be performed on an annual basis to conform with the SMP monitoring schedule. Personnel trained in groundwater sampling, collection and sample preservation techniques will be used. The inspection form located below or an equivalent form shall be used. The original inspection forms shall be maintained by Vanchlor in an inspection log book or file for the full term of the Administrative Order governing the implementation of the SMP. Copies of the inspections shall be submitted with the annual monitoring reports.

B. The well inspection will include visual inspection of the security cap and lock, condition of the surface grout, and the condition of the inner casing and cap. During well purging, the relative rate of recharge should be noted for comparison with the previous data to insure that the well screen in not plugged. Also during purging and sampling, the integrity of the well shall be inspected by measuring the total well depth and noting the presence of any obstructions such as casing bends, foreign objects or siltation. The measured well depth shall be compared to the "as-built" well depth.

C. If it becomes apparent that a well is not capable of providing representative samples, Vanchlor shall notify the Department within one week of the sampling event.

Landfill/Groundwater Monitoring System Inspection Form

1.	Is the integrity of the cover and ditch lining satisfactory?	YES	NO
1.1	Any sink holes or depressions?	YES	NO
1.2	Significant erosion of the banks?	YES	NO
1.3	Any visible problems?	YES	NO
2.	Is the integrity of the vegetative cover satisfactory?	YES	NO
2.1	Is the grass healthy looking?	YES	NO
2.2	Are there any bare spots?	YES	NO
2.3	Is the grass less than 8" tall?	YES	NO
2.4	Are there trees or bushes growing in the cover?	YES	NO
3.	Is drainage from the site satisfactory?	YES	NO
3.1	Is there any ponding or puddling?	YES	NO
4.	Is the fence surrounding the site secure?	YES	NO
4.1	Any holes or damage?	YES	NO
4.2	Signs in place every 50 feet?	YES	NO
4.3	Accessible entry to the site?	YES	NO
4.4	Property "Posted Signs" visible and intact?	YES	NO

5. Are all of the covers on the monitoring wells locked? **YES** NO
   5.1 Caps on all of the risers? **YES** NO

6. Is there any iron staining in the drainage ditch? YES **NO**

7. Are there any visible seeps in the cliff face? YES NO

8. Are the wells in good condition? **YES** NO
   8.1 Any damage to the outer casing? YES **NO**
   8.2 Obstructions in the riser? YES **NO**
   8.3 Excessive sediment buildup in any wells? YES **NO**

Name of inspector:

Signature: Bryan C Zhu Date: 8/12/2024

Well Purging / Sampling Data

WELL VDM-9R:

WELL PURGING DATA: DATE: 8/12/24

START TIME: 947 FINISH TIME: 1000

A: MP ELEVATION: 448.58 FEET

B: DEPTH TO WATER: 34.55 FEET

C: DEPTH OF WELL INSTALLED: 37.35 ft.

D: STATIC WATER LEVEL: C-D = 2.8 FEET

E: WELL VOLUME: E * 0.1636 = 0.46 GALLONS

F: DEPTH OF WELL AS MEASURED: 39.15 FEET

WELL SAMPLING DATA:

DATE: 8/13/24

START TIME: 1000 FINISH TIME: 1008

A: MP ELEVATION: 448.58 FEET

B: DEPTH TO WATER: 37.21 FEET

C: DEPTH OF WELL INSTALLED: 37.35 ft.

D: STATIC WATER LEVEL: C-D = 0.14 FEET

E: WELL VOLUME: E * 0.1636 = 0.02 GALLONS

F: DEPTH OF WELL AS MEASURED: 39.15 FEET

G: pH OF SAMPLE: 6.04 pH @ 17.4°C

H: pH METER CALIBRATED?: YES [X] NO [ ]

I: SAMPLES OBTAINED:

1- TOTAL METALS, 1 TOTAL CHLORIDES, 2 VOAs

J: WEATHER CONDITIONS: Clear, Sunny

K: SAMPLER(S): Amber Fleischman, Nicholas Kibby, Kyle Nichter

L: COMMENTS: 0.75 gals purged → dry, Small Solids in purge water
*Bailer and String replaced

Well Purging / Sampling Data

WELL VDM-10:

WELL PURGING DATA:

DATE: 8/12/24

START TIME: 933

FINISH TIME: 1003

A: MP ELEVATION: 444.46 FEET

B: DEPTH TO WATER: 33.27 FEET

C: DEPTH OF WELL INSTALLED: 45.76 ft.

D: STATIC WATER LEVEL: C-D = 12.49 FEET

E: WELL VOLUME: E * 0.1636 = 2.04 GALLONS

F: DEPTH OF WELL AS MEASURED: 46.69 FEET

WELL SAMPLING DATA:

DATE: 8/13/24

START TIME: 929

FINISH TIME: 951

A: MP ELEVATION: 444.46 FEET

B: DEPTH TO WATER: 44.36 FEET

C: DEPTH OF WELL INSTALLED: 45.76 ft.

D: STATIC WATER LEVEL: C-D = 1.4 FEET

E: WELL VOLUME: E * 0.1636 = 0.23 GALLONS

F: DEPTH OF WELL AS MEASURED: 46.70 FEET

G: pH OF SAMPLE: 6.33 pH @ 18.2 °C

H: pH METER CALIBRATED?: YES [X] NO [ ]

I: SAMPLES OBTAINED:

1- TOTAL METALS, 1 TOTAL CHLORIDES, 2 VOAs, 2 1,4 Dioxane, 3 PFAS

J: WEATHER CONDITIONS: Clear Sunny

K: SAMPLER(S): Amber Fleischman, Kyle Nichter, Nicholas Kibby

L: COMMENTS: 3.5 gals purged → dry / Emergent Contaminents Sampled On 8/13 then well went dry, returned 8/14 to finish Collection of VOAs, T Chlorides, and T metals.

*Bailer and String replaced

Emerging Contaminants 1,4-dioxane (via USEPA Method 8270D SIM) and per- and polyfluoroalkyl substances (PFAS) (via USEPA Method 1633) sampled at this location.

Well Purging / Sampling Data

WELL VDM-11:

WELL PURGING DATA:

DATE: 8/12/24

START TIME: 916

FINISH TIME: 919

A: MP ELEVATION: 450.33 FEET

B: DEPTH TO WATER: 19.71 FEET

C: DEPTH OF WELL INSTALLED: 22.63 ft.

D: STATIC WATER LEVEL: C-D = 2.92 FEET

E: WELL VOLUME: E * 0.1636 = 0.48 GALLONS

F: DEPTH OF WELL AS MEASURED: 22.85 FEET

WELL SAMPLING DATA:

DATE: 8/13/24

START TIME: 915

FINISH TIME: 922

A: MP ELEVATION: 450.33 FEET

B: DEPTH TO WATER: 21.05 FEET

C: DEPTH OF WELL INSTALLED: 22.63 ft.

D: STATIC WATER LEVEL: C-D = 1.58 FEET

E: WELL VOLUME: E * 0.1636 = 0.26 GALLONS

F: DEPTH OF WELL AS MEASURED: 22.85 FEET

G: pH OF SAMPLE: 6.24 pH @ 17.9 °C

H: pH METER CALIBRATED?: YES [X] NO [ ]

I: SAMPLES OBTAINED:

1- TOTAL METALS, 1 TOTAL CHLORIDES, 2 VOAs

J: WEATHER CONDITIONS: Clear, Sunny

K: SAMPLER(S): Amber Fleischman, Kyle Nichter, Nicholas Kibby

L: COMMENTS: ~0.5 gals purged before well went dry

*Bailer and string replaced, due to excassive ant in well

Well Purging / Sampling Data

WELL VDM-12:

WELL PURGING DATA:

DATE: 8/12/24

START TIME: 928 FINISH TIME: 929

A:	MP ELEVATION:	451.01 FEET		
B:	DEPTH TO WATER:			13.18 FEET
C:	DEPTH OF WELL INSTALLED:	14.91		
D:	STATIC WATER LEVEL:		C-D =	0 FEET
E:	WELL VOLUME:	E * 0.1636 =		0 GALLONS
F:	DEPTH OF WELL AS MEASURED:			13.18 FEET

WELL SAMPLING DATA:

DATE:_____

START TIME:_____ FINISH TIME:_____

A:	MP ELEVATION:	451.01 FEET		
B:	DEPTH TO WATER:			_____FEET
C:	DEPTH OF WELL INSTALLED:	14.91		
D:	STATIC WATER LEVEL:		C-D =	_____FEET
E:	WELL VOLUME:	E * 0.1636 =		_____GALLONS
F:	DEPTH OF WELL AS MEASURED:			_____FEET
G:	pH OF SAMPLE:			_____pH
H:	pH METER CALIBRATED?:	YES [ ]		NO [ ]

I: SAMPLES OBTAINED:

1- TOTAL METALS, 1 TOTAL CHLORIDES, 2 VOAs

J: WEATHER CONDITIONS: Clear, Sunny

K: SAMPLER(S): Amber Fleischman

L: COMMENTS: No water detected / well dry

Well Purging / Sampling Data

WELL VDM-14R:

WELL PURGING DATA: DATE: 8/12/24

START TIME: 1005 FINISH TIME: 1020

A: MP ELEVATION: 444.74 FEET

B: DEPTH TO WATER: 9.84 FEET

C: DEPTH OF WELL INSTALLED: 11.5

D: STATIC WATER LEVEL: C-D = 1.66 FEET

E: WELL VOLUME: E * 0.1636 = 0.27 GALLONS

F: DEPTH OF WELL AS MEASURED: 11.6 FEET

WELL SAMPLING DATA:

DATE: 8/13/24

START TIME: 1015 FINISH TIME: 1046

A: MP ELEVATION: 444.74 FEET

B: DEPTH TO WATER: 9.85 FEET

C: DEPTH OF WELL INSTALLED: 11.5

D: STATIC WATER LEVEL: C-D = 1.65 FEET

E: WELL VOLUME: E * 0.1636 = 0.27 GALLONS

F: DEPTH OF WELL AS MEASURED: 11.6 FEET

G: pH OF SAMPLE: 5.63 pH

H: pH METER CALIBRATED?: YES [X] NO [ ]

I: SAMPLES OBTAINED:

1- TOTAL METALS, 1 TOTAL CHLORIDES, 2 VOAs, 1.4 dioxane, 1633 PFAs

J: WEATHER CONDITIONS: Clear Sunny

K: SAMPLER(S): Amber Fleischman, Nicholas Kibby, Kyle Nichter

L: COMMENTS: 5.5 gals purged. Orange tint → clear during purge.
MS, MSD, Field Blank, and Duplicate Collected here

Emerging Contaminants 1,4-dioxane (via USEPA Method 8270D SIM) and per- and polyfluoroalkyl substances (PFAS) (via USEPA Method 1633) sampled at this location.

APPENDIX E

Attachment 1-A

Well Purging / Sampling Data

WELL D-55:

WELL PURGING DATA:

DATE: 8/12/24

START TIME: 1048 FINISH TIME: 1100

A: MP ELEVATION: 468.76 FEET

B: DEPTH TO WATER: 36.63 FEET

C: DEPTH OF WELL INSTALLED: 46.40 ft.

D: STATIC WATER LEVEL: C-D = 9.77 FEET

E: WELL VOLUME: E * 0.1636 = 1.60 GALLONS

F: DEPTH OF WELL AS MEASURED: 47.23 FEET

WELL SAMPLING DATA:

DATE: 8/13/24

START TIME: 1102 FINISH TIME: 1111

A: MP ELEVATION: 468.76 FEET

B: DEPTH TO WATER: 36.63 FEET

C: DEPTH OF WELL INSTALLED: 46.40 ft.

D: STATIC WATER LEVEL: C-D = 9.77 FEET

E: WELL VOLUME: E * 0.1636 = 1.60 GALLONS

F: DEPTH OF WELL AS MEASURED: 47.23 FEET

G: pH OF SAMPLE: 7.29 pH @ 17.2°C

H: pH METER CALIBRATED?: YES [X] NO [ ]

I: SAMPLES OBTAINED:

1- TOTAL METALS, 1 TOTAL CHLORIDES, 2 VOAs , 1,4 dioxane, 1633 PFAS

J: WEATHER CONDITIONS: Clear / Sunny

K: SAMPLER(S): Amber Fleischman, Nicholas Kibby, Kyle Nichter

L: COMMENTS: 4.5 gals purged → dry went turbid during purge

Emerging Contaminants 1,4-dioxane (via USEPA Method 8270D SIM) and per- and polyfluoroalkyl substances (PFAS) (via USEPA Method 1633) sampled at this location.

Field Data Sheet

Section 1: Event Information

Customer:	Vanchlor	Date:	8/13/2024
Site/Location:	Eighteen Mile Creek	Time:	1240
Sampler Name (printed):	Amber Fleischman	Weather:	Clear

Section 2: Sample Collection Information

Type of sample:	☒ Grab ☐ Composite ☐ Manual Composite ☐ Other: _____ If composite, Isco ID: _____

Section 3: Field Readings

Field pH (SM4500H+-B):	6.95	Flow 1:		Units:
Meter ID:	A2	Flow 2:		Units:
Residual Chlorine (SM4500Cl-G):		Flow 3:		Units:
Meter ID:		Flow 4:		Units:
Temperature:	22.8 ☒C ☐F			

Section 4: On-site Meter/Site Readings

pH:		Integrator Value:		Units:
Temperature:	☐C ☐F	Diameter of outfall pipe:		
Refrigerator Temperature:	☐C ☐F	Depth of outfall pipe:		

