

Prepared for:
Village of Wellsville
Department of Public Works
200 Bolivar Road
Wellsville, NY 14895

PERIODIC REVIEW REPORT

February 15, 2020 to February 15, 2021

Wellsville/Andover Landfill Site
Site Number 9-02-004
Allegany County, New York

Prepared by:
On-Site Geological Services, D.P.C.
72 Railroad Avenue
Wellsville, NY 14895

March 2021
Revision 1: April 2021

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1.0 OVERVIEW

1.1 Introduction

This report presents operations, maintenance and monitoring activities associated with the closed Wellsville/Andover Landfill (Site) for the period of February 15, 2020 to February 15, 2021 as part of the New York State Department of Environmental Conservation (NYSDEC) Periodic Review Report (PRR) process. The PRR certification is included as Appendix A of this report.

The Site is located on Snyder Hill Road (previously known as Gorman Road) in Wellsville and Andover townships, Allegany County, New York (Figure 1). Operation, maintenance and monitoring requirements for this Site are detailed in *Operation and Maintenance Manual for the Wellsville/Andover Landfill Site Number 9-02-004 Allegany County, New York*, dated November 1997 (O&M Plan), prepared by Ecology and Environment Engineering, P.C. (E&E) with subsequent revisions. Revisions to the O&M Plan have been approved by the NYSDEC and the current O&M requirements are summarized in Section 2 of this report (hereafter referred to as Approved O&M Plan) with details included in Appendix B.

1.2 Project Background

The Wellsville/Andover Landfill was operated by the Village of Wellsville from 1964 to 1983, accepting both municipal and industrial waste. NYSDEC added the Site to the New York State Superfund with the 1994 Record of Decision (ROD) requiring waste consolidation and capping as the remedial action. Remedial construction commenced in April 1996. Waste from the northwest and northeast fill areas was removed and consolidated on the south/south-central fill area. Following consolidation, the fill was compacted and capped with a 19-acre cover system. The cover system incorporates a passive landfill gas (LFG) venting system, a leachate collection and storage system and groundwater cut-off trench on the north and east sides. Remedial construction was completed in September 1997.

The leachate collection system gravity drains to a Leachate Sump (LS-1), from which leachate is pumped into two 15,000-gal underground storage tanks. The Village of Wellsville transports water from the storage tanks to the Village of Wellsville Publicly Owned Treatment Works (POTW) for treatment.

The groundwater cutoff trench is intended to capture groundwater from the north and east landfill perimeters. The north side collection trench drains to Manhole 32 (MH-32) located at the northwest corner of the landfill, while the east side collection trench drains to Manhole 33 (MH-33) at the southeast corner of the landfill. Both MH-32 and MH-33 are piped to drain either to the leachate collection system or to the landfill perimeter surface water drainage channels. To date, water in MH-32 and MH-33 has been drained to the leachate collection system sump. The pipes from the manholes to the drainage channel are closed with removable plugs.

1.3 Summary of 2020 Monitoring, Inspection and Maintenance Activities

This section provides an overview of the monitoring, inspection and maintenance activities completed in 2020.

The required 2020 monitoring events were completed by On-Site Geological Services, D.P.C. (On-Site) in accordance with procedures set forth in the Approved O&M Plan (Appendix B). Semi-annual groundwater and residential water supply monitoring events were conducted in April and October/November 2020. Field sampling forms are included in Appendix C. Laboratory analysis was conducted by ALS Environmental (ALS), located in Rochester, New York. The 2020 monitoring events show consistent results as compared to historic monitoring indicating the site remedy is operating as designed. Details of these monitoring activities are provided in Section 3 through 7 and the 2020 laboratory analytical reports are included in Appendix F.

Quarterly inspections are conducted and documented on Inspection and Maintenance Checklist by Village of Wellsville personnel (Appendix D). 2020 Quarterly inspections resulted with no unresolved problems. 2020 maintenance activities included the following:

- annual mowing of landfill cap vegetation;
- leachate management and disposal;
- leachate collection manhole (LS-1) pump #2 replaced; and
- WAL-19 residential water treatment unit maintenance.

Details of the maintenance activities are provided in Section 8.

2.0 MONITORING, INSPECTION AND MAINTENANCE REQUIREMENTS

This section outlines monitoring, inspection and maintenance requirements specified by the Approved O&M Plan.

2.1 **Monitoring Requirements**

The analytical program for the site is based on the requirements of Title 6 NYCRR Subdivision 360-2.11(c) and 360-2.17(f). The most recent revisions to the analytical program were approved in May 2009 and have been implemented starting with the fall 2009 monitoring event.

Table 2-1 presents the revised monitoring program, with the current analyte list presented as Table 2-2. Sampling locations are presented in Figure 2. Details of the approved monitoring requirements are provided below.

- Monitoring is conducted semi-annually with one event conducted in the spring and one event completed in the fall.
- Five monitoring wells and one residential water supply are sampled for field parameters and Volatile Organic Compounds (VOCs) during each spring sampling event. During each fall sampling event 16 monitoring wells are sampled for field parameters, VOCs and metals. Surface water location SWS-1, Groundwater cut-off system locations MH-32 and MW-33, and LS-1 are sampled annually for the parameters listed on Table 2-2. Due to dry conditions often preventing surface water sampling in the fall, starting in 2016, surface water and sediment sampling is conducted as part of the spring monitoring event.
- The Village of Wellsville continues to provide contractor maintenance of a water filtration system at residential location WAL-19. The filter system includes a particulate filter and two granulated activated carbon (GAC) filters plumbed in series. This residence will continue to be sampled semi-annually for VOCs before the first GAC filter (sample location: WAL-19 Pre), between the GAC filters (WAL-19 Inter) and after the second GAC filter (WAL-19 Post). Residential water supply locations WAL-2 and WAL-5 are sampled on an annual basis during the fall event. WAL-5 has been unoccupied for several years and therefore is currently not sampled. Starting in 2016, vacant residential location WAL-1 became occupied and was added back into the monitoring program. WAL-1 is sampled annually during the fall monitoring event.
- Static water level elevations are required to be measured in the monitoring wells and piezometers located on and around the landfill cap as part of sampling events. Water elevations are used to construct potentiometric maps. Table 2-3 provides a tabular listing of the 2020 static water elevations along with well construction information.
- Landfill gas monitoring and perimeter air monitoring are completed during the fall monitoring event for VOCs, Lower Explosive Level (LEL) and Oxygen (O₂). The 2020 air monitoring results are presented in Table 6-1.

2.2 Inspection and Maintenance Requirements

The inspection and maintenance requirements for the site are specified in the O&M Plan and include the following.

- Conduct quarterly inspections and maintenance (if required) of cover system, leachate collection and storage system, gas venting system, storm water system, groundwater monitoring system, and facility access system (i.e. access roads and gates). Quarterly Inspection and Maintenance Checklists are provided within the O&M Plan and are completed by Village of Wellsville Department of Public Works personnel.
- Annual mowing of the vegetative cover is performed by Village of Wellsville personnel.
- The Village of Wellsville is responsible for maintenance of a residential water treatment unit at residence WAL-19, located at 3914 Snyder Hill Road.

3.0 GROUNDWATER MONITORING RESULTS

Two groundwater monitoring events were completed during 2020. The spring event includes five monitoring wells for VOC analysis, while the fall event is a Site wide monitoring event. Spring and Fall field forms are included in Appendix C.

3.1 Spring Monitoring Event Summary

Spring 2020 groundwater sampling was conducted between April 20 and 22, 2020. Monitoring wells MW-4D, MW-5D, MW-5S, MW-11S and MW-16S were sampled and analyzed for VOCs. Surface water location SWS-1 was sampled on April 22, 2020. Residential water supply WAL-19 was sampled June 1, 2020, as this was the earliest the owners were available to facilitate sampling.

April 2020 groundwater results are typical of historical data with several monitoring wells exceeding Class GA Standards for cis-1,2-Dichloroethene (cDCE), Sodium, Trichloroethene (TCE) and Vinyl chloride. Monitoring well MW-16S is the furthest downgradient well. April 2020 MW-16S VOC concentrations are reported as non-detect.

Spring 2020 surface water analytical results are within NYSDEC Class C surface water standards. Surface water results discussed in Section 4.0 of this report.

WAL-19 residential water supply was sampled for VOC analysis before filters, between filters, and after filters on June 1, 2020. ALS performed analysis of the residential samples for TCL VOCs (method 524.2) as required by the current O&M Plan. WAL-19

results are typical of historic data with cDCE detected before filters at concentrations below Class GA standards and NYSDOH MCLs and non-detect after filtration. Residential water supply sampling analysis is detailed in Section 7.0 of this report.

3.2 Fall Monitoring Event Results

Groundwater samples were collected from 15 of the 16 scheduled monitoring wells as part of the fall 2020 monitoring event. Monitoring well MW-15S was observed dry and therefore not sampled. Table 3-1 exhibits the detection frequency, minimum and maximum detection, NYSDEC Class GA Groundwater Standard (Class GA Standard) and the number of Class GA Standard exceedances for groundwater samples collected in 2019 and 2020. Table 3-2 lists the 2020 Class GA and NYSDOH Maximum Contaminant Level (MCL) exceedances by individual monitoring well. Table 3-3 is a tabular listing of groundwater analytical results from the two sampling events completed in 2020. Monitoring well locations are presented in Figure 2. A discussion of the analytical results is provided below.

Inorganic Compounds (metals)

Groundwater samples were analyzed for fifteen inorganic compounds during the fall 2020 sampling event (Table 2-2). As shown in Table 3-1, seven metals (Barium, Calcium, Iron, Magnesium, Manganese, Potassium and Sodium) were detected in 2020. In 2019 the same metals were detected along with Zinc. Iron, Manganese and Sodium exceeded Class GA standards in 2019 and 2020 and are the metals that exceed Class GA Standards on a frequent basis. Concentration time trend plots for these three metals have been created to graphically present the most recent 10 years of monitoring data. These plots are presented in Appendix E for monitoring wells that have shown NYSDEC Class GA Standard exceedances of these metals during this time period. Monitoring wells CW-3A, CW-3B, CW-4A, CW-4B, MW-3S, MW-4D, MW-5D, MW-5S, MW-11S, MW-16S, MW-17D, MW-17D, MW-18D and MW-18S are included. These graphs illustrate generally stable Iron, Manganese and Sodium concentrations for the past 10 years. These three metals have been detected at various concentrations above standards at both upgradient and downgradient wells. These metals are common constituents of soil and regionally occur naturally at the concentrations detected in Site groundwater.

VOCs

Groundwater from each well sampled during both the spring and fall 2020 sampling events were analyzed for VOCs, which include 36 compounds (Table 2-2). Consistent with historic monitoring data, 2020 results show cDCE, TCE and Vinyl chloride exceeding

Class GA Standards. Vinyl chloride, cDCE and TCE are the primary Site constituents of interest and commonly exceed the Class GA Standards. Therefore concentration time trend plots for these three VOCs have been created. The plots include data from 2011 through 2020 and are included in Appendix E for monitoring wells that have shown Class GA Standard exceedances for these compounds. These monitoring wells include CW-3A, CW-3B, CW-4A, MW-3D, MW-4D, MW-5D, MW-5S, MW-11S, MW-15S, MW-17S and MW-18S. Additionally as monitoring well MW-16S is the furthest Site downgradient well, a graph for this location is also included. A discussion of the VOC time trend graphs is provided below.

- Downgradient well CW-3A TCE and cDCE concentrations appear to be generally stable or slightly decreasing, while Vinyl chloride has been non-detect during this 10 year monitoring period.
- TCE at downgradient well CW-3B has varied between 0.18 mg/L and 0.47 mg/L with a possible slight increasing trend over the last 10 years. cDCE concentrations have been stable at approximately 0.1 mg/L and Vinyl chloride has been non-detect.
- Downgradient well CW-4A shows cDCE, TCE and Vinyl chloride results as non-detect since 2011.
- Upgradient well MW-3D has shown cDCE at slight decreasing trend from over this 10 year monitoring period. TCE and Vinyl chloride are non-detect.
- Cross-gradient well MW-4D has shown cDCE and Vinyl chloride on a decreasing trend, while TCE has been non-detect.
- Cross-gradient well MW-5D exhibits low-level detections of TCE and Vinyl chloride throughout this 10 year monitoring period. cDCE has been generally stable between approximately 0.2 mg/L and 1 mg/L with apparent seasonal fluctuations. NYSDEC has requested 1,1-Dichloroethene and Trans-1,2-Dichloroethene also be included on the MW-5D plot. The graph shows these two parameters at or near detection limits the last 10 years.
- Cross-gradient well MW-5S exhibits generally stable trend in cDCE, TCE and Vinyl chloride since 2012.
- Downgradient well MW-11S has shown Vinyl chloride at near detection limits and cDCE has shown stable results. TCE appears generally stable between 2.1 mg/L and 3.6 mg/L.
- Downgradient well MW-15S was dry in 2020 and therefore not sampled. Due to insufficient groundwater, MW-15S was last sampled in October 2016 and showed cDCE, TCE and Vinyl chloride non-detect.
- At the furthest downgradient well MW-16S, cDCE, TCE and Vinyl chloride results are non-detect.

- Cross-gradient well MW-17S shows stable cDCE concentrations at approximately 0.06 mg/L between 2010 and 2017 with a slight decreasing trend starting in 2018. TCE and Vinyl chloride concentrations have been at or near detection limits.
- Cross-gradient well MW-18S has generally exhibited cDCE and TCE concentration at or near detection limits from 2011 to 2020. Vinyl chloride has not been detected during the last 10 years.

3.3 Data Quality Assessment

Samples were collected following proper procedures and were placed in laboratory supplied, pre-labeled containers, pre-preserved as appropriate, recorded on chain-of-custody form(s), placed in coolers, and packed with bagged ice. At the end of each sampling day, chain-of-custody forms were reviewed for completeness, coolers were re-iced and sealed. Samples were received by the laboratory in good condition and within temperature requirements. Samples were generally analyzed within appropriate hold times and the laboratory reported no significant analysis anomalies. Additional data quality control information is provided in the laboratory analytical reports located in Appendix F. The results presented in this report should be considered technically correct and usable.

Field Duplicate Samples

Field duplicate samples were collected during both the spring and fall sampling events. A field duplicated sample (DUP1-0420) was collected from monitoring well MW-16S on April 20, 2020 while a field duplicate at MW-11S was collected from on October 15, 2020. Results from the MW-16S and MW-11S samples compare favorably with the associated duplicate samples, indicating good sampling and analysis precision. A field duplicate sample comparison is presented in Table 3-4.

Field Equipment Blank Sample

Field sampling pump equipment blank samples were collected during both the spring and fall sampling events (EB1-0420 and EB1-1020). Field equipment blank samples were collected by pumping laboratory provided deionized water through the sampling pump and tubing. Sample EB1-1020 was collected from the bladder pump and tubing used to sample monitoring wells. 2020 equipment blank results show non-detect results, indicative of proper sampling equipment cleaning between monitoring wells.

3.4 Potentiometric Mapping

Prior to purging and collecting groundwater samples, static water levels were measured from the monitoring wells and piezometers. The spring and fall 2020 data are utilized to develop separate potentiometric maps for wells screened in overburden and wells screened in bedrock. The potentiometric maps for 2020 are included as Figures 3 through 6. Each contour represents a line of equivalent groundwater elevation. The direction of groundwater flow is from higher to lower elevation approximately perpendicular to the contours. The 2020 potentiometric maps are consistent with historic groundwater level data indicating stable and predictable groundwater flow.

4.0 SURFACE WATER AND SEDIMENT MONITORING RESULTS

Surface water and sediment location SWS-1 is positioned at the southwest corner of the landfill at the downstream side of the culvert within the drainage ditch that leads to an unnamed tributary to Duffy Hollow Creek (Figure 2). Both the unnamed tributary and Duffy Hollow Creek are classified as NYSDEC Class C streams. Surface water and sediment sampling at SWS-1 is required on an annual basis during the spring event. In 2020 SWS-1 was sampled on April 22, 2020. Sediment was not observed within the surface water ditch in 2020 and therefore not sampled. Surface results are presented in Table 4-1. The 2020 surface water results are below Class C Standards with VOCs reported as non-detect. Surface water seeps along the perimeter of the landfill have not been observed to be active since 2003; therefore no seep samples were collected in 2020.

5.0 LEACHATE SUMP AND MANHOLE MONITORING RESULTS

Water samples are required to be collected at Leachate Sump (LS-1) and two groundwater cut-off manholes (MH-32 and MH-33) annually. Sampling locations are presented in Figure 2. Table 5-1 exhibits the detection frequency, minimum and maximum detection for leachate sump and manhole samples collected in 2019 and 2020. Table 5-2 lists 2020 Class GA and MCL exceedances at LS-1, MH-32 and MH-33. Table 5-3 is a tabular listing of current and historic leachate sump analytical results. Table 5-4 is a tabular listing of current and historic manhole analytical results. A discussion of leachate sump and manhole analytical results is provided below.

5.1 Leachate Sump Results

Metals

Metals were analyzed in one leachate sump sample during 2020. Metals detected in 2020 include Barium, Calcium, Iron, Magnesium, Manganese, Potassium and Sodium. The same metals were detected in 2019. 2020 Metals results are consistent with historic data. Based upon NYSDEC request, concentration time trend plots for Iron, Manganese and Sodium have been created and are included in Appendix E. With the exception of an Iron spike in 2012, this plot illustrates LS-1 Iron, Manganese and Sodium concentrations generally stable since 2010.

VOCs

VOCs were analyzed in one leachate sump sample during 2020 and LS-1 VOC results are consistent with historic data. Based upon NYSDEC request, concentration time trend plots for cDCE, TCE and Vinyl Chloride is included in Appendix E. This plot shows a cDCE decrease in 2010 with generally stable concentrations between 2011 and 2020. TCE and Vinyl chloride have primarily been non-detect the last 10 years.

5.2 Manhole Monitoring Results

Metals

Metals were analyzed in two manhole samples in fall 2020. Metals detected in 2020 at MH-32 and MH-33 include Barium, Calcium, Iron, Magnesium, Manganese, Potassium and Sodium. 2020 Manhole Metals results are consistent with historic data and show Class GA exceedances for Iron and Manganese. Based upon NYSDEC request, concentration time trend plots for these Iron, Manganese and Sodium have been created as presented in Appendix E. MH-32 and MH-33 Iron, Manganese and Sodium concentrations appear generally stable to slight decreasing trend since 2010.

VOCs

VOCs were analyzed in two manhole samples in fall 2020. MH-33 VOC results are non-detect. cDCE was detected at MH-32 at a concentration of 1.5 mg/L, Dichloromethane at 0.21 mg/L and Trichloroethene at 0.57 mg/L. The remaining 2020 VOC results are non-detect. 2020 VOC results are consistent with historic data and with the exception of cDCE, Dichloromethane and TCE are below Class GA Standards. Based upon NYSDEC request, concentration time trend plots for cDCE, TCE and Vinyl chloride are included in Appendix E. MH-32 cDCE concentrations have fluctuated from near detection limit to 9.1 mg/L while TCE and Vinyl chloride have been at or near detection limit the last 10 years.

MH-33 has shown cDCE, TCE and Vinyl chloride at or near detection limit.

Wet Chemistry

Manholes MH-32 and MH-33 were sampled for Nitrate Nitrogen and Total Dissolved Solids (TDS) in 2020. Nitrate Nitrogen results are non-detect. MH-32 and MH-33 2020 TDS results are 353 mg/L and 372 mg/L, respectively. These TDS results are below Class GA and Class C Standards of 500 mg/L.

6.0 AIR MONITORING RESULTS

Air monitoring at the landfill perimeter, gas vents and LCS locations was conducted during the fall 2020 event utilizing a QRAE Mini RAE 3000 Photo Ionization Detector (PID) for VOCs and a QRAE3 four-gas meter for Oxygen (O₂) and Lower Explosive Limit (LEL). Please see Figure 7 for monitoring locations.

Prior to commencing air monitoring, the air monitoring instruments were properly calibrated according to manufacturer specifications. PID readings at the gas vents, LCS manholes and clean-out vents range from 0.0 ppm to 36.8 ppm. Oxygen levels ranged from 3.9% to 20.9%. 2020 LEL readings range from 0% to 100%. Upwind and downwind PID and LEL readings at the landfill perimeter are not above background readings indicating no measurable landfill gas at the landfill perimeter. Oxygen readings at the landfill perimeter are also within normal range. The air monitoring readings are recorded in tabular form and presented in Table 6-1.

7.0 RESIDENTIAL WATER SUPPLY MONITORING RESULTS

Four residential water supply sampling events were completed during 2020. The sampling events were conducted in June and October/November 2020. The current monitoring schedule requires that one water supply (WAL-19) be sampled semi-annually (spring and fall) and the remaining three locations (WAL-1, WAL-2 and WAL-5) be sampled annually.

Residential location WAL-19 was sampled in the spring and fall of 2020 while residential locations WAL-1 and WAL-2, were sampled in fall 2020. WAL-5 location was not sampled as the residence is unoccupied.

Table 7-1 presents an overview of 2020 residential water supply sampling. Figure 2

presents the approximate sampling locations.

A total of four residential water samples were collected in 2020. Table 7-2 exhibits the detection frequency, minimum and maximum detection, NYSDOH MCL, number of NYSDOH MCL exceedances, NYSDEC Class GA Standard and the number of Class GA Standard exceedances for both 2019 and 2020. Table 7-3 is a tabular listing of 2020 residential water analytical results. A discussion of the analytical results is provided below.

Metals

WAL-1 2020 metals results are below NYSDOH MCLs and Class GA Standards. WAL-2 shows Iron at 0.83 mg/L and Manganese at 0.873 mg/L exceeding the NYSDOH MCLs and Class GA Standards. Additionally, Sodium at 42.7 mg/L exceeds Class GA Standards. The WAL-2 2020 metals results are consistent with historic results and ambient groundwater quality. The Class GA exceedances are likely naturally occurring detections and not associated with the landfill. Metals are not required to be analyzed at WAL-19.

VOCs

During 2020, residential water samples were analyzed for VOCs with two parameters detected (cDCE and TCE). These detections are at WAL-19 prior to filtration and are below NYSDOH MCLs and NYSDEC Class GA Standards. VOCs are not detected at WAL-19 after filtration. 2020 WAL-1 VOC results are non-detect.

Additionally as required by NYSDEC, certain residential water supplies were sampled for emerging contaminants in 2020. This sampling was conducted as required by NYSDEC letter entitled *Request for Water Supply Sampling Wellsville-Andover Landfill, Wellsville Allegany County, Site No.: 902004*, dated February 14, 2020. This sampling was conducted between October 21, 2020 and November 14, 2020 showing primarily non-detect results. The results of this sampling were reported to NYSDEC on February 10, 2021 in a letter entitled *Private Water Supply Emerging Contaminants Sampling Results, Wellsville-Andover Landfill Site No 902004*. This letter report is included as Appendix G of this report.

8.0 INSPECTIONS AND MAINTENANCE ACTIVITIES

Quarterly Inspections and routine maintenance were performed by Village of Wellsville personnel and recorded on the Quarterly Inspection and Maintenance Checklist provided in the O&M Plan. Quarterly inspections were completed on March 30, June 30,

September 29 and December 31, 2020. No unresolved problems were noted on the inspection forms. The 2020 completed inspection forms are included in Appendix D. A description of maintenance activities performed during 2020 is provided below.

- Village of Wellsville personnel mowed the landfill cap in October 2020.
- The Village of Wellsville continues to maintain a water treatment unit at the LaDue (WAL-19) residence.
- A total of approximately 1,990,000 gallons of leachate was hauled from the Landfill to the Village of Wellsville POTW during 2020. The table below lists the total leachate gallons by year for the previous six years.

Year/Gallons	2014	2015	2016	2017	2018	2019	2020
	1,441,683	1,682,710	1,777,155	2,521,185	2,891,240	2,480,000	1,990,000

- On September 24, 2020, LS-1 pump 2 was removed by Village of Wellsville personnel with assistance of On-Site. One pump is required to be operational in order to transfer leachate from LS-1 to the storage tanks. Pump 1 continues to be in operation and pump 2 is scheduled to be replaced in 2021.

9.0 CONCLUSIONS

Monitoring and maintenance activities are being performed as required at the Wellsville/Andover Landfill. Routine maintenance and inspections are being conducted to maintain the Site. The Site has been monitored for over 23 years following completion of the remedial action. Monitoring will continue as required by the approved plan.

Maintenance activities planned for 2021 include:

- annual mowing of landfill cap vegetation;
- leachate management and disposal;
- LS-1 pump 2 replacement;
- leachate collection system cleaning; and
- WAL-19 water treatment unit maintenance.

This annual report is submitted as part of the Site Management Periodic Review required by the NYSDEC.

Tables

Table 2-1

**Monitoring Requirements
Wellsville/Andover Landfill
Wellsville, New York**

Location	Revised Sampling Frequency	Spring Analyte List ¹	Fall Analyte List ¹
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Groundwater

CW-3A	Annual - Fall	WL	Field, VOCs, Metals
CW-3B	Annual - Fall	WL	Field, VOCs, Metals
CW-4A	Annual - Fall	WL	Field, VOCs, Metals
CW-4B	Annual - Fall	WL	Field, VOCs, Metals
MW-15DA	NR	WL	NR
MW-15S	Annual - Fall	WL	Field, VOCs, Metals
MW-17D	Annual - Fall	WL	Field, VOCs, Metals
MW-17S	Annual - Fall	WL	Field, VOCs, Metals
MW-18D	Annual - Fall	WL	Field, VOCs, Metals
MW-18S	Annual - Fall	WL	Field, VOCs, Metals
MW-1D	NR	WL	NR
MW-3D	Annual - Fall	WL	Field, VOCs, Metals
MW-3S	Annual - Fall	WL	Field, VOCs, Metals
MW-4D	Semiannual - Spring/Fall	Field, VOCs	Field, VOCs, Metals
MW-5D	Semiannual - Spring/Fall	Field, VOCs	Field, VOCs, Metals
MW-5S	Semiannual - Spring/Fall	Field, VOCs	Field, VOCs, Metals
MW-11S	Semiannual - Spring/Fall	Field, VOCs	Field, VOCs, Metals
MW-16S	Semiannual - Spring/Fall	Field, VOCs	Field, VOCs, Metals

Leachate

LS-1	Annual - Fall	NR	Field, VOCs, Metals
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Reporting

Annual	Annual Review Report ⁴
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Notes

(Revised monitoring program is based on: April 3, 2009 On-Site letter *Site Monitoring Evaluation and Proposed Revised Monitoring Program*; NYSDEC May 12, 2009 response; and follow up e-mail.)

NR - Not required unless site conditions warrant (i.e., significant leachate breakout, leachate spill, etc.)

WL - Water level

¹ - Field = Field Parameters (WL, pH, Conductivity, Dissolved Oxygen, Turbidity, Oxidation Reduction Potential)

- VOCs = Volatile Organic Compounds method 8260

- Metals = As, Ba, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, K, Se, Na, Z

- NO₃ = Nitrate Nitrogen and TDS = Total Dissolved Solids

² WAL-19 tested for VOCs prior to filters, between filters and after filters

³ Wet Chemistry - Color, TOC, Total Phenolics, Alkalinity, BOD, Cl, Br, SO₄, TDS, NO₃, NH₃, COD, TKN

⁴ Annual periodic review report will include details of the years monitoring results, comparison of results to standards and historic results, potentiometric maps, details operation and maintenance and IC/EC certification.

⁵ Residential VOCs are tested using method 524.2

⁶ Starting in 2016 Surface Water and Sediment sampling changed from fall to spring due to dry conditions in fall often prohibiting sample collection

⁷ Starting in Fall 2016, WAL-1 residential water supply added back into the monitoring programs as this residence is no longer unoccupied.

Location	Revised Sampling Frequency	Spring Analyte List ¹	Fall Analyte List ¹
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Residential Water Supply

WAL-2	Annual - Fall	NR	Metals
WAL-5	Annual - Fall	NR	VOCs ⁵ , Metals
WAL-19	Semiannual - Spring/Fall	VOCs ^{2,5}	VOCs ^{2,5}
WAL-1 ⁷	Annual - Fall	NR	VOCs ⁵ , Metals

Landfill Gas Monitoring

Vents	Annual - Fall	NR	PID, LEL, O ₂
Leachate Clean-outs	Annual - Fall	NR	PID, LEL, O ₂
Manholes	Annual - Fall	NR	PID, LEL, O ₂
Perimeter	Annual - Fall	NR	PID, LEL, O ₂

Surface Water⁶

SWS-1	Annual - Spring	Field, VOCs, Metals, Wet Chem3	NR
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Sediment⁶

SWS-1	Annual - Spring	Field, VOCs, Metals, Wet Chem3	NR
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Groundwater Cut-Off System

MH-32	Annual - Fall	NR	Field, VOCs, Metals, NO ₃ , TDS
MH-33	Annual - Fall	NR	Field, VOCs, Metals, NO ₃ , TDS

Table 2-2

Approved Analyte List
Wellsville/Andover Landfill
Wellsville, New York

Field Parameters
Specific Conductance
Temperature
Field pH
Oxygen Reduction Potential
Dissolved Oxygen
Turbidity

Inorganic Compounds
Arsenic
Barium
Cadmium
Calcium
Chromium
Copper
Iron
Lead
Manganese
Magnesium
Nickel
Potassium
Selenium
Sodium
Zinc

Groundwater Cut-Off System Wet Chemistry
Nitrate Nitrogen
Total Dissolved Solids

Surface Water and Sediment Wet Chemistry
Alkalinity
Ammonia Nitrogen
Biochemical Oxygen Demand
Bromide
Chemical Oxygen Demand
Chloride
Color (True) (C.U.)
Nitrate Nitrogen
Sulfate
Total Dissolved Solids
Total Kjeldahl Nitrogen
Total Organic Carbon (TOC)
Total Phenolics

Volatile Organic Compounds
1,1,1-Trichloroethane
1,1,2,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dibromoethane
1,2-Dichloroethane
1,2-Dichloropropane
2-Butanone (MEK)
2-Hexanone
4-Methyl-2-pentanone
Acetone
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Dibromochloromethane
Dichloromethane (Methylene chloride)
Ethyl benzene
m&p-Xylene
o-Xylene
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Vinyl chloride

Table 2-3

**2020 Static Groundwater Level Monitoring Data
Wellsville/Andover Landfill
Wellsville, New York**

Well Number	Well Diameter (in)	TOC Elevation (ft amsl)	Protective Casing Elevation (ft amsl)	Ground Elevation (ft amsl)	Well Depth from TOC (ft)	Screened Interval from Ground (ft)	Screened Bedrock or Overburden	4/16/2020 DTW From TOC (ft)	4/16/2020 Static Water Elevation (ft amsl)	10/15/2020 DTW From TOC (ft)	10/15/2020 Static Water Elevation (ft amsl)
MW-1D	2	2193.32	2193.75	2190.6	77.39	64 - 74	Bedrock	68.15	2125.17	68.85	2124.47
MW-3D	2	2095.80	2096.07	2092.4	46.75	30 - 40	Bedrock	16.98	2078.82	20.96	2074.84
MW-3S	2	2095.70	2095.96	2093.1	25.92	9 - 19	Overburden	9.20	2086.50	12.67	2083.03
MW-4D	2	2092.22	2092.39	2090.3	24.63	12 - 22	Bedrock	9.90	2082.32	16.30	2075.92
MW-5D*	2	2067.58	2067.78	2065.4	37.74	26.5 - 36.5	Bedrock	1.93	2065.65	5.11	2062.47
MW-5S	2	2067.30	2067.59	2065.5	21.20	10 - 20	Overburden	1.93	2065.37	4.43	2062.87
MW-7D	2	2012.13	2012.69	2009.6	47.97	35 - 45	Bedrock	35.05	1977.08	37.14	1974.99
MW-11S	2	2003.52	2003.86	2001.6	20.40	8 - 18	Overburden	4.60	1998.92	8.82	1994.70
MW-15S	2	2022.88	2023.05	2020.2	22.10	9 - 19	Overburden	Dry	<2000.78	Dry	<2000.78
MW-15DA	2	2022.67	2023.08	2020.4	56.28	43 - 53	Bedrock	56.11	1966.56	56.10	1966.57
MW-16D	2	1924.73	1925.25	1922.0	53.00	40 - 50	Bedrock	28.70	1896.03	30.78	1893.95
MW-16S	2	1924.98	1925.15	1922.2	18.67	6 - 16	Overburden	7.15	1917.83	14.67	1910.31
MW-17D	4	2037.36	NA	2034.9	65.1	48 - 63 (open hole)	Bedrock	31.66	2005.70	33.10	2004.26
MW-17S	2	2037.59	2037.68	2034.6	26.94	9 - 24	Overburden	8.02	2029.57	9.96	2027.63
MW-18D	4	2066.19	NA	2062.6	28.50	24.5 - 39.5 (open hole)	Bedrock	13.79	2052.40	15.04	2051.15
MW-18S	2	2064.60	2065.72	2063.0	20.49	4 - 19	Overburden	4.16	2060.44	11.59	2053.01
CW-3A	2	2013.75	2013.90	2012.9	27.47	21 - 26	Overburden	9.72	2004.03	8.90	2004.85
CW-3B	2	2013.90	2014.10	2012.9	37.70	33.5 - 38.5	Overburden	20.60	1993.30	20.72	1993.18
CW-4A	2	2006.11	2006.35	2004.7	19.12	13 - 18	Overburden	3.25	2002.86	7.33	1998.78
CW-4B	2	2005.84	2005.93	2004.7	30.16	25.5 - 30.5	Overburden	2.64	2003.20	6.71	1999.13
PZ-1	2	2095.11	2095.27	2092.2	NM	6 - 13	Overburden/ Refuse	14.99	2080.12	14.09	2081.02
PZ-2	2	2095.83	2096.13	2092.9	NM	14 - 24	Overburden/ Refuse	12.65	2083.18	18.83	2077.00
PZ-4	2	2067.13	2067.38	2064.4	NM	12 - 22	Overburden/ Refuse	26.14	2040.99	26.07	2041.06
PZ-5	2	2059.71	2059.71	2056.7	NM	8 - 18	Overburden/ Refuse	13.81	2045.90	12.59	2047.12
PZ-6	2	2042.18	2042.31	2039.2	NM	8 - 18	Overburden/ Refuse	22.71	2019.47	22.64	2019.54

Notes:

Dry - Water not present

NM - Not Measured

NA - Not Applicable

* MW-5D Repaired on 10/29/2019. After repair measured new TOC elevation at 2067.58 ft and Protective Casing at 2067.78 ft

Table 3-1

Frequency of 2019 and 2020 Groundwater Detections
Wellsville/Andover Landfill
Wellsville, New York

Parameter	2019 Detection Frequency	2019 Minimum (mg/L)	2019 Maximum (mg/L)	2020 Detection Frequency	2020 Minimum (mg/L)	2020 Maximum (mg/L)	Class GA Standard (mg/L)	Number of 2019 Exceedences	Number of 2020 Exceedences
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Field Parameters