Section 5 Field Observations

Sampler Signature: [signature] PACE

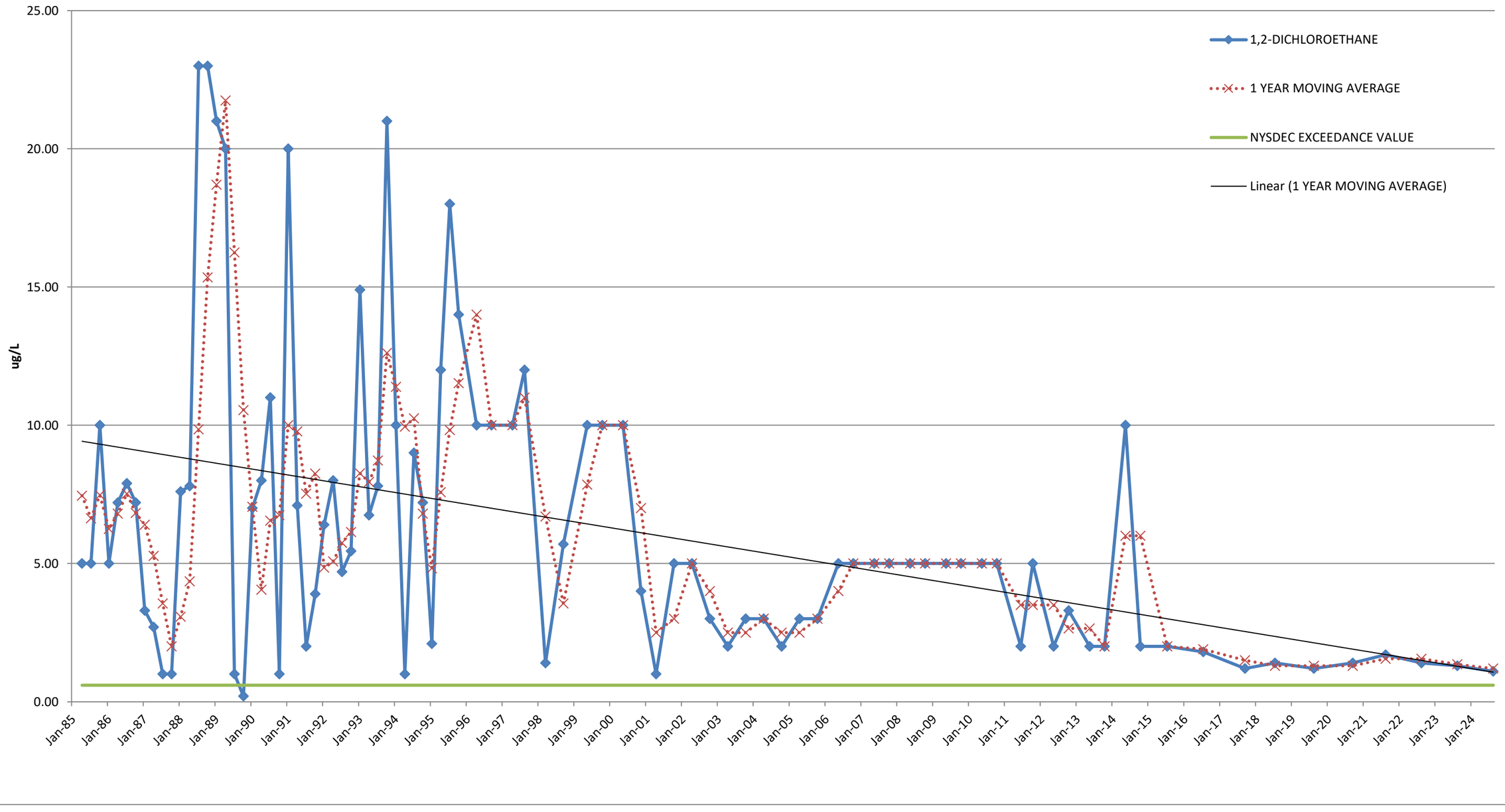
Appendix D

Historical Parameter Trend Analysis

Appendix D1

VDM-10

MOVING AVERAGE TREND TEST
VDM-10
1,2-DICHLOROETHANE



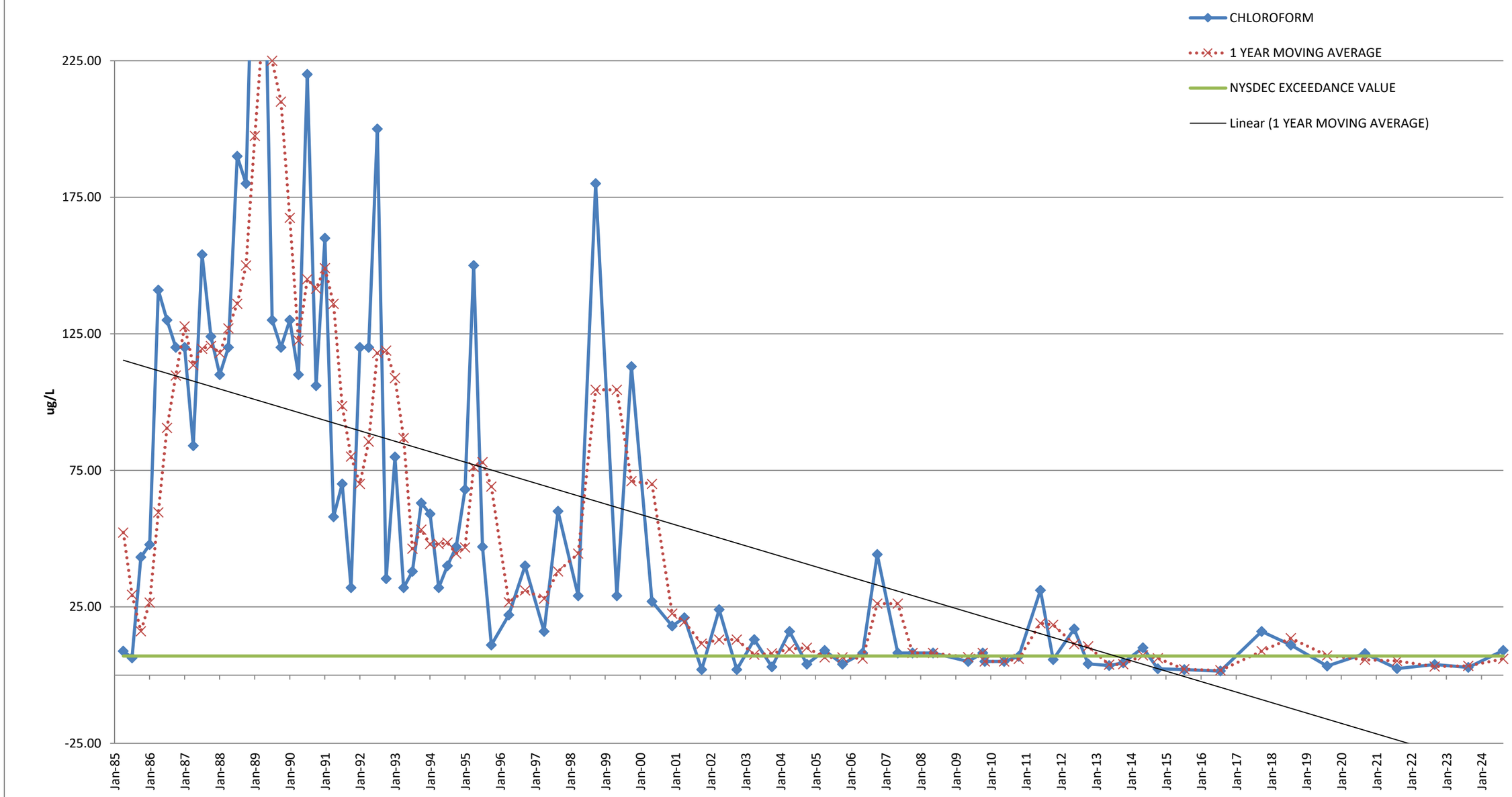
WELL VDM - 10 : 1,2-DICHLOROETHANE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETEC LIMIT	STATISTICS		MOVING AVERAGE				EVENT NO.
Jul-84		0.6	5	TOTAL STD	5.359509					1
Oct-84		0.6	5	TOTAL Sx	0.561829					2
Jan-85	9.90	0.6	5	TOTAL MEAN	7.2					3
Apr-85	5.00	0.6	5	TOTAL N	92	7.45				4
Jul-85	5.00	0.6	5	TOTAL df	91	6.63				5
Oct-85	10.00	0.6	5			7.48				6
Jan-86	5.00	0.6	5			6.25				7
Apr-86	7.20	0.6	5			6.80				8
Jul-86	7.90	0.6	5			7.53				9
Oct-86	7.20	0.6	5			6.83				10
Jan-87	3.30	0.6	5			6.40				11
Apr-87	2.70	0.6	5			5.28				12
Jul-87	1.00	0.6	5			3.55				13
Oct-87	1.00	0.6	5			2.00				14
Jan-88	7.60	0.6	5			3.08				15
Apr-88	7.80	0.6	5			4.35				16
Jul-88	23.00	0.6	5			9.85				17
Oct-88	23.00	0.6	5			15.35				18
Jan-89	21.00	0.6	5			18.70				19
Apr-89	20.00	0.6	5			21.75				20
Jul-89	1.00	0.6	5			16.25				21
Oct-89	0.20	0.6	5			10.55				22
Jan-90	7.00	0.6	5			7.05				23
Apr-90	8.00	0.6	5			4.05				24
Jul-90	11.00	0.6	5			6.55				25
Oct-90	1.00	0.6	5			6.75				26
Jan-91	20.00	0.6	5			10.00				27
Apr-91	7.10	0.6	5			9.78				28
Jul-91	2.00	0.6	5			7.53				29
Oct-91	3.90	0.6	5			8.25				30
Jan-92	6.40	0.6	5			4.85				31
Apr-92	8.00	0.6	5			5.08				32
Jul-92	4.70	0.6	5			5.75				33
Oct-92	5.45	0.6	5			6.14				34
Jan-93	14.90	0.6	5			8.26				35
Apr-93	6.75	0.6	5			7.95				36
Jul-93	7.80	0.6	5			8.73				37
Oct-93	21.00	0.6	5			12.61				38
Jan-94	10.00	0.6	5			11.39				39
Apr-94	1.00	0.6	5			9.95				40
Jul-94	9.00	0.6	5			10.25				41
Oct-94	7.20	0.6	5			6.80				42
Jan-95	2.10	0.6	5			4.83				43
Apr-95	12.00	0.6	5			7.58				44
Jul-95	18.00	0.6	5			9.83				45
Oct-95	14.00	0.6	1			11.53				46
Apr-96	10.00	0.6	10			14.00	13.00			47
Sep-96	10.00	0.6	10			10	10	09/17/96	semiannual	48
Apr-97	10.00	0.6	10			10	10	04/03/97	semiannual	49
Aug-97	12.00	0.6	10			11	11	08/27/97	semiannual	50
Mar-98	1.40	0.6	5			6.7	6.7	03/24/98	semiannual	51
Sep-98	5.70	0.6	5			3.55	3.55	09/22/98	semiannual	52
May-99	10.00	0.6	10			7.85	7.85	05/11/99	semiannual	53
Oct-99	10.00	0.6	10			10	10	10/05/99	semiannual	54
May-00	10.00	0.6	10			10	10	05/16/00	semiannual	55
Nov-00	4.00	0.6	5			7	7	11/28/00	semiannual	56
Apr-01	1.00	0.6	5			2.5	2.5	04/04/01	semiannual	57
Oct-01	5.00	0.6	5			3	3	10/18/01	semiannual	58
Apr-02	5.00	0.6	5			5	5	04/18/02	semiannual	59
Oct-02	3.00	0.6	5			4	4	10/03/02	semiannual	60
Apr-03	2.00	0.6	5			2.5	2.5	04/25/03	semiannual	61
Oct-03	3.00	0.6	5			2.5	2.5	10/03/03	semiannual	62
Apr-04	3.00	0.6	5			3	3	04/01/04	semiannual	63
Oct-04	2.00	0.6	5			2.5	2.5	10/19/04	semiannual	64
Apr-05	3.00	0.6	5			2.5	2.5	04/22/05	semiannual	65

WELL VDM - 10 : 1,2-DICHLOROETHANE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETEC LIMIT	STATISTICS		MOVING AVERAGE				EVENT NO.
Oct-05	3.00	0.6	5			3	3	10/07/05	semiannual	66
May-06	5.00	0.6	5			4	4	05/11/06	semiannual	67
Oct-06	5.00	0.6	5			5	5	10/18/06	semiannual	68
May-07	5.00	0.6	5			5	5	05/22/07	semiannual	69
Oct-07	5.00	0.6	5			5	5	10/25/07	semiannual	70
May-08	5.00	0.6	5			5	5	05/13/08	semiannual	71
Oct-08	5.00	0.6	5			5	5	10/23/08	semiannual	72
May-09	5.00	0.6	5			5	5	05/12/09	semiannual	73
Oct-09	5.00	0.6	5			5	5	10/29/09	semiannual	74
May-10	5.00	0.6	5			5	5	05/20/10	semiannual	75
Oct-10	5.00	0.6	5			5	5	10/18/10	semiannual	76
Jun-11	2.00	0.6	2			3.5	3.5	06/02/11	semiannual	77
Oct-11	5.00	0.6	5			3.5	3.5	10/12/11	semiannual	78
May-12	2.00	0.6	2			3.5	3.5	05/18/12	semiannual	79
Oct-12	3.30	0.6	2			2.65	2.65	10/11/12	semiannual	80
May-13	2.00	0.6	2			2.65	2.65	05/17/13	semiannual	81
Oct-13	2.00	0.6	2			2	2	10/11/13	semiannual	82
May-14	10.00	0.6	2			6	6	05/05/14	semiannual	83
Oct-14	2.00	0.6	2			6	6	10/06/14	semiannual	84
Jul-15	2.00	0.6	2			2	2	07/09/15	semiannual	85
Jul-16	1.80	0.6	1.5			1.9	1.9	07/20/16	Annual	86
Sep-17	1.20	0.6	0.5			1.5	1.5	09/22/17	Annual	87
Jul-18	1.40	0.6	0.5			1.3	1.3	07/24/18	Annual	88
Aug-19	1.20	0.6	2			1.3	1.3	08/06/19	Annual	89
Sep-20	1.40	0.6	0.5			1.3	1.3	09/04/20	Annual	90
Aug-21	1.70	0.6	0.5			1.55	1.55	08/03/21	Annual	91
Aug-22	1.40	0.6	2			1.55	1.55	08/30/22	Annual	92
Aug-23	1.30	0.6	0.5			1.35	1.35	08/15/23	Annual	93
Aug-24	1.10	0.6	0.5			1.2	1.2	08/14/24	Annual	94

MOVING AVERAGE TREND TEST
VDM-10
CHLOROFORM



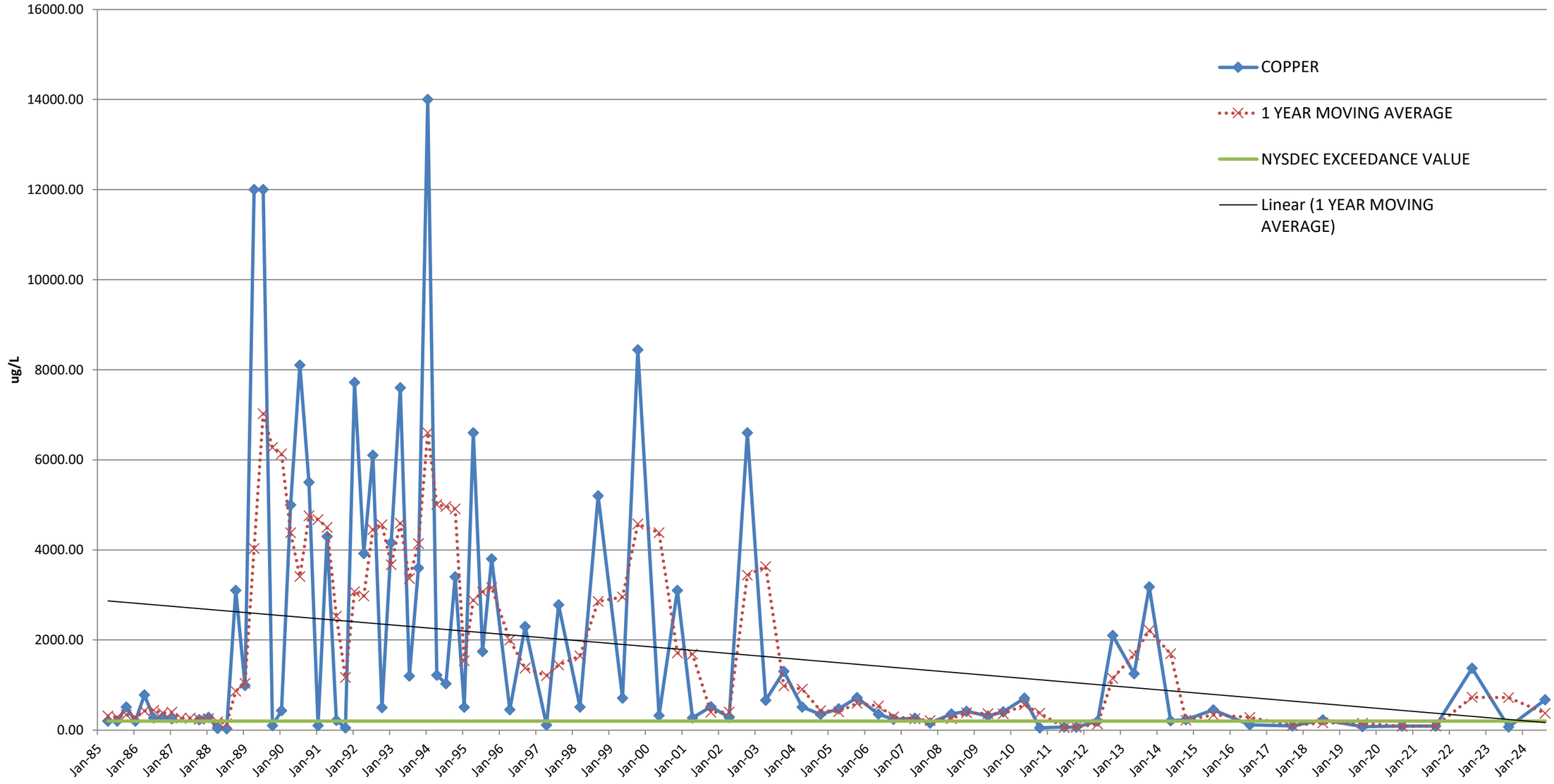
WELL VDM - 10 : CHLOROFORM

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETEC LIMIT	STATISTICS		MOVING AVERAGE				EVENT NO.
Jul-84	97.60	7	8	TOTAL STD	66.6692					1
Oct-84	96.46	7	8	TOTAL Sx	7.59766					2
Jan-85	5.97	7	8	TOTAL MEAN	59.91293					3
Apr-85	8.80	7	8	TOTAL N	78	52.21				4
Jul-85	6.30	7	8	TOTAL df	77	29.38				5
Oct-85	43.20	7	8			16.07				6
Jan-86	47.80	7	8			26.53				7
Apr-86	141.00	7	8			59.58				8
Jul-86	130.00	7	8			90.50				9
Oct-86	120.00	7	8			109.70				10
Jan-87	120.00	7	8			127.75				11
Apr-87	84.00	7	8			113.50				12
Jul-87	154.00	7	8			119.50				13
Oct-87	124.00	7	8			120.50				14
Jan-88	110.00	7	8			118.00				15
Apr-88	120.00	7	8			127.00				16
Jul-88	190.00	7	8			136.00				17
Oct-88	180.00	7	8			150.00				18
Jan-89	300.00	7	8			197.50				19
Apr-89	290.00	7	8			240.00				20
Jul-89	130.00	7	8			225.00				21
Oct-89	120.00	7	8			210.00				22
Jan-90	130.00	7	8			167.50				23
Apr-90	110.00	7	8			122.50				24
Jul-90	220.00	7	8			145.00				25
Oct-90	106.00	7	8			141.50				26
Jan-91	160.00	7	8			149.00				27
Apr-91	58.00	7	8			136.00				28
Jul-91	70.00	7	8			98.50				29
Oct-91	32.00	7	8			80.00				30
Jan-92	120.00	7	8			70.00				31
Apr-92	120.00	7	8			85.50				32
Jul-92	200.00	7	8			118.00				33
Oct-92	35.30	7	8			118.83				34
Jan-93	79.90	7	8			108.80				35
Apr-93	32.00	7	8			86.80				36
Jul-93	38.00	7	8			46.30				37
Oct-93	63.00	7	8			53.23				38
Jan-94	59.00	7	8			48.00				39
Apr-94	32.00	7	8			48.00				40
Jul-94	40.00	7	8			48.50				41
Oct-94	47.00	7	8			44.50				42
Jan-95	68.00	7	8			46.75				43
Apr-95	150.00	7	8			76.25				44
Jul-95	47.00	7	8			78.00				45
Oct-95	11.00	7	4			69.00				46
Apr-96	22.00	7	4			26.67				47
Sep-96	40.00	7	10			31.00	31.00	09/17/96	semiannual	48
Apr-97	16.00	7	10			28.00	28.00	04/03/97	semiannual	49
Aug-97	60.00	7	10			38.00	38.00	08/27/97	semiannual	50
Mar-98	29.00	7	10			44.50	44.50	03/24/98	semiannual	51
Sep-98	180.00	7	5			104.50	104.50	09/22/98	semiannual	52
May-99	29.00	7	10			104.50	104.50	05/11/99	semiannual	53
Oct-99	113.00	7	10			71.00	71.00	10/05/99	semiannual	54
May-00	27.00	7	10			70.00	70.00	05/16/00	semiannual	55
Nov-00	18.00	7	5			22.50	22.50	11/28/00	semiannual	56
Apr-01	21.00	7	5			19.50	19.50	04/04/01	semiannual	57
Oct-01	2.00	7	5			11.50	11.50	10/18/01	semiannual	58
Apr-02	24.00	7	5			13.00	13.00	04/18/01	semiannual	59
Oct-02	2.00	7	5			13.00	13.00	10/03/02	semiannual	60
Apr-03	13.00	7	5			7.50	7.50	04/25/03	semiannual	61
Oct-03	3.00	7	5			8.00	8.00	10/03/03	semiannual	62
Apr-04	16.00	7	5			9.50	9.50	04/01/04	semiannual	63
Oct-04	4.00	7	5			10.00	10.00	10/19/04	semiannual	64
Apr-05	9.00	7	5			6.50	6.50	04/22/05	semiannual	65

WELL VDM - 10 : CHLOROFORM

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETEC LIMIT	STATISTICS		MOVING AVERAGE				EVENT NO.
Oct-05	4.00	7	5			6.50	6.50	10/07/05	semiannual	66
May-06	8.10	7	5			6.05	6.05	05/11/06	semiannual	67
Oct-06	44.20	7	5			26.15	26.15	10/18/06	semiannual	68
May-07	8.10	7	5			26.15	26.15	05/22/04	semiannual	69
Oct-07	8.10	7	5			8.10	8.10	10/25/07	semiannual	70
May-08	8.10	7	5			8.10	8.10	05/13/08	semiannual	71
Oct-09	8.10	7	2			8.10	8.10	10/23/08	semiannual	72
May-09	5.00	7	5			6.55	6.55	05/09/09	semiannual	73
Oct-09	5.00	7	5			5.00	5.00	10/29/09	semiannual	74
May-10	5.00	7	5			5.00	5.00	05/20/10	semiannual	75
Oct-10	6.86	7	5			5.93	5.93	10/18/10	semiannual	76
Jun-11	31.10	7	5			18.98	18.98	06/02/11	semiannual	77
Oct-11	5.70	7	5			18.40	18.40	10/12/11	semiannual	78
May-12	16.90	7	2			11.30	11.30	05/18/12	semiannual	79
Oct-12	4.10	7	2			10.50	10.50	10/11/12	semiannual	80
May-13	3.50	7	2			3.80	3.80	05/17/13	semiannual	81
Oct-13	4.50	7	2			4.00	4.00	10/11/13	semiannual	82
May-14	10.00	7	10			7.25	7.25	05/05/14	semiannual	83
Oct-14	2.30	7	2			6.15	6.15	10/06/14	semiannual	84
Jul-15	2.00	7	2			2.15	2.15	07/09/15	semiannual	85
Jul-16	1.50	7	1.5			1.75	1.75	07/20/16	Annual	86
Sep-17	16.00	7	2.5			8.75	8.75	09/22/17	Annual	87
Jul-18	11.00	7	2.5			13.50	13.50	07/24/18	Annual	88
Aug-19	3.30	7	2.5			7.15	7.15	08/06/19	Annual	89
Sep-20	7.90	7	2.5			5.60	5.60	09/04/20	Annual	90
Aug-21	2.40	7	2.5			5.15	5.15	08/03/21	Annual	91
Aug-22	3.90	7	2.5			3.15	3.15	08/30/22	Annual	92
Aug-23	2.80	7	2.5			3.35	3.35	08/15/23	Annual	93
Aug-24	9.00	7	2.5			5.90	5.90	08/14/24	Annual	94

MOVING AVERAGE TREND TEST
VDM-10
COPPER



WELL VDM - 10 : COPPER

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETEC LIMIT	STATISTICS		MOVING AVERAGE				SAMPLING EVENT NO.
Jul-84	290.00	200	200	TOTAL STD	3128.01					1
Oct-84		200	200	TOTAL Sx	363.6238					2
Jan-85	450.00	200	200	TOTAL MEAN	2159.777					3
Apr-85	200.00	200	200	TOTAL N	75	313.33				4
Jul-85	200.00	200	200	TOTAL df	74	283.33				5
Oct-85	510.00	200	200			340.00				6
Jan-86	200.00	200	200			277.50				7
Apr-86	780.00	200	200			422.50				8
Jul-86	270.00	200	200			440.00				9
Oct-86	280.00	200	200			382.50				10
Jan-87	250.00	200	200			395.00				11
Apr-87		200	200			266.67				12
Jul-87		200	200			265.00				13
Oct-87	230.00	200	200			240.00				14
Jan-88	280.00	200	200			255.00				15
Apr-88	35.00	200	200			181.67				16
Jul-88	30.00	200	200			143.75				17
Oct-88	3100.00	200	200			861.25				18
Jan-89	990.00	200	200			1038.75				19
Apr-89	12000.00	200	200			4030.00				20
Jul-89	12000.00	200	200			7022.50				21
Oct-89	100.00	200	200			6272.50				22
Jan-90	430.00	200	200			6132.50				23
Apr-90	5000.00	200	200			4382.50				24
Jul-90	8100.00	200	200			3407.50				25
Oct-90	5500.00	200	200			4757.50				26
Jan-91	100.00	200	200			4675.00				27
Apr-91	4300.00	200	200			4500.00				28
Jul-91	215.00	200	200			2528.75				29
Oct-91	50.00	200	200			1166.25				30
Jan-92	7720.00	200	200			3071.25				31
Apr-92	3920.00	200	200			2976.25				32
Jul-92	6100.00	200	200			4447.50				33
Oct-92	498.00	200	200			4559.50				34
Jan-93	4160.00	200	200			3669.50				35
Apr-93	7600.00	200	200			4589.50				36
Jul-93	1200.00	200	200			3364.50				37
Oct-93	3600.00	200	200			4140.00				38
Jan-94	14000.00	200	200			6600.00				39
Apr-94	1220.00	200	200			5005.00				40
Jul-94	1030.00	200	200			4962.50				41
Oct-94	3400.00	200	200			4912.50				42
Jan-95	508.00	200	200			1539.50				43
Apr-95	6600.00	200	200			2884.50				44
Jul-95	1745.00	200	200			3063.25				45
Oct-95	3800.00	200	10			3163.25				46
Apr-96	453.00	200	10			1999.33				47
Sep-96	2300.00	200	10			1376.50	1376.50	09/17/96	semiannual	48
Apr-97	110.00	200	10			1205.00	1205.00	04/03/97	semiannual	49
Aug-97	2780.00	200	10			1445.00	1445.00	08/27/97	semiannual	50
Mar-98	510.00	200	20			1645.00	1645.00	03/24/98	semiannual	51
Sep-98	5200.00	200	20			2855.00	2855.00	09/22/98	semiannual	52
May-99	709.00	200	10			2954.50	2954.50	05/11/99	semiannual	53
Oct-99	8440.00	200	10			4574.50	4574.50	10/05/99	semiannual	54
May-00	322.00	200	10			4381.00	4381.00	05/16/00	semiannual	55
Nov-00	3100.00	200	5			1711.00	1711.00	11/28/00	semiannual	56
Apr-01	270.00	200	10			1685.00	1685.00	04/04/01	semiannual	57
Oct-01	520.00	200	10			395.00	395.00	10/18/01	semiannual	58
Apr-02	280.00	200	5			400.00	400.00	04/18/02	semiannual	59
Oct-02	6600.00	200	5			3440.00	3440.00	10/03/02	semiannual	60
Apr-03	660.00	200	5			3630.00	3630.00	04/25/03	semiannual	61
Oct-03	1300.00	200	10			980.00	980.00	10/03/03	semiannual	62
Apr-04	510.00	200	10			905.00	905.00	04/01/04	semiannual	63
Oct-04	350.00	200	10			430.00	430.00	10/19/04	semiannual	64
Apr-05	470.00	200	10			410.00	410.00	04/22/05	semiannual	65

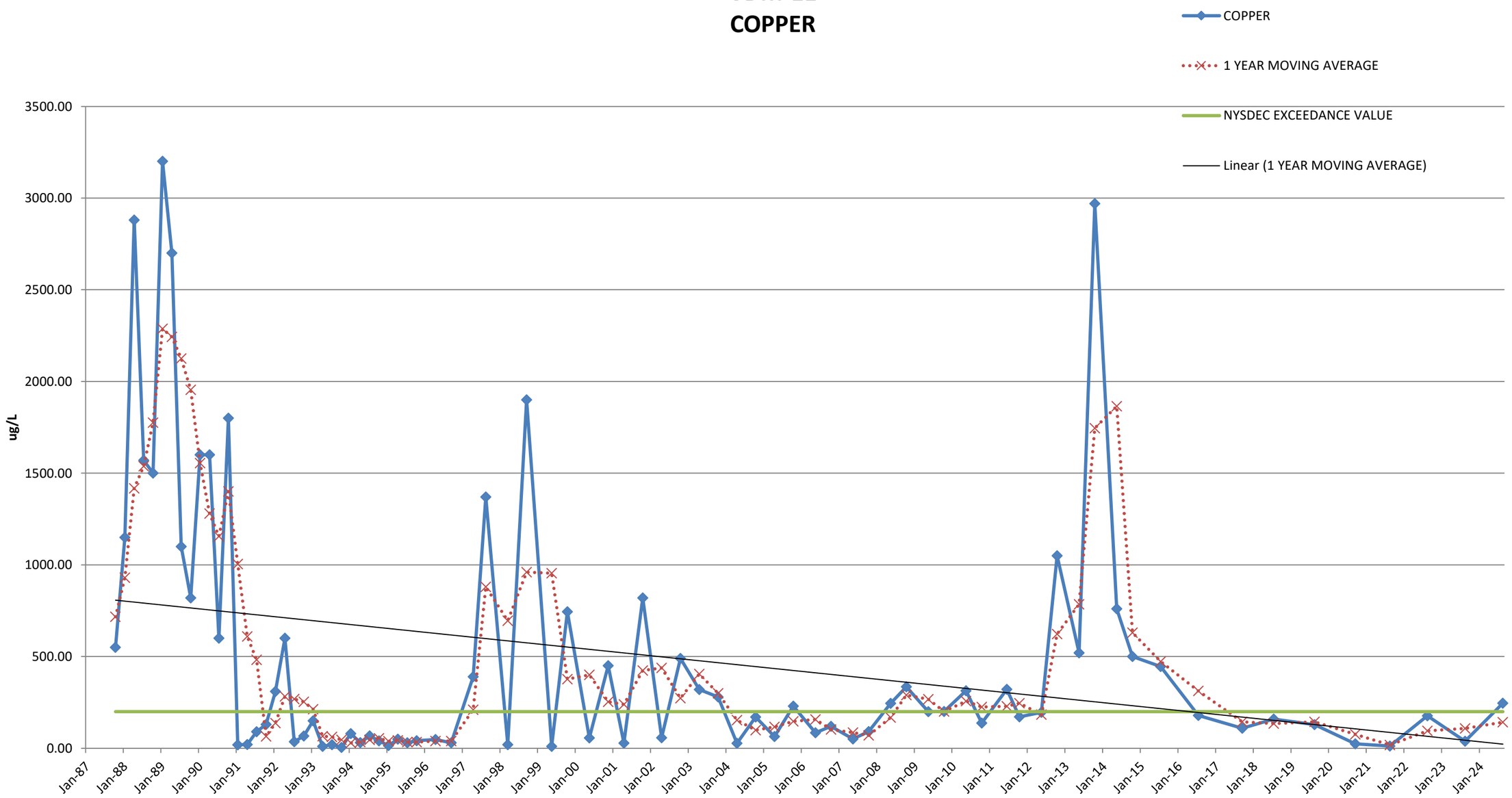
WELL VDM - 10 : COPPER

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETEC LIMIT	STATISTICS		MOVING AVERAGE				SAMPLING EVENT NO.
Oct-05	720.00	200	10			595.00	595.00	10/07/05	semiannual	66
May-06	353.00	200	10			536.50	536.50	05/11/06	semiannual	67
Oct-06	238.00	200	10			295.50	295.50	10/18/06	semiannual	68
May-07	262.00	200	10			250.00	250.00	05/22/07	semiannual	69
Oct-07	156.00	200	10			209.00	209.00	10/25/07	semiannual	70
May-08	355.00	200	10			255.50	255.50	05/13/08	semiannual	71
Oct-08	417.00	200	10			386.00	386.00	05/14/08	semiannual	72
May-09	315.00	200	10			366.00	366.00	05/12/09	semiannual	73
Oct-09	405.00	200	10			360.00	360.00	10/29/09	semiannual	74
May-10	708.00	200	10			556.50	556.50	05/20/10	semiannual	75
Oct-10	48.30	200	10			378.15	378.15	10/18/10	semiannual	76
Jun-11	67.00	200	10			57.65	57.65	06/02/11	semiannual	77
Oct-11	64.00	200	10			65.50	65.50	10/12/11	semiannual	78
May-12	199.00	200	10			131.50	131.50	05/18/12	semiannual	79
Oct-12	2100.00	200	40			1149.50	1149.50	10/11/12	semiannual	80
May-13	1250.00	200	400			1675.00	1675.00	05/17/13	semiannual	81
Oct-13	3180.00	200	20			2215.00	2215.00	10/11/13	semiannual	82
May-14	205.00	200	32000			1692.50	1692.50	05/05/14	semiannual	83
Oct-14	231.00	200	15			218.00	218.00	10/06/14	semiannual	84
Jul-15	446.00	200	500			338.50	338.50	07/09/15	semiannual	85
Jul-16	116.00	200	10			281.00	281.00	07/20/16	Annual	86
Sep-17	92.33	200	1			104.17	104.17	09/22/17	Annual	87
Jul-18	227.50	200	1			159.92	159.92	07/24/18	Annual	88
Aug-19	75.32	200	10			151.41	151.41	08/06/19	Annual	89
Sep-20	89.43	200	1			82.38	82.38	09/04/20	Annual	90
Aug-21	88.00	200	2.5			88.72	88.72	08/03/21	Annual	91
Aug-22	1371.00	200	1			729.50	729.50	08/30/22	Annual	92
Aug-23	70.16	200	1			720.58	720.58	08/15/23	Annual	93
Aug-24	673.70	200	1			371.93	371.93	08/14/24	Annual	94

Appendix D2

VDM-11

MOVING AVERAGE TREND TEST
VDM-11
COPPER



WELL VDM - 11 : COPPER

SAMPLING EVENT NO.	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
-	-	-	-	-	-	-				-
Jan-87	510.00	200	200	TOTAL STD	721.9995					1
Apr-87		200	200	TOTAL Sx	88.2063					2
Jul-87	1090.00	200	200	TOTAL MEAN	506.6647					3
Oct-87	550.00	200	200	TOTAL N	68	716.7				4
Jan-88	1150.00	200	200	TOTAL df	67	930.0				5
Apr-88	2880.00	200	200			1417.5				6
Jul-88	1570.00	200	200			1537.5				7
Oct-88	1500.00	200	200			1775.0				8
Jan-89	3200.00	200	200			2287.5				9
Apr-89	2700.00	200	200			2242.5				10
Jul-89	1100.00	200	200			2125.0				11
Oct-89	820.00	200	200			1955.0				12
Jan-90	1600.00	200	200			1555.0				13
Apr-90	1600.00	200	200			1280.0				14
Jul-90	600.00	200	200			1155.0				15
Oct-90	1800.00	200	200			1400.0				16
Jan-91	19.00	200	200			1004.8				17
Apr-91	21.00	200	200			610.0				18
Jul-91	90.00	200	200			482.5				19
Oct-91	130.00	200	200			65.0				20
Jan-92	310.00	200	200			137.8				21
Apr-92	600.00	200	200			282.5				22
Jul-92	35.50	200	200			268.9				23
Oct-92	66.70	200	200			253.1				24
Jan-93	150.00	200	200			213.1				25
Apr-93	10.00	200	200			65.6				26
Jul-93	20.00	200	200			61.7				27
Oct-93	5.00	200	200			46.3				28
Jan-94	80.00	200	200			28.8				29
Apr-94	31.00	200	200			34.0				30
Jul-94	68.00	200	200			46.0				31
Oct-94	40.00	200	200			54.8				32
Jan-95	15.00	200	200			38.5				33
Apr-95	50.00	200	200			43.3				34
Jul-95	30.00	200	200			33.8				35
Oct-95	41.00	200	10			34.0				36
Apr-96	48.00	200	10			39.7				37
Sep-96	30.00	200	30			39.0	39.0	9/17/1996	semiannual	38
Apr-97	390.00	200	10			210.0	210.0	4/3/1997	semiannual	39
Aug-97	1370.00	200	10			880.0	880.0	8/27/1997	semiannual	40
Mar-98	20.00	200	20			695.0	695.0	3/24/1998	semiannual	41
Sep-98	1900.00	200	20			960.0	960.0	9/22/1998	semiannual	42
May-99	10.00	200	10			955.0	955.0	5/11/1999	semiannual	43
Oct-99	744.00	200	10			377.0	377.0	10/5/1999	semiannual	44
May-00	56.00	200	10			400.0	400.0	5/16/2000	semiannual	45
Nov-00	450.00	200	5			253.0	253.0	11/28/2000	semiannual	46
Apr-01	28.00	200	10			239.0	239.0	4/4/2001	semiannual	47
Oct-01	820.00	200	10			424.0	424.0	10/18/2001	semiannual	48
Apr-02	57.00	200	5			438.5	438.5	4/18/2002	semiannual	49
Oct-02	490.00	200	5			273.5	273.5	10/3/2002	semiannual	50
Apr-03	320.00	200	5			405.0	405.0	4/25/2003	semiannual	51
Oct-03	280.00	200	10			300.0	300.0	10/3/2003	semiannual	52
Apr-04	27.00	200	10			153.5	153.5	4/1/2004	semiannual	53
Oct-04	170.00	200	10			98.5	98.5	10/19/2004	semiannual	54
Apr-05	64.00	200	10			117.0	117.0	4/22/2005	semiannual	55
Oct-05	230.00	200	10			147.0	147.0	10/7/2005	semiannual	56
May-06	85.00	200	10			157.5	157.5	5/11/2006	semiannual	57
Oct-06	120.00	200	10			102.5	102.5	10/18/2006	semiannual	58
May-07	51.00	200	10			85.5	85.5	5/22/2007	semiannual	59
Oct-07	91.00	200	10			71.0	71.0	10/25/2007	semiannual	60
May-08	245.00	200	10			168.0	168.0	5/13/2008	semiannual	61
Oct-08	335.00	200	10			290.0	290.0	10/23/2008	semiannual	62
May-09	200.00	200	10			267.5	267.5	5/12/2009	semiannual	63
Oct-09	201.00	200	10			200.5	200.5	10/29/2009	semiannual	64

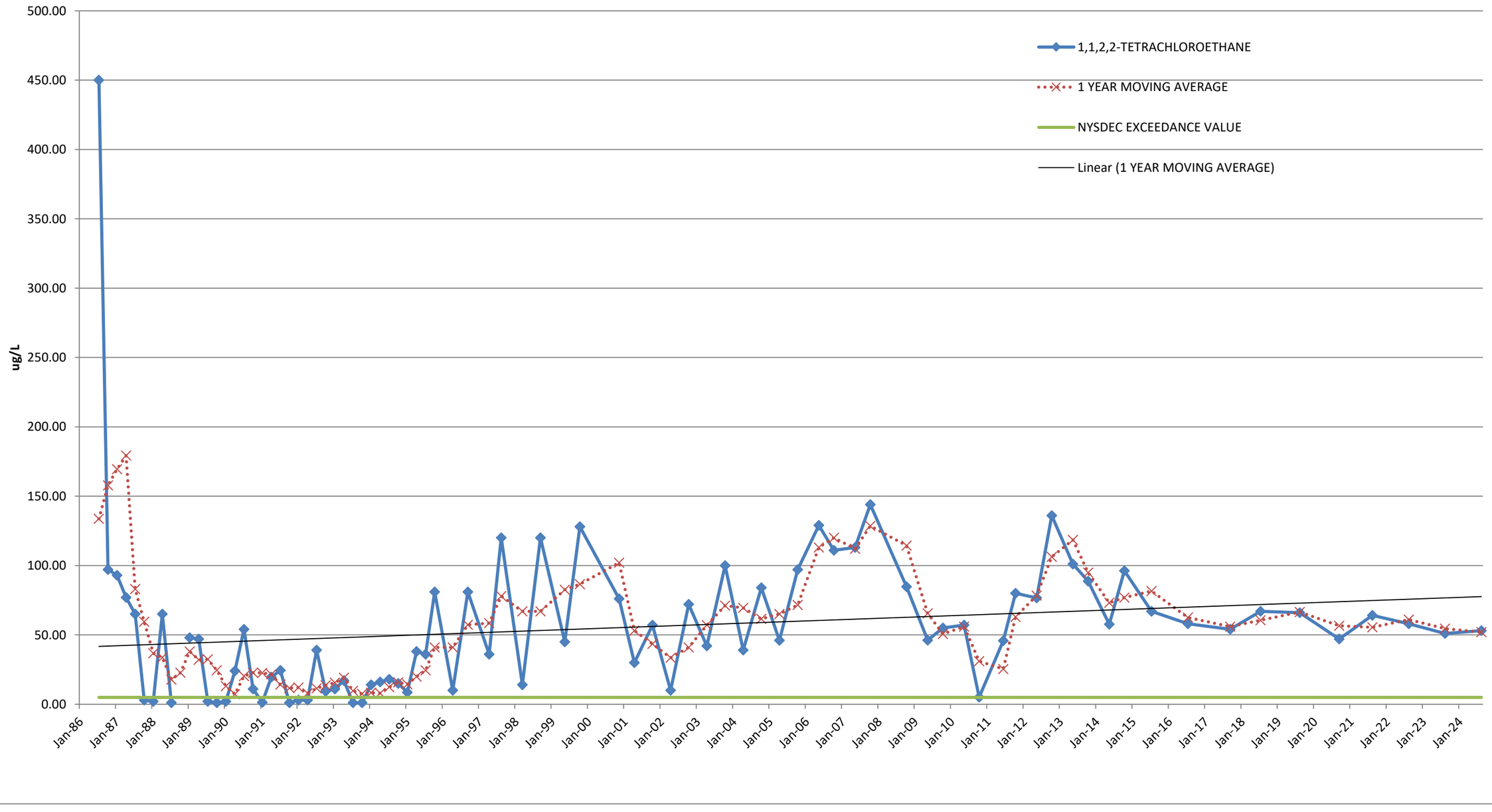
WELL VDM - 11 : COPPER

SAMPLING EVENT NO.	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
May-10	314.00	200	10			257.5	257.5	5/20/2010	semiannual	65
Oct-10	137.00	200	10			225.5	225.5	10/18/2010	semiannual	66
Jun-11	321.00	200	10			229.0	229.0	6/2/2011	semiannual	67
Oct-11	171.00	200	10			246.0	246.0	10/12/2011	semiannual	68
May-12	196.00	200	10			183.5	183.5	5/18/2012	semiannual	69
Oct-12	1050.00	200	40			623.0	623.0	10/11/2012	semiannual	70
May-13	520.00	200	400			785.0	785.0	5/17/2013	semiannual	71
Oct-13	2970.00	200	20			1745.0	1745.0	10/11/2013	semiannual	72
May-14	760.00	200	32			1865.0	1865.0	5/5/2014	semiannual	73
Oct-14	500.00	200	15			630.0	630.0	10/6/2014	semiannual	74
Jul-15	446.00	200	500			473.0	473.0	7/9/2015	semiannual	75
Jul-16	179.00	200	10			312.5	312.5	10/8/2014	Annual	76
Sep-17	109.30	200	1			144.2	144.2	9/22/2017	Annual	77
Jul-18	159.50	200	1			134.4	134.4	7/24/2018	Annual	78
Aug-19	129.40	200	1			144.5	144.5	8/6/2019	Annual	79
Sep-20	23.94	200	1			76.7	76.7	9/4/2020	Annual	80
Aug-21	11.80	200	2.5			17.9	17.9	8/3/2021	Annual	81
Aug-22	177.40	200	1			94.6	94.6	8/30/2022	Annual	82
Aug-23	38.68	200	1			108.0	108.0	8/15/2023	Annual	83
Aug-24	245.40	200	1			142.0	142.0	8/13/2024	Annual	84