Depth to Groundwater (ft)	20/20	0.94	31.87	20/20	1.92	33.21			
Dissolved Oxygen	20/20	0.39	8.76	20/20	0.51	8.89			
Field pH (std. units)	20/20	6.09	12.2	20/20	6.15	12.17	8.5	2	2
ORP (mV)	16/20	13.8	215.9	15/20	11.5	203.7			
Specific Conductivity (us/cm)	20/20	150.3	1416	20/20	142	1071			
Temperature (deg. C)	20/20	5.1	18.8	20/20	6	19.8			
Turbidity (NTU)	20/20	0.7	40.2	20/20	0.33	53.5	5	15	7

Inorganic Compounds

Arsenic	0/20			0/15			0.025	0	0
Barium	16/20	0.022	0.117	13/15	0.021	0.11	1	0	0
Cadmium	0/20			0/15			0.005	0	0
Calcium	20/20	2.6	116	15/15	3	89.9			
Chromium	0/20			0/15			0.05	0	0
Copper	0/20			0/15			0.2	0	0
Iron	16/20	0.16	6.51	10/15	0.13	15.5	0.3	11	5
Lead	0/20			0/15			0.025	0	0
Magnesium	20/20	2.9	60.6	15/15	1.5	61			
Manganese	19/20	0.018	2.69	14/15	0.013	2.73	0.3	8	6
Nickel	0/20			0/15			0.1	0	0
Potassium	10/20	2.2	12.5	9/15	2.1	11.8			
Selenium	0/20			0/15			0.01	0	0
Sodium	20/20	3.5	69	15/15	5.5	67.5	20	6	7
Zinc	1/20	0.025	0.025	0/15					

Volatile Organic Compounds

1,1,1-Trichloroethane	0/20			0/20			0.005	0	0
1,1,2,2-Tetrachloroethane	0/20			0/20			0.005	0	0
1,1,2-Trichloroethane	0/20			0/20			0.001	0	0
1,1-Dichloroethane	0/20			0/20			0.005	0	0
1,1-Dichloroethene	0/20			0/20			0.005	0	0
1,2-Dibromoethane	0/20			0/20					
1,2-Dichloroethane	0/20			0/20			0.0006	0	0
1,2-Dichloropropane	0/20			0/20			0.001	0	0
2-Butanone (MEK)	0/20			0/20					
2-Hexanone	0/20			0/20					
4-Methyl-2-pentanone	0/20			0/20					
Acetone	0/20			0/20					
Benzene	0/20			0/20			0.001	0	0
Bromodichloromethane	0/20			0/20					
Bromoform	0/20			0/20					
Bromomethane	0/20			0/20			0.005	0	0
Carbon disulfide	0/20			0/20					
Carbon tetrachloride	0/20			0/20			0.005	0	0
Chlorobenzene	0/20			0/20			0.005	0	0
Chloroethane	0/20			0/20			0.005	0	0
Chloroform	0/20			0/20			0.007	0	0
Chloromethane	0/20			0/20			0.005	0	0
cis-1,2-Dichloroethene	12/20	0.0065	0.59	13/20	0.0066	0.26	0.005	12	13
cis-1,3-Dichloropropene	0/20			0/20					
Dibromochloromethane	0/20			0/20					
Dichloromethane (Methylene chloride)	0/20			0/20			0.005	0	0
Ethyl benzene	0/20			0/20			0.005	0	0
m&p-Xylene	0/20			0/20					
o-Xylene	0/20			0/20					
Styrene	0/20			0/20			0.005	0	0
Tetrachloroethene	0/20			0/20			0.005	0	0
Toluene	0/20			0/20			0.005	0	0
trans-1,2-Dichloroethene	0/20			0/20			0.005	0	0
trans-1,3-Dichloropropene	0/20			0/20					
Trichloroethene	9/20	0.011	2.6	9/20	0.013	2.5	0.005	9	9
Vinyl chloride	6/20	0.0087	0.048	5/20	0.011	0.049	0.002	6	5

Note: Class GA Standard - NYSDEC Class GA Groundwater Standards

Table 3-2

**2020 Groundwater NYSDEC and NYSDOH Standards Exceedances
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)**

Location	Date Sampled	Parameter	Result (mg/L)	Class GA Standard (mg/L)	NYSDOH MCL (mg/L)
CW-3A	20-Oct-20	Field pH (std. units)	12.17	8.5	
CW-3A	20-Oct-20	Sodium	42.6	20	
CW-3A	20-Oct-20	cis-1,2-Dichloroethene	0.0081	0.005	0.005
CW-3A	20-Oct-20	Trichloroethene	0.042	0.005	0.005
CW-3B	21-Oct-20	Sodium	21.4	20	
CW-3B	21-Oct-20	cis-1,2-Dichloroethene	0.11	0.005	0.005
CW-3B	21-Oct-20	Trichloroethene	0.43 D	0.005	0.005
CW-4A	21-Oct-20	Turbidity (NTU)	19.1	5	5
CW-4A	21-Oct-20	Iron	1.1	0.3	0.3
CW-4A	21-Oct-20	Manganese	0.736	0.3	0.3
MW-11S	20-Apr-20	cis-1,2-Dichloroethene	0.18	0.005	0.005
MW-11S	20-Apr-20	Trichloroethene	2.1	0.005	0.005
MW-11S	15-Oct-20	Manganese	0.836	0.3	0.3
MW-11S	15-Oct-20	Sodium	21.1	20	
MW-11S	15-Oct-20	cis-1,2-Dichloroethene	0.26	0.005	0.005
MW-11S	15-Oct-20	Trichloroethene	2.5	0.005	0.005
MW-16S	15-Oct-20	Turbidity (NTU)	6.08	5	5
MW-17D	20-Oct-20	Field pH (std. units)	9.53	8.5	
MW-17D	20-Oct-20	Turbidity (NTU)	40.4	5	5
MW-17D	20-Oct-20	Iron	6.92	0.3	0.3
MW-17D	20-Oct-20	Sodium	34.4	20	
MW-17S	20-Oct-20	Turbidity (NTU)	5.4	5	5
MW-17S	20-Oct-20	Sodium	67.5	20	
MW-17S	20-Oct-20	cis-1,2-Dichloroethene	0.043	0.005	0.005
MW-17S	20-Oct-20	Trichloroethene	0.013	0.005	0.005
MW-18D	20-Oct-20	Turbidity (NTU)	53.5	5	5
MW-18D	20-Oct-20	Iron	15.5	0.3	0.3
MW-18D	20-Oct-20	Manganese	0.805	0.3	0.3
MW-18D	20-Oct-20	Sodium	20.7	20	

Table 3-2

**2020 Groundwater NYSDEC and NYSDOH Standards Exceedances
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)**

Location	Date Sampled	Parameter	Result (mg/L)	Class GA Standard (mg/L)	NYSDOH MCL (mg/L)
MW-18S	19-Oct-20	Iron	2.51	0.3	0.3
MW-18S	19-Oct-20	Manganese	0.719	0.3	0.3
MW-18S	19-Oct-20	cis-1,2-Dichloroethene	0.0066	0.005	0.005
MW-3D	19-Oct-20	cis-1,2-Dichloroethene	0.0076	0.005	0.005
MW-3S	19-Oct-20	Sodium	35.7	20	
MW-4D	20-Apr-20	Turbidity (NTU)	5.88	5	5
MW-4D	20-Apr-20	cis-1,2-Dichloroethene	0.12	0.005	0.005
MW-4D	20-Apr-20	Vinyl chloride	0.049	0.002	0.002
MW-4D	16-Oct-20	Iron	0.63	0.3	0.3
MW-4D	16-Oct-20	Manganese	2.73	0.3	0.3
MW-4D	16-Oct-20	cis-1,2-Dichloroethene	0.18	0.005	0.005
MW-4D	16-Oct-20	Vinyl chloride	0.033	0.002	0.002
MW-5D	22-Apr-20	cis-1,2-Dichloroethene	0.23	0.005	0.005
MW-5D	22-Apr-20	Trichloroethene	0.11	0.005	0.005
MW-5D	22-Apr-20	Vinyl chloride	0.015	0.002	0.002
MW-5D	15-Oct-20	Manganese	0.306	0.3	0.3
MW-5D	15-Oct-20	cis-1,2-Dichloroethene	0.089	0.005	0.005
MW-5D	15-Oct-20	Trichloroethene	0.018	0.005	0.005
MW-5S	22-Apr-20	Turbidity (NTU)	38.5	5	5
MW-5S	22-Apr-20	cis-1,2-Dichloroethene	0.12	0.005	0.005
MW-5S	22-Apr-20	Trichloroethene	0.027	0.005	0.005
MW-5S	22-Apr-20	Vinyl chloride	0.011	0.002	0.002
MW-5S	15-Oct-20	cis-1,2-Dichloroethene	0.2	0.005	0.005
MW-5S	15-Oct-20	Trichloroethene	0.024	0.005	0.005
MW-5S	15-Oct-20	Vinyl chloride	0.013	0.002	0.002

Notes:

Class GA Standard - NYSDEC Class GA Groundwater Standard

NYSDOH MCL - New York State Department of Health Maximum Containment Level

2020 Groundwater Analytical Results
Wellville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	Spring 2020					Fall 2020														
	MW-4D 4/20/2020	MW-5D 4/22/2020	MW-5S 4/22/2020	MW-11S 4/20/2020	MW-16S 4/20/2020	CW-3A 10/20/2020	CW-3B 10/21/2020	CW-4A 10/21/2020	CW-4B 10/21/2020	MW-3D 10/19/2020	MW-3S 10/19/2020	MW-4D 10/16/2020	MW-5D 10/15/2020	MW-5S 10/15/2020	MW-11S 10/15/2020	MW-16S 10/15/2020	MW-17D 10/20/2020	MW-17S 10/20/2020	MW-18D 10/20/2020	MW-18S 10/19/2020
Field Parameters																				
Depth to Groundwater (ft)	9.62	1.92	1.93	4.2	6.73	9.04	20.93	9.34	6.51	21.21	12.87	16.33	5.11	4.43	8.82	14.67	33.21	10.05	15.13	11.8
Dissolved Oxygen	2.79	1.43	2.83	1.52	8.89	6.1	1.16	0.79	3.4	0.51	1.82	1.76	4.54	1.09	1.18	3.65	5.68	0.85	1.27	1.16
Field pH (std. units)	6.53	6.84	6.33	6.99	7.2	12.17	6.84	6.45	6.91	6.72	7.02	6.15	6.65	6.24	6.79	7.12	9.53	7.17	7.47	6.58
ORP (mV)	52.9	75.7	11.5	86.4	138.9	-32.6	146.8	159.8	163.1	203.7	203.6	-38.9	127.8	-8.9	69.1	28.9	65.5	71.8	-188.9	-81.2
Specific Conductivity (us/cm)	283	214.8	142	492	149.5	990	590.7	307	349.9	634	535.3	255	162.3	157.2	520.3	184	290.1	1071	391.1	304.2
Temperature (deg. C)	11.9	7	6	12.7	8.3	10	13.5	18.6	15.9	9.3	9.1	6.6	15.2	18.3	18	19.8	9.1	10.8	12.8	10.9
Turbidity (NTU)	5.88	3.16	38.5	2.65	2.99	4.87	0.33	19.1	0.66	0.63	4.72	2.25	1.01	3.01	2.78	6.08	40.4	5.4	53.5	1.6
Inorganic Compounds																				
Arsenic						0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Barium						0.08	0.038	0.076	0.031	0.11	0.046	0.028	0.024	0.02 U	0.026	0.021	0.02 U	0.041	0.073	0.049
Cadmium						0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Calcium						86.9	67.4	29.4	39	69.4	45.2	24.1	15.5	14	55.3	18	3	89.9	41.6	38.6
Chromium						0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Copper						0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Iron						0.1 U	0.1 U	1.1	0.1 U	0.1 U	0.22	0.63	0.1 U	0.28	0.13	0.24	6.92	0.21	15.5	2.51
Lead						0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Magnesium						1.5	34.2	16.2	16.2	35.9	33.4	19.5	9.5	10.1	33.6	10.1	19.1	61	18.6	18.1
Manganese						0.026	0.029	0.736	0.037	0.022	0.013	2.73	0.306	0.079	0.836	0.01 U	0.097	0.024	0.805	0.719
Nickel						0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Potassium						11.8	2.5	2 U	2 U	2.2	3.1	2.4	2 U	2 U	2 U	2 U	5.2	3.8	2.9	2.1
Selenium						0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sodium						42.6	21.4	14.3	14.9	15.8	35.7	5.7	6.9	6.9	21.1	9.8	34.4	67.5	20.7	5.5
Zinc						0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Volatile Organic Compounds																				
1,1,1-Trichloroethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2,2-Tetrachloroethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
1,1-Dichloroethene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloroethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichloropropane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
2-Butanone (MEK)	0.01 U	0.025 U	0.01 U	0.2 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Hexanone	0.01 U	0.025 U	0.01 U	0.2 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Methyl-2-pentanone	0.01 U	0.025 U	0.01 U	0.2 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	0.01 U	0.025 U	0.01 U	0.2 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromodichloromethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromoform	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Bromomethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Carbon disulfide	0.01 U	0.025 U	0.01 U	0.2 U	0.01 U	0.01 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U	0.01 U
Carbon tetrachloride	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Chlorobenzene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloroethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloroform	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U
Chloromethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U

2020 Groundwater Analytical Results
Wellville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	Spring 2020					Fall 2020															
	MW-4D 4/20/2020	MW-5D 4/22/2020	MW-5S 4/22/2020	MW-11S 4/20/2020	MW-16S 4/20/2020	CW-3A 10/20/2020	CW-3B 10/21/2020	CW-4A 10/21/2020	CW-4B 10/21/2020	MW-3D 10/19/2020	MW-3S 10/19/2020	MW-4D 10/16/2020	MW-5D 10/15/2020	MW-5S 10/15/2020	MW-11S 10/15/2020	MW-16S 10/15/2020	MW-17D 10/20/2020	MW-17S 10/20/2020	MW-18D 10/20/2020	MW-18S 10/19/2020	
Volatile Organic Compounds (con't)																					
cis-1,2-Dichloroethene	0.12	0.23	0.12	0.18	0.005 U	0.0081	0.11	0.005 U	0.005 U	0.0076	0.005 U	0.18	0.089	0.2	0.26	0.005 U	0.005 U	0.043	0.005 U	0.0066	
cis-1,3-Dichloropropene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Dibromochloromethane	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Dichloromethane (Methylene chloride)	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Ethyl benzene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
m&p-Xylene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
o-Xylene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Styrene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Tetrachloroethene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Toluene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
trans-1,2-Dichloroethene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
trans-1,3-Dichloropropene	0.005 U	0.013 U	0.005 U	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Trichloroethene	0.005 U	0.11	0.027	2.1	0.005 U	0.042	0.43 D	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.018	0.024	2.5	0.005 U	0.005 U	0.013	0.005 U	0.005 U	
Vinyl chloride	0.049	0.015	0.011	0.1 U	0.005 U	0.005 U	0.013 U	0.005 U	0.005 U	0.005 U	0.005 U	0.033	0.005 U	0.013	0.1 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	

Notes :

U - Concentration not detected at specified limit

Table 3-4

2020 Field Duplicate Sample Comparisons
Analytical Results
Wellville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	MW16S-0420	DUP1-0420	MW11S-1020	DUP1-1020
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Inorganic Compounds

Arsenic			0.01 U	0.01 U
Barium			0.026	0.026
Cadmium			0.005 U	0.005 U
Calcium			55.3	54.3
Chromium			0.01 U	0.01 U
Copper			0.02 U	0.02 U
Iron			0.13	0.14
Lead			0.05 U	0.05 U
Magnesium			33.6	33
Manganese			0.836	0.823
Nickel			0.04 U	0.04 U
Potassium			2 U	2 U
Selenium			0.01 U	0.01 U
Sodium			21.1	20.8
Zinc			0.02 U	0.02 U

Volatile Organic Compounds

1,1,1-Trichloroethane	0.005 U	0.005 U	0.1 U	0.1 U
1,1,2-Tetrachloroethane	0.005 U	0.005 U	0.1 U	0.1 U
1,1,2-Trichloroethane	0.005 U	0.005 U	0.1 U	0.1 U
1,1-Dichloroethane	0.005 U	0.005 U	0.1 U	0.1 U
1,1-Dichloroethene	0.005 U	0.005 U	0.1 U	0.1 U
1,2-Dibromoethane	0.005 U	0.005 U	0.1 U	0.1 U
1,2-Dichloroethane	0.005 U	0.005 U	0.1 U	0.1 U
1,2-Dichloropropane	0.005 U	0.005 U	0.1 U	0.1 U
2-Butanone (MEK)	0.01 U	0.01 U	0.2 U	0.2 U
2-Hexanone	0.01 U	0.01 U	0.2 U	0.2 U
4-Methyl-2-pentanone	0.01 U	0.01 U	0.2 U	0.2 U
Acetone	0.01 U	0.01 U	0.2 U	0.2 U
Benzene	0.005 U	0.005 U	0.1 U	0.1 U
Bromodichloromethane	0.005 U	0.005 U	0.1 U	0.1 U
Bromoform	0.005 U	0.005 U	0.1 U	0.1 U
Bromomethane	0.005 U	0.005 U	0.1 U	0.1 U
Carbon disulfide	0.01 U	0.01 U	0.2 U	0.2 U
Carbon tetrachloride	0.005 U	0.005 U	0.1 U	0.1 U
Chlorobenzene	0.005 U	0.005 U	0.1 U	0.1 U
Chloroethane	0.005 U	0.005 U	0.1 U	0.1 U
Chloroform	0.005 U	0.005 U	0.1 U	0.1 U
Chloromethane	0.005 U	0.005 U	0.1 U	0.1 U
cis-1,2-Dichloroethene	0.005 U	0.005 U	0.26	0.25
cis-1,3-Dichloropropene	0.005 U	0.005 U	0.1 U	0.1 U
Dibromochloromethane	0.005 U	0.005 U	0.1 U	0.1 U
Dichloromethane (Methylene chloride)	0.005 U	0.005 U	0.1 U	0.1 U
Ethyl benzene	0.005 U	0.005 U	0.1 U	0.1 U
m&p-Xylene	0.005 U	0.005 U	0.1 U	0.1 U

Table 3-4

**2020 Field Duplicate Sample Comparisons
Analytical Results
Wellville/Andover Landfill
Wellsville, New York
(mg/L except where noted)**

Parameter	MW16S-0420	DUP1-0420	MW11S-1020	DUP1-1020
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Volatile Organic Compounds (con't)

o-Xylene	0.005 U	0.005 U	0.1 U	0.1 U
Styrene	0.005 U	0.005 U	0.1 U	0.1 U
Tetrachloroethene	0.005 U	0.005 U	0.1 U	0.1 U
Toluene	0.005 U	0.005 U	0.1 U	0.1 U
trans-1,2-Dichloroethene	0.005 U	0.005 U	0.1 U	0.1 U
trans-1,3-Dichloropropene	0.005 U	0.005 U	0.1 U	0.1 U
Trichloroethene	0.005 U	0.005 U	2.5	2.3
Vinyl chloride	0.005 U	0.005 U	0.1 U	0.1 U

Notes:

U - Concentration not detected at specified detection limit.

Table 4-1

**Current and Historic Surface Water Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)**

Parameter	SWS-1 4/17/2018	SWS-1 4/10/2019	SWS-1 4/22/2020	Class C Standard
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Field Parameters

Dissolved Oxygen		9.65	12.33	Not < 5
Field pH (std. units)	7.66	7.79	7.95	6.5 - 8.5
ORP (mV)	154.2	30.5	75.4	
Specific Conductivity (us/cm)	138.7	339.9	311.5	
Temperature (deg. C)	3.4	8.7	7.2	
Turbidity (NTU)	13.5	2.91	2.3	

Inorganic Compounds

Arsenic	0.01 U	0.01 U	0.01 U	
Barium	0.02 U	0.025	0.022	
Cadmium	0.005 U	0.005 U	0.005 U	
Calcium	13.9	37.1	35.8	
Chromium	0.01 U	0.01 U	0.01 U	
Copper	0.02 U	0.02 U	0.02 U	
Iron	0.78	0.23	0.13	
Lead	0.05 U	0.05 U	0.05 U	0.008
Magnesium	5.3	13.8	13	
Manganese	0.012	0.06	0.04	
Nickel	0.04 U	0.04 U	0.04 U	0.0082
Potassium	2.2	2.6	2 U	
Selenium	0.01 U	0.01 U	0.01 U	
Sodium	8.9	19.3	16	
Zinc	0.036	0.035	0.02 U	

Volatile Organic Compounds

1,1,1-Trichloroethane	0.005 U	0.005 U	0.005 U	
1,1,2,2-Tetrachloroethane	0.005 U	0.005 U	0.005 U	
1,1,2-Trichloroethane	0.005 U	0.005 U	0.005 U	
1,1-Dichloroethane	0.005 U	0.005 U	0.005 U	
1,1-Dichloroethene	0.005 U	0.005 U	0.005 U	
1,2-Dibromoethane	0.005 U	0.005 U	0.005 U	
1,2-Dichloroethane	0.005 U	0.005 U	0.005 U	
1,2-Dichloropropane	0.005 U	0.005 U	0.005 U	
2-Butanone (MEK)	0.01 U	0.01 U	0.01 U	
2-Hexanone	0.01 U	0.01 U	0.01 U	
4-Methyl-2-pentanone	0.01 U	0.01 U	0.01 U	
Acetone	0.01 U	0.01 U	0.01 U	
Benzene	0.005 U	0.005 U	0.005 U	0.01
Bromodichloromethane	0.005 U	0.005 U	0.005 U	
Bromoform	0.005 U	0.005 U	0.005 U	

Table 4-1

**Current and Historic Surface Water Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)**

Parameter	SWS-1 4/17/2018	SWS-1 4/10/2019	SWS-1 4/22/2020	Class C Standard
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Volatile Organic Compounds (con't)

Bromomethane	0.005 U	0.005 U	0.005 U	
Carbon disulfide	0.01 U	0.01 U	0.01 U	
Carbon tetrachloride	0.005 U	0.005 U	0.005 U	
Chlorobenzene	0.005 U	0.005 U	0.005 U	0.005
Chloroethane	0.005 U	0.005 U	0.005 U	
Chloroform	0.005 U	0.005 U	0.005 U	
Chloromethane	0.005 U	0.005 U	0.005 U	
cis-1,2-Dichloroethene	0.005 U	0.005 U	0.005 U	
cis-1,3-Dichloropropene	0.005 U	0.005 U	0.005 U	
Dibromochloromethane	0.005 U	0.005 U	0.005 U	
Dichloromethane (Methylene chloride)	0.005 U	0.005 U	0.005 U	0.2
Ethyl benzene	0.005 U	0.005 U	0.005 U	
m&p-Xylene	0.005 U	0.005 U	0.005 U	
o-Xylene	0.005 U	0.005 U	0.005 U	
Styrene	0.005 U	0.005 U	0.005 U	
Tetrachloroethene	0.005 U	0.005 U	0.005 U	
Toluene	0.005 U	0.005 U	0.005 U	6
trans-1,2-Dichloroethene	0.005 U	0.005 U	0.005 U	
trans-1,3-Dichloropropene	0.005 U	0.005 U	0.005 U	
Trichloroethene	0.005 U	0.005 U	0.005 U	0.04
Vinyl chloride	0.005 U	0.005 U	0.005 U	

General Chemistry

Alkalinity	56	127	131	
Ammonia Nitrogen	0.05 U	0.05 U	0.05 U	2
Biochemical Oxygen Demand	2 U	2 U	2 U	
Bromide	1 U	1 U	1 U	
Chemical Oxygen Demand	23.9	15.6	17.5	
Chloride	12.9	39.1	29	
Color (True) (C.U.)	105	34 *	35	
Nitrate Nitrogen	1 U	1 U	1 U	
pH of Color Analysis	7.64 *	8.07 *	7.57 *	
Sulfate	2 U	2 U	2 U	
Total Dissolved Solids	93	207	197	500
Total Kjeldahl Nitrogen	0.46	0.43	0.35	
Total Organic Carbon (TOC)		6.2	5.7	
Total Phenolics		0.005 U	0.005 U	

Notes:

Class C Standard - NYSDEC Class C Surface Water Standard

Concentrations are within Class C Standards

U - Concentration not detected at specified detection limit

* - Analysis was performed out of hold time

Table 5-1

Frequency of 2019 and 2020 Leachate Sump and Manhole Detections
Wellsville/Andover Landfill
Wellsville, New York

Parameter	2019 Detection Frequency	2019 Minimum (mg/L)	2019 Maximum (mg/L)	2020 Detection Frequency	2020 Minimum (mg/L)	2020 Maximum (mg/L)
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Field Parameters

Field pH (std. units)	3/3	6.48	6.86	3/3	7.25	7.55
ORP (mV)	2/3	74.7	84.2	3/3	39.2	122.8
Specific Conductivity (us/cm)	3/3	323.4	517	3/3	549	901
Temperature (deg. C)	3/3	13	13.5	3/3	11.2	14.8
Turbidity (NTU)	3/3	10.3	14.1	3/3	24.7	49.5

Inorganic Compounds

Arsenic	0/3			0/3		
Barium	3/3	0.04	0.08	3/3	0.048	0.117
Cadmium	0/3			0/3		
Calcium	3/3	48.4	89.4	3/3	96.9	122
Chromium	0/3			0/3		
Copper	0/3			0/3		
Iron	3/3	0.98	9.13	3/3	2.6	10.9
Lead	0/3			0/3		
Magnesium	3/3	14.1	20.4	3/3	11.5	33.8
Manganese	3/3	0.486	1.61	3/3	0.368	2.8
Nickel	0/3			0/3		
Potassium	2/3	2.1	2.6	2/3	4.7	11.4
Selenium	0/3			0/3		
Sodium	3/3	2.3	9.4	3/3	8.4	27.6
Zinc	0/3			0/3		

Volatile Organic Compounds

1,1,1-Trichloroethane	0/3			0/3		
1,1,2,2-Tetrachloroethane	0/3			0/3		
1,1,2-Trichloroethane	0/3			0/3		
1,1-Dichloroethane	0/3			0/3		
1,1-Dichloroethene	0/3			0/3		
1,2-Dibromoethane	0/3			0/3		
1,2-Dichloroethane	0/3			0/3		
1,2-Dichloropropane	0/3			0/3		
2-Butanone (MEK)	0/3			0/3		
2-Hexanone	0/3			0/3		
4-Methyl-2-pentanone	0/3			0/3		
Acetone	0/3			0/3		
Benzene	0/3			0/3		
Bromodichloromethane	0/3			0/3		
Bromoform	0/3			0/3		
Bromomethane	0/3			0/3		
Carbon disulfide	0/3			0/3		

Table 5-1

Frequency of 2019 and 2020 Leachate Sump and Manhole Detections
Wellsville/Andover Landfill
Wellsville, New York

Parameter	2019 Detection Frequency	2019 Minimum (mg/L)	2019 Maximum (mg/L)	2020 Detection Frequency	2020 Minimum (mg/L)	2020 Maximum (mg/L)
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Volatile Organic Compounds (con't)

Carbon tetrachloride	0/3			0/3		
Chlorobenzene	0/3			0/3		
Chloroethane	0/3			0/3		
Chloroform	0/3			0/3		
Chloromethane	0/3			0/3		
cis-1,2-Dichloroethene	3/3	0.0086	3.1	1/3	1.5	1.5
cis-1,3-Dichloropropene	0/3			0/3		
Dibromochloromethane	0/3			0/3		
Dichloromethane (Methylene chloride)	0/3			1/3	0.21	0.21
Ethyl benzene	0/3			0/3		
m&p-Xylene	0/3			0/3		
o-Xylene	0/3			0/3		
Styrene	0/3			0/3		
Tetrachloroethene	0/3			0/3		
Toluene	0/3			0/3		
trans-1,2-Dichloroethene	0/3			0/3		
trans-1,3-Dichloropropene	0/3			0/3		
Trichloroethene	0/3			1/3	0.57	0.57
Vinyl chloride	1/3	0.091	0.091	0/3		

General Chemistry

Nitrate Nitrogen	0/2			0/2		
Total Dissolved Solids	2/2	215	329	2/2	353	372

Table 5-2

**2020 Leachate Sump and Manhole
 NYSDEC and NYSDOH Standards Exceedances
 Wellsville/Andover Landfill
 Wellsville, New York
 (mg/L except where noted)**

Location	Date Sampled	Parameter	Result (mg/L)	Class GA Standard (mg/L)	NYSDOH MCL (mg/L)
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LS-1	21-Oct-20	Turbidity (NTU)	49.5	5	5
LS-1	21-Oct-20	Sodium	27.6	20	
LS-1	21-Oct-20	Manganese	2.8	0.3	0.3
LS-1	21-Oct-20	Iron	10.9	0.3	0.3

MH-32	16-Oct-20	Turbidity (NTU)	24.7	5	5
MH-32	16-Oct-20	Manganese	0.438	0.3	0.3
MH-32	16-Oct-20	Iron	2.6	0.3	0.3
MH-32	16-Oct-20	Trichloroethene	0.57	0.005	0.005
MH-32	16-Oct-20	Dichloromethane (Methylene chloride)	0.21	0.005	0.05
MH-32	16-Oct-20	cis-1,2-Dichloroethene	1.5	0.005	0.005

MH-33	16-Oct-20	Turbidity (NTU)	26.8	5	5
MH-33	16-Oct-20	Manganese	0.368	0.3	0.3
MH-33	16-Oct-20	Iron	2.79	0.3	0.3

Notes:

Class GA Standard - NYSDEC Class GA Groundwater Standard

NYSDOH MCL - New York State Department of Health Maximum Containment Level

Table 5-3

Current and Historic Leachate Sump Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	LS-1 10/29/2018	LS-1 10/23/2019	LS-1 10/21/2020	Class GA Standard
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Field Parameters

Field pH (std. units)	6.29	6.86	7.55	6-5 - 8.5
ORP (mV)	115.9	84.2	122.8	
Specific Conductivity (us/cm)	318.5	510.2	901	
Temperature (deg. C)	11	13.3	14.8	
Turbidity (NTU)	21.3	14.1	49.5	5

Inorganic Compounds

Arsenic	0.01 U	0.01 U	0.01 U	0.025
Barium	0.051	0.072	0.117	1
Cadmium	0.005 U	0.005 U	0.005 U	0.005
Calcium	50.4	85.3	122	
Chromium	0.01 U	0.01 U	0.01 U	0.05
Copper	0.02 U	0.02 U	0.02 U	0.2
Iron	3.17	2.47	10.9	0.3
Lead	0.05 U	0.05 U	0.05 U	0.025
Magnesium	12.7	20.4	33.8	
Manganese	1.2	1.18	2.8	0.3
Nickel	0.04 U	0.04 U	0.04 U	0.1
Potassium	2.8	2.6	4.7	
Selenium	0.01 U	0.01 U	0.01 U	0.01
Sodium	3.7	9.4	27.6	20
Zinc	0.045	0.02 U	0.02 U	

Volatile Organic Compounds

1,1,1-Trichloroethane	0.005 U	0.005 U	0.005 U	0.005
1,1,2,2-Tetrachloroethane	0.005 U	0.005 U	0.005 U	0.005
1,1,2-Trichloroethane	0.005 U	0.005 U	0.005 U	0.001
1,1-Dichloroethane	0.005 U	0.005 U	0.005 U	0.005
1,1-Dichloroethene	0.005 U	0.005 U	0.005 U	0.005
1,2-Dibromoethane	0.005 U	0.005 U	0.005 U	0.005
1,2-Dichloroethane	0.005 U	0.005 U	0.005 U	0.0006
1,2-Dichloropropane	0.005 U	0.005 U	0.005 U	0.001
2-Butanone (MEK)	0.01 U	0.01 U	0.01 U	0.005
2-Hexanone	0.01 U	0.01 U	0.01 U	0.005
4-Methyl-2-pentanone	0.01 U	0.01 U	0.01 U	0.005
Acetone	0.01 U	0.01 U	0.01 U	0.005
Benzene	0.005 U	0.005 U	0.005 U	0.001
Bromodichloromethane	0.005 U	0.005 U	0.005 U	0.005
Bromoform	0.005 U	0.005 U	0.005 U	0.005
Bromomethane	0.005 U	0.005 U	0.005 U	0.005
Carbon disulfide	0.01 U	0.01 U	0.01 U	0.005

Volatile Organic Compounds (con't)

Table 5-3

Current and Historic Leachate Sump Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	LS-1 10/29/2018	LS-1 10/23/2019	LS-1 10/21/2020	Class GA Standard
Carbon tetrachloride	0.005 U	0.005 U	0.005 U	0.005
Chlorobenzene	0.005 U	0.005 U	0.005 U	0.005
Chloroethane	0.005 U	0.005 U	0.005 U	0.005
Chloroform	0.005 U	0.005 U	0.005 U	0.007
Chloromethane	0.005 U	0.005 U	0.005 U	0.005
cis-1,2-Dichloroethene	0.29 D	0.072	0.005 U	0.005
cis-1,3-Dichloropropene	0.005 U	0.005 U	0.005 U	0.0004
Dibromochloromethane	0.005 U	0.005 U	0.005 U	0.005
Dichloromethane (Methylene chloride)	0.012	0.005 U	0.005 U	0.005
Ethyl benzene	0.005 U	0.005 U	0.005 U	0.005
m&p-Xylene	0.005 U	0.005 U	0.005 U	0.005
o-Xylene	0.005 U	0.005 U	0.005 U	0.005
Styrene	0.005 U	0.005 U	0.005 U	0.005
Tetrachloroethene	0.005 U	0.005 U	0.005 U	0.005
Toluene	0.005 U	0.005 U	0.005 U	0.005
trans-1,2-Dichloroethene	0.005 U	0.005 U	0.005 U	0.005
trans-1,3-Dichloropropene	0.005 U	0.005 U	0.005 U	0.0004
Trichloroethene	0.0057	0.005 U	0.005 U	0.005
Vinyl chloride	0.013	0.005 U	0.005 U	0.002

Notes:**Class GA Standard - NYSDEC Class GA Groundwater Standard**

Concentrations in **bold** exceed Class GA Standards.