Appendix D3

VDM-14R

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
1,1,2,2-TETRACHLOROETHANE



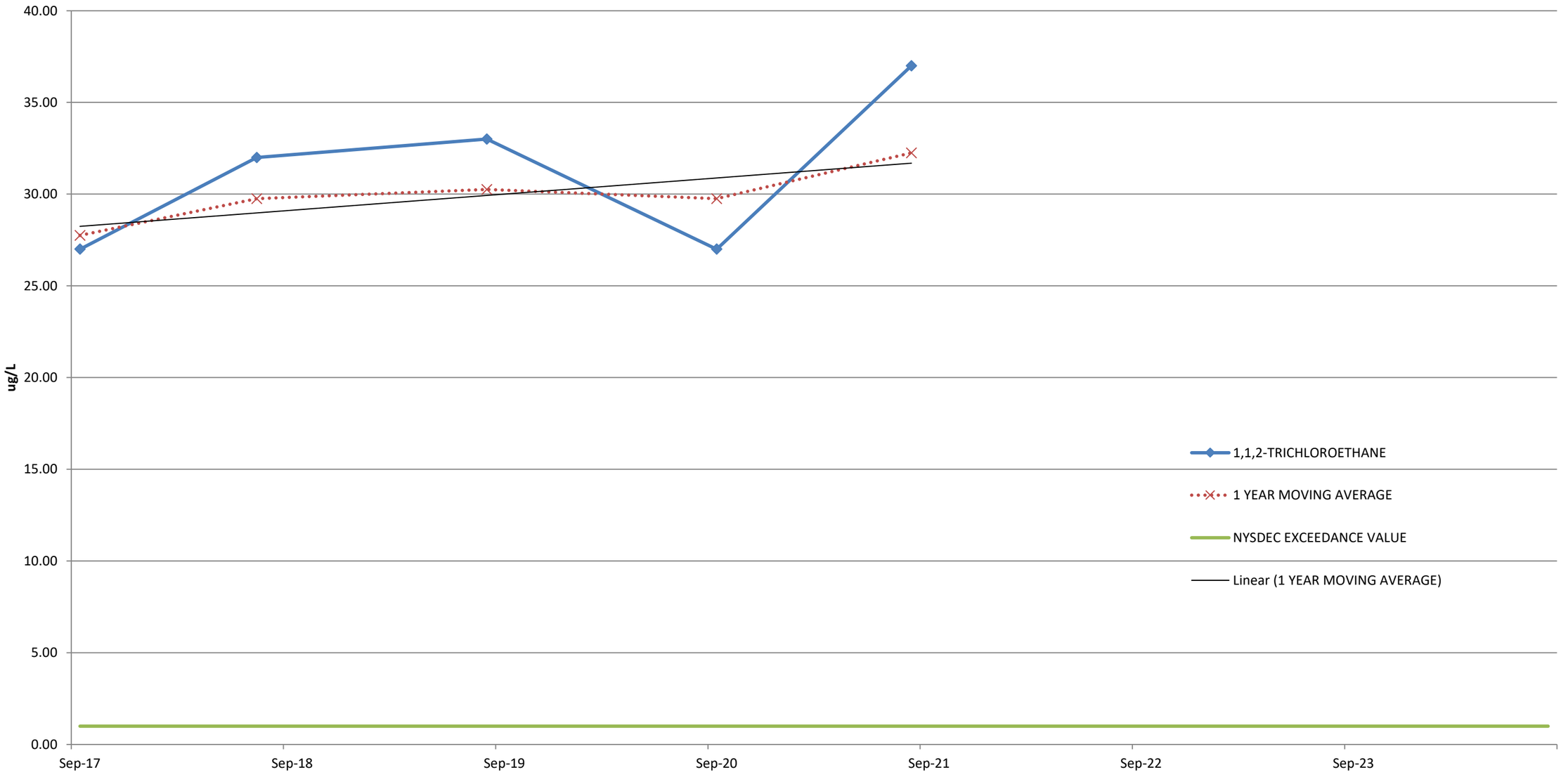
WELL VDM-14 & 14R: 1,1,2,2-TETRACHLOROETHANE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
----------	-	-	-	-	-	-				-
Oct-85	1.00	5	5	TOTAL STD	57.21885					1
Jan-86	46.00	5	5	TOTAL Sx	6.206255					2
Apr-86	38.00	5	5	TOTAL MEAN	54.6843					3
Jul-86	450.00	5	5	TOTAL N	86	133.8				4
Oct-86	97.00	5	5	TOTAL df	85	157.8				5
Jan-87	93.00	5	5			169.5				6
Apr-87	77.00	5	5			179.3				7
Jul-87	65.00	5	5			83.0				8
Oct-87	3.00	5	5			59.5				9
Jan-88	2.00	5	5			36.8				10
Apr-88	65.00	5	5			33.8				11
Jul-88	1.00	5	5			17.8				12
Oct-88		5	5			22.7				13
Jan-89	48.00	5	5			38.0				14
Apr-89	47.00	5	5			32.0				15
Jul-89	2.00	5	5			32.3				16
Oct-89	1.00	5	5			24.5				17
Jan-90	2.00	5	5			13.0				18
Apr-90	24.00	5	5			7.3				19
Jul-90	54.00	5	5			20.3				20
Oct-90	11.00	5	5			22.8				21
Jan-91	1.25	5	5			22.6				22
Apr-91	19.60	5	5			21.5				23
Jul-91	24.40	5	5			14.1				24
Oct-91	1.00	5	5			11.6				25
Jan-92	3.00	5	5			12.0				26
Apr-92	3.00	5	5			7.9				27
Jul-92	39.00	5	5			11.5				28
Oct-92	9.30	5	5			13.6				29
Jan-93	11.00	5	5			15.6				30
Apr-93	17.00	5	5			19.1				31
Jul-93	1.00	5	5			9.6				32
Oct-93	1.00	5	5			7.5				33
Jan-94	14.00	5	5			8.3				34
Apr-94	16.00	5	5			8.0				35
Jul-94	18.00	5	5			12.3				36
Oct-94	15.00	5	5			15.8				37
Jan-95	8.60	5	5			14.4				38
Apr-95	38.00	5	5			19.9				39
Jul-95	36.00	5	5			24.4				40
Oct-95	81.00	5	2			40.9				41
Apr-96	10.00	5	10			40.9				42
Sep-96	81.00	5	10			57.3	45.5	9/17/1996	semiannual	43
Apr-97	36.00	5	10			58.5	58.5	4/3/1997	semiannual	44
Aug-97	120.00	5	100			78.0	78.0	8/27/1997	semiannual	45
Mar-98	14.00	5	5			67.0	67.0	3/24/1998	semiannual	46
Sep-98	120.00	5	5			67.0	67.0	9/22/1998	semiannual	47
May-99	45.00	5	10			82.5	82.5	5/11/1999	semiannual	48
Oct-99	128.00	5	10			86.5	86.5	10/5/1999	semiannual	49
Nov-00	76.00	5	5			102.0	102.0	11/28/2000	semiannual	50
Apr-01	30.00	5	5			53.0	53.0	4/4/2001	semiannual	51
Oct-01	57.00	5	5			43.5	43.5	10/18/2001	semiannual	52
Apr-02	10.00	5	5			33.5	33.5	4/18/2002	semiannual	53
Oct-02	72.00	5	25			41.0	41.0	10/3/2002	semiannual	54
Apr-03	42.00	5	10			57.0	57.0	4/25/2003	semiannual	55
Oct-03	100.00	5	5			71.0	71.0	10/3/2003	semiannual	56
Apr-04	39.00	5	10			69.5	69.5	4/1/2004	semiannual	57
Oct-04	84.00	5	10			61.5	61.5	10/19/2004	semiannual	58
Apr-05	46.00	5	10			65.0	65.0	4/22/2005	semiannual	59
Oct-05	97.00	5	10			71.5	71.5	10/7/2005	semiannual	60
May-06	129.00	5	10			113.0	113.0	5/11/2006	semiannual	61
Oct-06	111.00	5	10			120.0	120.0	10/18/2006	semiannual	62
May-07	113.00	5	10			112.0	112.0	5/22/2007	semiannual	63
Oct-07	144.00	5	10			128.5	128.5	10/25/2007	semiannual	64

WELL VDM-14 & 14R: 1,1,2,2-TETRACHLOROETHANE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	84.70	5	10			114.4	114.4	10/23/2008	semiannual	65
May-09	46.20	5	25			65.5	65.5	5/12/2009	semiannual	66
Oct-09	55.00	5	25			50.6	50.6	10/29/2009	semiannual	67
May-10	57.00	5	25			56.0	56.0	5/20/2010	semiannual	68
Oct-10	5.00	5	25			31.0	31.0	10/18/2010	semiannual	69
Jun-11	45.80	5	25			25.4	25.4	6/2/2011	semiannual	70
Oct-11	80.00	5	50			62.9	62.9	10/12/2011	semiannual	71
May-12	76.60	5	2			78.3	78.3	5/18/2012	semiannual	72
Oct-12	136.00	5	2			106.3	106.3	10/11/2012	semiannual	73
May-13	101.00	5	2			118.5	118.5	5/17/2013	semiannual	74
Oct-13	88.70	5	2			94.9	94.9	10/11/2013	semiannual	75
May-14	57.60	5	2			73.2	73.2	5/5/2014	semiannual	76
Oct-14	96.20	5	2			76.9	76.9	10/6/2014	semiannual	77
Jul-15	66.90	5	2			81.6	81.6	7/6/2015	semiannual	78
Jul-16	58.00	5	1			62.5	62.5	7/20/2016	Annual	79
Sep-17	54.00	5	2			56.0	56.0	9/22/2017	Annual	80
Jul-18	67.00	5	2			60.5	60.5	7/24/2018	Annual	81
Aug-19	66.00	5	2.5			66.5	66.5	8/6/2019	Annual	82
Sep-20	47.00	5	1.2			56.5	56.5	9/4/2020	Annual	83
Aug-21	64.00	5	1.2			55.5	55.5	8/3/2021	Annual	84
Aug-22	58.00	5	5			61.0	61.0	8/30/2022	Annual	85
Aug-23	51.00	5	1			54.5	54.5	8/15/2023	Annual	86
Aug-24	53.00	5	1			52.0	52.0	8/13/2024	Annual	87

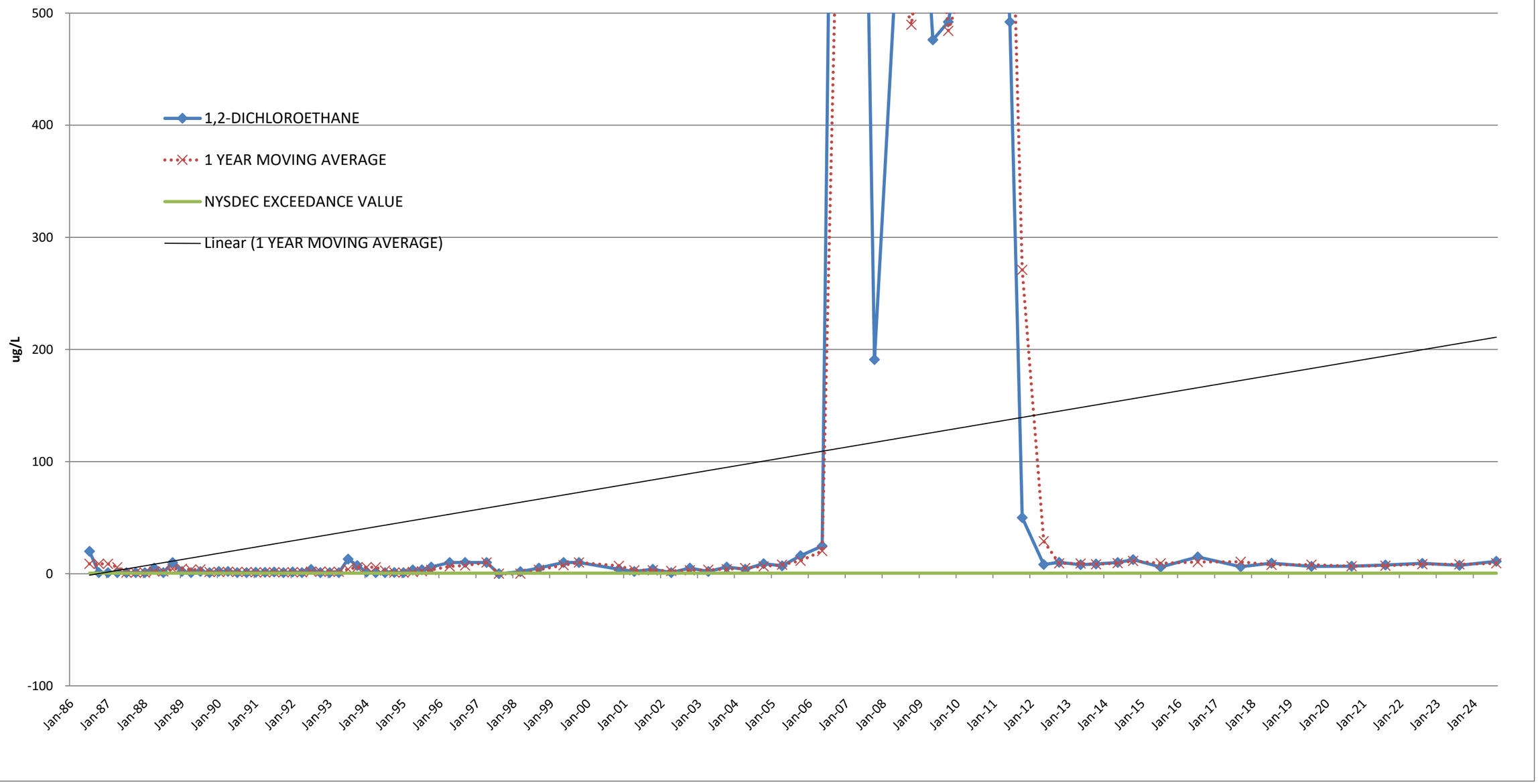
MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
1,1,2-TRICHLOROETHANE



WELL VDM-14 & 14R: 1,1,2-TRICHLOROETHANE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
----------	-	-	-	-	-	-				-
Sep-17	24.00	1	6	TOTAL STD	3.840573			9/22/2017	Annual	1
Jul-18	31.00	1	7.5	TOTAL Sx	1.4516			7/24/2018	Annual	2
Aug-19	29.00	1	7.5	TOTAL MEAN	30			8/6/2019	Annual	3
Sep-20	27.00	1	3.8	TOTAL N	8	27.8		9/4/2020	Annual	4
Aug-21	32.00	1	1.5	TOTAL df	7	29.8		8/3/2021	Annual	5
Aug-22	33.00	1	3			30.3		8/30/2022	Annual	6
Aug-23	27.00	1	3			29.8		8/15/2023	Annual	7
Aug-24	37.00	1	3			32.3		8/13/2024	Annual	8

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
1,2-DICHLOROETHANE



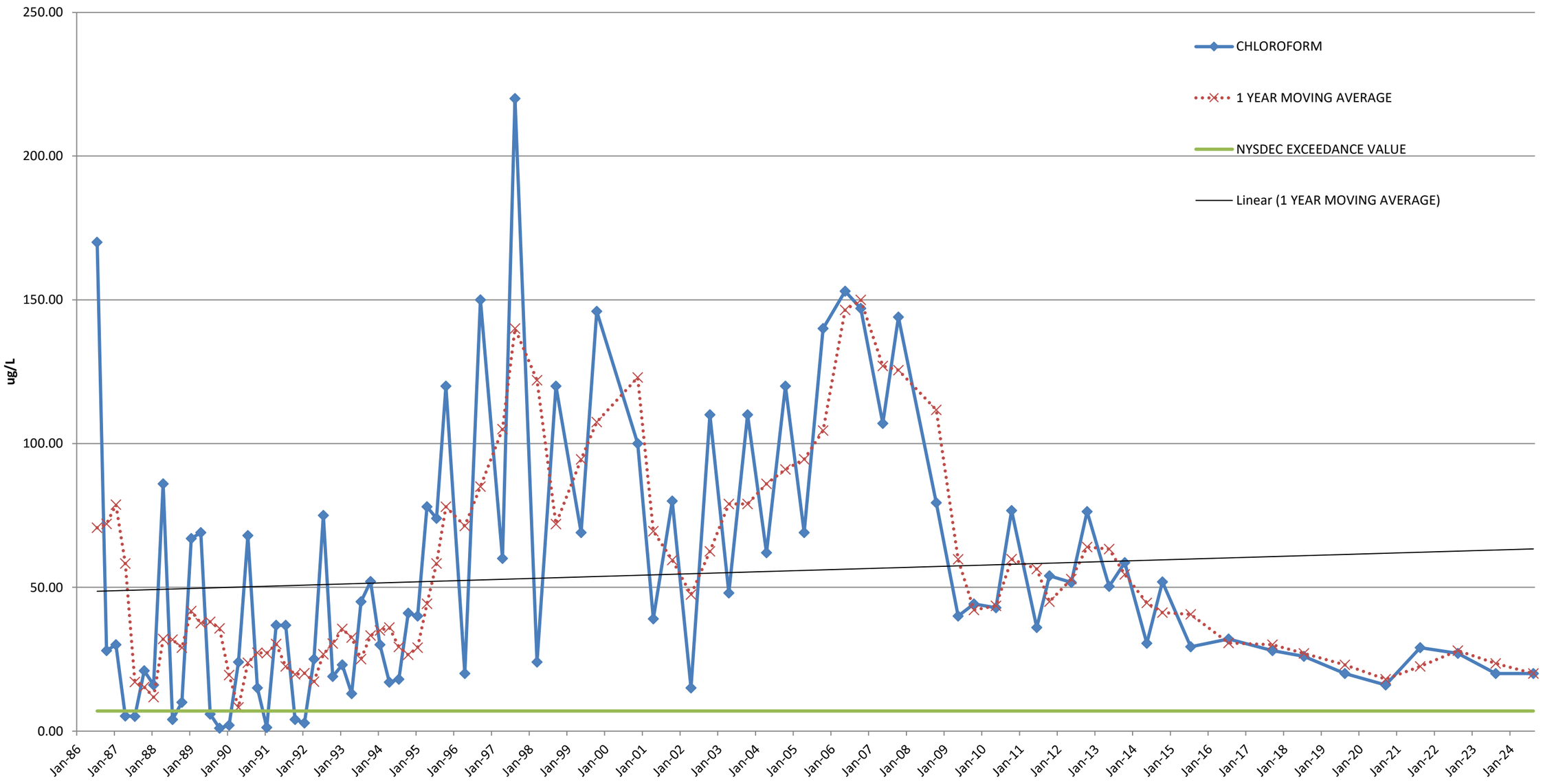
WELL VDM-14 & 14R : 1,2-DICHLOROETHANE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
----------	-	-	-	-	-	-				-
Oct-85	1	0.6	5	TOTAL STD	227.6801					1
Jan-86	1	0.6	5	TOTAL Sx	27.02066					2
Apr-86	13	0.6	5	TOTAL MEAN	75.9046					3
Jul-86	20	0.6	5	TOTAL N	72	8.75				4
Oct-86	1	0.6	5	TOTAL df	71	8.75				5
Jan-87	1	0.6	5			8.75				6
Apr-87	1	0.6	5			5.75				7
Jul-87	1	0.6	5			1.00				8
Oct-87	1	0.6	5			1.00				9
Jan-88	1	0.6	5			1.00				10
Apr-88	5	0.6	5			2.00				11
Jul-88	1	0.6	5			2.00				12
Oct-88	10	0.6	5			4.25				13
Jan-89	2	0.6	5			4.50				14
Apr-89	1	0.6	5			3.50				15
Jul-89	2	0.6	5			3.75				16
Oct-89	1	0.6	5			1.50				17
Jan-90	2	0.6	5			1.50				18
Apr-90	2	0.6	5			1.75				19
Jul-90	1	0.6	5			1.50				20
Oct-90	1	0.6	5			1.50				21
Jan-91	1.25	0.6	5			1.31				22
Apr-91	1.25	0.6	5			1.13				23
Jul-91	1.5	0.6	5			1.25				24
Oct-91	1	0.6	5			1.25				25
Jan-92	1.5	0.6	5			1.31				26
Apr-92	1	0.6	5			1.25				27
Jul-92	3.8	0.6	5			1.83				28
Oct-92	1	0.6	5			1.83				29
Jan-93	1	0.6	5			1.70				30
Apr-93	1	0.6	5			1.70				31
Jul-93	13	0.6	5			4.00				32
Oct-93	7.3	0.6	5			5.58				33
Jan-94	1.6	0.6	5			5.73				34
Apr-94	1	0.6	5			5.73				35
Jul-94	1	0.6	5			2.73				36
Oct-94	1.1	0.6	5			1.18				37
Jan-95	1	0.6	5			1.03				38
Apr-95	3.3	0.6	5			1.60				39
Jul-95	3.5	0.6	5			2.23				40
Oct-95	5.9	0.6	2			3.43				41
Apr-96	10	0.6	10			6.47				42
Sep-96	10	0.6	10			7.35	10.00	9/17/1996	semiannual	43
Apr-97	10	0.6	10			10.00	10.00	4/3/1997	semiannual	44
Aug-97	ND*	0.6	100			#VALUE!	#VALUE!	8/27/1997	semiannual	45
Mar-98	1.9	0.6	5			#VALUE!	#VALUE!	3/24/1998	semiannual	46
Sep-98	5.1	0.6	5			3.50	3.50	9/22/1998	semiannual	47
May-99	10	0.6	10			7.55	7.55	5/11/1999	semiannual	48
Oct-99	10	0.6	10			10.00	10.00	10/5/1999	semiannual	49
Nov-00	4	0.6	5			7.00	7.00	11/28/2000	semiannual	50
Apr-01	2	0.6	5			3.00	3.00	4/4/2001	semiannual	51
Oct-01	4	0.6	5			3.00	3.00	10/18/2001	semiannual	52
Apr-02	1	0.6	5			2.50	2.50	4/18/2002	semiannual	53
Oct-02	5	0.6	25			3.00	3.00	10/3/2002	semiannual	54
Apr-03	2	0.6	10			3.50	3.50	4/25/2003	semiannual	55
Oct-03	6	0.6	5			4.00	4.00	10/3/2003	semiannual	56
Apr-04	4	0.6	10			5.00	5.00	4/1/2004	semiannual	57
Oct-04	9	0.6	10			6.50	6.50	10/19/2004	semiannual	58
Apr-05	7	0.6	10			8.00	8.00	4/22/2005	semiannual	59
Oct-05	16	0.6	10			11.50	11.50	10/7/2005	semiannual	60
May-06	24.6	0.6	10			20.30	20.30	5/11/2006	semiannual	61
Oct-06	1210	0.6	10			617.30	617.30	10/18/2006	semiannual	62
May-07	1020	0.6	10			1115.00	1115.00	5/22/2007	semiannual	63
Oct-07	191	0.6	10			605.50	605.50	10/25/2007	semiannual	64

WELL VDM-14 & 14R : 1,2-DICHLOROETHANE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	788	0.6	10			489.50	489.50	10/23/2008	semiannual	65
May-09	476	0.6	25			632.00	632.00	5/12/2009	semiannual	66
Oct-09	492	0.6	25			484.00	484.00	10/29/2009	semiannual	67
May-10	598	0.6	25			545.00	545.00	5/20/2010	semiannual	68
Oct-10	880	0.6	25			739.00	739.00	10/18/2010	semiannual	69
Jun-11	492	0.6	25			686.00	686.00	6/2/2011	semiannual	70
Oct-11	50	0.6	50			271.00	271.00	10/12/2011	semiannual	71
May-12	8.2	0.6	2			29.10	29.10	5/18/2012	semiannual	72
Oct-12	10.2	0.6	2			9.20	9.20	10/11/2012	semiannual	73
May-13	8.1	0.6	2			9.15	9.15	5/17/2013	semiannual	74
Oct-13	8.7	0.6	2			8.40	8.40	10/11/2013	semiannual	75
May-14	10	0.6	10			9.35	9.35	5/5/2014	semiannual	76
Oct-14	12.6	0.6	2			11.30	11.30	10/6/2014	semiannual	77
Jul-15	6	0.6	2			9.30	9.30	7/6/2015	semiannual	78
Jul-16	15	0.6	1.5			10.50	10.50	7/20/2016	Annual	79
Sep-17	6.3	0.6	0.5			10.65	10.65	9/22/2017	Annual	80
Jul-18	9.4	0.6	2.5			7.85	7.85	7/24/2018	Annual	81
Aug-19	6.6	0.6	2.5			8.00	8.00	8/1/2019	Annual	82
Sep-20	6.7	0.6	1.2			6.65	6.65	9/4/2020	Annual	83
Aug-21	7.7	0.6	0.5			7.20	7.20	8/3/2021	Annual	84
Aug-22	9.2	0.6	0.6			8.45	8.45	8/30/2022	Annual	85
Aug-23	7.4	0.6	1			8.30	8.30	8/15/2023	Annual	86
Aug-24	11	0.6	1			9.20	9.20	8/13/2024	Annual	87

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
CHLOROFORM



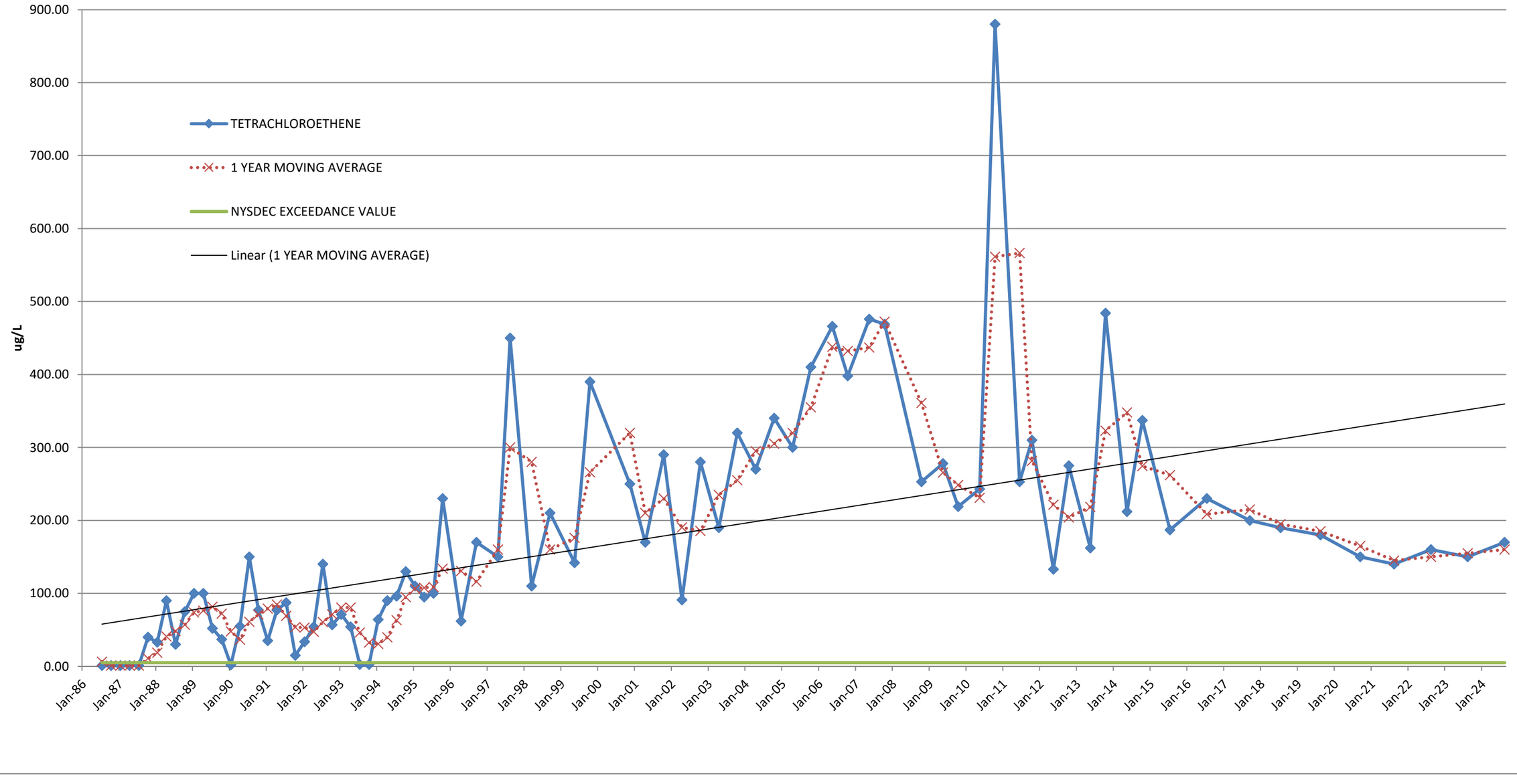
WELL VDM-14 & 14R: CHLOROFORM

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
----------	-	-	-	-	-	-				-
Oct-85	22.70	7	8	TOTAL STD	45.68698					1
Jan-86	3.20	7	8	TOTAL Sx	5.422046					2
Apr-86	87.00	7	8	TOTAL MEAN	53.8454					3
Jul-86	170.00	7	8	TOTAL N	72	70.73				4
Oct-86	28.00	7	8	TOTAL df	71	72.05				5
Jan-87	30.00	7	8			78.75				6
Apr-87	5.20	7	8			58.30				7
Jul-87	5.10	7	8			17.08				8
Oct-87	21.00	7	8			15.33				9
Jan-88	16.00	7	8			11.83				10
Apr-88	86.00	7	8			32.03				11
Jul-88	4.00	7	8			31.75				12
Oct-88	10.00	7	8			29.00				13
Jan-89	67.00	7	8			41.75				14
Apr-89	69.00	7	8			37.50				15
Jul-89	5.90	7	8			37.98				16
Oct-89	1.00	7	8			35.73				17
Jan-90	2.00	7	8			19.48				18
Apr-90	24.00	7	8			8.23				19
Jul-90	68.00	7	8			23.75				20
Oct-90	15.00	7	8			27.25				21
Jan-91	1.25	7	8			27.06				22
Apr-91	36.80	7	8			30.26				23
Jul-91	36.80	7	8			22.46				24
Oct-91	4.00	7	8			19.71				25
Jan-92	2.80	7	8			20.10				26
Apr-92	25.00	7	8			17.15				27
Jul-92	75.00	7	8			26.70				28
Oct-92	19.00	7	8			30.45				29
Jan-93	23.00	7	8			35.50				30
Apr-93	13.00	7	8			32.50				31
Jul-93	45.00	7	8			25.00				32
Oct-93	52.00	7	8			33.25				33
Jan-94	30.00	7	8			35.00				34
Apr-94	17.00	7	8			36.00				35
Jul-94	18.00	7	8			29.25				36
Oct-94	41.00	7	8			26.50				37
Jan-95	40.00	7	8			29.00				38
Apr-95	78.00	7	8			44.25				39
Jul-95	74.00	7	8			58.25				40
Oct-95	120.00	7	8			78.00				41
Apr-96	20.00	7	8			71.33				42
Sep-96	150.00	7	10			85.00	85.00	9/17/1996	semiannual	43
Apr-97	60.00	7	10			105.00	105.00	4/3/1997	semiannual	44
Aug-97	220.00	7	100			140.00	140.00	8/27/1997	semiannual	45
Mar-98	24.00	7	5			122.00	122.00	3/24/1998	semiannual	46
Sep-98	120.00	7	5			72.00	72.00	9/22/1998	semiannual	47
May-99	69.00	7	10			94.50	94.50	5/11/1999	semiannual	48
Oct-99	146.00	7	10			107.50	107.50	10/5/1999	semiannual	49
Nov-00	100.00	7	5			123.00	123.00	11/28/2000	semiannual	50
Apr-01	39.00	7	5			69.50	69.50	4/4/2001	semiannual	51
Oct-01	80.00	7	5			59.50	59.50	10/18/2001	semiannual	52
Apr-02	15.00	7	5			47.50	47.50	4/18/2002	semiannual	53
Oct-02	110.00	7	25			62.50	62.50	10/3/2002	semiannual	54
Apr-03	48.00	7	10			79.00	79.00	4/25/1993	semiannual	55
Oct-03	110.00	7	5			79.00	79.00	10/3/2003	semiannual	56
Apr-04	62.00	7	5			86.00	86.00	4/1/2004	semiannual	57
Oct-04	120.00	7	5			91.00	91.00	10/19/2004	semiannual	58
Apr-05	69.00	7	5			94.50	94.50	4/22/2005	semiannual	59
Oct-05	140.00	7	5			104.50	104.50	10/7/2005	semiannual	60
May-06	153.00	7	5			146.50	146.50	5/11/2006	semiannual	61
Oct-06	147.00	7	5			150.00	150.00	10/18/2006	semiannual	62
May-07	107.00	7	5			127.00	127.00	5/22/2007	semiannual	63
Oct-07	144.00	7	5			125.50	125.50	10/25/2007	semiannual	64

WELL VDM-14 & 14R: CHLOROFORM

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	79.40	7	5			111.70	111.70	10/23/2008	semiannual	65
May-09	40.00	7	5			59.70	59.70	5/12/2009	semiannual	66
Oct-09	44.20	7	5			42.10	42.10	10/29/2009	semiannual	67
May-10	42.90	7	5			43.55	43.55	5/20/2010	semiannual	68
Oct-10	76.70	7	5			59.80	59.80	10/18/2010	semiannual	69
Jun-11	36.00	7	5			56.35	56.35	6/2/2011	semiannual	70
Oct-11	54.00	7	50			45.00	45.00	10/12/2011	semiannual	71
May-12	51.70	7	2			52.85	52.85	5/18/2012	semiannual	72
Oct-12	76.30	7	2			64.00	64.00	10/11/2012	semiannual	73
May-13	50.30	7	2			63.30	63.30	5/17/2013	semiannual	74
Oct-13	58.60	7	2			54.45	54.45	10/11/2013	semiannual	75
May-14	30.50	7	2			44.55	44.55	5/5/2014	semiannual	76
Oct-14	51.90	7	2			41.20	41.20	10/6/2014	semiannual	77
Jul-15	29.30	7	2			40.60	40.60	7/9/2015	semiannual	78
Jul-16	32.00	7	1.5			30.65	30.65	7/20/2016	Annual	79
Sep-17	28.00	7	10			30.00	30.00	9/22/2017	Annual	80
Jul-18	26.00	7	12			27.00	27.00	7/24/2018	Annual	81
Aug-19	20.00	7	12			23.00	23.00	8/6/2019	Annual	82
Sep-20	16.00	7	6.2			18.00	18.00	9/4/2020	Annual	83
Aug-21	29.00	7	2.5			22.50	22.50	8/3/2021	Annual	84
Aug-22	27.00	7	5			28.00	28.00	8/30/2022	Annual	85
Aug-23	20.00	7	5			23.50	23.50	8/15/2023	Annual	86
Aug-24	20.00	7	5			20.00	20.00	8/13/2024	Annual	87