U - Concentration not detected at specified detection limit

D - Concentration is a result of dilution, see lab report for details

Table 5-4

Current and Historic Manhole Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	MH-32 10/29/2018	MH-32 10/28/2019	MH-32 10/16/2020	MH-33 10/29/2018	MH-33 10/28/2019	MH-33 10/16/2020	Class GA Standard
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Field Parameters

Field pH (std. units)	6.47	6.48	7.25	6.67	6.6	7.45	6.5 - 8.5
ORP (mV)	-43.6	-51.9	108.9	50.6	74.7	39.2	
Specific Conductivity (us/cm)	528.7	517	593.3	233.8	323.4	549	
Temperature (deg. C)	9.5	13	11.8	8.9	13.5	11.2	
Turbidity (NTU)	19.4	10.9	24.7	12.8	10.3	26.8	5

Inorganic Compounds

Arsenic	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025
Barium	0.078	0.08	0.081	0.037	0.04	0.048	1
Cadmium	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005
Calcium	101	89.4	96.9	38	48.4	99	
Chromium	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05
Copper	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.2
Iron	9.31	9.13	2.6	1.66	0.98	2.79	0.3
Lead	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.025
Magnesium	14.6	14.3	11.5	10.6	14.1	20.8	
Manganese	2.2	1.61	0.438	0.518	0.486	0.368	0.3
Nickel	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.1
Potassium	2.4	2.1	11.4	2.3	2 U	2 U	
Selenium	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01
Sodium	2.5	3.1	8.4	1.8	2.3	9.5	20
Zinc	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	

Volatile Organic Compounds

1,1,1-Trichloroethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
1,1,2,2-Tetrachloroethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
1,1,2-Trichloroethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.001
1,1-Dichloroethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
1,1-Dichloroethene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
1,2-Dibromoethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
1,2-Dichloroethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.0006
1,2-Dichloropropane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.001
2-Butanone (MEK)	0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005
2-Hexanone	0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005
4-Methyl-2-pentanone	0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005
Acetone	0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005
Benzene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.001
Bromodichloromethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Bromoform	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Bromomethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Carbon disulfide	0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U	0.005

Table 5-4

Current and Historic Manhole Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	MH-32 10/29/2018	MH-32 10/28/2019	MH-32 10/16/2020	MH-33 10/29/2018	MH-33 10/28/2019	MH-33 10/16/2020	Class GA Standard
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Volatile Organic Compounds (con't)

Carbon tetrachloride	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Chlorobenzene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Chloroethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Chloroform	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.007
Chloromethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
cis-1,2-Dichloroethene	1.4 D	3.1 D	1.5	0.015	0.0086	0.005 U	0.005
cis-1,3-Dichloropropene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.0004
Dibromochloromethane	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Dichloromethane (Methylene chloride)	0.005 U	0.05 U	0.21	0.005 U	0.005 U	0.005 U	0.005
Ethyl benzene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
m&p-Xylene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
o-Xylene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Styrene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Tetrachloroethene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
Toluene	0.0081	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
trans-1,2-Dichloroethene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.005
trans-1,3-Dichloropropene	0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U	0.0004
Trichloroethene	0.005 U	0.05 U	0.57	0.005 U	0.005 U	0.005 U	0.005
Vinyl chloride	0.11	0.091	0.05 U	0.005 U	0.005 U	0.005 U	0.002

General Chemistry

Nitrate Nitrogen	1 U	1 U	1 U	1 U	1 U	1 U	
Total Dissolved Solids	336	329	353	177	215	372	500

Notes:

Class GA Standard - NYSDEC Class GA Groundwater Standard

Concentrations in **bold** exceed Class GA Standards.

U - Concentration not detected at specified detection limit

Table 6-1

Fall 2020 Air Monitoring Results
Wellsville/Andover Landfill
Wellsville, New York

Monitoring Point	Date	PID (ppm)	O ₂ (%)	LEL (%)
V-1	10/14/2020	0.0	20.9	0
V-2	10/14/2020	0.1	20.9	18
V-3	10/14/2020	0.0	20.9	0
V-4	10/14/2020	0.5	20.9	57
V-5	10/14/2020	0.0	20.9	12
V-6	10/14/2020	0.7	20.9	0
V-7	10/14/2020	0.0	20.9	0
V-8	10/14/2020	0.3	20.9	10
V-9	10/14/2020	11.6	19.2	<100
V-10	10/14/2020	0.0	20.9	0
V-11	10/14/2020	2.2	19.9	<100
V-12	10/14/2020	0.0	20.9	0
V-13	10/14/2020	0.0	20.9	0
V-14	10/14/2020	0.3	20.9	38
V-15	10/14/2020	0.0	20.9	0
V-16	10/14/2020	0.0	20.9	0
V-17	10/14/2020	0.3	20.9	40
V-18	10/14/2020	1.7	20.9	50
V-19	10/14/2020	0.0	20.9	0
V-20	10/14/2020	0.0	20.9	0
V-21	10/14/2020	0.1	20.9	3
L-16	10/14/2020	0.3	20.9	14
L-17	10/14/2020	0.0	20.9	0
L-19	10/14/2020	2.0	7.6	<100
L-21	10/14/2020	0.0	20.9	0
L-23	10/14/2020	3.6	18.6	<100
L-25	10/14/2020	3.3	3.9	<100
L-27	10/14/2020	4.1	10.2	<100
L-29	10/14/2020	36.8	14.8	<100
L-31	10/14/2020	33.3	18.0	<100
MH-6	10/14/2020	0.8	14.1	<100
MH-7	10/14/2020	0.0	20.9	0
MH-8	10/14/2020	3.6	16.2	<100
MH-9	10/14/2020	0.2	20.9	2
MH-10	10/14/2020	10.1	18.4	69
MH-11	10/14/2020	0.3	20.9	0
MH-12	10/14/2020	11.6	20.9	0
MH-13	10/14/2020	20.5	20.2	24
MH-32	10/14/2020	0.0	20.9	0
MH-33	10/14/2020	0.0	20.9	0
Upwind	10/14/2020	0.0	20.9	0
Downwind-1	10/14/2020	0.0	20.9	0
Downwind-2	10/14/2020	0.0	20.9	0
Downwind-3	10/14/2020	0.0	20.9	0

Notes:

Meters: QRAE3 4 Gas / RAE 3000 PID

Background Readings:

O₂=20.9 LEL = 0 PID = 0.0

Weather: 63° F, Sunny, 0-10 mph winds from SW

Monitored By: K. Dye

Table 7-1

**Spring and Fall 2020
Residential Water Supply Contact and Sampling Summary
Wellsville/Andover Landfill**

Name	Mailing Address	Physical Address of Sampling Location	Phone No.	Location ID	Water Source	Telephone Contact		Sampling Approved	Sampling Location	Sample Collection	
						Date	Time			Date	Time
Mr. John Carl	3987 Snyder Rd Wellsville, NY 14895	3987 Snyder Rd Wellsville, NY 14895	585-610-8581	WAL-1	Well ³	10/20/2020	1430	Yes	Kitchen Sink	10/28/2020	1010
Mr. Phil Rosini	72 Havenshire Rd Rochester, NY 14625	3899 Snyder Road Wellsville, NY	(C) 585-754-6328 (H) 585-671-3831	WAL-2	Well ^{1,2} 150 ft deep	10/13/2020	1110	Yes	Kitchen Sink	11/14/2020	1310
Adam Fantrazzo	4011 Duffy Hollow Rd Wellsville, NY 14895	4011 Duffy Hollow Rd Wellsville, NY 14895	585-296-0007	WAL-5	Spring ³	10/13/2020	1115	No Contact ⁴	Kitchen Sink	NA	NA
Mr. Daniel & Mrs. Barbara LaDue	3914 Snyder Rd. Wellsville, NY 14895	3914 Snyder Rd. Wellsville, NY 14895	(H) 585-593-7200 (C) 585-593-8524	WAL-19	Spring ²	6/1/2020	845	Yes	Post - Kitchen Sink	6/1/2020	1115
									Inter - Between Filters		1125
									Pre - Before Filters		1130
						10/20/2020	1425	Yes	Post - Kitchen Sink	10/21/2020	910
									Inter - Between Filters		935
								Pre - Before Filters		945	

Notes:

- ¹ Water source information from *Remedial Investigation Report, Wellsville-Andover Landfill Site*, November 1993, prepared by Ecology & Environment
 - ² Water source information from *Phase II State Superfund Investigation Report, Wellsville-Andover Landfill Site*, December 1986, prepared by Malcolm Pirnie
 - ³ Water Source from land owner
 - ⁴ Presumed owner did not return phone calls, property appears vacant
- NA - Not applicable

Frequency of 2019 and 2020 Residential Water Supply Detections
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	2019 Detection Frequency	2019 Minimum (mg/L)	2019 Maximum (mg/L)	2020 Detection Frequency	2020 Minimum (mg/L)	2020 Maximum (mg/L)	NYSDOH MCL (mg/L)	2019 DOH Exceedences	2020 DOH Exceedences	Class GA Standard	2019 Class GA Exceedences	2020 Class GA Exceedences
Inorganic Compounds												
Arsenic	0/2			0/2			0.05	0	0	0.025	0	0
Barium	2/2	0.032	0.075	2/2	0.034	0.071	1	0	0	1	0	0
Cadmium	0/2			0/2			0.01	0	0	0.005	0	0
Calcium	2/2	40.9	45.2	2/2	38.4	48.3						
Chromium	0/2			0/2			0.05	0	0	0.05	0	0
Copper	0/2			0/2			1	0	0	0.2	0	0
Iron	1/2	0.69	0.69	1/2	0.83	0.83	0.3	1	1	0.3	1	1
Lead	0/2			0/2			0.05	0	0	0.025	0	0
Magnesium	2/2	14.2	15.6	2/2	13	16.2						
Manganese	2/2	0.108	0.747	2/2	0.11	0.873	0.3	1	1	0.3	1	1
Nickel	0/2			0/2						0.1	0	0
Potassium	0/2			0/2								
Selenium	0/2			0/2			0.01	0	0	0.01	0	0
Sodium	2/2	9	47.5	2/2	8	42.7				20	1	1
Zinc	1/2	0.04	0.04	0/2								
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	0/7			0/7			0.005	0	0	0.005	0	0
1,1,1-Trichloroethane	0/4			0/7			0.005	0	0	0.005	0	0
1,1,2,2-Tetrachloroethane	0/7			0/7			0.005	0	0	0.005	0	0
1,1,2-Trichloroethane	0/7			0/7			0.005	0	0	0.001	0	0
1,1-Dichloroethane	0/7			0/7			0.005	0	0	0.005	0	0
1,1-Dichloroethene	0/7			0/7			0.005	0	0	0.005	0	0
1,1-Dichloropropene	0/4			0/7								
1,2,3-Trichloropropane	0/7			0/7						0.00004	0	0
1,2,4-Trimethylbenzene	0/7			0/7			0.005	0	0	0.005	0	0
1,2-Dibromo-3-chloropropane	0/3			0/1						0.00004	0	0
1,2-Dichlorobenzene	0/7			0/7			0.005	0	0	0.003	0	0
1,2-Dichloroethane	0/7			0/7						0.0006	0	0
1,2-Dichloropropane	0/7			0/7						0.001	0	0
1,3,5-Trimethylbenzene	0/7			0/7			0.005	0	0	0.005	0	0
1,3-Dichlorobenzene	0/7			0/7			0.005	0	0	0.003	0	0
1,3-Dichloropropane	0/7			0/7			0.005	0	0	0.005	0	0
1,4-Dichlorobenzene	0/7			0/7			0.005	0	0	0.003	0	0
2,2-Dichloropropane	0/7			0/7			0.005	0	0	0.005	0	0
Benzene	0/7			0/7			0.005	0	0	0.001	0	0
Bromobenzene	0/7			0/7			0.005	0	0	0.005	0	0
Bromochloromethane	0/7			0/7			0.005	0	0	0.005	0	0
Bromomethane	0/7			0/7			0.005	0	0	0.005	0	0
Carbon tetrachloride	0/7			0/7			0.005	0	0	0.005	0	0
Chlorobenzene	0/7			0/7			0.005	0	0	0.005	0	0
Chloroethane	0/7			0/7			0.005	0	0	0.005	0	0
Chloromethane	0/7			0/7						0.005	0	0

Frequency of 2019 and 2020 Residential Water Supply Detections
Wellsville/Andover Landfill
Wellsville, New York
(mg/L except where noted)

Parameter	2019 Detection Frequency	2019 Minimum (mg/L)	2019 Maximum (mg/L)	2020 Detection Frequency	2020 Minimum (mg/L)	2020 Maximum (mg/L)	NYSDOH MCL (mg/L)	2019 DOH Exceedences	2020 DOH Exceedences	Class GA Standard	2019 Class GA Exceedences	2020 Class GA Exceedences
Volatile Organic Compounds (con't)												
cis-1,2-Dichloroethene	2/7	0.0022	0.0024	2/7	0.0023	0.0023				0.005	0	0
cis-1,3-Dichloropropene	0/7			0/7								
Dibromomethane	0/7			0/7			0.005	0	0	0.005	0	0
Dichlorodifluoromethane	0/7			0/7			0.005	0	0	0.005	0	0
Dichloromethane (Methylene chloride)	0/7			0/7			0.005	0	0	0.005	0	0
Ethyl benzene	0/7			0/7			0.005	0	0	0.005	0	0
Isopropylbenzene	0/7			0/7			0.005	0	0	0.005	0	0
m&p-Xylene	0/7			0/7								
Methyl t-Butyl Ether	0/1			0/6								
n-Butylbenzene	0/7			0/7			0.005	0	0	0.005	0	0
n-Propylbenzene	0/7			0/7			0.005	0	0	0.005	0	0
o-Chlorotoluene	0/4			0/7								
o-Xylene	0/7			0/7								
p-Chlorotoluene	0/4			0/7								
p-Isopropyltoluene	0/7			0/7						0.005	0	0
sec-Butylbenzene	0/7			0/7						0.005	0	0
Styrene	0/7			0/7			0.005	0	0	0.005	0	0
tert-Butylbenzene	0/7			0/7						0.005	0	0
Tetrachloroethene	0/7			0/7			0.005	0	0	0.005	0	0
Toluene	0/7			0/7			0.005	0	0	0.005	0	0
trans-1,2-Dichloroethene	0/7			0/7						0.005	0	0
trans-1,3-Dichloropropene	0/7			0/7								
Trichloroethene	2/7	0.0024	0.0033	2/7	0.0029	0.0033	0.005	0	0	0.005	0	0
Trichlorofluoromethane	0/7			0/7			0.005	0	0	0.005	0	0
Vinyl chloride	0/4			0/6			0.005	0	0	0.002	0	0
1,2,3-Trichlorobenzene	0/7			0/7			0.005	0	0	0.005	0	0
1,2,4-Trichlorobenzene	0/7			0/7			0.005	0	0	0.005	0	0
Hexachlorobutadiene	0/7			0/7						0.0005	0	0

Notes:

NYSDOH MCL - NYSDOH Maximum Containment Level

Class GA Standard - NYSDEC Class GA Groundwater Standard

Table 7-3

2020 Residential Water Supply Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L)

Parameter	WAL1 10/28/2020	WAL2 11/14/2020	WAL19 Pre 6/1/2020	WAL19 Inter 6/1/2020	WAL19 Post 6/1/2020	WAL19 Pre 10/21/2020	WAL19 Inter 10/21/2020	WAL19 Post 10/21/2020
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Inorganic Compounds

Arsenic	0.01 U	0.01 U						
Barium	0.071	0.034						
Cadmium	0.005 U	0.005 U						
Calcium	38.4	48.3						
Chromium	0.01 U	0.01 U						
Copper	0.02 U	0.02 U						
Iron	0.1 U	0.83						
Lead	0.05 U	0.05 U						
Magnesium	13	16.2						
Manganese	0.11	0.873						
Nickel	0.04 U	0.04 U						
Potassium	2 U	2 U						
Selenium	0.01 U	0.01 U						
Sodium	8	42.7						
Zinc	0.02 U	0.02 U						

Volatile Organic Compounds

1,1,1,2-Tetrachloroethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1,1-Trichloroethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1,2,2-Tetrachloroethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1,2-Trichloroethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloroethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloroethene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloropropene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,2,3-Trichloropropane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,2,4-Trimethylbenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,2-Dibromo-3-chloropropane	0.0005 U							
1,2-Dichlorobenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,2-Dichloroethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,2-Dichloropropane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,3,5-Trimethylbenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,3-Dichlorobenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,3-Dichloropropane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,4-Dichlorobenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
2,2-Dichloropropane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Benzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromochloromethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromomethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Carbon tetrachloride	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Chlorobenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Chloroethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Chloromethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
cis-1,2-Dichloroethene	0.0005 U		0.0023	0.0005 U	0.0005 U	0.0023	0.0005 U	0.0005 U
cis-1,3-Dichloropropene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Dibromomethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Dichlorodifluoromethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Dichloromethane (Methylene chloride)	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Ethyl benzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Isopropylbenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
m&p-Xylene	0.00025 U		0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U
Methyl t-Butyl Ether			0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
n-Butylbenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U

Table 7-3

2020 Residential Water Supply Analytical Results
Wellsville/Andover Landfill
Wellsville, New York
(mg/L)

Parameter	WAL1 10/28/2020	WAL2 11/14/2020	WAL19 Pre 6/1/2020	WAL19 Inter 6/1/2020	WAL19 Post 6/1/2020	WAL19 Pre 10/21/2020	WAL19 Inter 10/21/2020	WAL19 Post 10/21/2020
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Volatile Organic Compounds (con't)

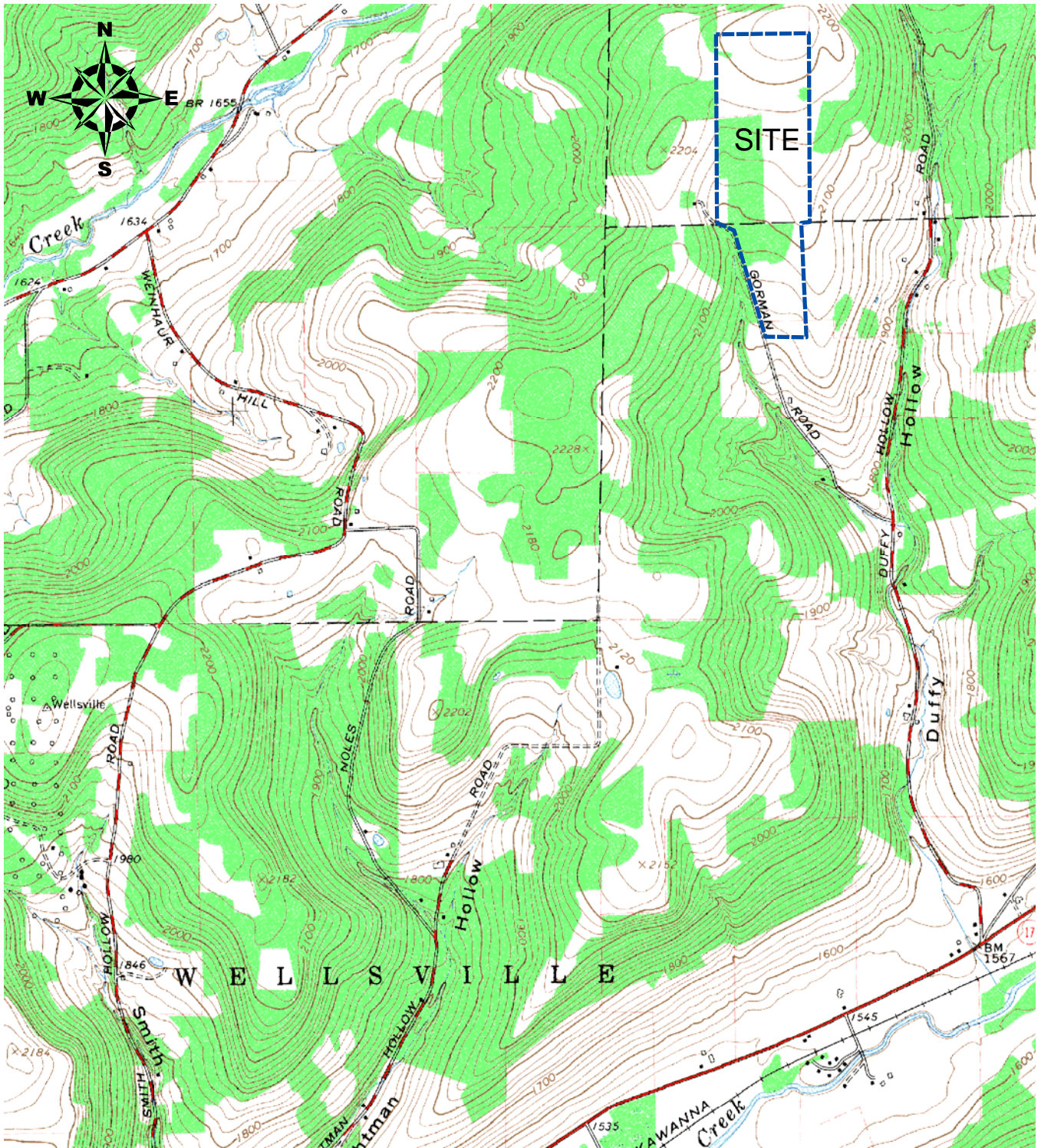
n-Propylbenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
o-Chlorotoluene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
o-Xylene	0.00025 U		0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.00025 U
p-Chlorotoluene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
p-Isopropyltoluene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
sec-Butylbenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Styrene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
tert-Butylbenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Tetrachloroethene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Toluene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
trans-1,2-Dichloroethene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
trans-1,3-Dichloropropene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Trichloroethene	0.0005 U		0.0029	0.0005 U	0.0005 U	0.0033	0.0005 U	0.0005 U
Trichlorofluoromethane	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Vinyl chloride			0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,2,3-Trichlorobenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,2,4-Trichlorobenzene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Hexachlorobutadiene	0.0005 U		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U

Notes:

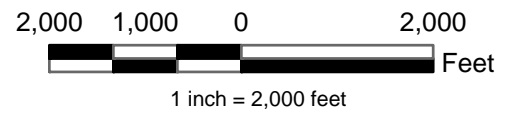
U - Concentrations not detected at specified limit

Figures

SITE LOCATION



SOURCE: WELLSVILLE NORTH, USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, DATED 1965.
 NOTE: GORMAN ROAD IS NOW SYNDER ROAD.



Legend

 Approximate Site Boundary

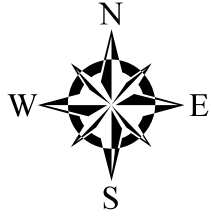


ON-SITE GEOLOGICAL SERVICES, D.P.C.

72 Railroad Avenue Wellsville, NY 14895

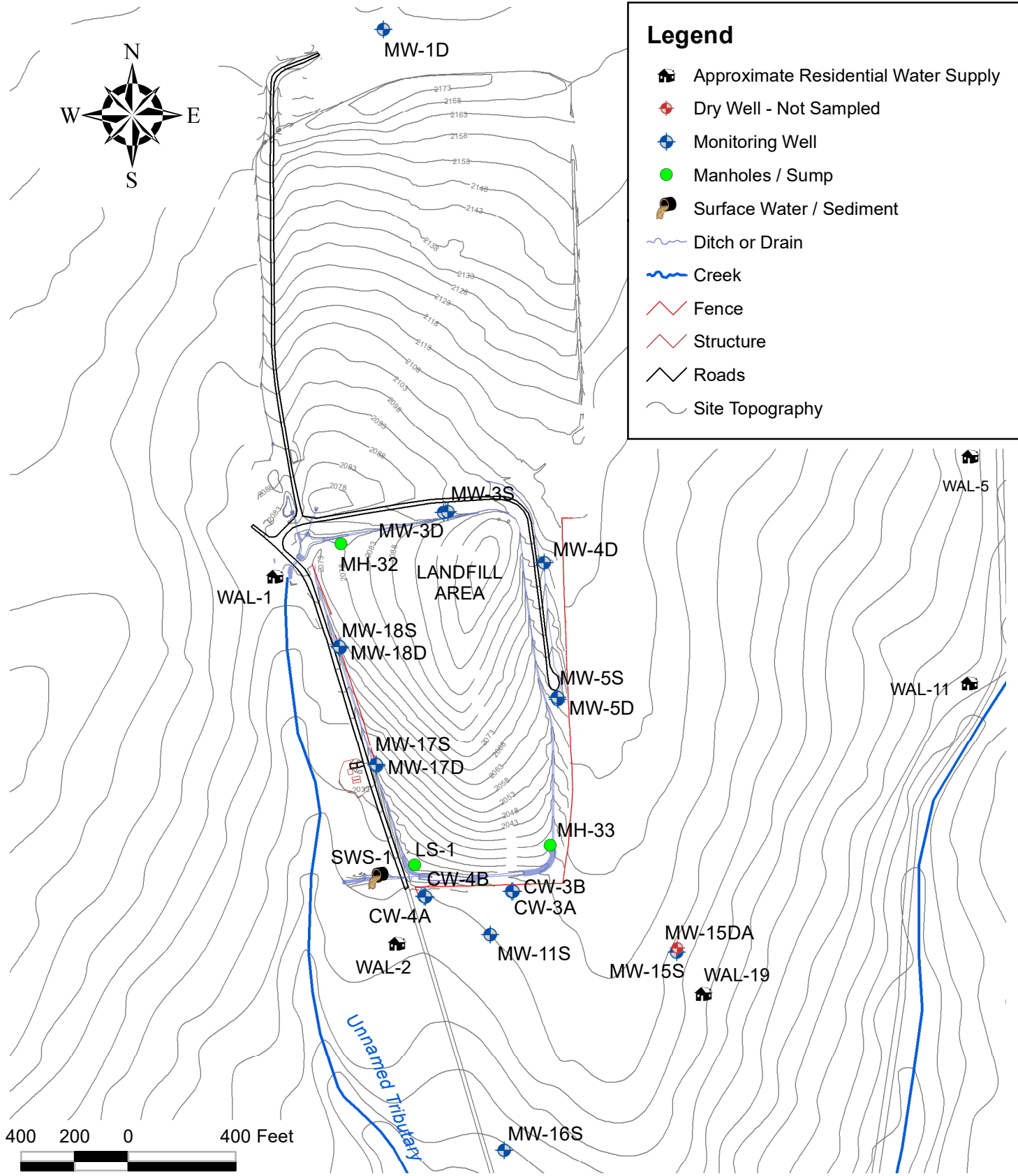
FIGURE NO.	1
PROJECT	WAL
DOCUMENT	Annual Report
FILE NO.	Site_Loc.mxd

2020 MONITORING LOCATIONS



Legend

- Approximate Residential Water Supply
- Dry Well - Not Sampled
- Monitoring Well
- Manholes / Sump
- Surface Water / Sediment
- Ditch or Drain
- Creek
- Fence
- Structure
- Roads
- Site Topography

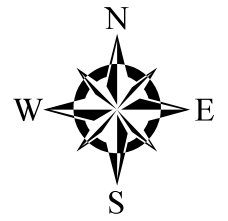


ON-SITE GEOLOGICAL SERVICES, D.P.C.

72 Railroad Avenue Wellsville, NY 14895

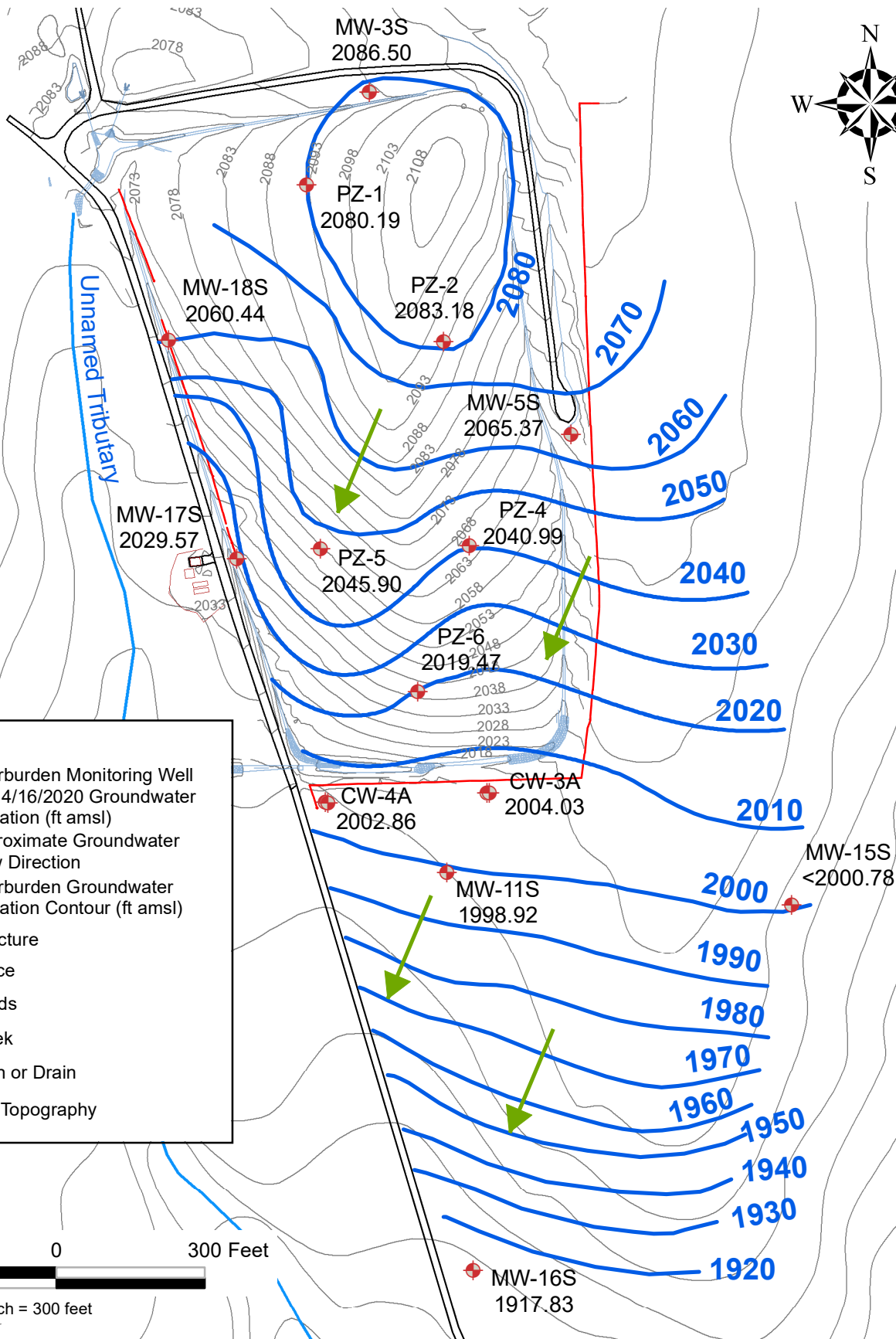
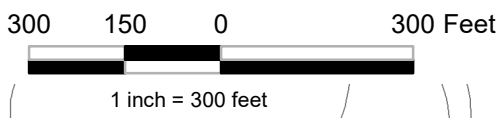
FIGURE NO.	2
PROJECT	WAL
DOCUMENT	2020 Annual Report
FILE NO.	Fig 2.mxd

APRIL 16, 2020 OVERBURDEN MONITORING WELL POTENTIOMETRIC MAP



Legend

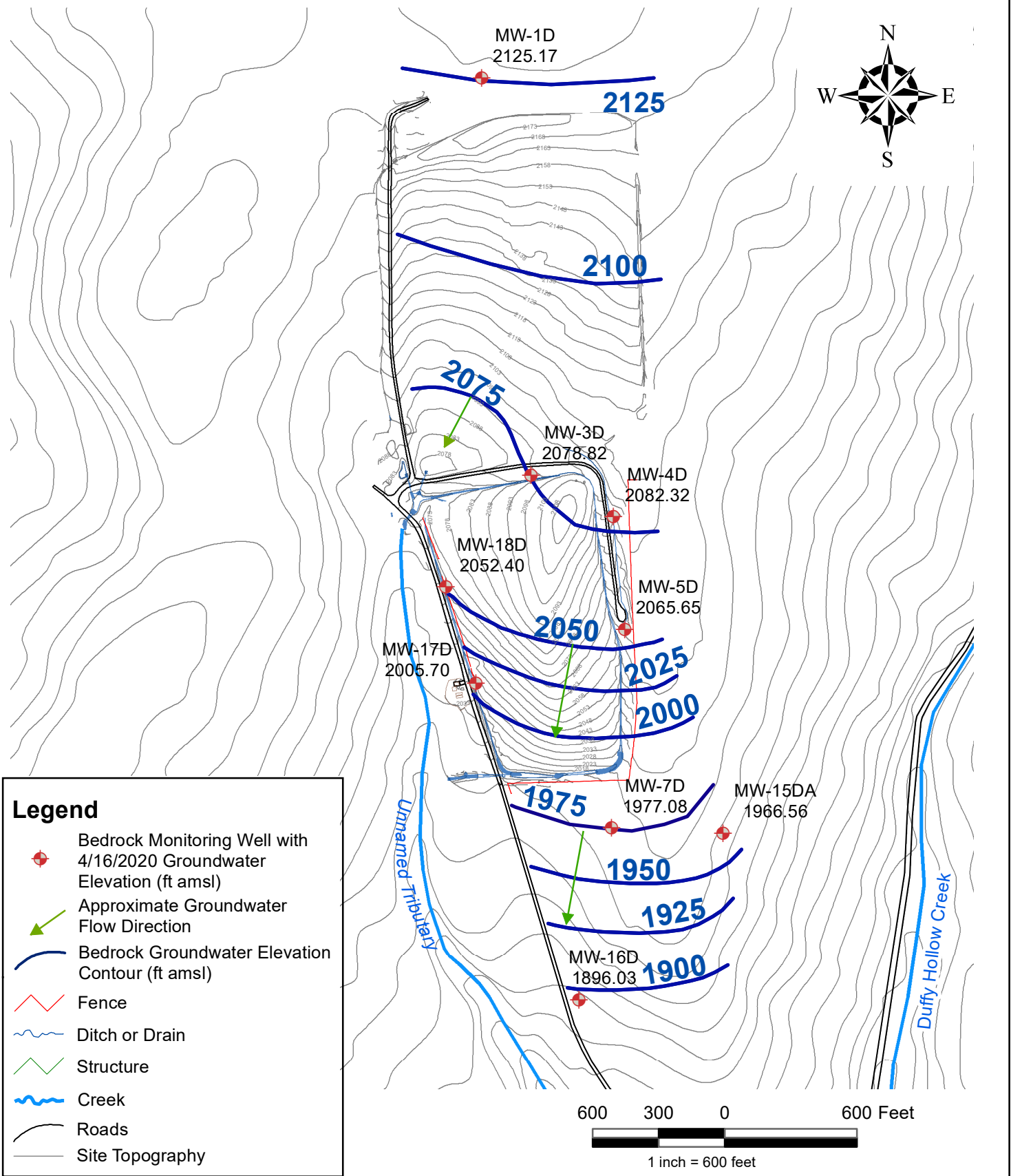
- Overburden Monitoring Well with 4/16/2020 Groundwater Elevation (ft amsl)
- Approximate Groundwater Flow Direction
- Overburden Groundwater Elevation Contour (ft amsl)
- Structure
- Fence
- Roads
- Creek
- Ditch or Drain
- Site Topography



ON-SITE GEOLOGICAL SERVICES, D.P.C.
 72 Railroad Avenue Wellsville, NY 14895

FIGURE NO.	3
PROJECT	WAL
DOCUMENT	2020 Annual Report
FILE NO	Fig 3 0420 OB.mxd

APRIL 16, 2020 BEDROCK MONITORING WELL POTENTIOMETRIC MAP

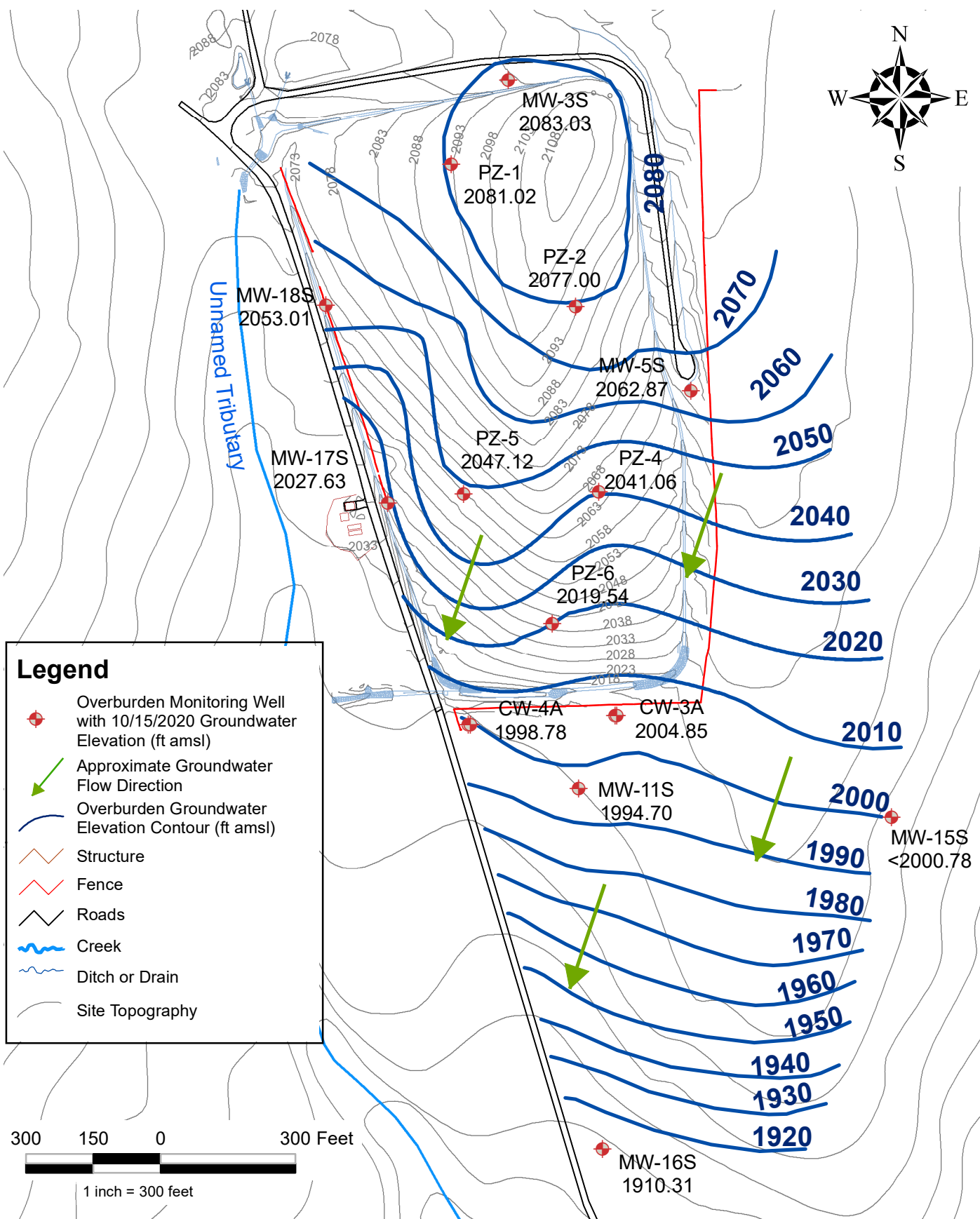
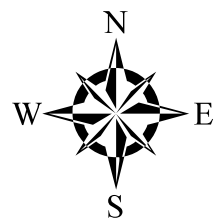


ON-SITE GEOLOGICAL SERVICES, D.P.C.

72 Railroad Avenue Wellsville, NY 14895

FIGURE NO.	4
PROJECT	WAL
DOCUMENT	2020 Annual Report
FILE NO	Fig 4 0420 BR.mxd

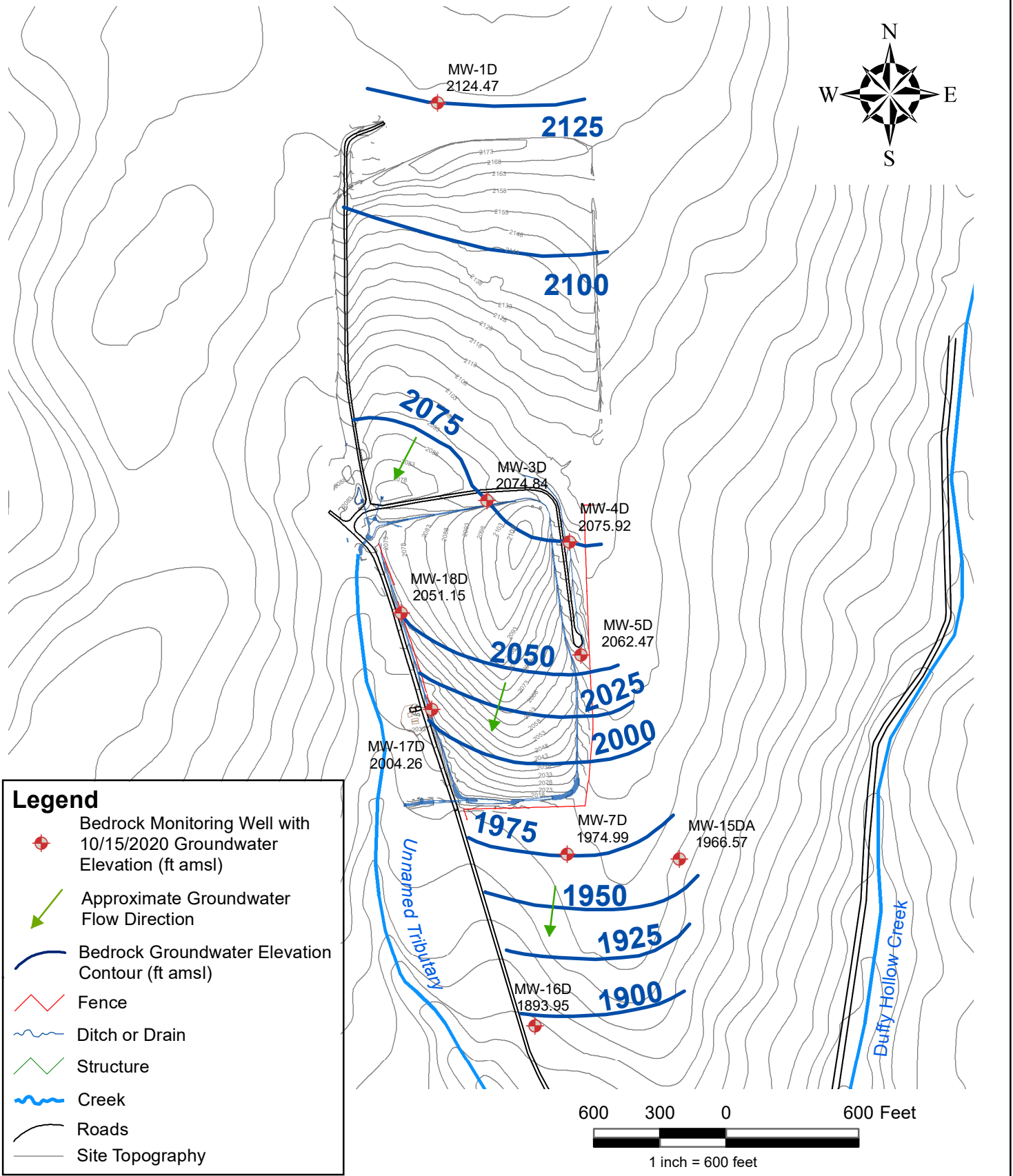
OCTOBER 15, 2020 OVERBURDEN MONITORING WELL POTENTIOMETRIC MAP



ON-SITE GEOLOGICAL SERVICES, D.P.C
 72 Railroad Avenue Wellsville, NY 14895

FIGURE NO.	5
PROJECT	WAL
DOCUMENT	2020 Annual Report
FILE NO	Fig 5 1020 OB.mxd

OCTOBER 15, 2020 BEDROCK MONITORING WELL POTENTIOMETRIC MAP

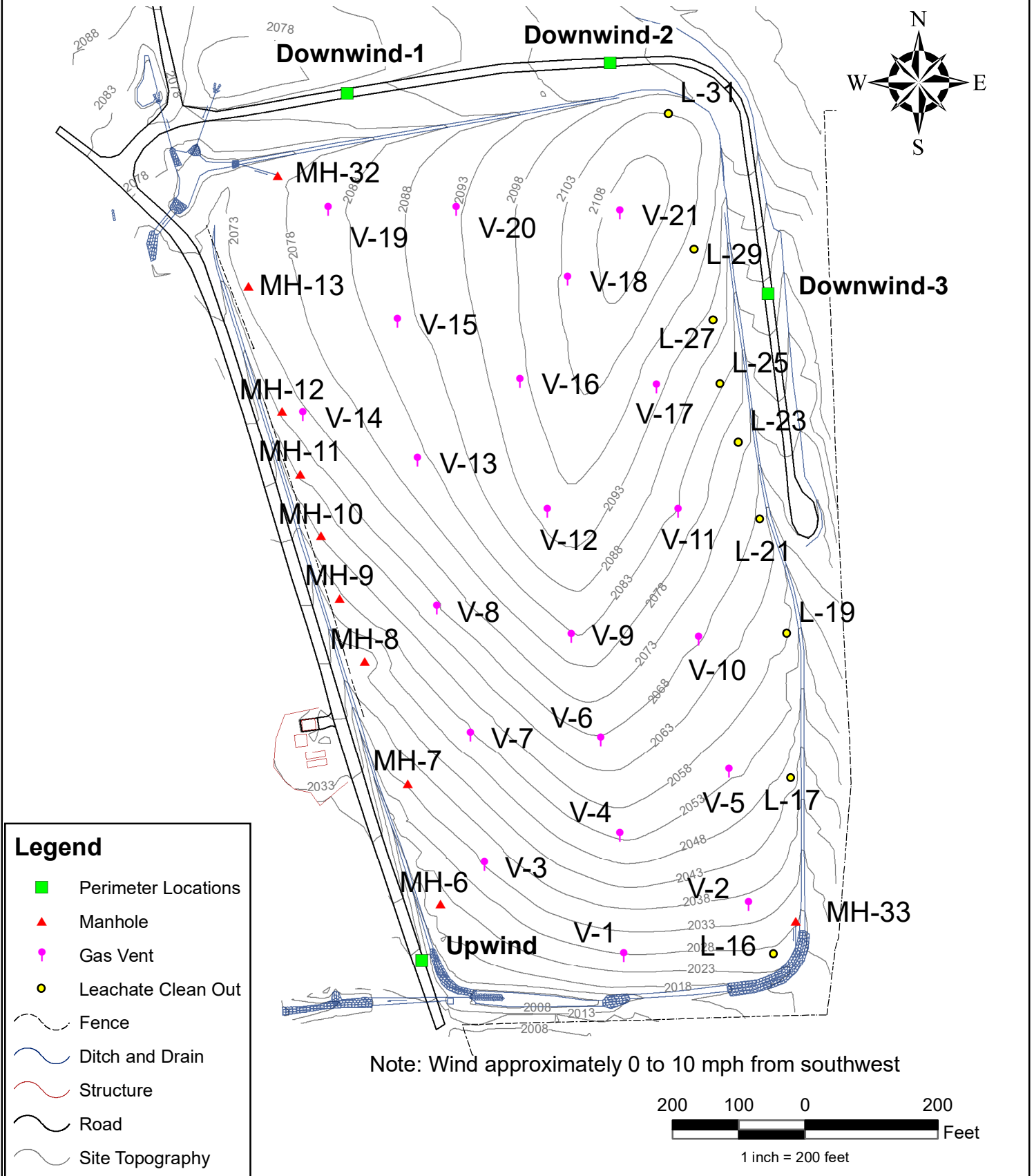


ON-SITE GEOLOGICAL SERVICES, D.P.C.

72 Railroad Avenue Wellsville, NY 14895

FIGURE NO.	6
PROJECT	WAL
DOCUMENT	2020 Annual Report
FILE NO	Fig 6 1020 BR.mxd

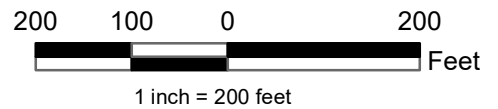
OCTOBER 14, 2020 AIR MONITORING LOCATIONS



Legend

- Perimeter Locations
- ▲ Manhole
- Gas Vent
- Leachate Clean Out
- Fence
- ~ Ditch and Drain
- Structure
- Road
- Site Topography

Note: Wind approximately 0 to 10 mph from southwest



ON-SITE GEOLOGICAL SERVICES, D.P.C.

72 Railroad Avenue Wellsville, NY 14895

FIGURE NO.	7
PROJECT	WAL
DOCUMENT	2020 ANNUAL RPT
FILE NO.	FIG 7.MXD

Appendix A

**NYSDEC Site Management
Periodic Review Report
Certification**



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site Details

Site No. **902004**

Box 1

Site Name **Wellsville-Andover Landfill**

Site Address: Snyder Hill Road Zip Code: 14895
 City/Town: Wellsville
 County: Allegany
 Site Acreage: 19.000

Reporting Period: February 15, 2020 to February 15, 2021

- | | YES | NO |
|--|-------------------------------------|-------------------------------------|
| 1. Is the information above correct? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Box 2

- | | YES | NO |
|--|-------------------------------------|--------------------------|
| 6. Is the current site use consistent with the use(s) listed below?
Closed Landfill | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Are all ICs in place and functioning as designed? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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

Description of Institutional Controls

Parcel

Owner

Institutional Control

201-1-15.2

VILLAGE OF WELLSVILLE

Ground Water Use Restriction
Monitoring Plan
O&M Plan

Description of Engineering Controls

Parcel

Engineering Control

201-1-15.2

Cover System
Fencing/Access Control
Leachate Collection

Per Site O&M Manual (11/01/1997), Environmental Control Systems:

- Cover System.
- Leachate Collection and Storage System.
- Gas Venting System.
- Storm Water System.
- Groundwater Monitoring System; and
- Facility Access System (i.e., Access Roads and gates).

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 complete.

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. 902004

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 William Whitfield at 200 Bolivar Road Wellsville, NY 14895,
print name print business address

am certifying as Owner (Owner or Remedial Party)

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



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

3/2/21

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 Jonathan Brandes, P.G. at 72 Railroad Avenue Wellsville, NY 14895,
print name print business address

am certifying as a Qualified Environmental Professional for the Owner
(Owner or Remedial Party)

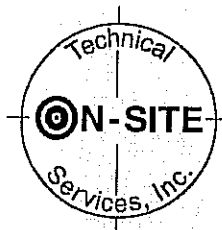

Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification

Stamp
(Required for PE)

3/2/21
Date

Appendix B

Monitoring Evaluation,
Approved Revised
Monitoring Plan and
NYSDEC Response



ON-SITE TECHNICAL SERVICES, INC

72 Railroad Avenue
Wellsville, New York 14895

Phone: (585) 593-1824
Fax: (585) 593-7471

April 3, 2009

Linda Ross, CPG
New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Wellsville/Andover Landfill Site (Site # 9-02-004) – Site Monitoring Evaluation and Proposed Revised Monitoring Plan

Dear Linda:

On behalf of the Village of Wellsville, this letter has been prepared to evaluate the above referenced site's post remedial action monitoring results and propose a revised monitoring plan tailored to the site for continued ample monitoring.

Background

The Wellsville/Andover Landfill was operated by the Village of Wellsville from 1964 to 1983, accepting both municipal and industrial waste. The site was added to the New York State Superfund and the New York State Department of Environmental Conservation (NYSDEC) selected capping with waste consolidation as the remedial action in the Record of Decision (ROD) for the site (NYSDEC 1994). Waste from the Northwest and Northeast fill areas was consolidated and capped on the South/South-central fill area. Following consolidation, the fill was compacted and capped with a 19-acre cover system, which incorporates a passive landfill gas (LFG) venting system, a leachate collection and storage system and a groundwater cut-off trench. Remedial construction activities were completed in September 1997.

An operation and maintenance plan was prepared for the site: *Operation and Maintenance Manual For The Wellsville/Andover Landfill Site Number 9-02-004 Allegany County, New York*, dated November 1997 (O&M Plan); which details O&M requirements. Section 3.3 of the O&M Plan states:

The primary goals of this action were to minimize leachate production, control and manage leachate produced, control LFG, consolidate the waste to reduce the size of the landfill, reduce the potential for

surface contact with waste and contaminated soils, and mitigate the spread of contaminated groundwater off site. The remedial action mitigated significant threats to the public health and the environment by:

- *Reducing the production of leachate within the fill mass;*
- *Eliminating the threat to surface waters by eliminating any future contaminated surface water runoff from the contaminated soils on site;*
- *Eliminating the potential for direct human or animal contact with the contaminated soils on site;*
- *Mitigate the impacts of contaminated groundwater to the environment;*
- *Mitigating, to the extent practicable, migration of contaminants in the landfill to groundwater; and*
- *Controlling LFG.*

Site Hydrogeology

Groundwater hydrogeology was investigated during the remedial investigation as summarized in the O&M Plan. Generally, groundwater flows from the North-Northeast to the South-Southwest as dictated primarily by topography. The overburden and bedrock beneath the site have been interpreted as being one continuous aquifer with no separating confining layer. However, in some areas of the site discontinuous low permeability horizons of silt and clay are present within the overburden creating perched water bearing zones. Groundwater flow is restricted vertically by localized clay/silt lenses, but aided in other areas by sand and gravel zones. In the top of bedrock, groundwater flow appears to be controlled by fractures and joints. Open and clay-filled bedrock fractures with many orientations were observed from remedial investigation borings. This indicates that groundwater can flow both horizontally and vertically within the overburden and top of bedrock.

Potentiometric mapping as part of approximately 11 years of post remediation monitoring indicate that groundwater flow conditions and directions have shown little variations from that observed during the remedial investigation.

Evaluation of Monitoring Results

Post remedial action site monitoring commenced in June 1998 and was conducted quarterly through 1999. Starting in 2000 and continuing through 2008, site monitoring has been conducted semi-annually. The monitoring has included sampling and analysis of groundwater, surface water and sediment, groundwater collection system water and leachate. These samples are tested for field parameters, Volatile Organic Compounds (VOCs), 15 Metals and 14 wet chemistry compounds listed in the table below.

Field Parameters

Specific Conductance
 Temperature
 pH
 Oxygen Reduction Potential
 Dissolved Oxygen
 Turbidity

Inorganic Compounds

Arsenic
 Barium
 Cadmium
 Calcium
 Chromium
 Copper
 Iron
 Lead
 Magnesium
 Manganese
 Nickel
 Potassium
 Selenium
 Sodium
 Zinc

Volatile Organic Compounds

1,1,1-Trichloroethane
 1,1,2,2-Tetrachloroethane
 1,1,2-Trichloroethane
 1,1-Dichloroethane
 1,1-Dichloroethene
 1,2-Dibromoethane
 1,2-Dichloroethane
 1,2-Dichloropropane
 2-Butanone (MEK)
 2-Hexanone
 4-Methyl-2-pentanone
 Acetone
 Benzene
 Bromodichloromethane
 Bromoform
 Bromomethane
 Carbon disulfide
 Carbon tetrachloride
 Chlorobenzene
 Chloroethane
 Chloroform
 Chloromethane
 cis-1,2-Dichloroethene
 cis-1,3-Dichloropropene
 Dibromochloromethane
 Dichloromethane (Methylene chloride)
 Ethyl benzene
 m&p-Xylene
 o-Xylene
 Styrene
 Tetrachloroethene
 Toluene
 trans-1,2-Dichloroethene
 trans-1,3-Dichloropropene
 Trichloroethene
 Vinyl chloride

Wet Chemistry

Alkalinity
 Ammonia
 Biochemical Oxygen Demand
 Bromide
 Chemical Oxygen Demand
 Chloride
 Color (True)
 Hardness
 Sulfate
 Total Dissolved Solids
 Total Kjeldahl Nitrogen
 Total Organic Carbon (TOC)
 Total Phenolics
 Turbidity

Additionally potentiometric mapping, landfill gas monitoring and sampling and analysis of nearby residential water supplies is conducted. An evaluation of these approximately 11 years of monitoring results is presented below.

Groundwater

The current site monitoring well network consists of 18 wells required to be sampled annually and 11 of the 18 wells sampled semi-annually. Please see attached figure 1 for monitoring well locations. The table below presents a summary of parameters detected in groundwater during the last five years of monitoring.

Summary of 2004 through 2008 Groundwater Detected Parameters (mg/L)

Parameter	Number of Samples	Number of Detections	Minimum Detection	Maximum Detection	Class GA Standard	Number of Class GA Exceedances
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Metals

Barium	119	98	0.0202	0.32	1	0
Calcium	119	119	2.96	140		
Chromium	119	1	0.011	0.011	0.05	0
Iron	119	97	0.108	13.4	0.3	77
Lead	119	8	0.0052	0.0733	0.025	1
Magnesium	119	118	0.651	64		
Manganese	119	112	0.0102	1.65	0.3	58
Potassium	119	85	2.1	33.5		
Selenium	119	1	0.00522	0.00522	0.01	0
Sodium	119	119	1.56	67.4	20	45
Zinc	119	21	0.0205	0.347		0

VOCs

1,1-Dichloroethene	134	1	0.0066	0.0066	0.005	1
cis-1,2-Dichloroethene	134	94	0.005	3	0.005	93
Ethyl benzene	134	1	0.0073	0.0073	0.005	1
Toluene	134	1	0.0065	0.0065	0.005	1
trans-1,2-Dichloroethene	134	4	0.011	0.021	0.005	4
Trichloroethene	134	80	0.0052	3.2	0.005	80
Vinyl chloride	134	34	0.005	0.83	0.002	34

Wet Chemistry

Alkalinity	113	113	7.2	410		
Ammonia Nitrogen	115	11	0.0512	0.161	2	0
Biochemical Oxygen Demand	111	15	2.13	13		
Bromide	113	6	1.06	1.38		
Chemical Oxygen Demand	115	40	5.13	18.8		
Chloride	113	89	2.04	71.4	250	0
Color (True) (C.U.)	116	70	5	75	15	10
Hardness	117	117	12.2	519		
Sulfate	113	113	3.49	161	250	0
Total Dissolved Solids	113	113	32	698	500	5
Total Kjeldahl Nitrogen	115	34	0.203	2.74		
Total Organic Carbon (TOC)	115	70	1.01	7.51		
Total Phenolics	114	2	0.00706	0.0181	0.001	2

As observed in the table above and also previously described in site monitoring reports, there are three metals (Iron, Manganese and Sodium) and three VOCs (cis-1,2-Dichloroethene (cDCE), Trichloroethene (TCE) and Vinyl chloride) that frequently exceed NYSDEC Class GA Groundwater Standards. Therefore, concentration verses time plots for these six compounds have been prepared for monitoring wells that exhibit exceedances. These wells include CW-3A, CW-3B, CW-4B, MW-5D, MW-5S, MW-15S and MW-18S for metals and VOCs and MW-11S and MW-16S for VOCs. These plots are attached for reference.

In General, for Iron, Manganese and Sodium, increasing or decreasing time trends are not apparent. The three metals have been detected at various concentrations above standards at both upgradient and downgradient wells. These metals are common constituents of soil and groundwater and often occur naturally at the concentrations detected.

Volatile Organic Compound analyses of groundwater have shown evident time trends and VOCs are the primary constituents of concern at this site. For this reason statistical analysis was performed to evaluate total VOCs (sum of detected VOCs in a given sample). The data set utilized for the analysis includes all available post remediation VOC results, which generally includes 24 sampling events over an 11 year period. The statistical analysis was conducted using the Mann-Kendall test using a normal approximation method in accordance with *USEPA Data Quality Assessment: Statistical Methods for Practitioners EPA QA/G-9S*, dated February 2006. In this analysis, a null hypothesis of "There is no trend" is tested against an alternative hypothesis of either "There is an upward trend" or "There is a downward trend". This analysis involves using a triangular table to compute a Statistic (S) and test it against a critical value and a probability value at a 5 % significance level (95% confidence level). If both criteria are met, then the null hypothesis of no trend is rejected in favor of the alternative hypothesis. Rejecting the null hypothesis suggests that the alternative hypothesis may be true. Alternative hypotheses are upward trend for S greater than zero and downward trend for S less than zero. If only one criterion or neither criteria are met, then the result is not enough evidence to show a trend. These statistical analyses are presented in Table 1 attached. A discussion of time trend plots and statistical analysis by individual monitoring well is provided below.

CW-3A – This is an overburden well located immediately downgradient of the landfill.

Plot observation: This well exhibited anomalous high results in June 2005, but has returned to lower levels the last seven samplings. TCE and cDCE have shown a decreasing trend the last three samplings, while vinyl chloride has been non-detect except in June 2005.

Statistical analysis: There is strong evidence of an upward trend in total VOC concentrations.

CW-3B – This is an overburden well located immediately downgradient of the landfill and adjacent to CW-3A. This well is approximately 12.5 feet deeper than CW-3A.

Plot observation: There is an apparent slight increasing trend in concentrations of TCE and cDCE.

Statistical analysis: There is strong evidence of an upward trend in total VOC concentrations.

CW-4B – This is an overburden well located immediately downgradient of the landfill.

Plot observation: The plot shows a slight downward trend with TCE and Vinyl chloride results non-detect the last five years and cDCE has been non-detect since December 2005.

Statistical Analysis: There is evidence of a downward trend, but not statistically significant at the 5% significance level (95% confidence level). Therefore, the result of the statistics is no trend.

MW-4D – This is a bedrock well located cross-gradient and East of the Northern portion of the landfill.

Plot observation: This well exhibits an apparent seasonal fluctuation in VOCs with an inverse proportional relationship to groundwater elevation. Elevated concentrations of primarily cDCE occur in the fall when groundwater elevations are low and then decrease in the spring when groundwater elevations are high. However, this seasonal fluctuation is not represented in the graph for the period of 2003 to 2007 when semi-annual sampling was conducted in the months of June and December and did not include samplings at low groundwater elevation periods. This period may have included times of elevated cDCE, but this is unknown because sampling was not conducted during periods of low groundwater levels.

Statistical Analysis: There is evidence of a downward trend, but not statistically significant at the 5% significance level (95% confidence level). Therefore, the result of the statistics is no trend.

MW-5S – This is an overburden well located cross-gradient and East of the central portion of the landfill.

Plot observation: There is a decreasing trend apparent from 1998 to 2002 and concentrations have remained low and relatively stable since 2002.

Statistical analysis: There is evidence of a downward trend, but not statistically significant at the 5% significance level (95% confidence level). Therefore, the result of the statistics is no trend.

MW-5D – This is a bedrock well located immediately adjacent to MW-5S.

Plot observations: cDCE is observed at higher concentrations than TCE and Vinyl chloride, but there is not an apparent increasing or decreasing trend.

Statistical analysis: There is no trend.

MW-11S – This is an overburden well located approximately 230 feet downgradient of the landfill and has been sampled semi-annually since 2005.

Plot observation: The plot shows fairly consistent VOC concentrations over time. TCE is the highest concentration (approximately 3 mg/L), cDCE is consistently around 0.5 mg/L and Vinyl chloride has been non-detect.

Statistical analysis: There is no trend.

MW-15S – This is an overburden well located cross/downgradient and approximately 600 feet from the landfill.

Plot observation: There is no discernable upward or downward trend. cDCE has been detected at concentrations between 0.011 mg/L and 0.04 mg/L, TCE fluctuates between

approximately 0.5 mg/L and non-detect and Vinyl chloride has been non-detect since 2002. However, this well does appear to exhibit seasonal fluctuations in VOC concentrations similar to MW-4D.

Statistical analysis: There is no trend.

MW-16S – This is an overburden well located approximately 1000 feet downgradient of the landfill. This well has been sampled on the same frequency as MW-11S.

Plot observation: cDCE, TCE and Vinyl chloride results are below detection limits, with the exception of TCE at 0.066 mg/L in September 2006.

Statistical analysis: Since there is only one VOC detection at this well; statistical analysis is not applicable.

MW-18S - This is an overburden well located cross-gradient and West of the northern portion of the landfill.

Plot observation: A time trend is not obvious, but there is a good correlation between cDCE and TCE, while Vinyl chloride has not been detected. cDCE and TCE concentrations increased in 2000 as compared to 1998 through 1999 and remained at similar concentration through 2007.

Statistical analysis: There is evidence of an upward trend. However, it should be noted that both criteria thresholds were just slightly exceeded, indicating that there is just enough evidence to reject no trend in favor of an upward trend.

Surface Water and Sediment

Surface water and sediment samples have been collected annually since 2000 from location SWS-1 (see figure 1). Prior to spring 2000 surface water and sediment samples were collected quarterly from SWS-1 and two other down stream locations. Additionally, three landfill perimeter seep samples were collected between 2001 and 2003. Seeps have not been observed active since 2003. SWS-1 is the currently required surface water and sediment sampling location; therefore results from this location are discussed below.

Location SWS-1 is located at the downstream side of the culvert within the drainage ditch that leads to an unnamed tributary to Duffy Hollow Creek. Both the unnamed tributary and Duffy Hollow Creek are classified as NYSDEC Class C streams. Since June 1998, 15 surface water samples have been collected at SWS-1. From these 15 samples, four samples have exhibited Class C surface water exceedances as presented in the table below.

SWS-1 Surface Water Class C Exceedances (mg/L)

Parameter	SWS-1 6/25/1998	SWS-1 12/2/1998	SWS-1 3/25/1999	SWS-1 6/16/2005	Class C Standard
Lead	0.0088		0.0089		0.008
Nickel			0.0176 B		0.0082
Thallium		0.0127			0.008
Total Dissolved Solids				642	500

VOCs have not been detected at SWS-1 with the following exceptions. There were three Acetone detections between 1998 and 1999, which are probable laboratory artifacts. cDCE was detected five times at a maximum concentration of 0.0067 mg/L. The last cDCE detection was reported in April 2003.

Sediment sampling at SWS-1 has shown typical metal and wet chemistry parameter detections along with minimal VOC detections. A summary of SWS-1 sediment detections is presented in the table below.

SWS-1 Sediment Analytical Result Summary (mg/Kg)

Parameter	Number of Samples	Number of Detections	Minimum Detection	Maximum Detection
Aluminum	7	7	8780	13100
Arsenic	15	15	7.16	73.4
Barium	15	15	51.2	348
Beryllium	7	5	0.628	0.876
Boron	7	2	27.1	41.1
Cadmium	15	2	0.18	1.14
Calcium	15	15	3850	43200
Chromium	15	15	7.26	21.2
Cobalt	7	7	9.9	17.4
Copper	15	15	10.2	25.5
Iron	15	15	11800	41200
Lead	15	15	6.22	30
Magnesium	15	15	1780	8490
Manganese	15	15	579	8160
Mercury	7	1	0.01	0.01
Nickel	15	15	10.3	32.3
Potassium	15	15	862	4600
Selenium	15	6	1.3	13.1
Sodium	15	12	81.9	1390
Thallium	7	1	3.21	3.21
Vanadium	7	7	11.2	23.4
Zinc	14	14	74.3	2610
1,1,2-Trichloroethane	15	1	0.012	0.012
1,2-Dichloroethane	15	1	0.012	0.012
2-Butanone (MEK)	15	2	0.004	0.033
Acetone	15	5	0.016	0.22
Chloromethane	15	1	0.004	0.004
Toluene	15	2	0.0027	0.071

SWS-1 Sediment Analytical Result Summary (mg/Kg)

Parameter	Number of Samples	Number of Detections	Minimum Detection	Maximum Detection
Alkalinity	15	14	376	14300
Ammonia Nitrogen	15	11	8.12	339
Biochemical Oxygen Demand	14	13	203	49500
Bromide	15	1	13.1	13.1
Chemical Oxygen Demand	15	15	15600	535000
Chloride	15	4	41.8	144
Hardness	14	13	689	44300
Sulfate	15	4	39.3	1700
Total Kjeldahl Nitrogen	15	15	168	5790
Total Organic Carbon (TOC)	10	10	0.34	46700
Total Phenolics	15	1	0.447	0.447
Total Solids	14	14	14.1	82.6

Groundwater Cut-off System

The groundwater cut-off system is intended to capture upgradient groundwater from the North and East landfill perimeters prior to contacting waste within the landfill. The North side collection trench drains to Manhole MH-32 located at the Northwest corner of the landfill, while the East side collection trench drains to Manhole MH-33 at the Southeast corner of the landfill. Both MH-32 and MH-33 are piped to drain either to the leachate collection system or to the landfill perimeter surface water drainage channels. To date, water in MH-32 and MH-33 has been drained to the leachate collection system. The pipes from the manholes to the drainage channel are closed with removable plugs. Sampling of these two manholes has been conducted since 1998 in anticipation of demonstrating acceptable water quality for discharge to the surface water drainage channels. A summary of parameters exceeding Class C surface water standards is provided below.

MH-32 & MH-33 Groundwater Cut-off System Class C Surface Water Exceedance Summary (mg/L)

Parameter	Number of Sample	Number of Detections	Minimum Detection	Maximum Detection	Class C Standard	Number of Class C Exceedances
Cobalt	12	4	0.0056	0.154	0.005	4
Lead	46	11	0.0027	0.165	0.008	7
Nickel	46	4	0.0056	0.272	0.0082	3
Thallium	12	3	0.0055	0.0178	0.008	2
Vanadium	12	4	0.0043	0.0826	0.014	2
Dichloromethane (Methylene chloride)	42	9	0.0027	1.9	0.2	1
Trichloroethene	42	20	0.0011	1.6	0.04	6
Ammonia Nitrogen	42	41	0.0955	7.69	2	12
Total Dissolved Solids	42	42	203	1650	500	16

Additionally, since cDCE, TCE and Vinyl chloride are the three primary constituents of concern in groundwater; time trend plots of these three compounds were created for MH-32 and MH-33 and are attached. MH-32, and to a greater extent MH-33, show a decreasing trend in these VOCs. However, at this time groundwater cut-off trench water does not meet standards to allow discharge to surface water.