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
TETRACHLOROETHENE



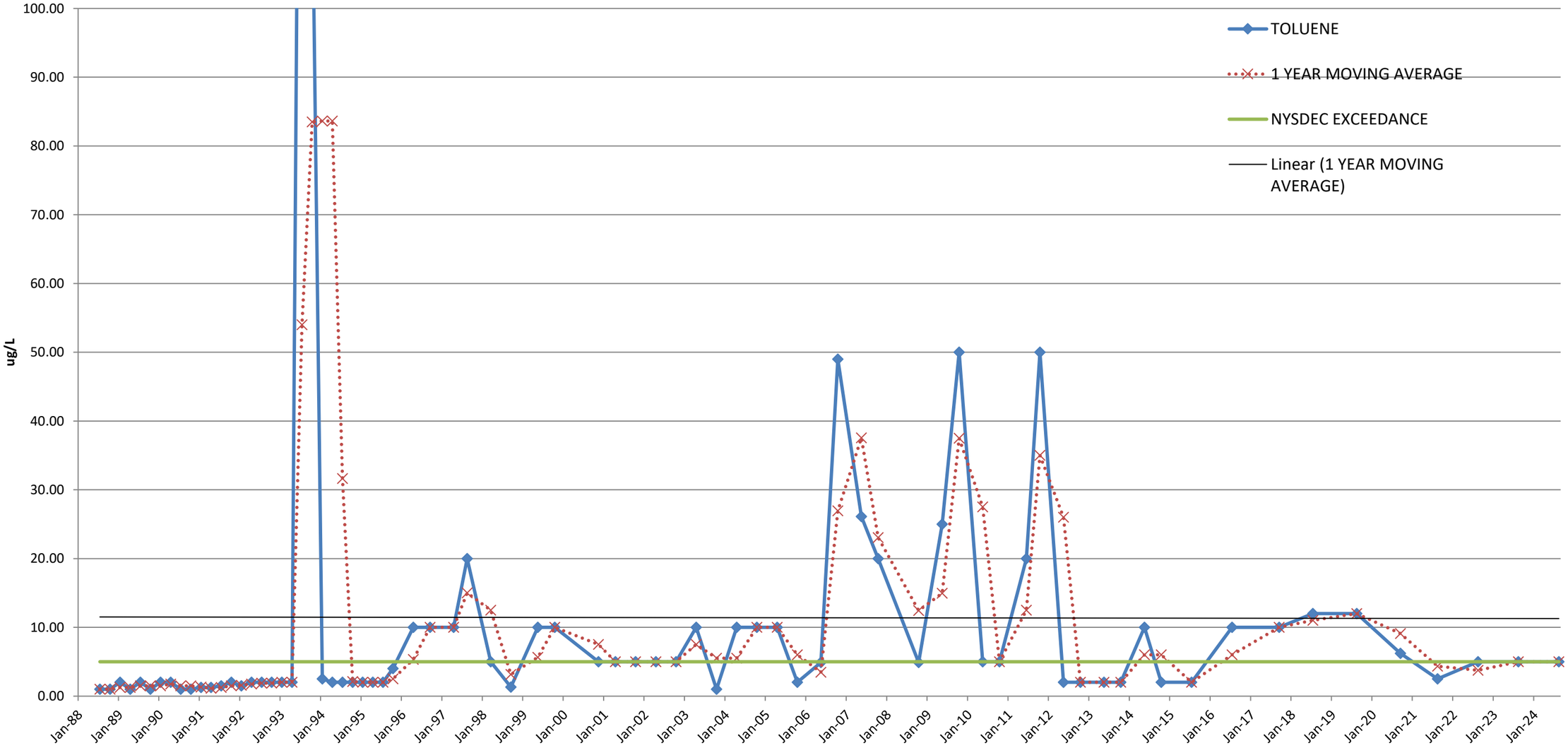
WELL VDM-14 & 14R: TETRACHLOROETHENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
-	-	-	-	-	-	-				-
Oct-85	22.40	5	5	TOTAL STD	149.9727					1
Jan-86	1.00	5	5	TOTAL Sx	16.17197					2
Apr-86	1.00	5	5	TOTAL MEAN	167.9828					3
Jul-86	1.00	5	5	TOTAL N	87	6.35				4
Oct-86	1.00	5	5	TOTAL df	86	1.00				5
Jan-87	1.00	5	5			1.00				6
Apr-87	1.00	5	5			1.00				7
Jul-87	1.00	5	5			1.00				8
Oct-87	40.00	5	5			10.75				9
Jan-88	33.00	5	5			18.75				10
Apr-88	90.00	5	5			41.00				11
Jul-88	30.00	5	5			48.25				12
Oct-88	75.00	5	5			57.00				13
Jan-89	100.00	5	5			73.75				14
Apr-89	100.00	5	5			76.25				15
Jul-89	52.00	5	5			81.75				16
Oct-89	37.00	5	5			72.25				17
Jan-90	2.00	5	5			47.75				18
Apr-90	55.00	5	5			36.50				19
Jul-90	150.00	5	5			61.00				20
Oct-90	77.00	5	5			71.00				21
Jan-91	35.00	5	5			79.25				22
Apr-91	77.10	5	5			84.78				23
Jul-91	87.30	5	5			69.10				24
Oct-91	15.00	5	5			53.60				25
Jan-92	33.70	5	5			53.28				26
Apr-92	54.00	5	5			47.50				27
Jul-92	140.00	5	5			60.68				28
Oct-92	57.00	5	5			71.18				29
Jan-93	71.00	5	5			80.50				30
Apr-93	54.00	5	5			80.50				31
Jul-93	2.50	5	5			46.13				32
Oct-93	2.50	5	5			32.50				33
Jan-94	64.00	5	5			30.75				34
Apr-94	90.00	5	5			39.75				35
Jul-94	96.00	5	5			63.13				36
Oct-94	130.00	5	5			95.00				37
Jan-95	110.00	5	5			106.50				38
Apr-95	95.00	5	5			107.75				39
Jul-95	100.00	5	5			108.75				40
Oct-95	230.00	5	5			133.75				41
Apr-96	62.00	5	5			130.67				42
Sep-96	170.00	5	10			116.00	116.00	9/17/1996	semiannual	43
Apr-97	150.00	5	10			160.00	160.00	4/3/1997	semiannual	44
Aug-97	450.00	5	100			300.00	300.00	8/27/1997	semiannual	45
Mar-98	110.00	5	5			280.00	280.00	3/24/1998	semiannual	46
Sep-98	210.00	5	5			160.00	160.00	9/22/1998	semiannual	47
May-99	142.00	5	10			176.00	176.00	5/11/1999	semiannual	48
Oct-99	390.00	5	10			266.00	266.00	10/5/1999	semiannual	49
Nov-00	250.00	5	5			320.00	320.00	11/28/2000	semiannual	50
Apr-01	170.00	5	5			210.00	210.00	4/4/2001	semiannual	51
Oct-01	290.00	5	5			230.00	230.00	10/18/2001	semiannual	52
Apr-02	91.00	5	5			190.50	190.50	4/18/2002	semiannual	53
Oct-02	280.00	5	25			185.50	185.50	10/3/2002	semiannual	54
Apr-03	190.00	5	10			235.00	235.00	4/25/2003	semiannual	55
Oct-03	320.00	5	5			255.00	255.00	10/3/2003	semiannual	56
Apr-04	270.00	5	5			295.00	295.00	4/1/2004	semiannual	57
Oct-04	340.00	5	5			305.00	305.00	10/19/2004	semiannual	58
Apr-05	300.00	5	5			320.00	320.00	4/22/2005	semiannual	59
Oct-05	410.00	5	5			355.00	355.00	10/7/2005	semiannual	60
May-06	466.00	5	5			438.00	438.00	5/11/2006	semiannual	61
Oct-06	398.00	5	5			432.00	432.00	10/18/2006	semiannual	62
May-07	476.00	5	5			437.00	437.00	5/22/2007	semiannual	63
Oct-07	469.00	5	5			472.50	472.50	10/25/2007	semiannual	64

WELL VDM-14 & 14R: TETRACHLOROETHENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	253.00	5	5			361.00	361.00	10/23/2008	semiannual	65
May-09	278.00	5	25			265.50	265.50	5/12/2009	semiannual	66
Oct-09	219.00	5	25			248.50	248.50	10/29/2009	semiannual	67
May-10	243.00	5	25			231.00	231.00	5/20/2010	semiannual	68
Oct-10	880.00	5	25			561.50	561.50	10/18/2010	semiannual	69
Jun-11	253.00	5	25			566.50	566.50	6/2/2011	semiannual	70
Oct-11	310.00	5	25			281.50	281.50	10/12/2011	semiannual	71
May-12	133.00	5	2			221.50	221.50	5/18/2012	semiannual	72
Oct-12	275.00	5	2			204.00	204.00	10/11/2012	semiannual	73
May-13	162.00	5	2			218.50	218.50	5/17/2013	semiannual	74
Oct-13	484.00	5	2			323.00	323.00	10/11/2013	semiannual	75
May-14	212.00	5	2			348.00	348.00	5/5/2014	semiannual	76
Oct-14	337.00	5	2			274.50	274.50	10/6/2014	semiannual	77
Jul-15	187.00	5	2			262.00	262.00	7/9/2015	semiannual	78
Jul-16	230.00	5	1.5			208.50	208.50	7/20/2016	Annual	79
Sep-17	200.00	5	2			215.00	215.00	9/22/2017	Annual	80
Jul-18	190.00	5	2.5			195.00	195.00	7/24/2018	Annual	81
Aug-19	180.00	5	2.5			185.00	185.00	8/6/2019	Annual	82
Sep-20	150.00	5	1.2			165.00	165.00	9/4/2020	Annual	83
Aug-21	140.00	5	0.5			145.00	145.00	8/3/2021	Annual	84
Aug-22	160.00	5	1			150.00	150.00	8/30/2022	Annual	85
Aug-23	150.00	5	1			155.00	155.00	8/15/2023	Annual	86
Aug-24	170.00	5	1			160.00	160.00	8/13/2024	Annual	87

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
TOLUENE



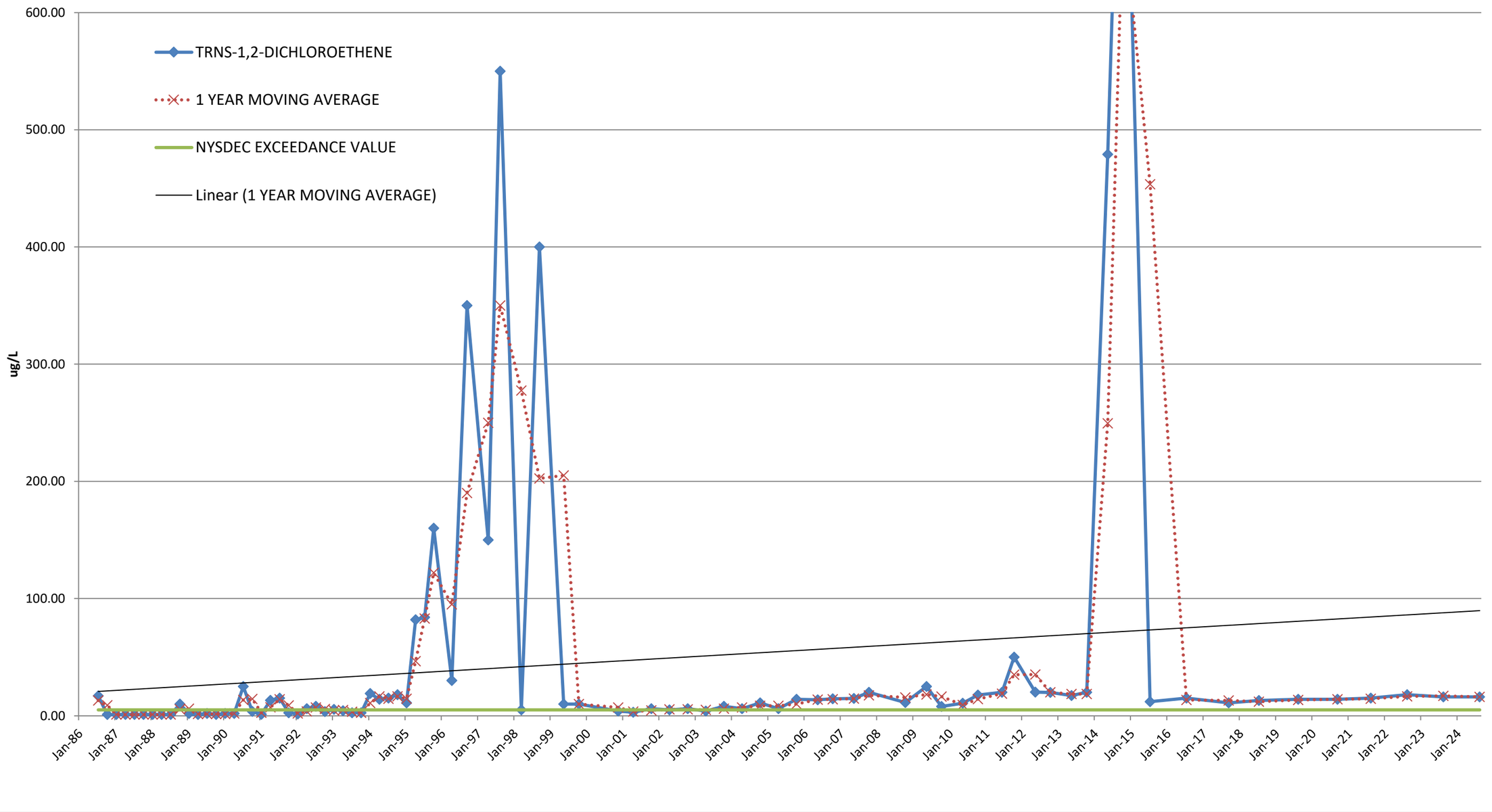
WELL VDM-14 & 14R: TOLUENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
----------	-	-	-	-	-	-				-
Oct-85		5	5	TOTAL STD	27.71073					1
Jan-86		5	5	TOTAL Sx	3.137623					2
Apr-86		5	5	TOTAL MEAN	11.1					3
Jul-86		5	5	TOTAL N	79					4
Oct-86		5	5	TOTAL df	78					5
Jan-87		5	5							6
Apr-87		5	5							7
Jul-87		5	5							8
Oct-87	1.00	5	5							9
Jan-88	1.00	5	5							10
Apr-88	1.00	5	5							11
Jul-88	1.00	5	5			1.0				12
Oct-88	1.00	5	5			1.0				13
Jan-89	2.00	5	5			1.3				14
Apr-89	1.00	5	5			1.3				15
Jul-89	2.00	5	5			1.5				16
Oct-89	1.00	5	5			1.5				17
Jan-90	2.00	5	5			1.5				18
Apr-90	2.00	5	5			1.8				19
Jul-90	1.00	5	5			1.5				20
Oct-90	1.00	5	5			1.5				21
Jan-91	1.25	5	5			1.3				22
Apr-91	1.25	5	5			1.1				23
Jul-91	1.50	5	5			1.3				24
Oct-91	2.00	5	5			1.5				25
Jan-92	1.50	5	5			1.6				26
Apr-92	2.00	5	5			1.8				27
Jul-92	2.00	5	5			1.9				28
Oct-92	2.00	5	5			1.9				29
Jan-93	2.00	5	5			2.0				30
Apr-93	2.00	5	5			2.0				31
Jul-93	210.00	5	5			54.0				32
Oct-93	120.00	5	5			83.5				33
Jan-94	2.50	5	5			83.6				34
Apr-94	2.00	5	5			83.6				35
Jul-94	2.00	5	5			31.6				36
Oct-94	2.00	5	5			2.1				37
Jan-95	2.00	5	5			2.0				38
Apr-95	2.00	5	5			2.0				39
Jul-95	2.00	5	5			2.0				40
Oct-95	4.00	5	4			2.5				41
Apr-96	10.00	5	10			5.3				42
Sep-96	10.00	5	10			10.0	10.0	9/17/1996	semiannual	43
Apr-97	10.00	5	10			10.0	10.0	4/3/1997	semiannual	44
Aug-97	20.00	5	100			15.0	15.0	8/27/1997	semiannual	45
Mar-98	5.00	5	5			12.5	12.5	3/24/1998	semiannual	46
Sep-98	1.30	5	5			3.2	3.2	9/22/1998	semiannual	47
May-99	10.00	5	10			5.7	5.7	5/11/1999	semiannual	48
Oct-99	10.00	5	10			10.0	10.0	10/5/1999	semiannual	49
Nov-00	5.00	5	5			7.5	7.5	11/28/2000	semiannual	50
Apr-01	5.00	5	5			5.0	5.0	4/4/2001	semiannual	51
Oct-01	5.00	5	5			5.0	5.0	10/18/2001	semiannual	52
Apr-02	5.00	5	5			5.0	5.0	4/18/2002	semiannual	53
Oct-02	5.00	5	25	**		5.0	5.0	10/3/2002	semiannual	54
Apr-03	10.00	5	10			7.5	7.5	4/25/2003	semiannual	55
Oct-03	1.00	5	5			5.5	5.5	10/3/2003	semiannual	56
Apr-04	10.00	5	10			5.5	5.5	4/1/2004	semiannual	57
Oct-04	10.00	5	10			10.0	10.0	10/19/2004	semiannual	58
Apr-05	10.00	5	10			10.0	10.0	4/22/2005	semiannual	59
Oct-05	2.00	5	10			6.0	6.0	10/7/2005	semiannual	60
May-06	4.90	5	10			3.5	3.5	5/11/2006	semiannual	61
Oct-06	49.00	5	10			27.0	27.0	10/18/2006	semiannual	62
May-07	26.10	5	10			37.6	37.6	5/22/2007	semiannual	63
Oct-07	20.00	5	4.9			23.1	23.1	10/25/2007	semiannual	64

WELL VDM-14 & 14R: TOLUENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	4.90	5	4.9			12.5	12.5	10/23/2008	semiannual	65
May-09	25.00	5	25			15.0	15.0	5/12/2009	semiannual	66
Oct-09	50.00	5	25			37.5	37.5	10/29/2009	semiannual	67
May-10	5.00	5	5			27.5	27.5	5/20/2010	semiannual	68
Oct-10	5.00	5	5			5.0	5.0	10/18/2010	semiannual	69
Jun-11	20.00	5	20			12.5	12.5	6/2/2011	semiannual	70
Oct-11	50.00	5	50			35.0	35.0	10/12/2011	semiannual	71
May-12	2.00	5	2			26.0	26.0	5/18/2012	semiannual	72
Oct-12	2.00	5	2			2.0	2.0	10/11/2012	semiannual	73
May-13	2.00	5	2			2.0	2.0	5/17/2013	semiannual	74
Oct-13	2.00	5	2			2.0	2.0	10/11/2013	semiannual	75
May-14	10.00	5	10			6.0	6.0	5/5/2014	semiannual	76
Oct-14	2.00	5	2			6.0	6.0	10/6/2014	semiannual	77
Jul-15	2.00	5	2			2.0	2.0	7/9/2015	semiannual	78
Jul-16	10.00	5	1			6.0	6.0	7/20/2016	Annual	79
Sep-17	10.00	5	10			10.0	10.0	9/22/2017	Annual	80
Jul-18	12.00	5	12			11.0	11.0	7/24/2018	Annual	81
Aug-19	12.00	5	12			12.0	12.0	8/6/2019	Annual	82
Sep-20	6.20	5	6.2			9.1	9.1	9/4/2020	Annual	83
Aug-21	2.50	5	2.5			4.4	4.4	8/3/2021	Annual	84
Aug-22	5.00	5	5			3.8	3.8	8/30/2022	Annual	85
Aug-23	5.00	5	5			5.0	5.0	8/15/2023	Annual	86
Aug-24	5.00	5	5			5.0	5.0	8/13/2024	Annual	87