Leachate

The quantity of leachate generated at the site has greatly decreased following the remedial action (please see attached graph). Leachate is sampled from the leachate sump. Since the groundwater cut-off system has drained to the leachate sump to date, leachate samples are a composite from the leachate collection system and groundwater cut-off trench. Various metals, VOCs and wet chemistry parameters are typically detected as presented in the summary table below.

Summary of Leachate Sump Detected Parameters (mg/L)

Parameter	Number of Samples	Number of Detections	Minimum Detection	Maximum Detection
Aluminum	5	4	0.164	8.76
Arsenic	21	12	0.0051	0.238
Barium	21	21	0.112	0.961
Boron	4	3	0.163	0.659
Cadmium	21	1	0.00572	0.00572
Calcium	21	21	78.7	151
Chromium	21	4	0.0101	0.0205
Cobalt	4	1	0.0034	0.0034
Copper	21	4	0.0043	0.0392
Iron	21	21	3.22	360
Lead	21	10	0.0043	0.0738
Magnesium	21	21	25.1	62.2
Manganese	21	21	3.72	13.7
Nickel	21	1	0.0054	0.0054
Potassium	21	21	3.57	16.9
Selenium	21	3	0.005	0.00981
Sodium	21	21	14.6	112
Tin	3	1	0.198	0.198
Vanadium	4	1	0.0632	0.0632
Zinc	18	11	0.0159	0.21
1,1-Dichloroethane	21	2	0.0014	0.0022
2-Butanone (MEK)	21	2	0.031	0.05
4-Methyl-2-pentanone	21	1	0.0049	0.0049
Acetone	21	5	0.0056	0.044
Benzene	21	2	0.0022	0.0044
Chlorobenzene	21	1	0.0019	0.0019
Chloroethane	21	1	0.0027	0.0027
Chloroform	21	2	0.0018	0.0034
cis-1,2-Dichloroethene	21	21	0.011	0.95
Dichloromethane (Methylene	21	2	0.0023	0.067

Summary of Leachate Sump Detected Parameters (mg/L)

Parameter	Number of Samples	Number of Detections	Minimum Detection	Maximum Detection
chloride)				
Ethyl benzene	21	6	0.005	0.1
m&p-Xylene	21	1	0.0075	0.0075
o-Xylene	21	1	0.0038	0.0038
Phenol	5	1	0.044	0.044
Toluene	21	4	0.0022	0.026
trans-1,2-Dichloroethene	21	4	0.0026	0.0075
Trichloroethene	21	14	0.0064	0.038
Vinyl chloride	21	16	0.0029	0.05
Alkalinity	19	19	276	566
Ammonia Nitrogen	19	19	0.0873	12.1
Biochemical Oxygen Demand	19	8	2.01	5.4
Bromide	19	3	1.02	1.43
Chemical Oxygen Demand	19	18	12.3	17100
Chloride	19	19	27.8	200
Color (True) (C.U.)	19	19	10	200
Hardness	19	19	328	675
Sulfate	19	19	4.26	26.3
Total Dissolved Solids	19	19	357	925
Total Kjeldahl Nitrogen	19	19	2.17	14.8
Total Organic Carbon (TOC)	18	18	2.04	26
Total Phenolics	19	1	0.00588	0.00588

Landfill Gas Monitoring

Landfill gas monitoring has been conducted at the site for approximately 10 years using an FID and an O₂/LEL meter. This monitoring has provided substantial characterization of the landfill gas and shown fairly consistent results. Several of the gas vents, leachate clean outs and manholes exhibit high concentrations of Methane and low levels of Oxygen, while the landfill perimeter readings are generally within normal background levels. Additional gas monitoring was conducted in June 2005 using a GEM 2000 landfill gas meter to provide more characterization of the landfill gas. The June 2005 monitoring showed several locations with Methane readings between approximately 33% and 97%. This monitoring has demonstrated that the primary landfill gas is Methane. Starting with the March 2007 monitoring event, a PID has been utilized instead of an FID. The PID provides monitoring of VOCs while an O₂/LEL meter continues to be used to monitor Oxygen and Methane.

Residential Water Supplies

There are 20 residential water supply locations in the monitoring program. The current monitoring schedule requires that three water supplies be sampled semi-annually (spring and fall) and the remaining 17 locations be sampled every three years. The table below presents a summary of detected parameters from the last five years of sampling, which includes sampling of the available 20 locations in 2005 and 2008.

Summary of 2004 through 2008 Residential Water Supply Detected Parameters (mg/L)

Parameter	Number of Samples	Number of Detections	Minimum Detection	Maximum Detection	Class GA Standard	Number of Class GA Exceedances	NYSDOH MCL	Number of NYSDOH MCL Exceedances
Barium	53	52	0.002	0.11	1	0	1	0
Calcium	53	53	3.4	54.4				
Copper	53	20	0.01	0.16	0.2	0	1	0
Iron	53	25	0.06	1	0.3	9	0.3	9
Lead	53	1	0.015	0.015	0.025	0	0.05	0
Magnesium	53	53	1.6	20.8				
Manganese	57	35	0.0054	2.8	0.3	14	0.3	14
Potassium	53	53	0.7	4.4				
Sodium	53	53	1.1	104	20	28		0
Zinc	53	11	0.011	0.22			5	0
cis-1,2-Dichloroethene	58	9	0.00084	0.0021	0.005	0		
Trichloroethene	58	9	0.0012	0.0028	0.005	0	0.005	0

As shown in the table above, two parameters (Iron and Manganese) have shown exceedances of standards during the last five years. Eight of the nine Iron exceedances are from location WAL-2, which is a seasonal hunting camp adjacent to the Southwest corner of the landfill. The other Iron exceedance is WAL-17 in November 2005. WAL-17 is located approximately 8000 feet from the landfill; therefore this exceedance is unlikely related to the site. The Manganese exceedances are from WAL-2 and WAL-20. WAL-20 is also located approximately 8000 feet from the site and Manganese concentrations have been near or below detection limits since this residential well was replaced in 2005. The VOC detections shown in the table above are from pre-filtered WAL-19 samples. WAL-19 is located Southeast of the landfill and includes a two-stage carbon treatment system maintained by the Village of Wellsville.

Summary of Monitoring Results Evaluation

Volatile Organic Compounds and to a lesser extent, metals, are the constituents of concern at the site. VOCs groundwater concentrations are stable at most wells and trending upward at three wells. The locations where VOCs are trending upward are immediately adjacent to the landfill and this upward trend is indicative of minimal groundwater flow. Groundwater level drawdown during sampling and slow recovery (in some cases days) further illustrate that groundwater flow is extremely measured. Metals have shown exceedances of standards in both upgradient and downgradient wells and in many cases are naturally occurring. Wet Chemistry parameters in groundwater are generally below standards and do not appear to be a good indicator of landfill impacts on groundwater at this site. This is contrary to typical municipal solid waste landfills and should be considered when evaluating future site monitoring needs. Surface water and sediment sampled at location SWS-1 appears un-impacted by the site. Groundwater collection system sampling shows some signs of decreasing concentrations, but results do not meet surface water standards at this time. Leachate continues to show several detections, but is generally

more dilute as compared to operating municipal landfills. Two Residential water supplies close to the landfill continue to show detections of constituents of concern.

These 11 years of monitoring results demonstrate that the remedial action goals continue to be met. Leachate quantities have greatly decreased following the remedial action. Surface water is not impacted by the site. Contaminated groundwater and landfill gas migration is being controlled. The remedial action has mitigated significant threats to public health and the environment.

Proposed Monitoring Program

Based on the above evaluation of monitoring results, a revised monitoring program has been designed to meet the needs of continued surveillance of the remedial objectives into the future. VOCs and metals are the primary constituents of concern and wet chemistry parameters do not appear to be good indicators at this site. The project analyte list is proposed to be revised to include field parameters, VOCs and metals with a few exceptions. The proposed monitoring requirements are presented in Table 2 attached and discussed below.

Groundwater

Groundwater sampling is proposed to be conducted annually, each Fall, in an attempt to capture annual high groundwater concentrations. Sampling locations will include currently sampled wells, with the following exceptions. Upgradient well MW-1D will not be sampled because upgradient water quality has been adequately characterized and no concern of an upgradient contaminate source. Sampling of overburden wells CW-3A and CW-4A will be discontinued because overburden wells CW-3B and CW-4B are immediately adjacent to these wells and show similar water chemistry. Bedrock well MW-15DA has not been sampled following the remedial action, because it has been dry. MW-15DA will be removed from the required sampling list.

Surface Water and Sediment

Surface water at location SWS-1 will be sampled during the annual Fall event with analysis for field parameters, VOCs, Metals, Nitrate Nitrogen and Total Dissolved Solids (TDS). Nitrate Nitrogen and TDS are tested in anticipation that the groundwater cut-off system may one day discharge to surface water and these two parameters frequently exceed Class C surface water standards in groundwater cut-off system water. Sediment sampling at this location has limited usefulness and is therefore discontinued.

Groundwater Cut-Off System

Manholes MH-32 and MH-33 will be sampled during the annual Fall event with analysis for field parameters, VOCs, Metals, Nitrate Nitrogen and TDS. Sampling of these locations is conducted in anticipation of future discharge to surface water.

Leachate

Leachate sump will be sampled during the annual Fall event.

Landfill Gas Monitoring

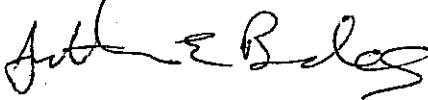
Landfill gas has been adequately characterized and has not been detected at the landfill perimeter; therefore landfill gas monitoring will be discontinued.

Residential Water Supply

Hunting camp WAL-2 will be sampled annually for metals. Resident WAL-5 will be sampled annually for VOCs and Metals. The two-stage carbon treatment unit will be maintained at residence WAL-19 with semi-annual sampling for VOCs prior to filtration, between the filters and post filtration. The remainder of the residential water supply sampling will be discontinued.

The Village of Wellsville and On-Site appreciate your review and consideration on this matter. If you have any questions or require any clarification on the information presented in this letter, please call the undersigned.

Sincerely,



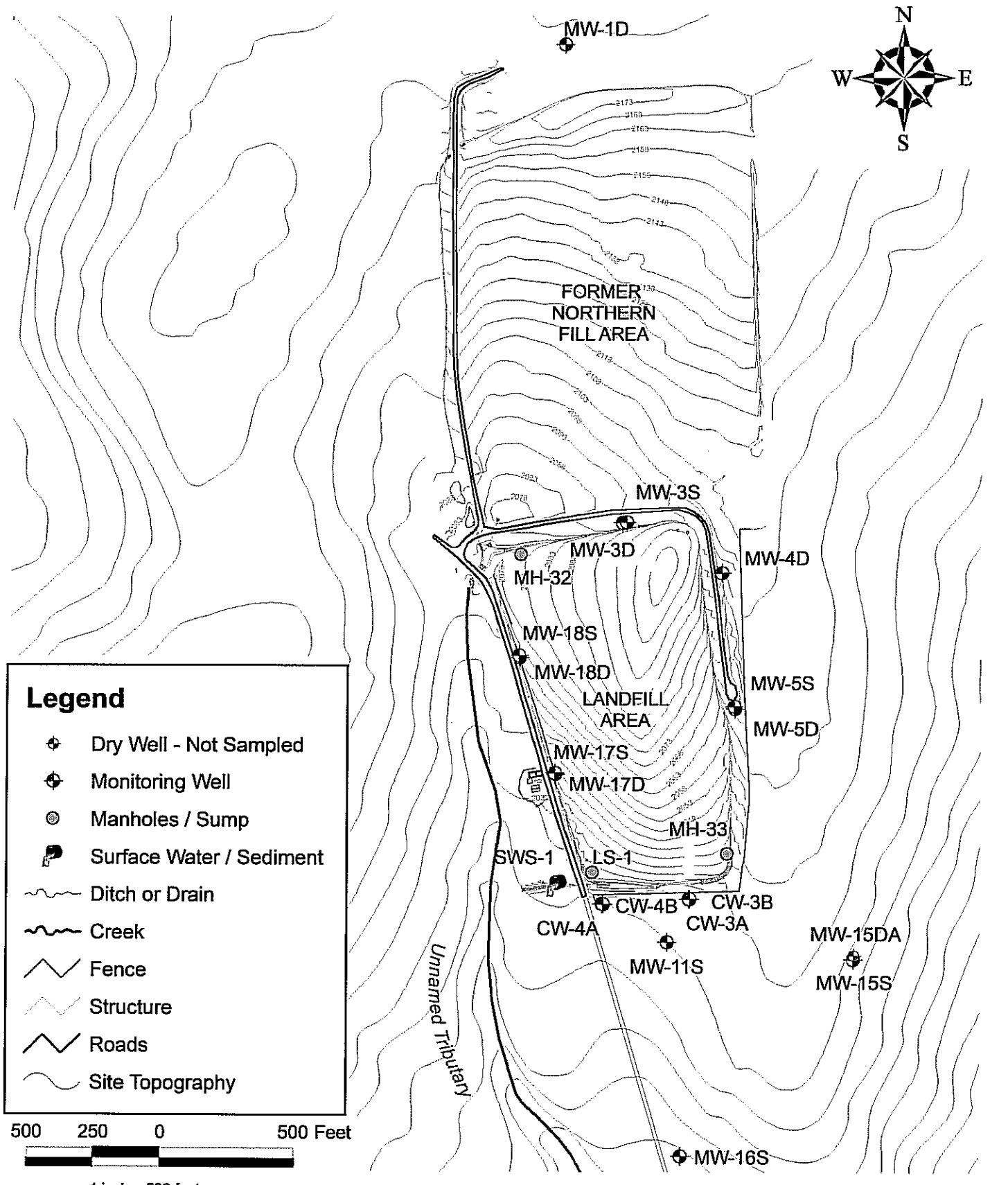
Jonathan E. Brandes, P.G.

Senior Geologist











cc: Bill Whitfield, Village of Wellsville
Judy Lynch, Village Trustee, Liaison to Landfill
Tamara S. Girard, NYSDOH

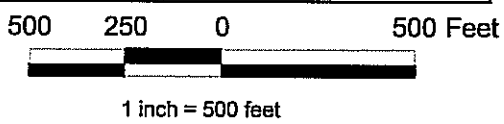
Attachments

SAMPLING LOCATIONS



Legend

-  Dry Well - Not Sampled
-  Monitoring Well
-  Manholes / Sump
-  Surface Water / Sediment
-  Ditch or Drain
-  Creek
-  Fence
-  Structure
-  Roads
-  Site Topography

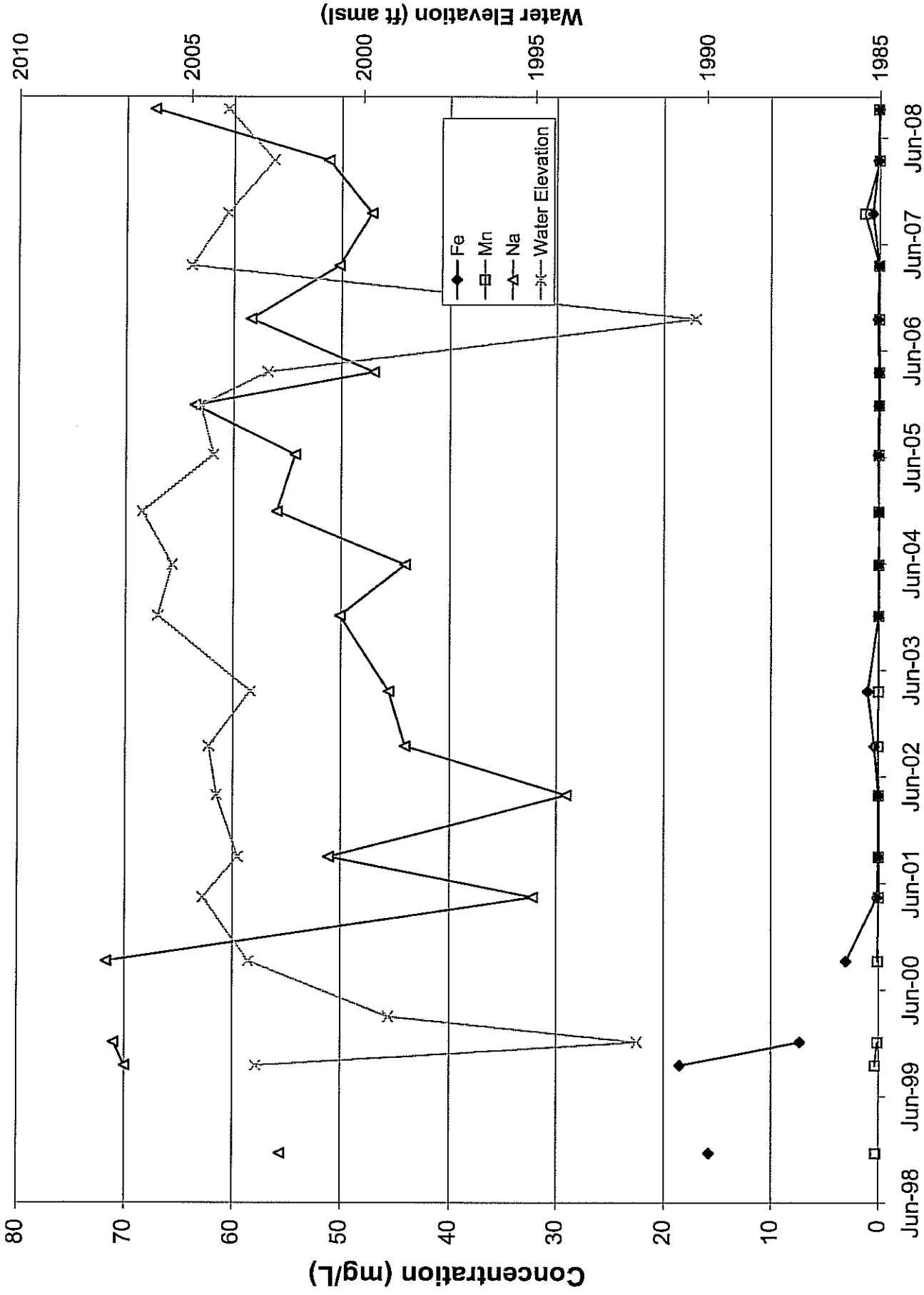


ON-SITE TECHNICAL SERVICES, INC.

72 Railroad Avenue Wellsville, NY 14895

FIGURE NO.	1
PROJECT	WAL
DOCUMENT	2009 Site Review
FILE NO.	Fig 1 - Samp Locs.mxd

CW-3A Metals

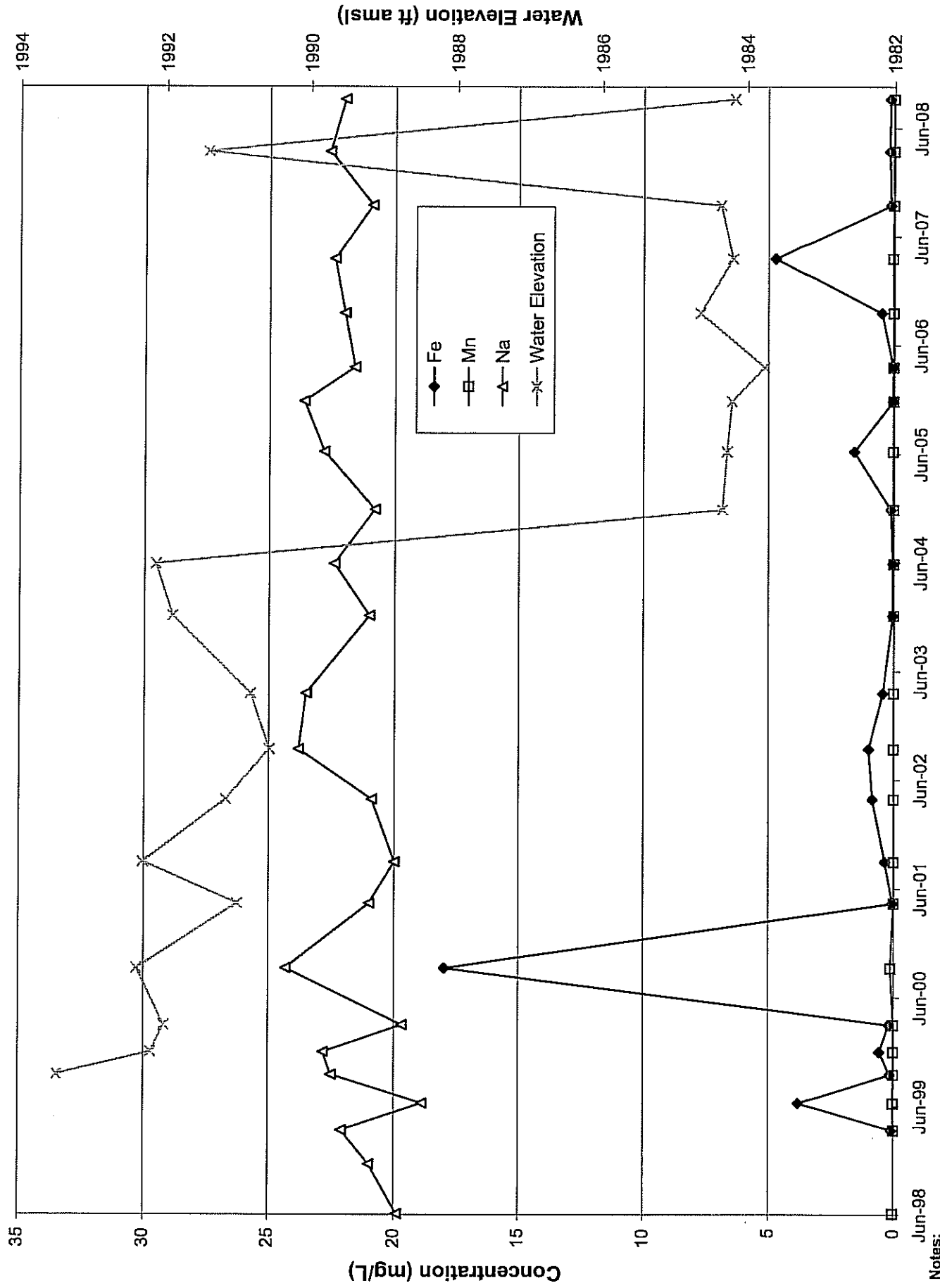


Notes:

1. The majority of results for Manganese and Iron are non detect.
2. 1/2 Detection limit used for non-detects.

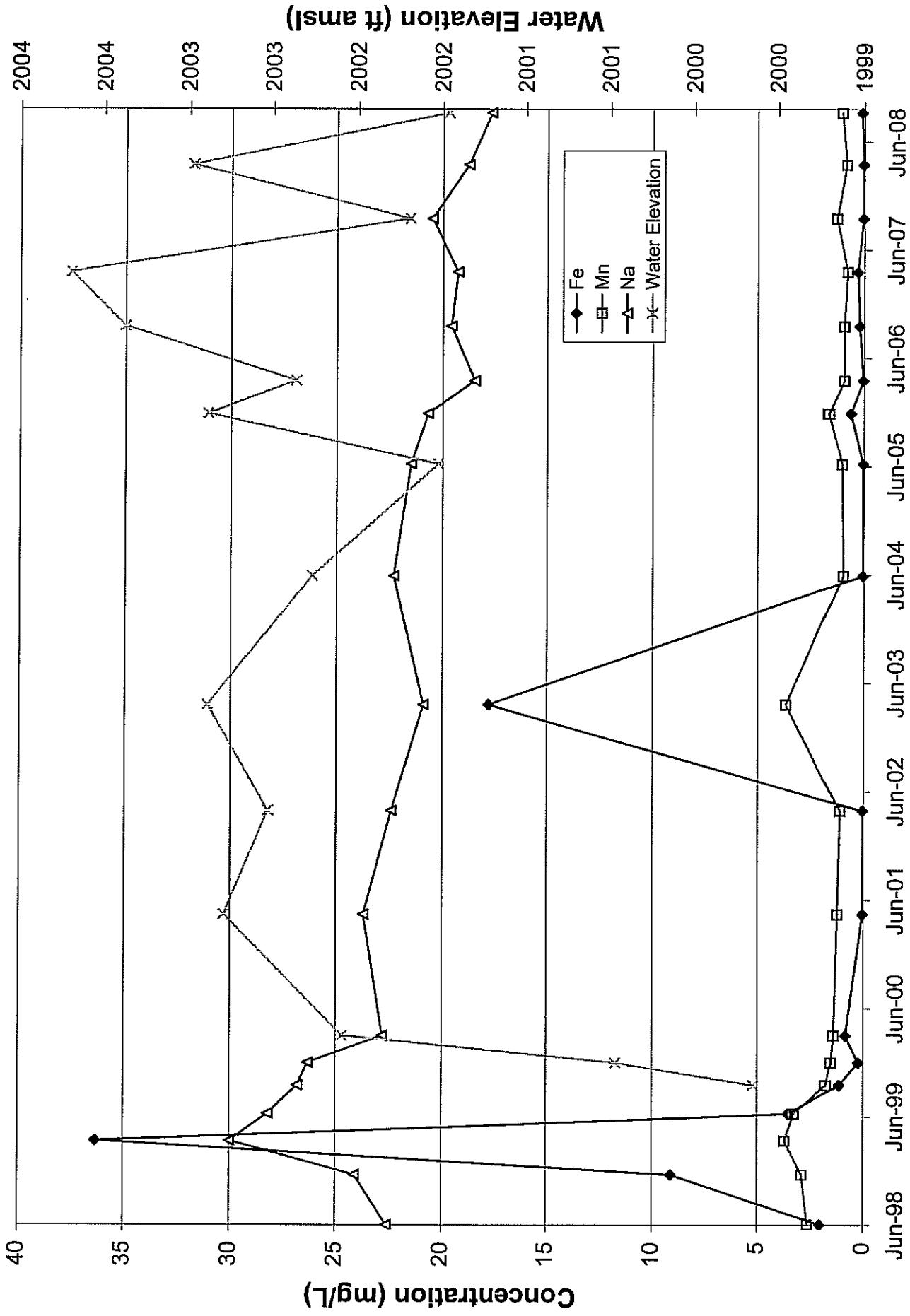
Date

CW-3B Metals



Notes:
 1. A majority of results for Manganese and Iron are non-detects.
 2. 1/2 detection limit used for non-detects.

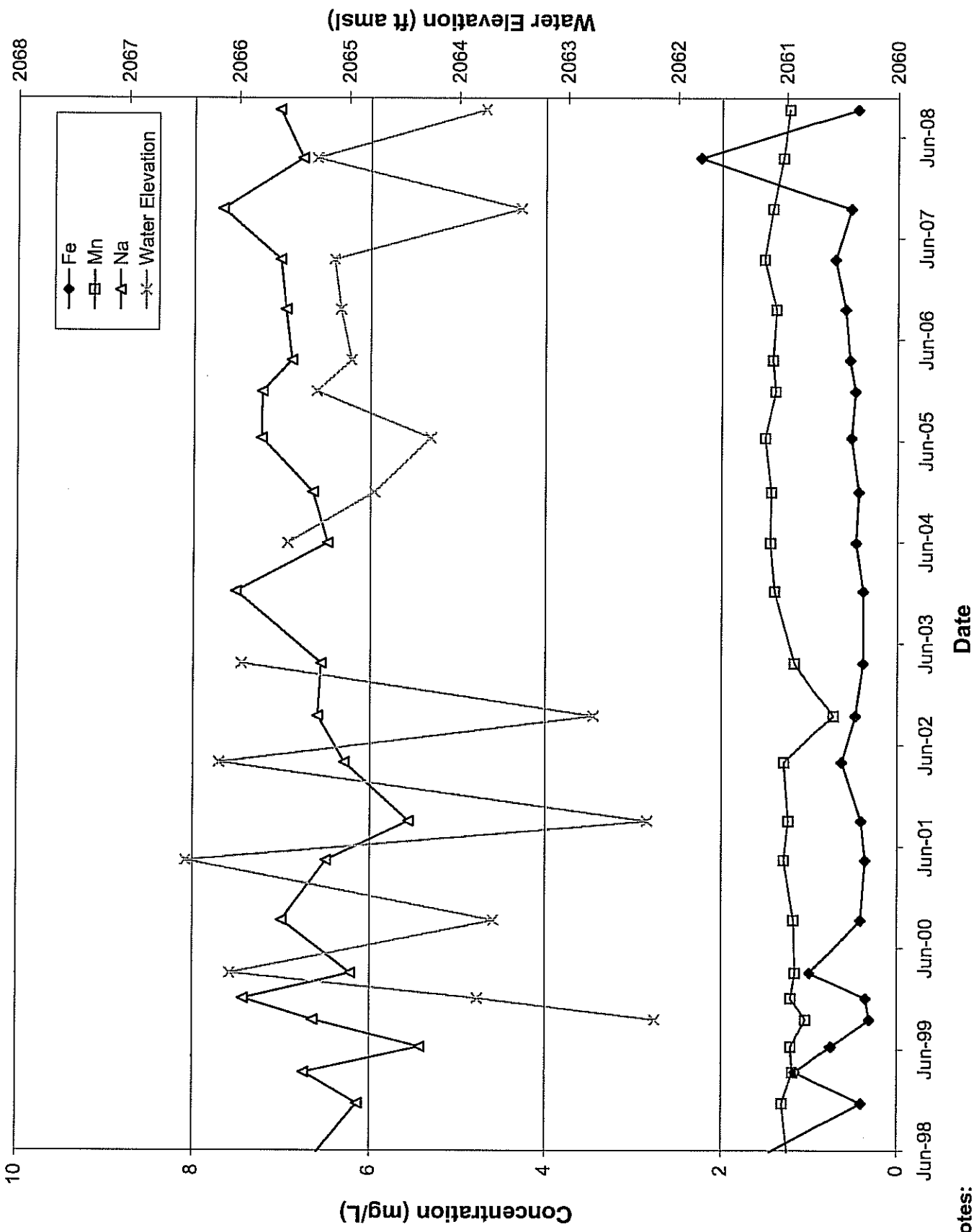
CW-4B Metals



Notes:

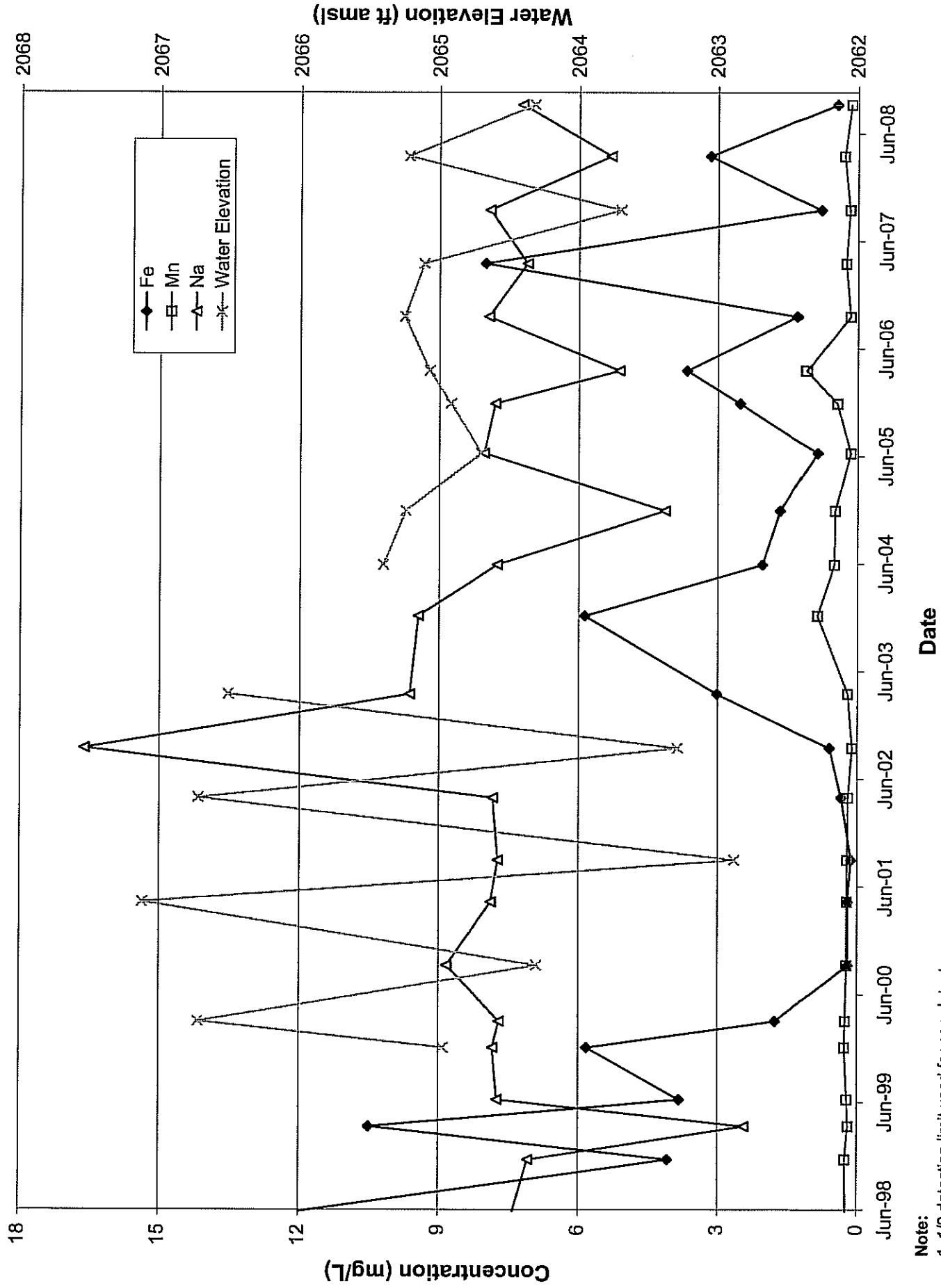
- 1/2 detection limit used for non-detects
- Iron is non-detect on 4/25/2001, 4/9/2002, 6/8/2004, 6/20/2005, 3/28/2006, 9/25/2007 and 3/25/2008

MW-5D Metals



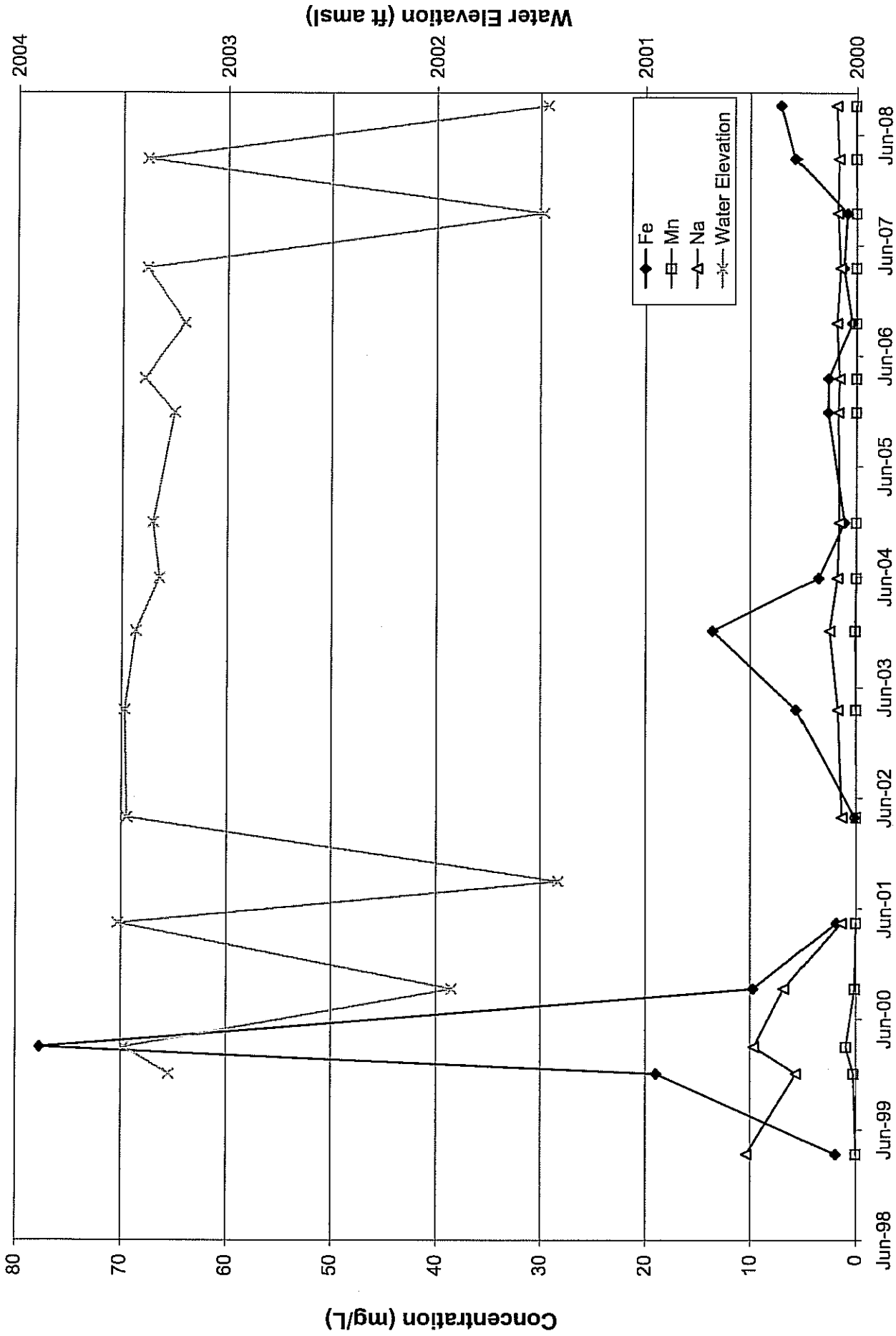
Notes:
 1. 1/2 Detection limit used for non-detects
 2. No water elevation available December 2003.

MW-5S Metals



Note:
 1. 1/2 detection limit used for non-detects.
 2. No water elevation available for December 2003.

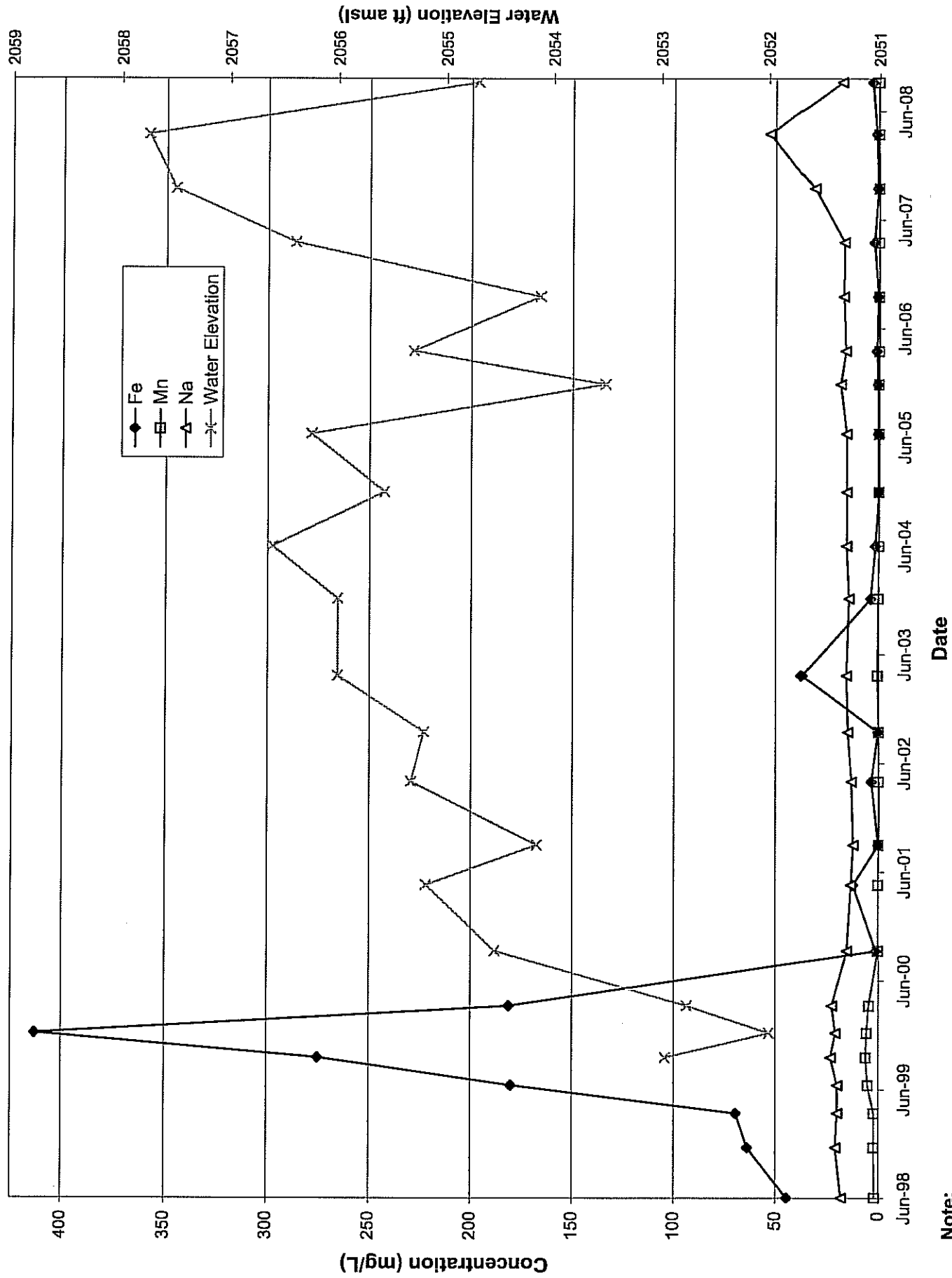
MW-15S Metals



Notes:

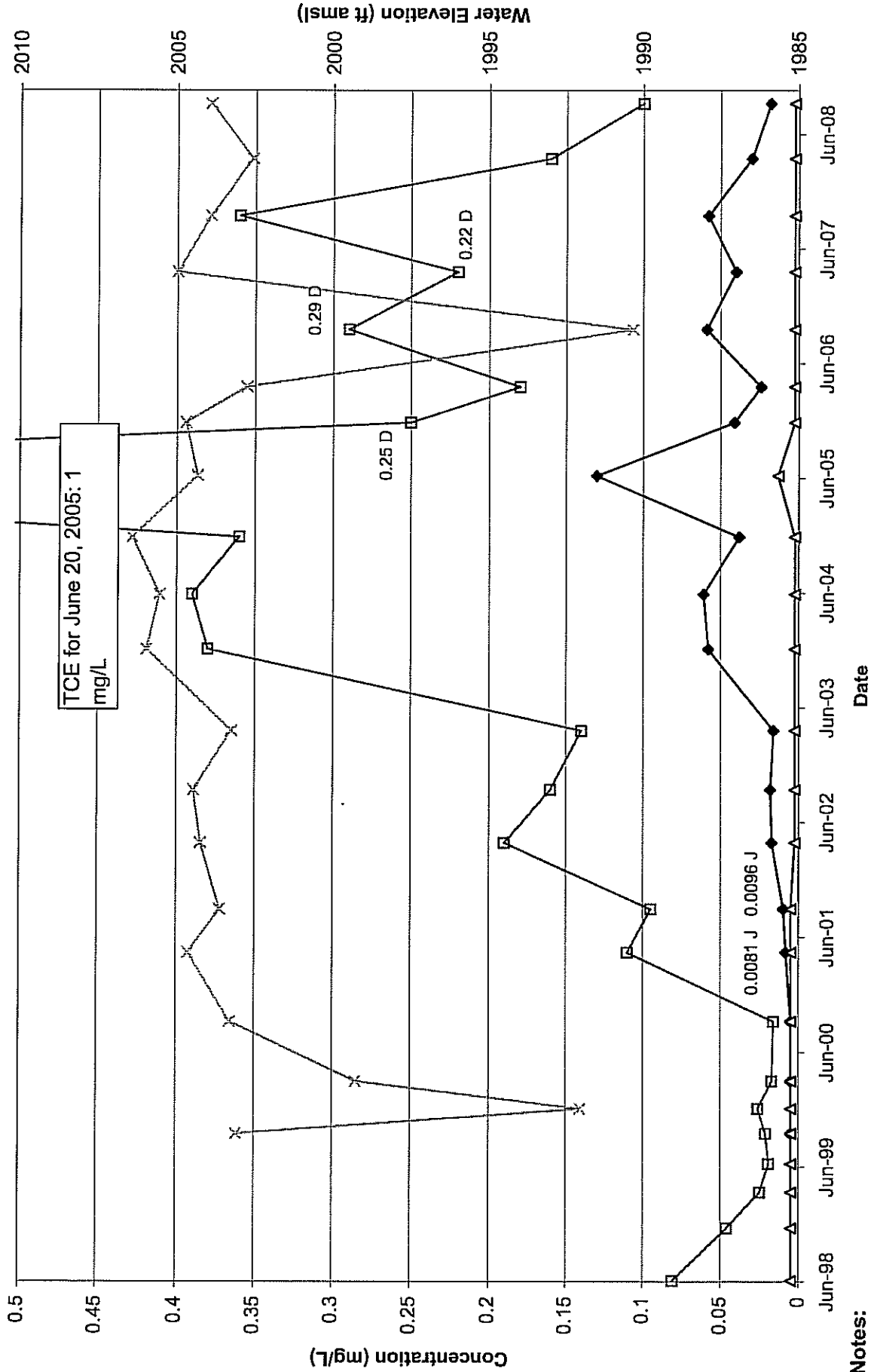
1. 1/2 detection limit used for non-detects
2. Manganese is non-detect on 4/10/2002 and 9/28/2006.
3. VOCs only collected on 9/1/2001 due to insufficient water volume.

MW-18S Metals



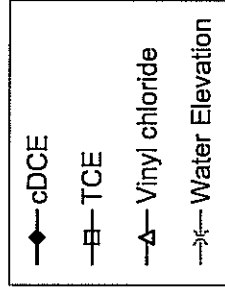
Note:
1. 1/2 Detection limit used for non-detects

CW-3A VOCs



Notes:

- 1/2 Detection limit used for non-detects.
- Refer to Table B-1 (following graphs) for analytical results used in graphs.
- Vinyl chloride results are non-detect except in June 2005.
- Results for cis-1,2-Dichloroethene on 3/13/2000 and 9/19/2000 are non-detect and estimated on 4/26/2001 and 9/11/2001.
- D - This flag indicates a result from a diluted sample.
- Data with flag labeled on graph as appropriate.



TCE for June 20, 2005: 1 mg/L

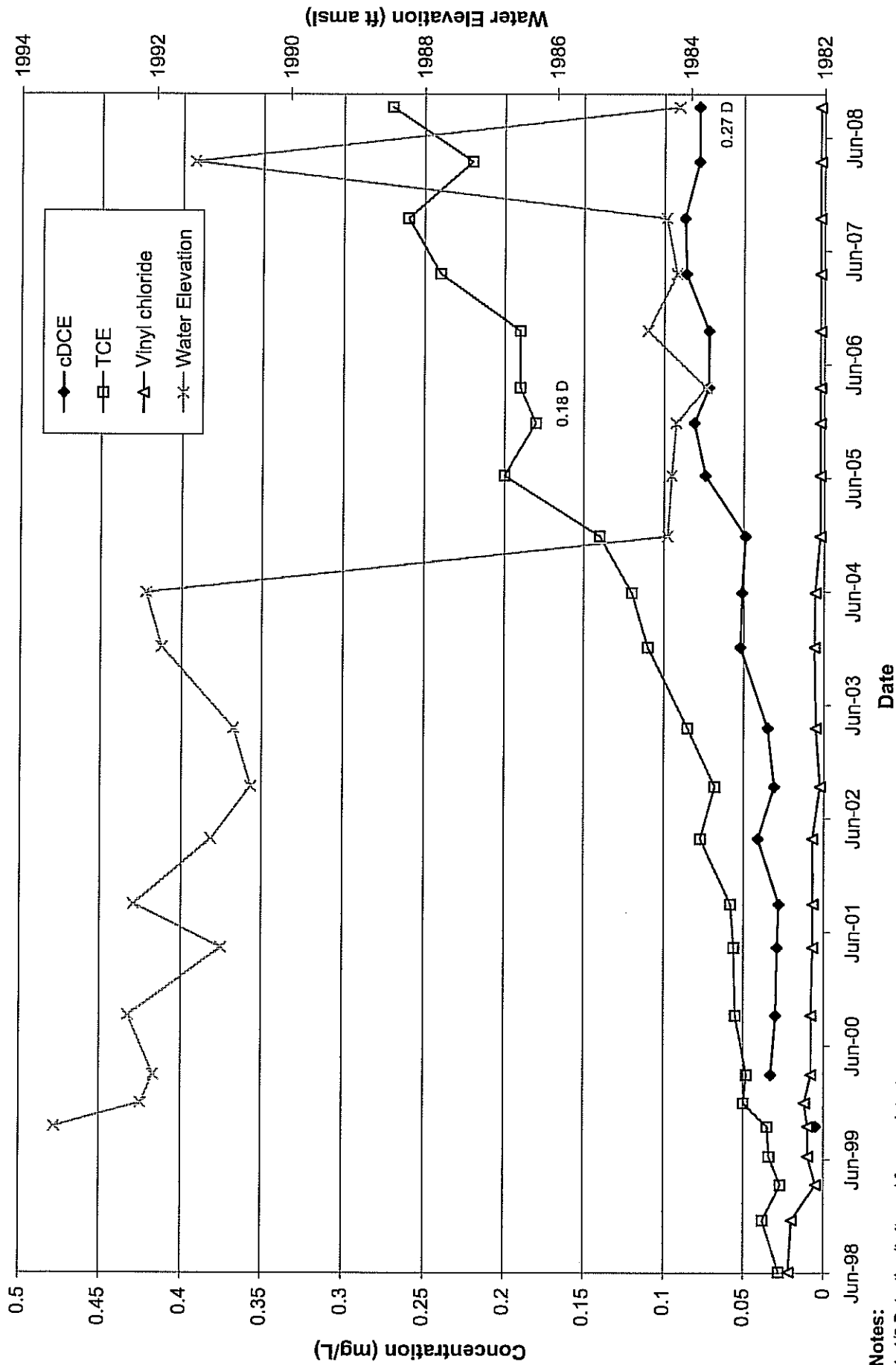
0.0081 J 0.0096 J

0.29 D

0.25 D

0.22 D

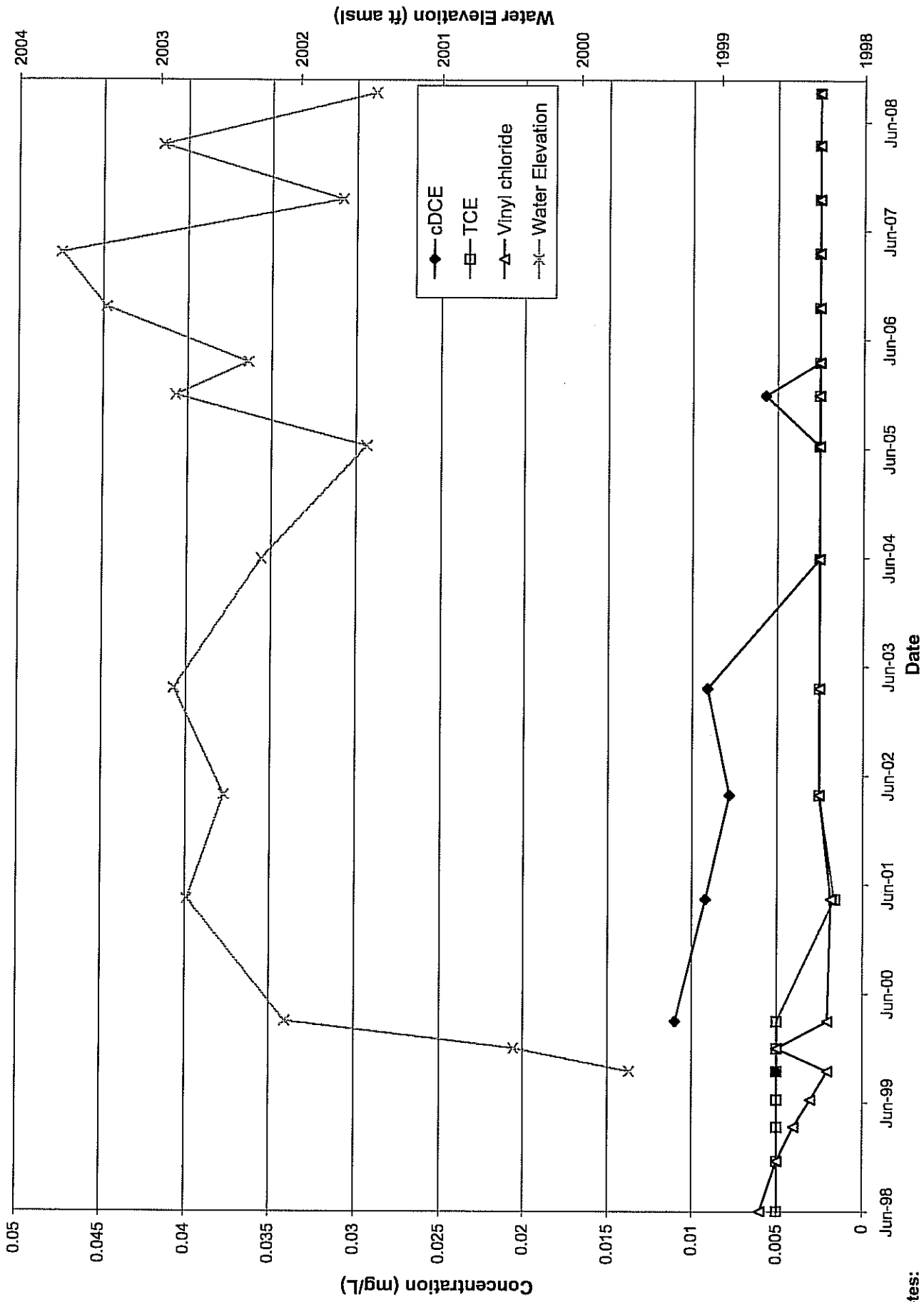
CW-3B VOCs



Notes:

- 1/2 Detection limit used for non-detects.
- Refer to Table B-1 (following graphs) for analytical results used in graphs.
- The majority of Vinyl chloride results are non-detect. Vinyl chloride results on 3/13/2000, 9/19/2000, 4/25/2001 and on 9/11/2001 are estimated values.
- Results for cDCE on 9/28/1999 are non-detect.
- D - This flag indicates a result from a diluted sample.
- Data with flag labeled on graph as appropriate.

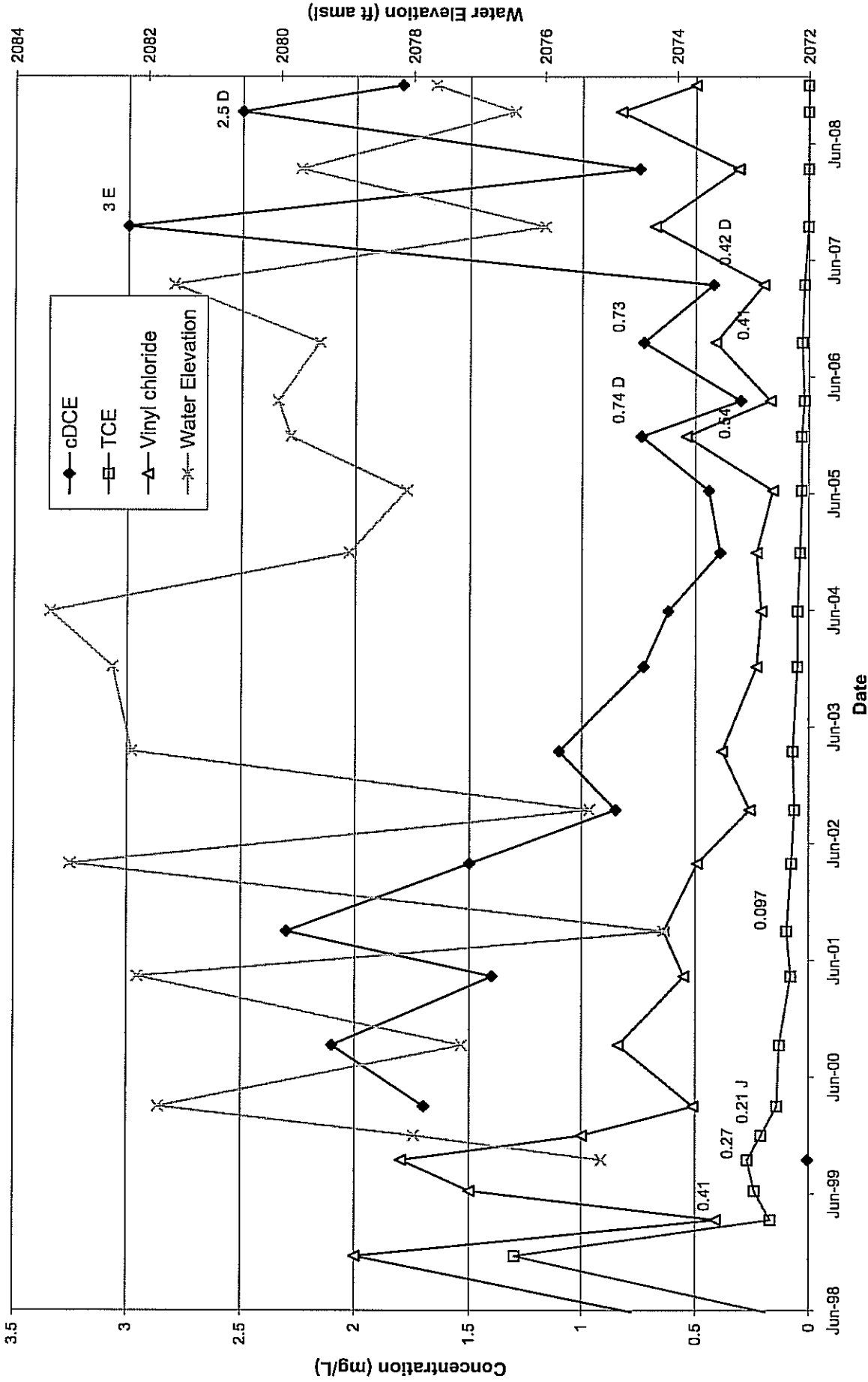
CW-4B VOCs



Notes:

- 1/2 Detection limit used for non-detects.
- Refer to Table B-1 (following graphs) for analytical results used in graphs.
- TCE and Vinyl chloride results are either non-detect or estimated values.
- A majority of cDCE results are non-detect.

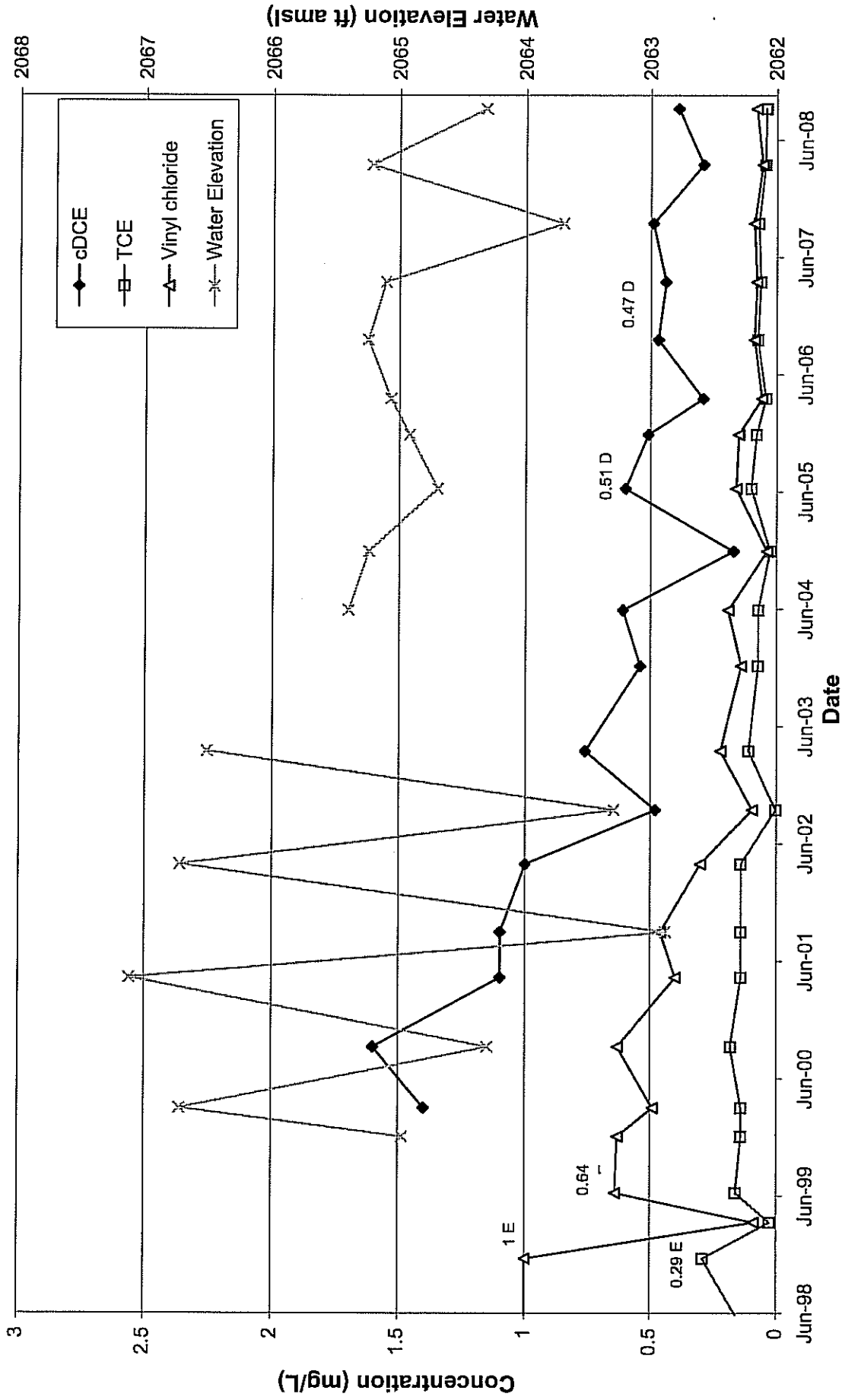
MW-4D VOCs



NOTES:

- 1/2 Detection limit used for non-detects.
- Refer to Table B-1 (following graphs) for analytical results used in graphs.
- E - Results are greater than the calibration range of the instrument used for analysis
- J - Estimated value.
- D - This flag indicates a result from a diluted sample.
- TCE is non-detect on 9/25/2007 and 3/24/2008.
- Data with flag labeled on graph as appropriate.

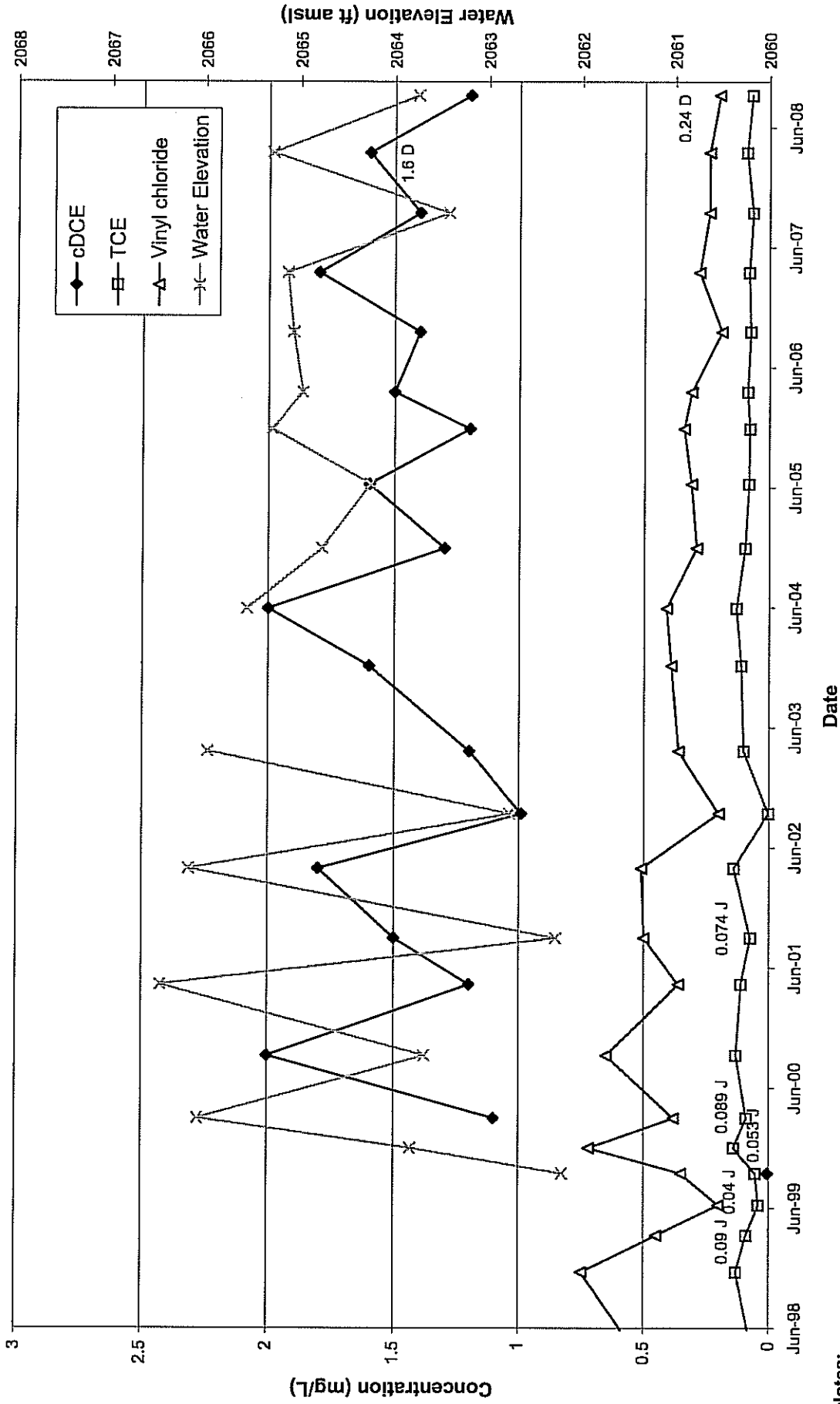
MW-5S VOCs



Notes:

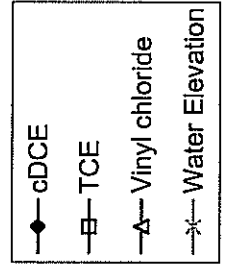
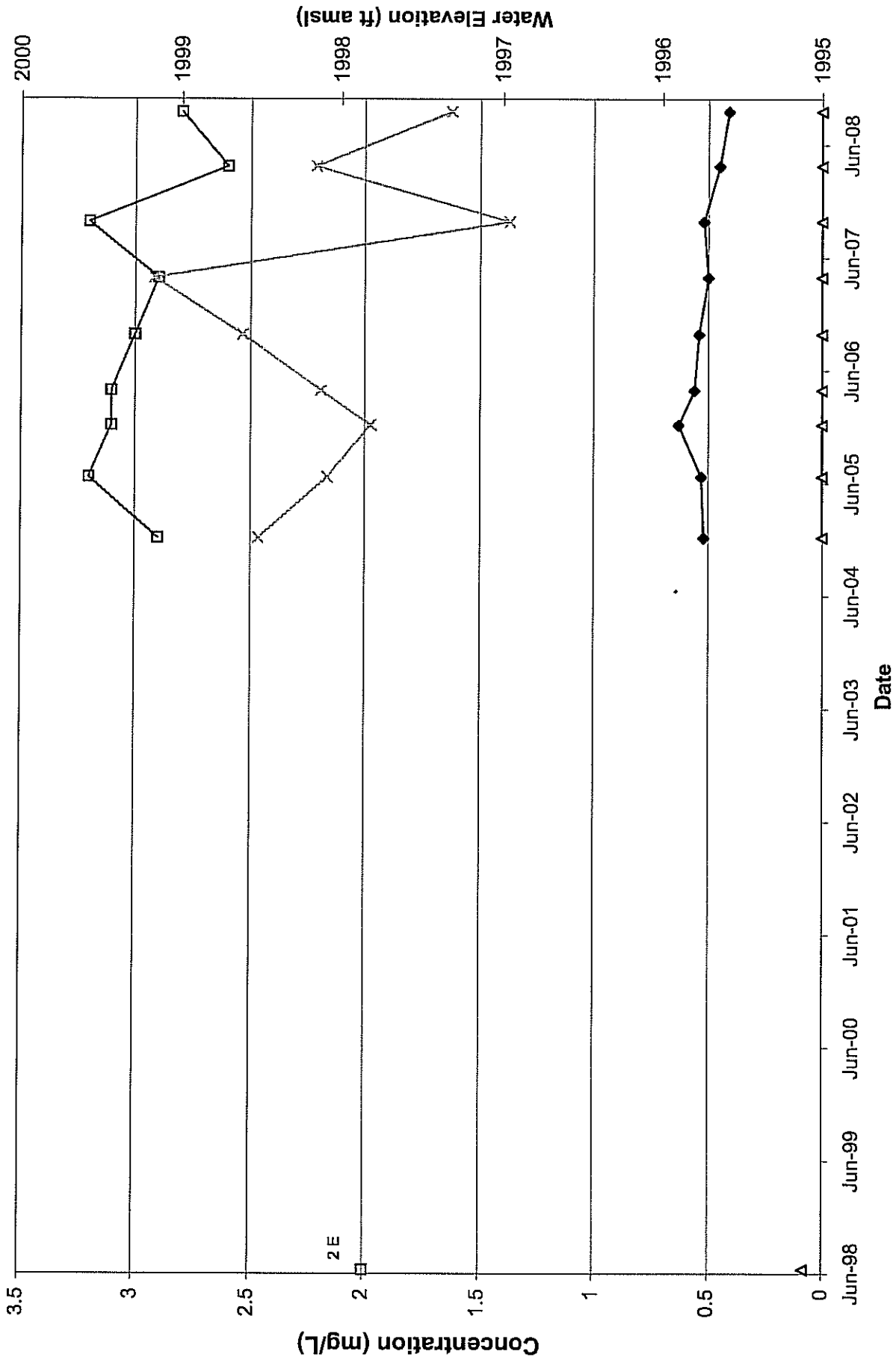
- 1/2 Detection limit used for non-detects.
- Refer to Table B-1 (following graphs) for analytical results used in graphs.
- TCE result on 9/26/2002 is non-detect.
- E - Results are greater than the calibration range of the instrument used for analysis.
- D - This flag indicates a result from a diluted sample.
- Data with flag labeled on graph as appropriate.
- No water elevation available for December 2003.