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
TRANS-1,2-DICHLOROETHENE



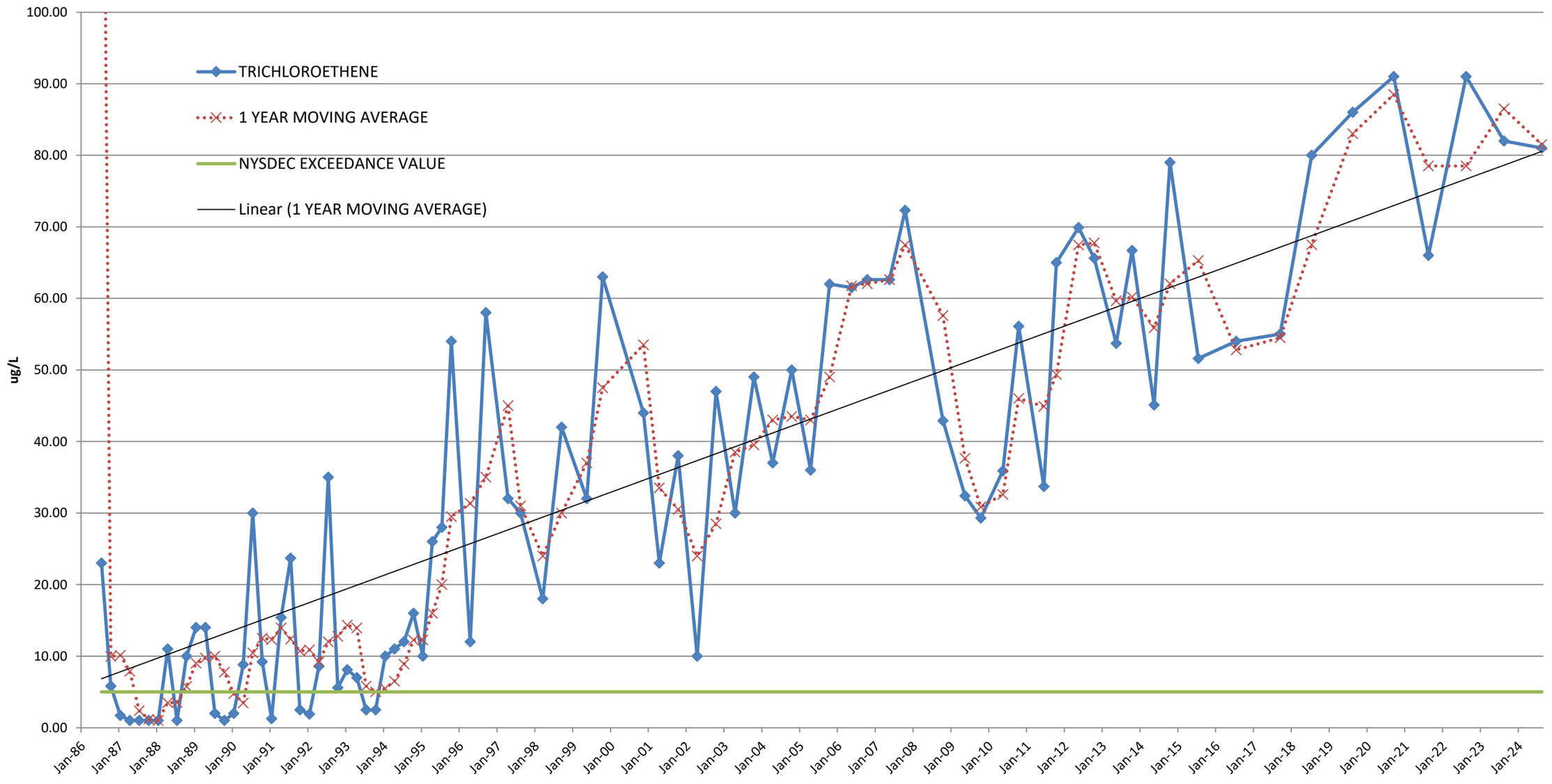
WELL VDM-14 & 14R: TRANS-1,2-DICHLOROETHENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
-	-	-	-	-	-	-				-
Oct-85	1.00	5	5	TOTAL STD	131.8775					1
Jan-86	1.00	5	5	TOTAL Sx	14.22072					2
Apr-86	9.00	5	5	TOTAL MEAN	45.1931					3
Jul-86	17.00	5	5	TOTAL N	87	13.0				4
Oct-86	1.00	5	5	TOTAL df	86	9.0				5
Jan-87	1.00	5	5			1.0				6
Apr-87	1.00	5	5			1.0				7
Jul-87	1.00	5	5			1.0				8
Oct-87	1.00	5	5			1.0				9
Jan-88	1.00	5	5			1.0				10
Apr-88	1.00	5	5			1.0				11
Jul-88	1.00	5	5			1.0				12
Oct-88	10.00	5	5			5.5				13
Jan-89	2.00	5	5			6.0				14
Apr-89	1.00	5	5			1.5				15
Jul-89	2.00	5	5			1.5				16
Oct-89	1.00	5	5			1.5				17
Jan-90	2.00	5	5			1.5				18
Apr-90	2.00	5	5			2.0				19
Jul-90	25.00	5	5			13.5				20
Oct-90	3.70	5	5			14.4				21
Jan-91	1.25	5	5			2.5				22
Apr-91	13.10	5	5			7.2				23
Jul-91	15.10	5	5			14.1				24
Oct-91	2.50	5	5			8.8				25
Jan-92	1.50	5	5			2.0				26
Apr-92	6.00	5	5			3.8				27
Jul-92	8.00	5	5			7.0				28
Oct-92	3.50	5	5			5.8				29
Jan-93	5.40	5	5			4.5				30
Apr-93	4.30	5	5			4.9				31
Jul-93	2.50	5	5			3.4				32
Oct-93	2.50	5	5			2.5				33
Jan-94	19.00	5	5			10.8				34
Apr-94	14.00	5	5			16.5				35
Jul-94	15.00	5	5			14.5				36
Oct-94	18.00	5	5			16.5				37
Jan-95	11.00	5	5			14.5				38
Apr-95	82.00	5	5			46.5				39
Jul-95	84.00	5	5			83.0				40
Oct-95	160.00	5	5			122.0				41
Apr-96	30.00	5	5			95.0				42
Sep-96	350.00	5	10			190.0	190.0	9/17/1996	semiannual	43
Apr-97	150.00	5	10			250.0	250.0	4/3/1997	semiannual	44
Aug-97	550.00	5	100			350.0	350.0	8/27/1997	semiannual	45
Mar-98	5.00	5	5			277.5	277.5	3/24/1998	semiannual	46
Sep-98	400.00	5	5			202.5	202.5	9/22/1998	semiannual	47
May-99	10.00	5	10			205.0	205.0	5/11/1999	semiannual	48
Oct-99	10.00	5	10			10.0	10.0	10/5/1999	semiannual	49
Nov-00	4.00	5	5			7.0	7.0	11/28/2000	semiannual	50
Apr-01	3.00	5	5			3.5	3.5	4/4/2001	semiannual	51
Oct-01	6.00	5	5			4.5	4.5	10/18/2001	semiannual	52
Apr-02	5.00	5	5			5.5	5.5	4/18/2002	semiannual	53
Oct-02	6.00	5	25			5.5	5.5	10/3/2002	semiannual	54
Apr-03	4.00	5	10			5.0	5.0	4/25/2003	semiannual	55
Oct-03	8.00	5	5			6.0	6.0	10/3/2003	semiannual	56
Apr-04	6.00	5	10			7.0	7.0	4/1/2004	semiannual	57
Oct-04	11.00	5	10			8.5	8.5	10/19/2004	semiannual	58
Apr-05	6.00	5	10			8.5	8.5	4/22/2005	semiannual	59
Oct-05	14.00	5	10			10.0	10.0	10/7/2005	semiannual	60
May-06	13.60	5	10			13.8	13.8	5/11/2006	semiannual	61
Oct-06	14.40	5	10			14.0	14.0	10/18/2006	semiannual	62
May-07	14.80	5	10			14.6	14.6	5/22/2007	semiannual	63
Oct-07	20.00	5	10			17.4	17.4	10/25/2007	semiannual	64

WELL VDM-14 & 14R: TRANS-1,2-DICHLOROETHENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	11.20	5	10			15.6	15.6	10/23/2008	semiannual	65
May-09	25.00	5	25			18.1	18.1	5/12/2009	semiannual	66
Oct-09	7.85	5	25			16.4	16.4	10/29/2009	semiannual	67
May-10	10.70	5	25			9.3	9.3	5/20/2010	semiannual	68
Oct-10	17.70	5	25			14.2	14.2	10/18/2010	semiannual	69
Jun-11	20.00	5	20			18.9	18.9	6/2/2011	semiannual	70
Oct-11	50.00	5	50			35.0	35.0	10/12/2011	semiannual	71
May-12	20.20	5	2			35.1	35.1	5/18/2012	semiannual	72
Oct-12	19.80	5	2			20.0	20.0	10/11/2012	semiannual	73
May-13	17.20	5	2			18.5	18.5	5/17/2013	semiannual	74
Oct-13	20.00	5	2			18.6	18.6	10/11/2013	semiannual	75
May-14	479.00	5	10			249.5	249.5	5/5/2014	semiannual	76
Oct-14	895.00	5	2			687.0	687.0	10/6/2014	semiannual	77
Jul-15	12.00	5	2			453.5	453.5	7/9/2015	semiannual	78
Jul-16	15.00	5	1.5			13.5	13.5	7/20/2016	Annual	79
Sep-17	11.00	5	10			13.0	13.0	9/22/2017	Annual	80
Jul-18	13.00	5	12			12.0	12.0	7/24/2018	Annual	81
Aug-19	14.00	5	12			13.5	13.5	8/6/2019	Annual	82
Sep-20	14.00	5	6.2			14.0	14.0	9/4/2020	Annual	83
Aug-21	15.00	5	2.5			14.5	14.5	8/3/2021	Annual	84
Aug-22	18.00	5	5			16.5	16.5	8/30/2022	Annual	85
Aug-23	16.00	5	5			17.0	17.0	8/15/2023	Annual	86
Aug-24	16.00	5	5			16.0	16.0	8/13/2024	Annual	87

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
TRICHLOROETHENE



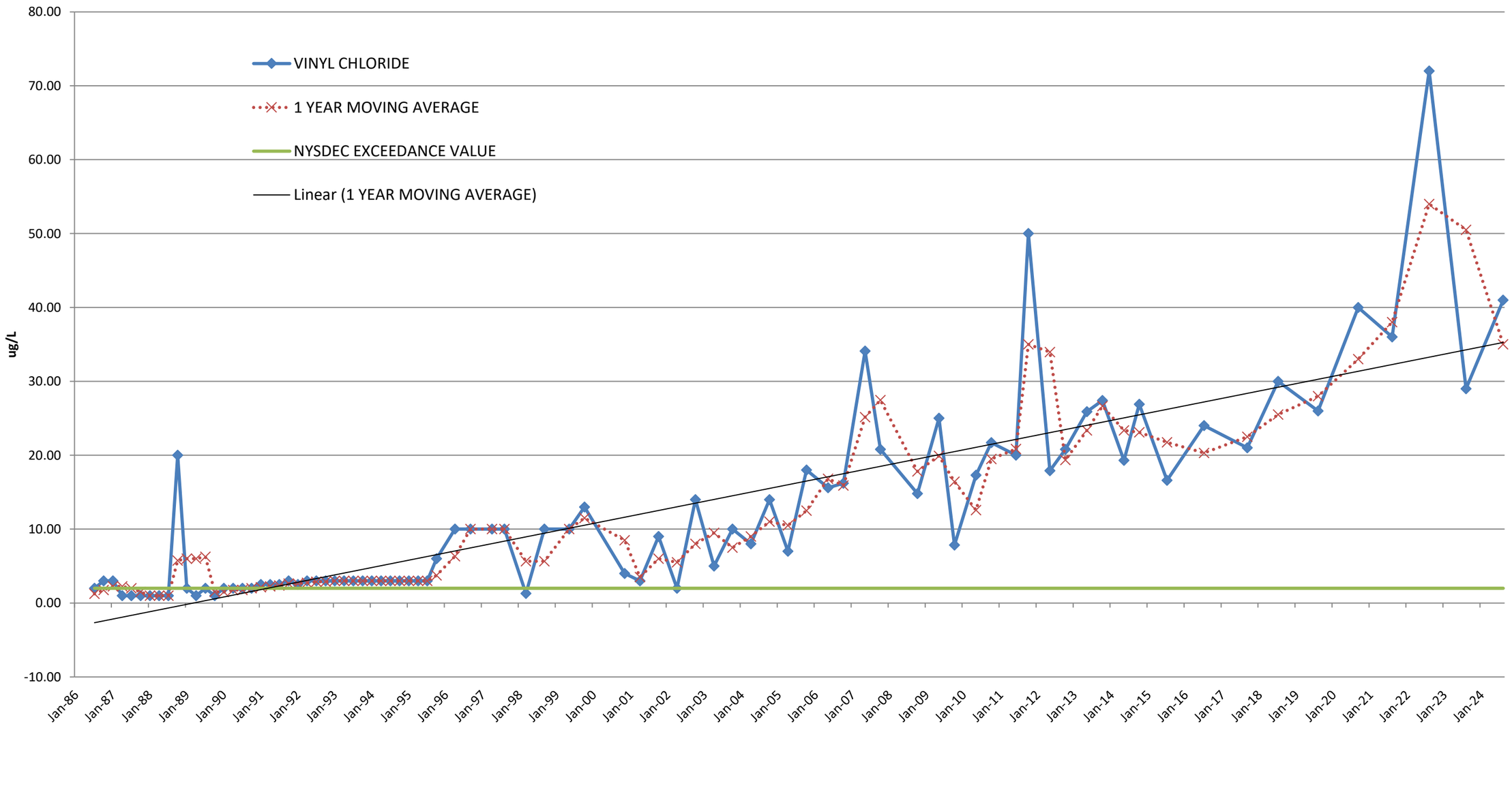
WELL VDM-14 & 14R: TRICHLOROETHENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
-	-	-	-	-	-	-				-
Oct-85	639.00	5	5	TOTAL STD	69.7937					1
Jan-86	1.00	5	5	TOTAL Sx	7.526048					2
Apr-86	10.00	5	5	TOTAL MEAN	39.69471					3
Jul-86	23.00	5	5	TOTAL N	87	168.25				4
Oct-86	5.80	5	5	TOTAL df	86	9.95				5
Jan-87	1.70	5	5			10.13				6
Apr-87	1.00	5	5			7.88				7
Jul-87	1.00	5	5			2.38				8
Oct-87	1.00	5	5			1.18				9
Jan-88	1.00	5	5			1.00				10
Apr-88	11.00	5	5			3.50				11
Jul-88	1.00	5	5			3.50				12
Oct-88	10.00	5	5			5.75				13
Jan-89	14.00	5	5			9.00				14
Apr-89	14.00	5	5			9.75				15
Jul-89	2.00	5	5			10.00				16
Oct-89	1.00	5	5			7.75				17
Jan-90	2.00	5	5			4.75				18
Apr-90	8.80	5	5			3.45				19
Jul-90	30.00	5	5			10.45				20
Oct-90	9.20	5	5			12.50				21
Jan-91	1.25	5	5			12.31				22
Apr-91	15.40	5	5			13.96				23
Jul-91	23.70	5	5			12.39				24
Oct-91	2.50	5	5			10.71				25
Jan-92	1.89	5	5			10.87				26
Apr-92	8.60	5	5			9.17				27
Jul-92	35.00	5	5			12.00				28
Oct-92	5.60	5	5			12.77				29
Jan-93	8.10	5	5			14.33				30
Apr-93	7.00	5	5			13.93				31
Jul-93	2.50	5	5			5.80				32
Oct-93	2.50	5	5			5.03				33
Jan-94	10.00	5	5			5.50				34
Apr-94	11.00	5	5			6.50				35
Jul-94	12.00	5	5			8.88				36
Oct-94	16.00	5	5			12.25				37
Jan-95	10.00	5	5			12.25				38
Apr-95	26.00	5	5			16.00				39
Jul-95	28.00	5	5			20.00				40
Oct-95	54.00	5	5			29.50				41
Apr-96	12.00	5	5			31.33				42
Sep-96	58.00	5	10			35.00	35.00	9/17/1996	semiannual	43
Apr-97	32.00	5	10			45.00	45.00	4/3/1997	semiannual	44
Aug-97	30.00	5	100			31.00	31.00	8/27/1997	semiannual	45
Mar-98	18.00	5	5			24.00	24.00	3/24/1998	semiannual	46
Sep-98	42.00	5	5			30.00	30.00	9/22/1998	semiannual	47
May-99	32.00	5	10			37.00	37.00	5/11/1999	semiannual	48
Oct-99	63.00	5	10			47.50	47.50	10/5/1999	semiannual	49
Nov-00	44.00	5	5			53.50	53.50	11/28/2000	semiannual	50
Apr-01	23.00	5	5			33.50	33.50	4/4/2001	semiannual	51
Oct-01	38.00	5	5			30.50	30.50	10/18/2001	semiannual	52
Apr-02	10.00	5	5			24.00	24.00	4/18/2002	semiannual	53
Oct-02	47.00	5	25			28.50	28.50	10/18/2001	semiannual	54
Apr-03	30.00	5	10			38.50	38.50	4/25/2003	semiannual	55
Oct-03	49.00	5	5			39.50	39.50	10/3/2003	semiannual	56
Apr-04	37.00	5	5			43.00	43.00	4/1/2004	semiannual	57
Oct-04	50.00	5	10			43.50	43.50	10/19/2004	semiannual	58
Apr-05	36.00	5	10			43.00	43.00	4/22/2005	semiannual	59
Oct-05	62.00	5	10			49.00	49.00	10/7/2005	semiannual	60
May-06	61.50	5	10			61.75	61.75	5/11/2006	semiannual	61
Oct-06	62.60	5	10			62.05	62.05	10/18/2006	semiannual	62
May-07	62.60	5	10			62.60	62.60	5/22/2007	semiannual	63
Oct-07	72.30	5	10			67.45	67.45	10/25/2007	semiannual	64

WELL VDM-14 & 14R: TRICHLOROETHENE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	42.90	5	10			57.60	57.60	10/23/2008	semiannual	65
May-09	32.40	5	25			37.65	37.65	5/12/2009	semiannual	66
Oct-09	29.30	5	25			30.85	30.85	10/29/2009	semiannual	67
May-10	35.90	5	25			32.60	32.60	5/20/2010	semiannual	68
Oct-10	56.10	5	25			46.00	46.00	10/18/2010	semiannual	69
Jun-11	33.70	5	25			44.90	44.90	6/2/2011	semiannual	70
Oct-11	65.00	5	50			49.35	49.35	10/12/2011	semiannual	71
May-12	69.90	5	2			67.45	67.45	5/18/2012	semiannual	72
Oct-12	65.60	5	2			67.75	67.75	10/11/2012	semiannual	73
May-13	53.70	5	2			59.65	59.65	5/17/2013	semiannual	74
Oct-13	66.70	5	2			60.20	60.20	10/11/2013	semiannual	75
May-14	45.10	5	2			55.90	55.90	5/5/2014	semiannual	76
Oct-14	79.00	5	2			62.05	62.05	10/6/2014	semiannual	77
Jul-15	51.60	5	2			65.30	65.30	7/9/2015	semiannual	78
Jul-16	54.00	5	1			52.80	52.80	7/20/2016	Annual	79
Sep-17	55.00	5	2			54.50	54.50	9/22/2017	Annual	80
Jul-18	80.00	5	2.5			67.50	67.50	7/24/2018	Annual	81
Aug-19	86.00	5	2.5			83.00	83.00	8/6/2019	Annual	82
Sep-20	91.00	5	1.2			88.50	88.50	9/4/2020	Annual	83
Aug-21	66.00	5	0.5			78.50	78.50	8/3/2021	Annual	84
Aug-22	91.00	5	1			78.50	78.50	8/30/2022	Annual	85
Aug-23	82.00	5	1			86.50	86.50	8/15/2023	Annual	86
Aug-24	81.00	5	1			81.50	81.50	8/13/2024	Annual	87