MW-5D VOCs



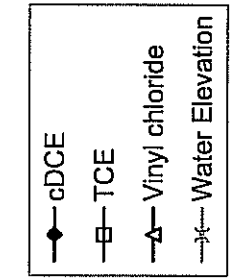
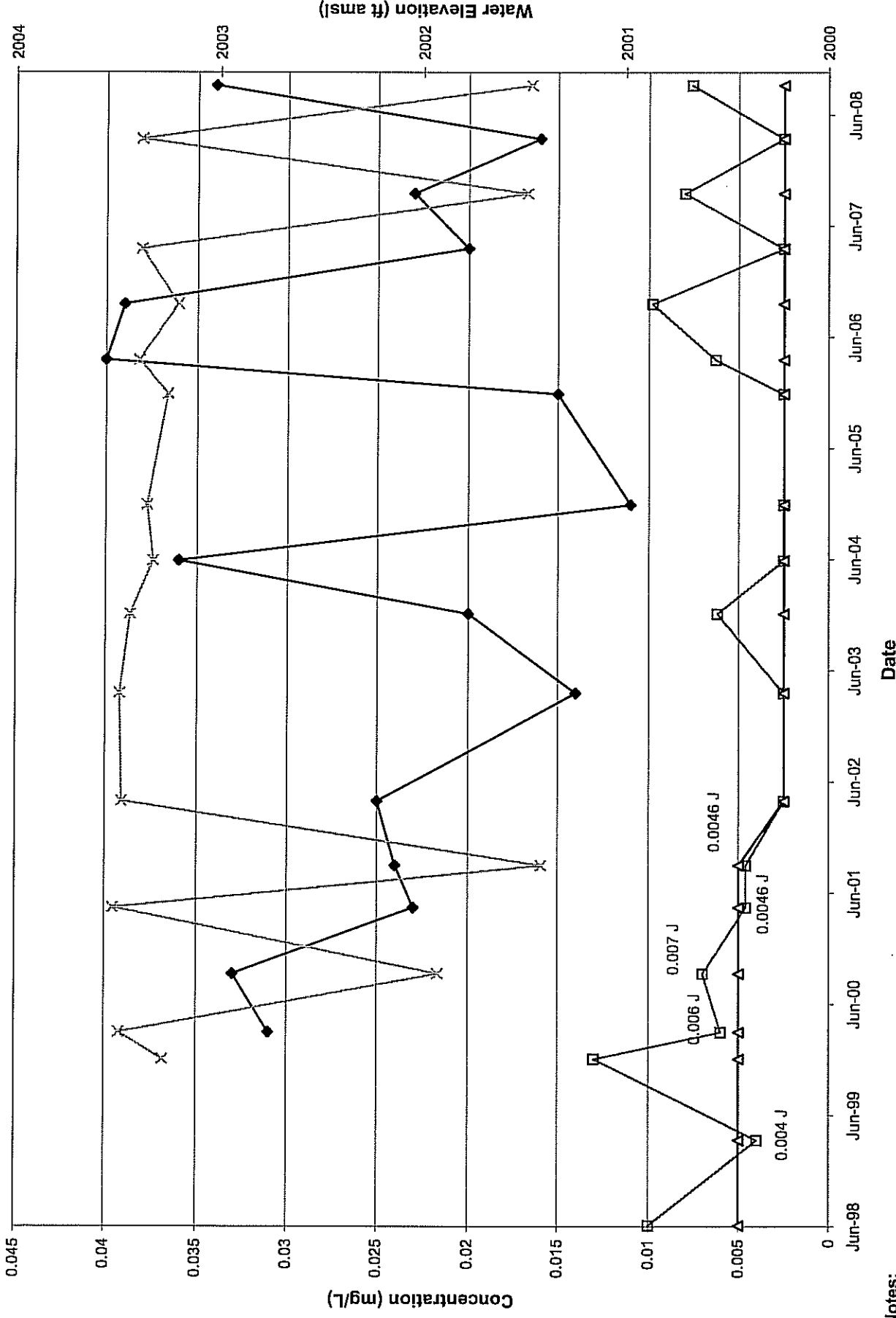
- Notes:**
- 1/2 Detection limit used for non-detects.
 - Refer to Table B-1 (following graphs) for analytical results used in graphs.
 - TCE results on 6/9/1998, 9/23/1999, 6/23/1999, 9/28/1999, 3/14/2000 and 9/12/2001 are estimated values.
 - Result for cDCE on 9/28/1999 is non-detect.
 - J - Estimated values.
 - D - This flag indicates a result from a diluted sample.
 - Data with flag labeled on graph as appropriate.
 - No water elevation available December 2003.

MW-11S VOCs



- NOTES:**
- 1/2 Detection limit used for non-detects.
 - Refer to Table B-1 (following graphs) for analytical results used in graphs.
 - E - Results are greater than the calibration range for the instrument used for analysis.
 - Vinyl chloride results are non-detect with an exception of result on 6/17/1998.
 - Data with flag labeled on graph as appropriate.

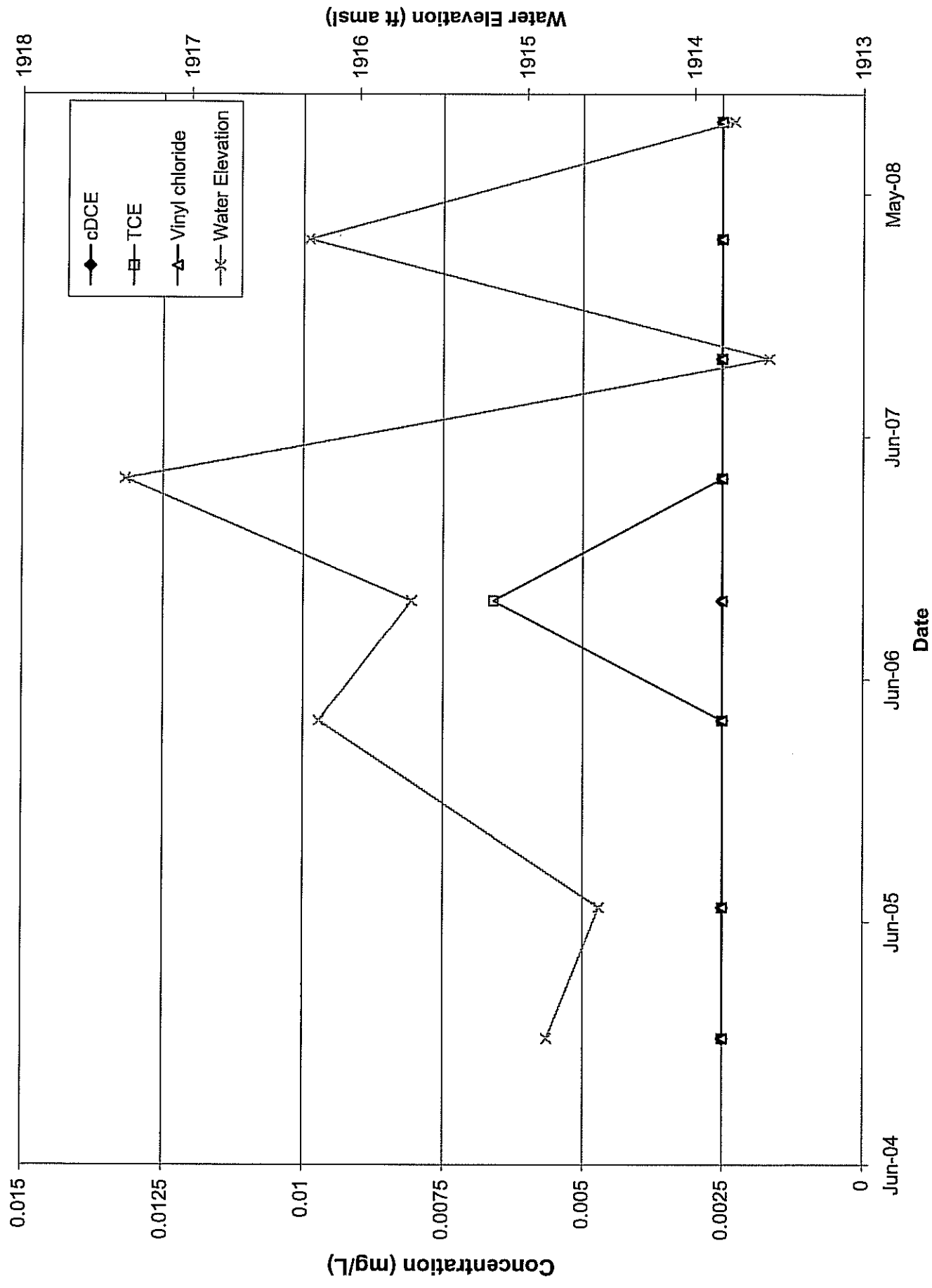
MW-15S VOCs



Date

- Notes:**
- 1/2 Detection limit used for non-detects.
 - Refer to Table B-1 (following graphs) for analytical results used in graphs.
 - J - Estimated value.
 - All Vinyl chloride and a majority of TCE results are non-detect.
 - Data with flag labeled on graph as appropriate.

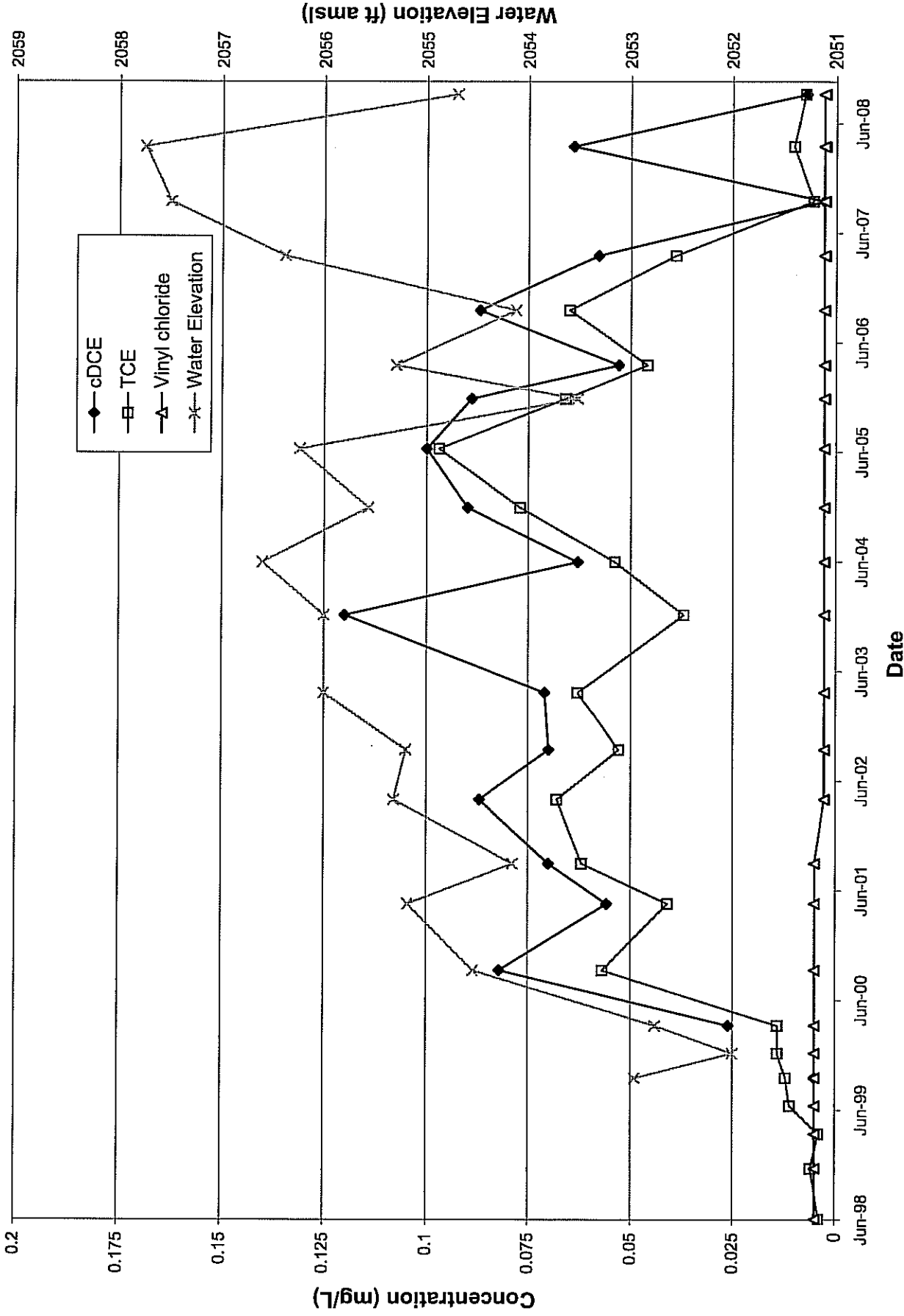
MW-16S VOCs



Notes:

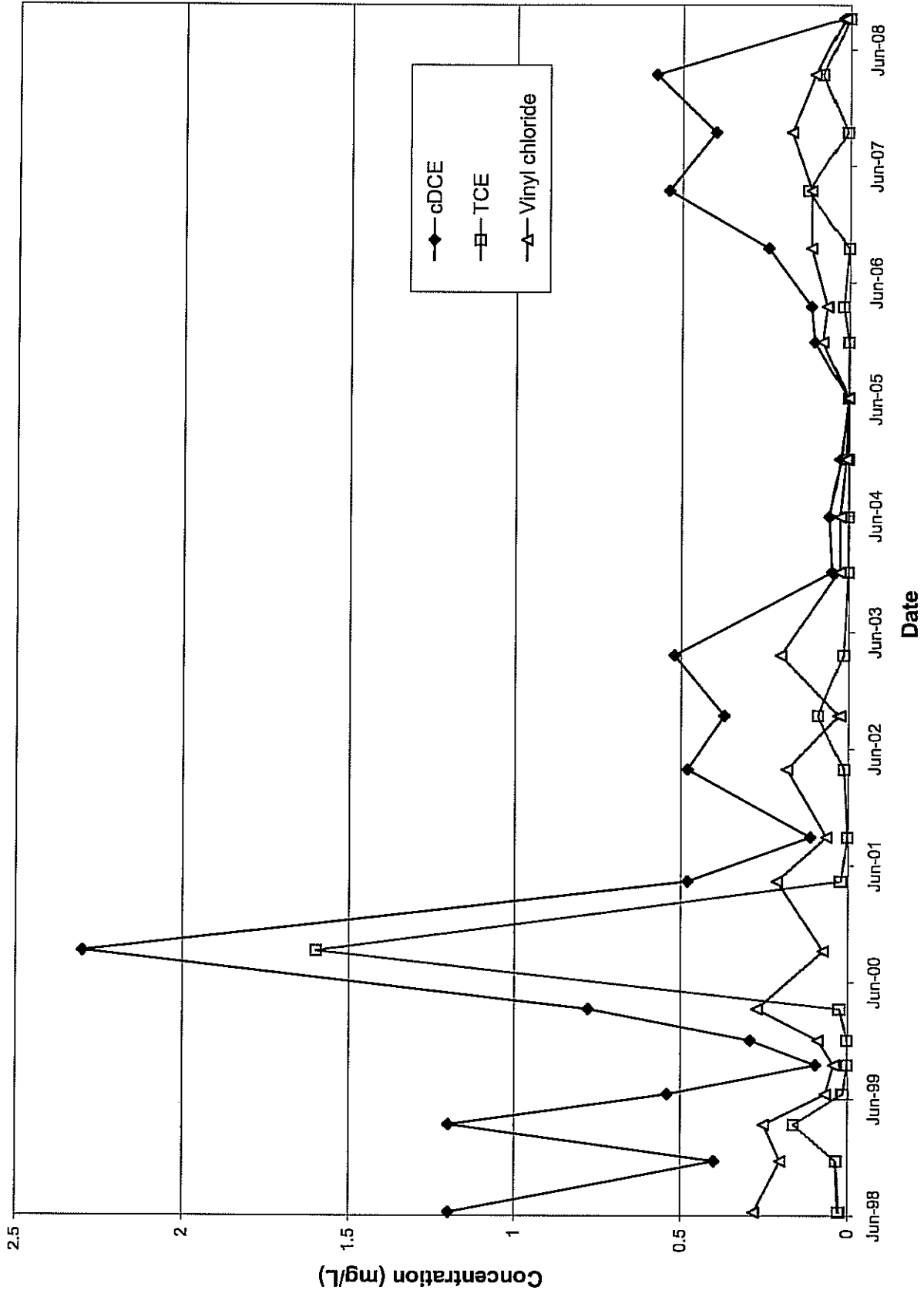
1. All values for cDCE, TCE and Vinyl chloride are non-detect with the exception of TCE on 9/27/2006.
2. There is no data available for MW-16S prior to December 2004.

MW-18S VOCs



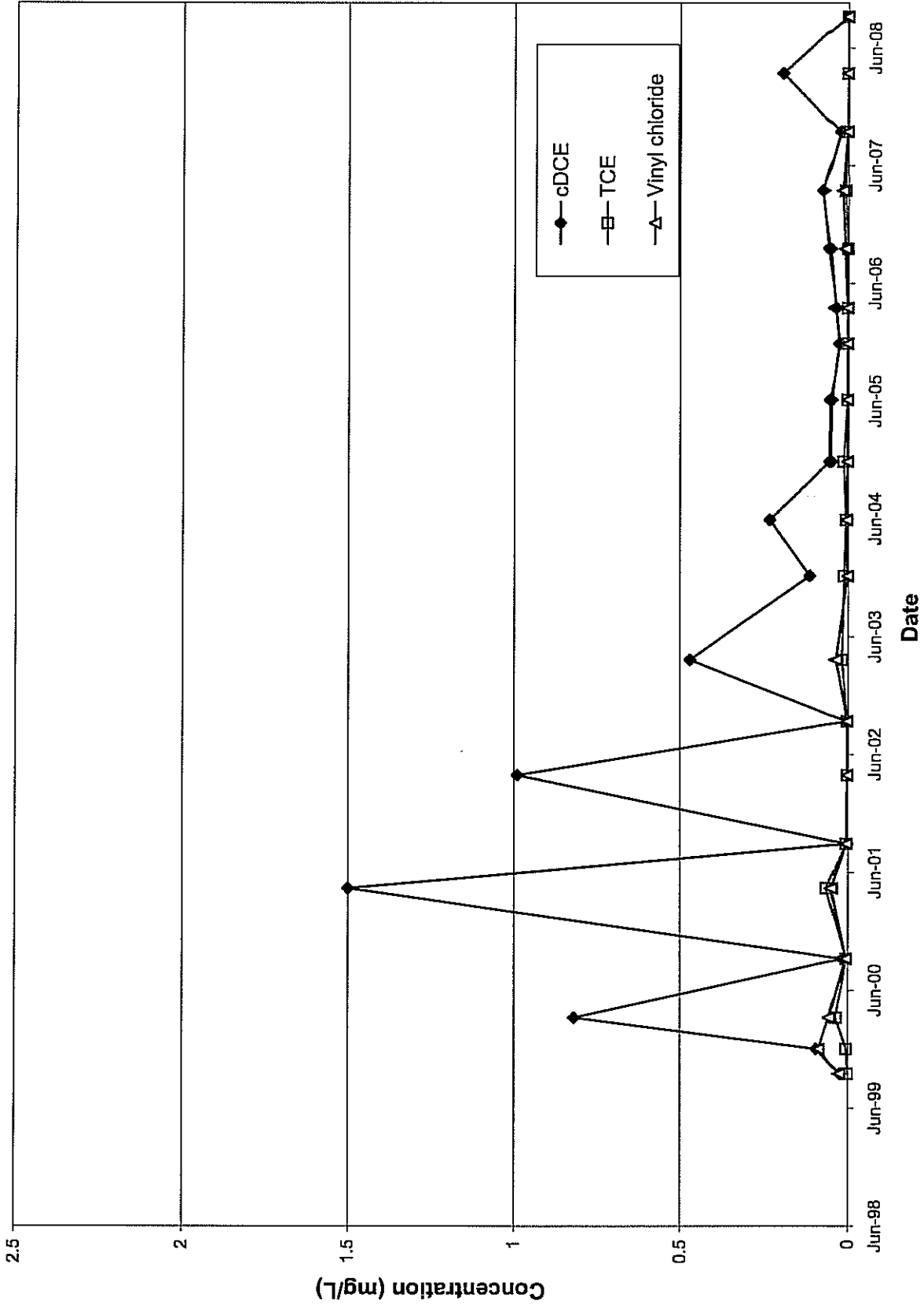
- Notes:
- 1/2 Detection limit used for non-detects.
 - Refer to Table B-1 (following graphs) for analytical results used in graphs.
 - TCE results on 6/15/1998, 12/1/1998 and 3/26/1999 are estimated values.
 - Vinyl chloride results are non-detect; cDCE is non-detect on 9/29/1999 and 9/25/2007.

MH-32



Notes:
1. 1/2 Detection limit used for non-detects.

MH-33



Notes:
1. 1/2 Detection limit used for non-detects.

Table 1

Statistical Analysis of Groundwater Data (1998-2008)
 Wellsville/Andover Landfill
 Wellsville, New York

Monitoring Well CW-3A Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date	6/17/98	12/1/98	3/25/99	6/24/99	9/29/99	12/16/99	3/13/00	9/19/00	4/26/01	9/11/01	4/10/02	9/25/02	4/7/03	12/16/03	6/8/04	12/7/04	6/20/05	12/6/05	3/30/06	9/28/06	3/30/07	9/25/07	3/25/08	9/17/08
Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Result (mg/L)	0.086	0.048	0.03	0.021	0.024	0.027	0.017	0.032	0.1301	0.113	0.207	0.178	0.156	0.438	0.451	0.398	1.143	0.291	0.204	0.349	0.26	0.418	0.19	0.118
Count "u"																								
Count "s"																								
Count "u"																								
Count "s"																								
Total "u"																								203
Total "s"																								73
0.086	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.048	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.032	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.1301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.438	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.451	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.204	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.349	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.418	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

S = Total Number of "u" minus Total Number of "s" = 130

STEP 4. a) Critical Value: From Table A-2, $Z_{\alpha/2}$ (critical value at 5% significance level) = 1.645

STEP 4. b) Probability Value: p -value = $(P(Z > z_0) = 1 - z_p)$, where z_p from Table A-1 = 0.9993
 p -value = 0.0007

STEP 5. a) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if absolute value of Z_0 is $> Z_{\alpha/2}$
 Since absolute value $z_0 = 3.1998 > 1.645$
 we reject the null hypothesis of no trend

STEP 5. b) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if p -value is less than significance level = 0.05.
 Since p -value = 0.0007 < 0.05
 we reject the null hypothesis of no trend

Therefore: We reject the null hypothesis of no trend in favor of the alternative hypothesis (i.e. evidence of upward trend).

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-9S, dated February 2006

Table 1

Statistical Analysis of Groundwater Data (1998-2008)
Wellsville/Andover Landfill
Wellsville, New York

Monitoring Well CW-3B Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date	6/17/98	12/1/98	3/25/99	6/24/99	9/28/99	12/13/99	3/13/00	6/19/00	9/19/00	12/10/00	3/10/01	6/10/01	9/10/01	12/10/01	3/10/02	6/10/02	9/10/02	12/10/02	3/10/03	6/10/03	9/10/03	12/10/03	3/10/04	6/10/04	9/10/04	12/10/04	3/10/05	6/10/05	9/10/05	12/10/05	3/10/06	6/10/06	9/10/06	12/10/06	3/10/07	6/10/07	9/10/07	12/10/07	3/10/08	6/10/08	9/10/08	12/10/08	Count "+"	Count "-"	Total "+"	Total "-"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000

S = Total Number of "+" minus Total Number of "-" = 210
STEP 4. a) Critical Value: From Table A-2, $z_{\alpha/0.05}$ (critical value at 5% significance level) = 1.645
STEP 4. b) Probability Value: p-value = $(P(Z > z_{\alpha})) = 1 - z_{\alpha}$, where z_{α} from Table A-1 = 0.9999 (off scale)
p-value = 0.0001
STEP 5. a) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if absolute value of z_{α} is $> z_{\alpha/0.05}$
Since absolute value $z_{\alpha} = 5.1873 > 1.645$
we reject the null hypothesis of no trend
STEP 5. b) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if p-value is less than significance level = 0.05.
Since p-value = 0.0001 < 0.05
we reject the null hypothesis of no trend
Therefore: We reject the null hypothesis of no trend in favor of the alternative hypothesis (i.e. evidence of upward trend)

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-9S, dated February 2006
1/2 detection limit used for non-detects.
Page 2 of 9

Table 1

Statistical Analysis of Groundwater Data (1998-2008)
Wellsvil/Andover Landfill
Wellsville, New York

Monitoring Well MW-4D Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date	6/9/98	12/1/98	3/24/99	6/23/99	9/28/99	12/13/99	3/14/00	6/21/00	9/21/00	12/10/00	3/26/02	6/26/02	9/26/02	12/18/03	3/28/03	6/19/04	9/16/04	12/10/04	3/27/05	6/29/05	9/27/05	12/7/05	3/27/06	6/27/06	9/25/07	3/24/08	6/16/08	12/11/08
Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Result (mg/L)	1.83	15.3	1.784	6.774	11.25	6.81	2.35	3.07	2.0401	3.037	2.067	1.173	3.012	1.011	0.88	0.659	1.317	1.312	0.503	1.17	0.651	3.68	1.05	3.33	2.3	2.5	2.3	2.3
Count "+"	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Count "-"																												
Count "u"																												
Total "+"	75																											
Total "-"	189																											

S = Total Number of "+" minus Total Number of "-" = -114

STEP 1. Null Hypothesis: H_0 : There is no trend. H_A : There is a downward trend.

STEP 2. Alternate Hypothesis: H_0 : There is a downward trend. H_A : There is a downward trend.

STEP 3. Test Statistics: $Z_0 = S - \text{sign}(S) / \sqrt{V(S)}$ Where: $\text{sign}(S) = 1$ if $S > 0$, 0 if $S = 0$, and -1 if $S < 0$
and $V(S) = (1/8)(n-1)(2n+5) - [t_1(t_1-1)(2t_1+5) + t_2(t_2-1)(2t_2+5) + \dots + t_g(t_g-1)(2t_g+5)]$
Where: n (number of samples) = 25
 t_1 = number of tied samples in the first group = 0
 t_2 = number of tied samples in second group = 0
 g = the number of tied sample groups

$V(S) = 1833.33$
 $Z_0 = -2.6391$

STEP 4. a) Critical Value: From Table A-2, $z_{0.05}$ (critical value at 5% significance level) = 1.645
STEP 4. b) Probability Value: p -value = $P(Z > z_0) = 1 - z_p$, where z_p from Table A-1 = 0.0041
 p -value = 0.9959

STEP 5. a) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if absolute value of z_0 is $> z_{0.05}$
Since absolute value $z_0 = -2.6391 > 1.645$
we reject the null hypothesis of no trend

STEP 5. b) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if p -value is less than significance level = 0.05.
Since p -value = 0.9959 > 0.05
we fail to reject the null hypothesis of no trend

Therefore: We fail to reject the null hypothesis of no trend at the 5% significance level (i.e. there is evidence of a downward trend but not enough to over rule no trend)

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-9S, dated February 2000

Table 1

Statistical Analysis of Groundwater Data (1988-2008)
Wellsville/Andover Landfill
Wellsville, New York

Monitoring Well MW-5D Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date	6/9/98	12/1/98	3/23/99	6/23/99	9/26/99	12/14/99	3/14/00	9/20/00	4/24/01	9/12/01	4/11/02	9/25/02	4/2/03	12/18/03	6/9/04	12/9/04	6/22/05	12/7/05	3/29/06	9/26/06	3/27/07	9/25/07	3/26/08	9/17/08	Count "+"	Count "-"	Count "0"
Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	6	17	
Result (mg/L)	2.484	2.98	1.74	1.166	1.84	3.134	1.581	2.78	1.7073	4.4528	4.9869	1.19	1.66	2.1	2.5814	1.686	1.991	1.618	1.897	1.665	2.161	1.706	1.945	1.469	118	158	Total "+"
	+					+	+	+		+	+				+										6	17	
		2.98				+				+	+				+											3	19
		1.74				+				+	+				+											11	10
		1.166				+				+	+				+											20	0
		1.84				+				+	+				+											10	9
		3.134								+	+				+											2	16
		1.581								+	+				+											15	2
		2.78								+	+				+											2	14
		1.7073								+	+				+											8	7
		4.4528								+	+				+											1	13
		4.9869																								0	13
		1.19																								0	0
		1.66																								12	0
		2.1																								9	2
		2.5814																								2	8
		1.686																								0	9
		1.991																								5	3
		1.618																								1	6
		1.897																								5	3
		1.665																								2	3
		2.161																								3	1
		1.706																								1	1
		1.945																								0	1

S = Total Number of "+" minus Total Number of "-" = -40 **STEP 4. a) Critical Value:** From Table A-2, $z_{\alpha,0.95}$ (critical value at 5% significance level) = 1.645

STEP 1. Null Hypothesis: H_0 : There is no trend. **STEP 4. b) Probability Value:** p -value = $(P(Z > z_c)) = 1 - z_p$, where z_p from Table A-1 = 0.165
 p -value = 0.8350

STEP 2. Alternative Hypothesis: H_A : There is a downward trend. **STEP 5. a) Conclusion:** For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if absolute value of z_c is $> z_{\alpha,0.95}$
 Since absolute value $z_c = 0.9674 < 1.645$
 we fail to reject the null hypothesis of no trend

STEP 3. Test Statistics: **STEP 5. b) Conclusion:** For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if p -value is less than significance level = 0.05.
 Since p -value = 0.8350 > 0.05
 we fail to reject the null hypothesis of no trend

Therefore: We fail to reject the null hypothesis of no trend (i.e. No trend / stable)

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-9S, dated February 2008

Table 1

Statistical Analysis of Groundwater Data (1998-2008)
Wellsville/Andover Landfill
Wellsville, New York

Monitoring Well MW-5S Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date	6/9/98	12/1/98	3/24/99	6/23/99	12/16/99	3/14/00	9/20/00	4/23/01	9/12/01	4/11/02	9/26/02	3/28/03	12/18/03	6/9/04	12/9/04	6/22/05	12/7/05	3/29/06	9/28/06	3/27/07	9/25/07	3/26/08	9/17/08	Count "+"	Count "-"	
Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Count "+"	Count "-"	
Result (mg/L)	3.06	4.796	0.116	2.413	5.14	2.03	2.41	1.6543	1.7	1.44	0.575	1.09	0.753	0.872	0.233	0.86	0.74	0.391	0.634	1.118	0.651	0.391	0.512	56	196	
3.06	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	20	
4.796	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	20	
0.116	-	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	20	0	
2.413	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	18	
5.14	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	18	
2.03	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	16	
2.41	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	16	
1.6543	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	16	
1.7	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14	
1.44	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14	
0.575	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	13	
1.09	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14	
0.753	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	
0.872	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	
0.233	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	7	
0.86	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8	
0.74	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0	
0.391	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6	
0.634	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	
1.118	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	
0.651	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3	
0.391	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	
																								1	0	
S = Total Number of "+" minus Total Number of "-" =																								-140		

STEP 4. a) Critical Value: From Table A-2, $Z_{0.05}$ (critical value at 5% significance level) = 1.645

STEP 4. b) Probability Value: p -value = $(P(Z > z_p)) = 1 - z_p$, where z_p from Table A-1 = 0.0001 (off scale)

STEP 5. a) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if absolute value of Z_p is $> Z_{0.05}$

Since absolute value $Z_p = 3.6723 > 1.645$

we reject the null hypothesis of no trend

For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if p -value is less than significance level = 0.05.

Since p -value = 0.9999 > 0.05

we fail to reject the null hypothesis of no trend

Therefore: We fail to reject the null hypothesis of no trend at the 5% significance level (i.e. there is evidence of a downward trend but not enough to over rule no trend)

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-95, dated February 2006

1/2 detection limit used for non-detects.

Table 1

Statistical Analysis of Groundwater Data (1998-2008)
Wellsville/Andover Landfill
Wellsville, New York

Monitoring Well MW-11S Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date Event	6/17/98 1	12/8/04 2	6/23/05 3	12/8/05 4	3/31/06 5	9/27/06 6	3/30/07 7	9/26/07 8	3/24/08 9	9/17/08 10	Count "+"	Count "-"
Result (mg/L)	2.752	3.42	3.73	3.73	3.66	3.54	3.4	3.72	3.05	3.21	9	0
	3.42	+	+	+	+	+	+	+	+	+	5	3
	3.73	+	+	0	-	-	-	-	-	-	0	6
	3.73	+	+	-	-	-	-	-	-	-	0	6
	3.66	+	+	-	-	-	-	-	-	-	1	4
	3.54	+	+	-	-	-	-	-	-	-	1	3
	3.4	+	+	-	-	-	-	-	-	-	0	2
	3.72	+	+	-	-	-	-	-	-	-	0	2
	3.05	+	+	-	-	-	-	-	-	+	1	0
											18	26
											Total "+"	Total "-"

S = Total Number of "+" minus Total Number of "-" = -8

STEP 4. a) Critical Value:

H₀: There is no trend.

STEP 1. Null Hypothesis:

H_A: There is a downward trend.