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
VINYL CHLORIDE



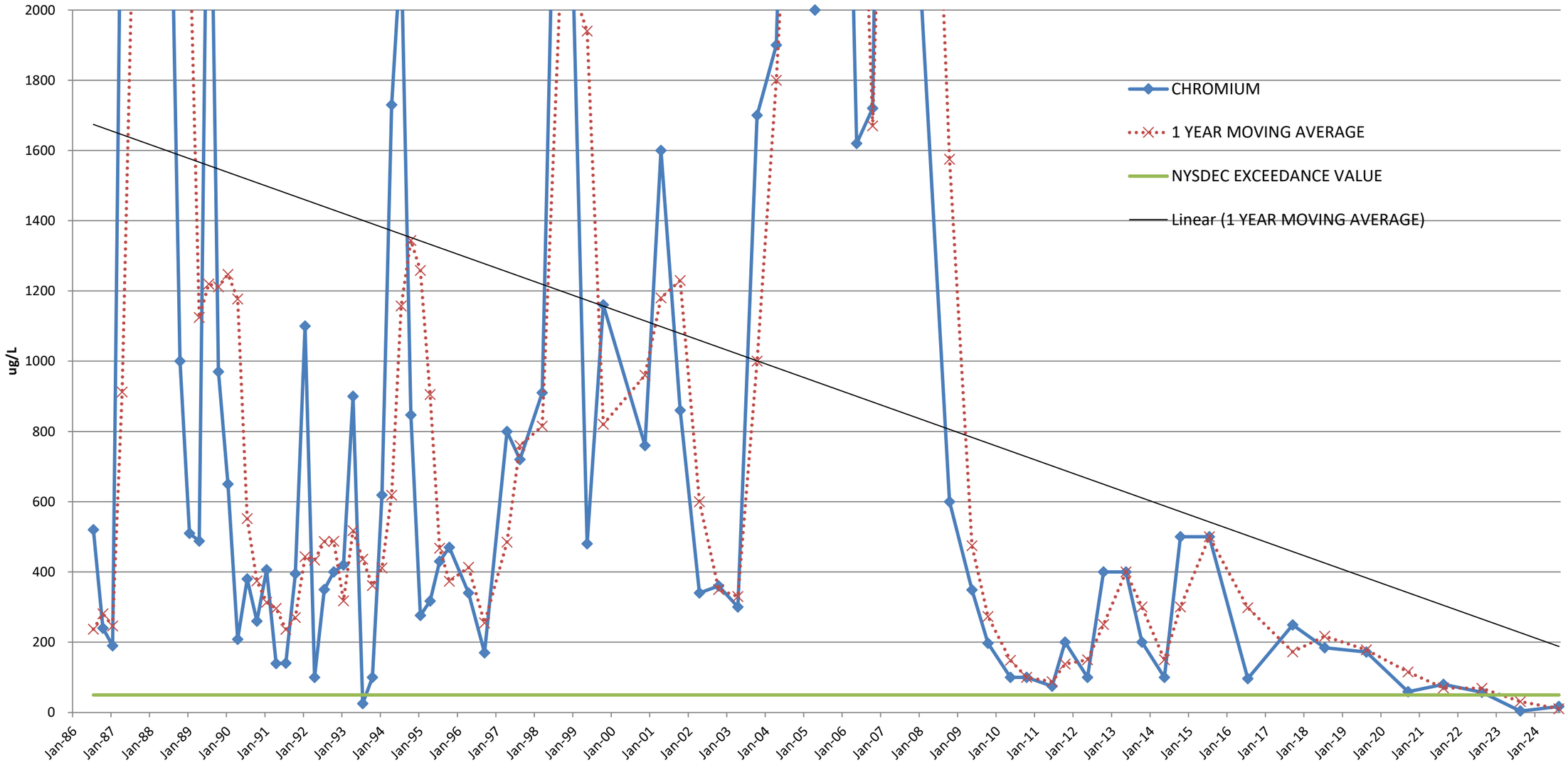
WELL VDM-14 & 14R: VINYL CHLORIDE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
-	-	-	-	-	-	-				-
Oct-85	1.00	2	2	TOTAL STD	12.89674					1
Jan-86	1.00	2	2	TOTAL Sx	1.390691					2
Apr-86	1.00	2	2	TOTAL MEAN	11.46494					3
Jul-86	2.00	2	2	TOTAL N	87	1.25				4
Oct-86	3.00	2	2	TOTAL df	86	1.75				5
Jan-87	3.00	2	2			2.25				6
Apr-87	1.00	2	2			2.25				7
Jul-87	1.00	2	2			2.00				8
Oct-87	1.00	2	2			1.50				9
Jan-88	1.00	2	2			1.00				10
Apr-88	1.00	2	2			1.00				11
Jul-88	1.00	2	2			1.00				12
Oct-88	20.00	2	2			5.75				13
Jan-89	2.00	2	2			6.00				14
Apr-89	1.00	2	2			6.00				15
Jul-89	2.00	2	2			6.25				16
Oct-89	1.00	2	2			1.50				17
Jan-90	2.00	2	2			1.50				18
Apr-90	2.00	2	2			1.75				19
Jul-90	2.00	2	2			1.75				20
Oct-90	2.00	2	2			2.00				21
Jan-91	2.50	2	2			2.13				22
Apr-91	2.50	2	2			2.25				23
Jul-91	2.50	2	2			2.38				24
Oct-91	3.00	2	2			2.63				25
Jan-92	2.50	2	2			2.63				26
Apr-92	3.00	2	2			2.75				27
Jul-92	3.00	2	2			2.88				28
Oct-92	3.00	2	2			2.88				29
Jan-93	3.00	2	2			3.00				30
Apr-93	3.00	2	2			3.00				31
Jul-93	3.00	2	2			3.00				32
Oct-93	3.00	2	2			3.00				33
Jan-94	3.00	2	2			3.00				34
Apr-94	3.00	2	2			3.00				35
Jul-94	3.00	2	2			3.00				36
Oct-94	3.00	2	2			3.00				37
Jan-95	3.00	2	2			3.00				38
Apr-95	3.00	2	2			3.00				39
Jul-95	3.00	2	2			3.00				40
Oct-95	6.00	2	6			3.75				41
Apr-96	10.00	2	10			6.33				42
Sep-96	10.00	2	10			10.00	10.00	9/17/1996	semiannual	43
Apr-97	10.00	2	10			10.00	10.00	4/3/1997	semiannual	44
Aug-97	10.00	2	100			10.00	10.00	8/27/1997	semiannual	45
Mar-98	1.30	2	10			5.65	5.65	3/24/1998	semiannual	46
Sep-98	10.00	2	10			5.65	5.65	9/22/1998	semiannual	47
May-99	10.00	2	10			10.00	10.00	5/11/1999	semiannual	48
Oct-99	13.00	2	10			11.50	11.50	10/5/1999	semiannual	49
Nov-00	4.00	2	5			8.50	8.50	11/28/2000	semiannual	50
Apr-01	3.00	2	5			3.50	3.50	4/4/2001	semiannual	51
Oct-01	9.00	2	5			6.00	6.00	10/18/2001	semiannual	52
Apr-02	2.00	2	5			5.50	5.50	4/18/2002	semiannual	53
Oct-02	14.00	2	25			8.00	8.00	10/3/2002	semiannual	54
Apr-03	5.00	2	10			9.50	9.50	4/25/2003	semiannual	55
Oct-03	10.00	2	5			7.50	7.50	10/3/2003	semiannual	56
Apr-04	8.00	2	10			9.00	9.00	4/1/2004	semiannual	57
Oct-04	14.00	2	10			11.00	11.00	10/19/2004	semiannual	58
Apr-05	7.00	2	10			10.50	10.50	4/22/2005	semiannual	59
Oct-05	18.00	2	10			12.50	12.50	10/7/2005	semiannual	60
May-06	15.60	2	10			16.80	16.80	5/11/2006	semiannual	61
Oct-06	16.20	2	10			15.90	15.90	10/18/2006	semiannual	62
May-07	34.10	2	10			25.15	25.15	5/22/2007	semiannual	63
Oct-07	20.80	2	10			27.45	27.45	10/25/2007	semiannual	64

WELL VDM-14 & 14R: VINYL CHLORIDE

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING AVG				EVENT NO.
Oct-08	14.80	2	10			17.80	17.80	10/23/2008	semiannual	65
May-09	25.00	2	25			19.90	19.90	5/12/2009	semiannual	66
Oct-09	7.85	2	25			16.43	16.43	10/29/2009	semiannual	67
May-10	17.30	2	25			12.58	12.58	5/20/2010	semiannual	68
Oct-10	21.70	2	25			19.50	19.50	10/18/2010	semiannual	69
Jun-11	20.00	2	20			20.85	20.85	6/2/2011	semiannual	70
Oct-11	50.00	2	50			35.00	35.00	10/12/2011	semiannual	71
May-12	17.90	2	2			33.95	33.95	5/18/2012	semiannual	72
Oct-12	20.80	2	2			19.35	19.35	10/11/2012	semiannual	73
May-13	25.90	2	2			23.35	23.35	5/17/2013	semiannual	74
Oct-13	27.40	2	2			26.65	26.65	10/11/2013	semiannual	75
May-14	19.30	2	2			23.35	23.35	5/5/2014	semiannual	76
Oct-14	26.90	2	2			23.10	23.10	10/2/2014	semiannual	77
Jul-15	16.60	2	2			21.75	21.75	7/9/2015	semiannual	78
Jul-16	24.00	2	1			20.30	20.30	7/20/2016	Annual	79
Sep-17	21.00	2	4			22.50	22.50	9/22/2017	Annual	80
Jul-18	30.00	2	5			25.50	25.50	7/24/2018	Annual	81
Aug-19	26.00	2	5			28.00	28.00	8/6/2019	Annual	82
Sep-20	40.00	2	2.5			33.00	33.00	9/4/2020	Annual	83
Aug-21	36.00	2	2.5			38.00	38.00	8/3/2021	Annual	84
Aug-22	72.00	2	2			54.00	54.00	8/30/2022	Annual	85
Aug-23	29.00	2	2			50.50	50.50	8/15/2023	Annual	86
Aug-24	41.00	2	2			35.00	35.00	8/13/2024	Annual	87

MOVING AVERAGE TREND TEST
VDM-14 (1987-2007) & VDM-14R (2008-Present)
CHROMIUM



WELL VDM-14 & 14R: CHROMIUM

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING VG				EVENT NO.
----------	-	-	-	-	-	-				-
Oct-85	64	50	50	TOTAL STD	1745.988					1
Jan-86	330	50	50	TOTAL Sx	207.2107					2
Apr-86	34	50	50	TOTAL MEAN	1270.542					3
Jul-86	520	50	50	TOTAL N	72	237.00				4
Oct-86	240	50	50	TOTAL df	71	281.00				5
Jan-87	190	50	50			246.00				6
Apr-87	2700	50	50			912.50				7
Jul-87	5300	50	50			2107.50				8
Oct-87	8200	50	50			4097.50				9
Jan-88	8000	50	50			6050.00				10
Apr-88	5000	50	50			6625.00				11
Jul-88	2500	50	50			5925.00				12
Oct-88	1000	50	50			4125.00				13
Jan-89	510	50	50			2252.50				14
Apr-89	488	50	50			1124.50				15
Jul-89	2880	50	50			1219.50				16
Oct-89	970	50	50			1212.00				17
Jan-90	650	50	50			1247.00				18
Apr-90	208	50	50			1177.00				19
Jul-90	380	50	50			552.00				20
Oct-90	260	50	50			374.50				21
Jan-91	406	50	50			313.50				22
Apr-91	139	50	50			296.25				23
Jul-91	140	50	50			236.25				24
Oct-91	395	50	50			270.00				25
Jan-92	1100	50	50			443.50				26
Apr-92	100	50	50			433.75				27
Jul-92	350	50	50			486.25				28
Oct-92	400	50	50			487.50				29
Jan-93	420	50	50			317.50				30
Apr-93	900	50	50			517.50				31
Jul-93	25	50	50			436.25				32
Oct-93	100	50	50			361.25				33
Jan-94	619	50	50			411.00				34
Apr-94	1730	50	50			618.50				35
Jul-94	2180	50	50			1157.25				36
Oct-94	847	50	50			1344.00				37
Jan-95	276	50	50			1258.25				38
Apr-95	317	50	50			905.00				39
Jul-95	430	50	50			467.50				40
Oct-95	470	50	2			373.25				41
Apr-96	340	50	2			413.33				42
Sep-96	170	50	5			255.00	255.00	9/17/1996	semiannual	43
Apr-97	800	50	20			485.00	485.00	4/3/1997	semiannual	44
Aug-97	720	50	5			760.00	760.00	8/27/1997	semiannual	45
Mar-98	910	50	10			815.00	815.00	3/24/1998	semiannual	46
Sep-98	3400	50	10			2155.00	2155.00	9/22/1998	semiannual	47
May-99	480	50	10			1940.00	1940.00	5/11/1999	semiannual	48
Oct-99	1160	50	14			820.00	820.00	10/5/1999	semiannual	49
Nov-00	760	50	2			960.00	960.00	11/28/2000	semiannual	50
Apr-01	1600	50	2			1180.00	1180.00	4/4/2001	semiannual	51
Oct-01	860	50	2			1230.00	1230.00	10/18/2001	semiannual	52
Apr-02	340	50	2			600.00	600.00	4/18/2002	semiannual	53
Oct-02	360	50	2			350.00	350.00	10/3/2002	semiannual	54
Apr-03	300	50	2			330.00	330.00	4/25/2003	semiannual	55
Oct-03	1700	50	2			1000.00	1000.00	10/3/2003	semiannual	56
Apr-04	1900	50	4			1800.00	1800.00	4/1/2004	semiannual	57
Oct-04	3800	50	4			2850.00	2850.00	10/19/2004	semiannual	58
Apr-05	2000	50	4			2900.00	2900.00	4/22/2005	semiannual	59
Oct-05	4400	50	4			3200.00	3200.00	10/7/2005	semiannual	60
May-06	1620	50	4			3010.00	3010.00	5/11/2006	semiannual	61
Oct-06	1720	50	4			1670.00	1670.00	10/18/2006	semiannual	62
May-07	6100	50	4			3910.00	3910.00	5/22/2007	semiannual	63
Oct-07	2550	50	4			4325.00	4325.00	10/25/2007	semiannual	64

WELL VDM-14 & 14R: CHROMIUM

SAMPLING EVENT	CONC PPB	DEC EXCEED VALUE	DETECT LIMIT	STATISTICS		MOVING VG				EVENT NO.
Oct-08	600	50	4			1575.00	1575.00	10/23/2008	semiannual	65
May-09	349	50	4			474.50	474.50	5/12/2009	semiannual	66
Oct-09	197	50	4			273.00	273.00	10/29/2009	semiannual	67
May-10	100	50	4			148.50	148.50	5/20/2010	semiannual	68
Oct-10	100	50	4			100.00	100.00	10/18/2010	semiannual	69
Jun-11	75	50	4			87.50	87.50	6/2/2011	semiannual	70
Oct-11	200	50	200			137.50	137.50	10/12/2011	semiannual	71
May-12	100	50	100			150.00	150.00	5/18/2012	semiannual	72
Oct-12	400	50	400			250.00	250.00	10/11/2012	semiannual	73
May-13	400	50	400			400.00	400.00	5/17/2013	semiannual	74
Oct-13	200	50	200			300.00	300.00	10/11/2013	semiannual	75
May-14	100	50	30			150.00	150.00	5/5/2014	semiannual	76
Oct-14	500	50	10			300.00	300.00	10/6/2014	semiannual	77
Jul-15	500	50	500			500.00	500.00	7/9/2015	semiannual	78
Jul-16	96	50	10			298.00	298.00	7/20/2016	Annual	79
Sep-17	249.3	50	1			172.65	172.65	9/22/2017	Annual	80
Jul-18	184.2	50	1			216.75	216.75	7/24/2018	Annual	81
Aug-19	171.7	50	10			177.95	177.95	8/6/2019	Annual	82
Sep-20	58.92	50	1			115.31	115.31	9/4/2020	Annual	83
Aug-21	80	50	0.5			69.46	69.46	8/3/2021	Annual	84
Aug-22	57.5	50	1			68.75	68.75	8/30/2022	Annual	85
Aug-23	3.98	50	10			30.74	30.74	8/15/2023	Annual	86
Aug-24	16.8	50	10			10.39	10.39	8/13/2024	Annual	87

Appendix E

IC/EC Certification Form

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932039

Site Name Vanchlor Company, Inc.

Site Address: 600 Mill Street Zip Code: 14094
City/Town: Lockport
County: Niagara
Site Acreage: 5.000

Reporting Period: February 13, 2024 to February 13, 2025

	YES	NO
1. Is the information above correct?	X	☐
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?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
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?	☐	X

Box 2

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

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. 932039 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
95.17-1-56.11	VANCHLOR COMPANY, INC.	Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan Ground Water Use Restriction Building Use Restriction

Order On Consent; July 10, 2014.
Compliance with the Site Management Plan; January 2015.
Compliance with the Deed Restriction; October 5, 1999.
Prohibition against disturbance of the landfill cap and monitoring system.
Prohibition on the use of groundwater.
Prohibition on gardening/farming.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
95.17-1-56.11	Cover System Fencing/Access Control

The cover system is comprised of a low permeability cap constructed as 24 inch thick clay layer, 3 inch thick drainage layer, 15 inch thick loam layer, six inch thick topsoil layer and vegetative cover. An inspection is done annually. Maintenance is routinely done or as needed to maintain the cover integrity. A fence encompasses the site for security purposes. Repair or replacement of any damaged or deteriorated components are done as needed.

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 Engineering Control 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. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The 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. 932039

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 Richard Shotell, President (print name) at Vanchlor Co. Inc. 45 Main Street, Lockport, NY 14094 (print business address),

am certifying as Owner (Owner or Remedial Party)

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

R S Shotell

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

1/21/25
Date

EC CERTIFICATIONS

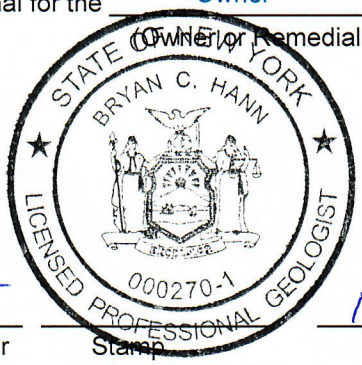
Box 7

Qualified Environmental Professional Signature

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

I Bryan C. Hann, P.G. (NY) (print name) at TRC Environmental Corporation, 1090 Union Road, Suite 280, West Seneca, NY 14224 (print business address),

am certifying as a Qualified Environmental Professional for the Owner (Owner or Remedial Party)



Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date
		1/24/2025