STEP 2. Alternative Hypothesis:

STEP 3. Test Statistics:

$Z_0 = S - \text{sign}(S) / \sqrt{V(S)}$ Where: $\text{sign}(S) = 1$ if $S > 0$, 0 if $S = 0$, and -1 if $S < 0$
and $V(S) = 1/18(n(n-1)(2n+5) - [t_1(t_1-1)(2t_1+5) + t_2(t_2+5) + \dots \text{up to } t_g])$

Where:
n (number of samples) = 10
t₁ = number of tied samples in the first group = 2
t₂ = number of tied samples in second group = 0
g = the number of tied sample groups

$V(S) = 124.00$
 $Z_0 = -0.6286$

From Table A-2, $Z_{0.95}$ (critical value at 5% significance level) = 1.645

STEP 4. b) Probability Value:

p-value = $P(Z > Z_0) = 1 - Z_{p^*}$ where Z_{p^*} from Table A-1 = 0.2648
p-value = 0.7352

STEP 5. a) Conclusion:

For testing the hypothesis, H₀ (no trend) against H_A - reject H₀ if absolute value of Z_0 is $> Z_{0.95}$
Since absolute value $Z_0 = 0.6286 < 1.645$
we fail to reject the null hypothesis of no trend

STEP 5. b) Conclusion:

For testing the hypothesis, H₀ (no trend) against H_A - reject H₀ if p-value is less than significance level = 0.05.
Since p-value = 0.7352 $>$ 0.05
we fail to reject the null hypothesis of no trend

Therefore: We fail to reject the null hypothesis of no trend (i.e. No trend / stable)

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-9S, dated February 2006

Table 1

Statistical Analysis of Groundwater Data (1998-2008)
Wellsville/Andover Landfill
Wellsville, New York

Monitoring Well MW-15S Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date	6/17/98	3/25/99	12/16/99	3/13/00	4/26/00	9/21/00	4/10/01	9/11/01	4/10/02	3/31/03	12/16/03	6/8/04	12/8/04	12/7/05	3/30/06	9/28/06	3/29/07	9/26/07	3/24/08	9/16/08	9/17/08	Count "+"	Count "-"
Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
Result (mg/L)	0.103	0.027	0.073	0.037	0.04	0.0276	0.0286	0.025	0.014	0.0262	0.036	0.011	0.015	0.0463	0.0488	0.02	0.031	0.016	0.0416				
0.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	19
0.027	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	11	7
0.073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	17
0.037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	11
0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	11
0.0276	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	4	11
0.0286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7
0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	7
0.014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7
0.0262	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	7
0.036	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	5
0.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1
0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4
0.0463	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5
0.0488	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	0
0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	0
0.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5
0.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1
0.0416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1
0.0416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0
																						0	0
																						83	106

S = Total Number of "+" minus Total Number of "-" = -23

STEP 1. Null Hypothesis: H_0 : There is no trend.

STEP 2. Alternative Hypothesis: H_A : There is a downward trend.

STEP 3. Test Statistics:

$Z_0 = S - \text{sign}(S) / \sqrt{V(S)}$ Where: $\text{sign}(S) = 1$ if $S > 0$, 0 if $S = 0$, and -1 if $S < 0$
and $V(S) = 1/18(n(n-1)(2n+5) - [(t_1(t_1-1)(2t_1+5) + t_2(t_2+5) + \dots + t_k(t_k+5)])$

Where: n (number of samples) = 20

t_1 = number of tied samples in the first group = 2

t_2 = number of tied samples in second group = 0

g = the number of tied sample groups

$V(S) = 949.00$

$Z_0 = -0.7142$

Therefore:

We fail to reject the null hypothesis of no trend (i.e. No trend / stable)

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-9S, dated February 2006

1/2 detection limit used for non-detects.

STEP 4. a) Critical Value: From Table A-2, $Z_{0.95}$ (critical value at 5% significance level) = 1.645

STEP 4. b) Probability Value: p -value = $P(Z > Z_0) = 1 - Z_p$ where Z_p from Table A-1 = 0.2376
 p -value = 0.7624

STEP 5. a) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if absolute value of Z_0 is $> Z_{0.95}$
Since absolute value $Z_0 = 0.7142 < 1.645$
we fail to reject the null hypothesis of no trend

STEP 5. b) Conclusion: For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if p -value is less than significance level = 0.05.
Since p -value = 0.7624 $>$ 0.05
we fail to reject the null hypothesis of no trend

Table 1
 Statistical Analysis of Groundwater Data (1998-2008)
 Wellsville/Andover Landfill
 Wellsville, New York

Monitoring Well MW-18S Total VOCs

COMPUTATIONS: Compute Statistic (S).

Date	6/15/98	12/1/98	3/26/99	6/28/99	9/29/99	12/20/99	3/21/00	9/21/00	4/30/01	9/11/01	4/12/02	9/25/02	4/3/03	12/17/03	6/11/04	12/9/04	6/23/05	12/6/05	3/28/06	9/27/06	3/28/07	9/25/07	3/26/08	9/16/08	Count "+"	Count "-"	Count "0"	Total "0"			
Event	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Count "+"	Count "-"	Count "0"	Total "0"			
Result (mg/L)	0.024	0.026	0.018	0.038	0.04	0.049	0.087	0.139	0.097	0.132	0.155	0.123	0.134	0.157	0.117	0.167	0.197	0.155	0.099	0.152	0.097	0.0052	0.074	0.0141	Count "+"	Count "-"	Count "0"	Total "0"			
	0.024	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	20	3	3	103			
	0.026	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	19	2	2	103			
	0.018	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	19	2	2	103			
	0.038	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	18	2	2	103			
	0.04	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	17	2	2	103			
	0.049	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	16	2	2	103			
	0.087	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	14	3	3	103			
	0.139	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	6	10	10	103			
	0.132	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	11	3	3	103			
	0.155	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	7	7	7	103			
	0.123	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	3	9	9	103			
	0.134	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	6	6	6	103			
	0.157	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	5	5	5	103			
	0.117	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	2	8	8	103			
	0.167	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	1	7	7	103			
	0.197	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	0	103			
	0.155	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	6	6	103			
	0.134	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	1	4	4	103			
	0.152	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	0	103			
	0.097	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	0	103			
	0.052	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	2	2	2	103			
	0.074	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	0	0	0	103			
S = Total Number of "+" minus Total Number of "-" =																									68			STEP 4. a) Critical Value:	From Table A-2, $z_{0.95}$ (critical value at 5% significance level) = 1.645		
STEP 1. Null Hypothesis:	H_0 : There is no trend.																										STEP 4. b) Probability Value:	p -value = $(P(Z > z_0)) = 1 - z_p$, where z_p from Table A-1 = 0.9516		p -value = 0.0482	
STEP 2. Alternative Hypothesis:	H_A : There is an upward trend.																										STEP 5. a) Conclusion:	For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if absolute value of z_0 is $> z_{0.95}$		Since absolute value $z_0 = 1.6529 > 1.645$ we reject the null hypothesis of no trend	
STEP 3. Test Statistics:	Where: $\text{sign}(S) = 1$ if $S > 0$, 0 if $S = 0$, and -1 if $S < 0$																										STEP 5. b) Conclusion:	For testing the hypothesis, H_0 (no trend) against H_A - reject H_0 if p -value is less than significance level = 0.05.		Since p -value = 0.0482 < 0.05 we reject the null hypothesis of no trend	
and $V(S) = 1/18(n(n-1)(2n+5) - [t_1(t_1-1)(2t_1+5) + t_2(t_2-1)(2t_2+5)] + \dots$ up to t_g)																															
Where:	n (number of samples) = 24																														
	t_1 = number of tied samples in the first group = 2																														
	t_2 = number of tied samples in second group = 2																														
	g = the number of tied sample groups																														
	$V(S) = 1623.33$																														
	$z_0 = 1.6529$																														
Therefore:	We reject the null hypothesis of no trend in favor of the alternative hypothesis (i.e. evidence of upward trend)																														

Reference: USEPA Data Quality Assessment: Statistical Methods for Practitioner EPA QA/G-9S, dated February 2006

Table 2

**2009 Proposed Monitoring Program
Wellsville/Andover Landfill**

Location	Current Sampling Frequency	Proposed Sampling Frequency	Proposed Analyte List ¹
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Groundwater

CW-3A	Semiannual	NR	NR
CW-3B	Semiannual	Annual - Fall	Field, VOCs, Metals
CW-4A	Annual	NR	NR
CW-4B	Semiannual	Annual - Fall	Field, VOCs, Metals
MW-15DA	Semiannual	NR	NR
MW-15S	Semiannual	Annual - Fall	Field, VOCs, Metals
MW-17D	Annual	Annual - Fall	Field, VOCs, Metals
MW-17S	Annual	Annual - Fall	Field, VOCs, Metals
MW-18D	Annual	Annual - Fall	Field, VOCs, Metals
MW-18S	Semiannual	Annual - Fall	Field, VOCs, Metals
MW-1D	Annual	NR	NR
MW-3D	Annual	Annual - Fall	Field, VOCs, Metals
MW-3S	Annual	Annual - Fall	Field, VOCs, Metals
MW-4D	Semiannual	Annual - Fall	Field, VOCs, Metals
MW-5D	Semiannual	Annual - Fall	Field, VOCs, Metals
MW-5S	Semiannual	Annual - Fall	Field, VOCs, Metals
MW-11S	Semiannual	Annual - Fall	VOCs
MW-16S	Semiannual	Annual - Fall	VOCs

Surface Water

SWS-1	Annual	Annual	Field, VOCs, Metals, Wet Chem
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Sediment

SWS-1	Annual	NR	NR
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Groundwater Cut-Off System

MH-32	Semiannual	Annual - Fall	Field, VOCs, Metals, Wet Chem
MH-33	Semiannual	Annual - Fall	Field, VOCs, Metals, Wet Chem

Leachate

LS-1	Semiannual	Annual - Fall	Field, VOCs, Metals
------	------------	---------------	---------------------

Notes

NR - Not required unless site conditions warrant (i.e., significant leachate breakout, leachate spill, etc.)

¹ - Field = Field Parameters (pH, Conductivity, Dissolved Oxygen, Turbidity, Oxidation Reduction Potential)

- VOCs = Volatile Organic Compounds method 8260

- Metals = As, Ba, Cd, Ca, Cr, Cu, Fe, Pb, Mg, Mn, Ni, P, Se, Na, Z

- Wet Chem = Nitrate Nitrogen and Total Dissolved Solids

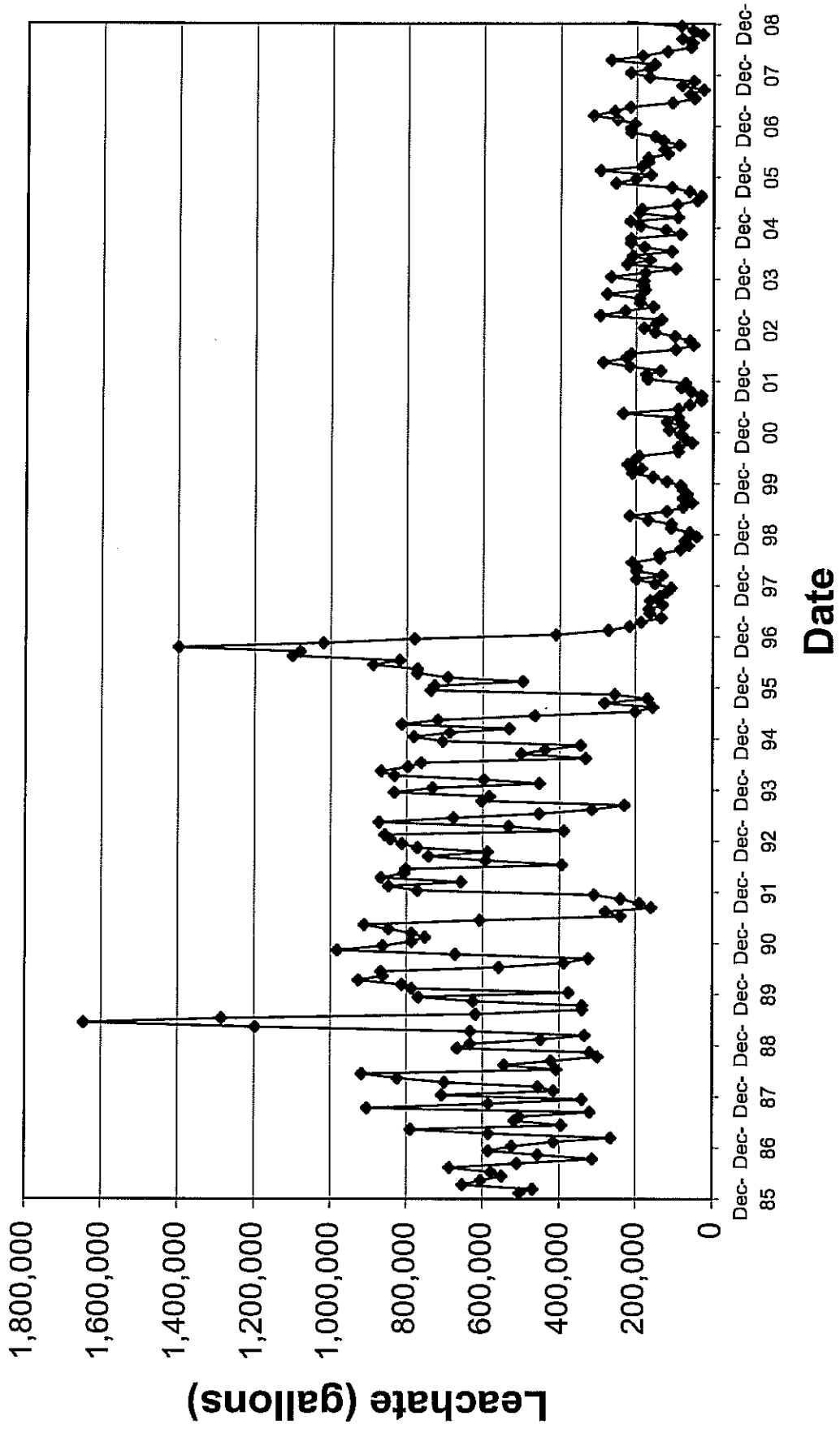
² WAL-19 tested for VOCs prior to filters, between filters and after filters

Location	Current Sampling Frequency	Proposed Sampling Frequency	Proposed Analyte List ¹
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Residential Water Supply

WAL-1	Every 3 Years	NR	NR
WAL-2	Semiannual	Annual	Metals
WAL-3	Every 3 Years	NR	NR
WAL-4	Every 3 Years	NR	NR
WAL-5	Semiannual	Annual	VOCs, Metals
WAL-6	Every 3 Years	NR	NR
WAL-7	Every 3 Years	NR	NR
WAL-8	Every 3 Years	NR	NR
WAL-9	Every 3 Years	NR	NR
WAL-10	Every 3 Years	NR	NR
WAL-11	Every 3 Years	NR	NR
WAL-12	Every 3 Years	NR	NR
WAL-13	Every 3 Years	NR	NR
WAL-14	Every 3 Years	NR	NR
WAL-15	Every 3 Years	NR	NR
WAL-16	Every 3 Years	NR	NR
WAL-17	Every 3 Years	NR	NR
WAL-18	Every 3 Years	NR	NR
WAL-19	Semiannual	Semiannual	VOCs ²
WAL-20	Every 3 Years	NR	NR

Leachate Quantity Wellsville-Andover Landfill



New York State Department of Environmental Conservation

Division of Environmental Remediation, Region 9

270 Michigan Avenue, Buffalo, New York 14203-2915

Phone: (716) 851-7220; Fax (716) 851-7226

Website: www.dec.ny.gov



Alexander B. Grannis
Commissioner

May 12, 2009

William Whitfield
Director of Public Works
Village of Wellsville
200 Bolivar Road
Wellsville, New York 14895

Dear Mr. Whitfield:

Wellsville-Andover Landfill
Site hw902004
Wellsville, Alleghany County

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have reviewed the Site Monitoring Evaluation and Proposed Revised Monitoring Plan dated April 3, 2009, for the Wellsville-Andover Landfill site. This plan recommends modification of the environmental sampling for the landfill and the surrounding residences. Based on this review, the following determinations regarding the sampling frequency have been made.

Groundwater Monitoring Well CW-3A

This overburden monitoring well has increasing Volatile Organic Compounds (VOC) contamination and should be retained for annual sampling for field, VOC and metal analytes. It monitors a different interval of the overburden formation than the neighboring CW-3B monitoring well. The location is adjacent and downgradient from the landfill and could be an important sentinel well if the groundwater flow patterns should change.

Groundwater Monitoring Wells CW-3B, CW-4B, MW-15S, MW-17D, MW-17S, MW-18D, MW-18S, MW-3D, MW-3S

We concur with the proposed annual frequency and the proposed analyte list for these monitoring wells.

Groundwater Monitoring Well CW-4A

This monitoring well should be retained for annual sampling since it monitors a different interval of the overburden formation than the neighboring CW-4B. The location is adjacent and downgradient from the landfill and could be an important sentinel well if the groundwater flow patterns should change.

Groundwater Monitoring Well MW-15DA

This bedrock well has not been sampled following the remedial action since it has been dry. We concur with the removal from the required sampling list. This monitoring well should be decommissioned.

Groundwater Monitoring Well MW-1D

This monitoring well can also be decommissioned. MW-3S and MW-3D can both function as the upgradient monitoring wells. We concur with the deletion from the sampling schedule. This monitoring well is located at too great a distance to be useful as an upgradient well.

Groundwater Monitoring Wells MW-4D, MW-5D, MW-5S, MW-11S and MW-16S

These monitoring wells should all be sampled annually for the field, VOCs and metals parameters. In addition, there should be a sampling round in the spring for VOCs only. The VOCs in MW-4D, MW-5D, MW-5S and MW-11S are of concern to the Departments. In addition, groundwater concentrations in the sentinel landfill well MW-16 is of particular concern, since it is the furthest downgradient monitoring well from the landfill. If MW-16 becomes contaminated, there should be an assessment of both the remedy and the downgradient monitoring and residential sampling.

Surface Water and Sediment Sampling – SWS-1

Since these monitoring points are potential exposure points, they should be monitored annually for the field, VOCs and metals parameters. In addition the surface water and sediment sampling should be sampled for the full wet chemistry list that it currently in effect.

Groundwater Cut-Off System MH-32, MH-33 and Leachate LS-1

We concur with the proposed sampling frequency and analyte list for these sampling points.

Recommendation to discontinue sampling of several residential wells

We concur with the recommendation to discontinue sampling at the following residential wells currently within the sampling program:

WAL-1:Shettine Residence; WAL-16 Cornell Residence

No site-related constituents have been detected in these wells at concentrations that exceed NYSDOH standards for public drinking water supplies. Additionally, given that the WAL-1 residence is currently unoccupied and the WAL-16 residence is significantly distant from the landfill, we agree with the recommendation to discontinue sampling of these wells.

WAL-3: Gephart Residence; WAL-4: Hanabach Residence; WAL-8: Dodge Residence; WAL-9: Greene Residence; WAL-10: Schettine Residence; WAL-14 Carl Residence; WAL-18: Geffer Residence; WAL-13: Wispel Residence; WAL-15: Kelly Residence

Sodium has been detected in these residential wells at concentrations that exceed NYSDOH public drinking water standards. Standards for sodium were originally based on aesthetic and taste properties, and the NYSDOH public drinking water supply guideline for people on severely restricted sodium diet is no more than 20 mg/L of sodium. If concerned about sodium intake, the homeowner may wish to use an alternate supply of water for drinking and cooking purposes. While semi-volatile organic compounds have been detected sporadically in several sampling events, these compounds were detected at concentrations significantly lower than the NYSDOH public drinking water standards. Based on this information, we agree with the recommendation to discontinue sampling of these wells.

WAL-6: Cimino Residence

Iron and manganese have been detected at concentrations that exceed NYSDOH public drinking water standards in two sampling events. However, no compounds were detected at levels which exceed NYSDOH drinking water standards in the last three of the six sampling events completed. Based on this information, we agree with the recommendation to discontinue sampling of this well.

WAL-11: Urban Residence

Iron has been historically detected in WAL-11 at concentrations that exceed NYSDOH public drinking water standards. However, levels of iron detected in the last of the twelve sampling events completed did not exceed drinking water standards. Standards for iron were based on aesthetic properties and were set to prevent problems such as poor taste, odor and fixture staining. Given this information, we concur with the recommendation to discontinue sampling of this well.

WAL-12: Blaske Residence

Iron and sodium have been detected in this residential well during the three completed sampling events at concentrations that exceed NYSDOH public drinking water standards. Standards for sodium and iron were based on aesthetic and taste properties, and the NYSDOH public drinking water supply guideline for people on severely restricted sodium diet is no more than 20 mg/L of sodium. If concerned about sodium intake, the homeowner may wish to use an alternative supply of water for drinking and cooking purposes. Based on this information, we concur with the recommendation to discontinue sampling of this well.

WAL-17: Meisenzhal Residence

Iron and sodium have been detected at WAL-17 at concentrations that exceed NYSDOH public drinking water standards. Standards for sodium and iron were based on aesthetic and taste properties, and the NYSDOH public drinking water supply guideline for people on a severely restricted sodium diet is no more than 20 mg/L of sodium. If concerned about sodium intake, the homeowner may wish to use an alternate supply of water for drinking and cooking purposes. Based on this information, we agree with the proposal to discontinue sampling of this well.

WAL-20: Fanton Residence

Current sampling frequency: every three years

Proposed sampling frequency: discontinue sampling

Three sampling events have been completed since the granulated activated carbon filter system was removed from WAL-20 in January of 2007 (subsequent to placement of a new drinking water well in 2005). With the exception of sodium, no site-related constituents have been detected in WAL-20 at levels that exceed applicable standards. Additionally, this well is located a substantial distance from the landfill. Based on this information, we agree with the recommendation to discontinue sampling of this well.

Recommendation to modify sampling frequency

We concur with the recommendation to modify the sampling frequency at the following residential wells currently within the sampling program:

WAL-2: Rossini Residence

Inorganic compounds (metals), including sodium, iron and manganese have historically been detected in WAL-2 at concentrations that exceed NYSDOH public drinking water standards. We understand that this residence is adjacent to the Wellsville-Andover landfill, is occupied seasonally and that the homeowner uses bottled water as a source of potable water while in-residence. Given this information, we concur with the recommendation of annual sampling for metals compounds. This is reduced from semi-annual sampling for inorganic compounds.

William D. Whitfield
May 12, 2009
Page 5

WAL-5: Ormsby Residence

Volatile organic compounds, including cis-1,2-dichloroethene and trichloroethene and metals compounds have been detected at low concentrations (below NYSDOH drinking water standards) in WAL-5. The concentrations of these compounds has remained relatively consistent over semi-annual sampling events completed from 1998 to 2002 and have not been detected in the last twelve sampling events. Based on this information, we concur with the recommendation to reduce the sampling frequency from semi-annual to annual sampling.

WAL-19: LaDue Residence

We concur with the recommendation to continue semi-annual sampling.

Although a review of the available data supports the proposed modifications to the sampling program, it should be noted that, should conditions change additional sampling or re-sampling of the environmental media may be warranted and requested by either NYSDOH or NYSDEC.

If you have any questions, please contact me at 716-851-7220.

Sincerely,

Linda C. Ross

Linda C. Ross
Project Manager
Division of Environmental Remediation

LCR/tml

cc: Mr. Jonathan Brandes, On-Site Technical Services, Inc
Ms. Tamara Girard, NYSDOH

Jon Brandes

From: "Linda Ross" <lcross@gw.dec.state.ny.us>
To: "Jon Brandes" <Jonb@on-sitehs.com>
Cc: "Tamara Girard" <tsg01@health.state.ny.us>; "William Whitfield" <billwhitfield@wellsvilleny.com>
Sent: Friday, May 22, 2009 1:15 PM
Attach: MON PROGRAM REV Table.xls
Subject: Fwd: Wellsville Andover Landfill

Jon, I agree with your proposal below in the email and the attached monitoring schedule. Please continue with the landfill gas monitoring, since they are potential exposure points. Thanks. L.

Linda C. Ross
Engineering Geologist I
New York State Department of Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, NY 14203-2999
lcross@gw.dec.state.ny.us
office: 716. 851. 7220
fax: 716. 851. 7226

>>> "Jon Brandes" <Jonb@on-sitehs.com> 5/22/2009 11:59 AM >>>
Linda,

Based on your response to the site evaluation and proposed monitoring program, we have revised the monitoring program table - please see attached. We will follow this schedule starting with the fall event. One item that was not commented on is the request to discontinue landfill gas monitoring. Please provide comment.

Also I propose the following for reporting:

- 1) The spring 2009 sampling event was completed following the old monitoring schedule and the typical report will be completed.
- 2) For each future spring and fall event a letter report will be prepared once analytical results are received. The letter report will present the results of the monitoring event.
- 3) A annual report each year similar to previous annual reports.

Thanks and have a great holiday weekend!!

Jon Brandes, P.G.
Senior Geologist
On-Site Technical Services, Inc.
72 Railroad Ave
Wellsville, NY 14895
Phone: 585-593-1824
Fax: 585-593-7471

Appendix C

Spring/Fall

Field Forms

Spring 2020 Field Forms

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 4-20-20

Monitoring Well: MW-4D Sample ID: MW4D-0420 Arrival Time: 1112

Weather Conditions

Temp. 44 ° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 24.63 ft – SWL: 9.62 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 2.4 gals Purge Vol: 2.0 gals.

Start Purge: 1120 Pumping Rate: 167 ^{sec} /500 mL Purge Duration: 1 hr Start Sampling: 1220

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 14L100804), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.25</u>	<u>1200</u>	<u>6.53</u>	<u>278.3</u>	<u>11.2</u>	<u>3.47</u>	<u>11.5</u>	<u>51.8</u>	<u>14.08</u>
<u>1.4</u>	<u>1205</u>	<u>6.53</u>	<u>281.2</u>	<u>10.5</u>	<u>3.36</u>	<u>11.7</u>	<u>55.4</u>	<u>14.52</u>
<u>1.6</u>	<u>1210</u>	<u>6.53</u>	<u>283.0</u>	<u>8.73</u>	<u>3.13</u>	<u>11.9</u>	<u>54.3</u>	<u>14.90</u>
<u>1.8</u>	<u>1215</u>	<u>6.53</u>	<u>282.7</u>	<u>10.2</u>	<u>2.97</u>	<u>12.0</u>	<u>53.6</u>	<u>15.16</u>
<u>2.0</u>	<u>1220</u>	<u>6.53</u>	<u>283.0</u>	<u>5.88</u>	<u>2.79</u>	<u>11.9</u>	<u>52.9</u>	<u>15.43</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear w/ part floating Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's Number of Containers: 3

Well Sampling Completion: Date 4-20-20 Time 1239 Samplers KDye

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 4/22/20

Monitoring Well: MW-5D Sample ID: MW5D-0420 Arrival Time: 1150

Weather Conditions

Temp: 36 ° F () Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-10 mph w/ gusts

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Soft Bottom

Depth & Purging Information

TD: 37.65 ft - SWL: 1.92 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 5.7 gals Purge Vol: 2.6 gals.

Start Purge: 1205 Pumping Rate: _____ /500 mL Purge Duration: 55 min Start Sampling: 1300

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 144100804), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.25</u>	<u>1235</u>	<u>6.85</u>	<u>212.0</u>	<u>7.76</u>	<u>1.98</u>	<u>7.2</u>	<u>70.5</u>	<u>2.80</u>
<u>2.50</u>	<u>1240</u>	<u>6.85</u>	<u>212.5</u>	<u>5.54</u>	<u>1.52</u>	<u>7.4</u>	<u>72.3</u>	<u>3.0</u>
<u>1.75</u>	<u>1245</u>	<u>6.85</u>	<u>212.6</u>	<u>4.44</u>	<u>1.49</u>	<u>7.5</u>	<u>72.9</u>	<u>2.94</u>
<u>2.1</u>	<u>1250</u>	<u>6.85</u>	<u>212.5</u>	<u>4.29</u>	<u>1.48</u>	<u>7.7</u>	<u>74.1</u>	<u>2.99</u>
<u>2.3</u>	<u>1255</u>	<u>6.85</u>	<u>213.3</u>	<u>4.17</u>	<u>1.47</u>	<u>7.3</u>	<u>75.4</u>	<u>3.11</u>
<u>2.6</u>	<u>1300</u>	<u>6.84</u>	<u>214.8</u>	<u>3.16</u>	<u>1.43</u>	<u>7.0</u>	<u>75.7</u>	<u>3.14</u>
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

Stabilization Criteria: 1) field parameters ± 0.1 pH, ± 3% conductivity, ± 10 mv ORP, ± 10% DO, ± 10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's Number of Containers: 3

Well Sampling Completion: Date 4/22/20 Time 1312 Samplers KD/E

MS/MSD

On-Site Technical Services, Inc. Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 4/22/20

Monitoring Well: MW-55 Sample ID: MW55-0420

Arrival Time: 0815

Weather Conditions

Temp. 29 ° F () Sunny Partly Cloudy () Cloudy () Light Rain () Hvy. Rain Snow
Wind Conditions: 0-10 mph w/ Gusts

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK
Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 21.20 ft - SWL: 1.93 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 3.0 gals Purge Vol: 7.3 gals.
Start Purge: 0835 Pumping Rate: 176 /500 mL Purge Duration: 3 hrs Start Sampling: 1135
Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 142100804), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
2.25	1000			226.0				1.96
3.3	1020			109.0				1.96
4.4	1040			83.3				1.96
5.75	1010	6.36	142.9	50.9	2.88	7.3	11.0	1.96
6.1	1115	6.35	142.7	47.9	2.86	6.1	10.5	2.00
6.4	1120	6.35	142.4	46.8	2.86	6.9	10.1	2.00
6.75	1125	6.34	142.5	45.5	2.85	6.4	10.6	1.98
7.0	1130	6.34	142.2	43.1	2.81	6.1	11.7	1.98
7.3	1135	6.33	142.0	38.5	2.83	6.0	11.5	2.00

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Slightly Cloudy Sample Odor: No odor

Other Observations/Comments: 0855 Tubing Froze. 0940 Back up and running

Analysis Requested: Voc's Number of Containers: 76

Well Sampling Completion: Date 4-22-20 Time 1148 Samplers K D/E

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 4-20-20

Monitoring Well: MW-115 Sample ID: MW115-0420 Arrival Time: 1250

Weather Conditions

Temp. 56 ° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: light breeze

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 20.40 ft – SWL: 4.20 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 2.5 gals Purge Vol: 2.9 gals.

Start Purge: 1300 Pumping Rate: 151^{gpc} /500 mL Purge Duration: 1 hr Start Sampling: 1400

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 142100804), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.8</u>	<u>1340</u>	<u>6.98</u>	<u>491.8</u>	<u>3.70</u>	<u>1.73</u>	<u>11.5</u>	<u>84.5</u>	<u>5.07</u>
<u>2.0</u>	<u>1345</u>	<u>6.98</u>	<u>490.6</u>	<u>3.92</u>	<u>1.69</u>	<u>11.3</u>	<u>84.7</u>	<u>5.13</u>
<u>2.3</u>	<u>1350</u>	<u>6.98</u>	<u>487.2</u>	<u>3.76</u>	<u>1.58</u>	<u>12.1</u>	<u>84.5</u>	<u>5.27</u>
<u>2.6</u>	<u>1355</u>	<u>6.99</u>	<u>490.8</u>	<u>3.29</u>	<u>1.64</u>	<u>12.3</u>	<u>84.4</u>	<u>5.25</u>
<u>2.9</u>	<u>1400</u>	<u>6.99</u>	<u>492.0</u>	<u>2.65</u>	<u>1.52</u>	<u>12.7</u>	<u>84.6</u>	<u>5.33</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's Number of Containers: 3

Well Sampling Completion: Date 4-20-20 Time 1419 Samplers K Dye

Dup 1
1040

On-Site Technical Services, Inc. Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 4-20-20

Monitoring Well: MW-16S Sample ID: MW16S-0420 Arrival Time: 0928

Weather Conditions

Temp: 36 ° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 18.67 ft - SWL: 6.73 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 1.9 gals Purge Vol: 2.3 gals.

Start Purge: 0935 Pumping Rate: 165 ^{sec} /500 mL Purge Duration: 1hr Start Sampling: 1035

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 142100804), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mv)	DTW (ft)
1.3	1010	7.17	149.8	3.89	9.39	8.5	138.2	9.03
1.5	1015	7.18	149.8	4.75	9.20	8.5	138.3	9.39
1.75	1020	7.19	150.0	3.86	9.11	8.5	138.7	9.55
1.9	1025	7.20	149.8	3.13	9.04	8.4	138.5	9.68
2.1	1030	7.20	150.1	2.84	9.08	8.2	138.6	9.70
2.3	1035	7.20	149.5	2.99	8.89	8.3	138.9	9.60

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's Number of Containers: 3+Dup 1

Well Sampling Completion: Date 4-20-20 Time 1103 Samplers KQE

On-Site Technical Services, Inc.

Groundwater Cutoff, Leachate, Surface Water, Sediment, Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 4/22/20

Sampling Location: SWS-1 Sample ID: SWS1-0420 Arrival Time: 1330

Weather Conditions

Temp. 39 ° F () Sunny (X) Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-10 mph w/gusts

Location Type

() Groundwater Cutoff, () Leachate, (X) Surface Water, () Sediment, Other No SED - Hard Pack ground

Flow and Depth Information (as appropriate)

Depth: 5" Estimated Flow: 1-2 GPM Comments: _____

Field Parameters (as appropriate)

Meter: YSI (sn: 142100804), Hach 2100P (sn: 12410)

Measured in: (X) Directly Submerged Probe () Cup Note: Turbidity measured from a vial grab sample

Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)
<u>1345</u>	<u>7.95</u>	<u>311.5</u>	<u>2.30</u>	<u>12.33</u>	<u>7.2</u>	<u>75.4</u>

Sample Information

Sample Type: (X) Grab () Composite Sample Location: () Discharge Pipe () Pond (X) Ditch () Leachate Sump

Location Description/Condition: _____

Sample Collection Equipment/Method: dipper Sample Description (clarity/color): Clear No Color

Sample Odor: No odor Other Observations/Comments: _____

Analysis Requested: VOCS-Metals-Wet Chem Sample Time: 1345 Number of Containers: 10

Sampling Completion: Time 1406 Date 4-22-20 Samplers KDye

On-Site Technical Services, Inc. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 6-1-20

Sampling Location: WAL-19

Sample ID: WAL19 Post-0620
WAL19 Inter-0620
WAL19 Pre-0620

Arrival Time: 1104

Weather Conditions

Temp. 56° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-10 mph

Sample Information

Sample Type: Grab () Composite

Sample Location: Kitchen Sink - Post Sample

Location Description/Condition: Inter + Pre Sampling in Basement Wotreatment system Pits

Sample Collection Equipment/Method: Grab Sample Description (clarity/color): Clear No odor

Sample Odor: No odor Other Observations/Comments: _____

Analysis Requested: VOC Sample Time: Post=1115
Inter=1125 Number of Containers: 9
Pre=1130

Comment:

Sampling Completion: Time 1147 Date 6-1-20 Samplers K Dye

Fall 2020

Field Forms

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/20/20

Monitoring Well: CW-3A Sample ID: CW3A-1020 Arrival Time: 1326

Weather Conditions

Temp. 47 ° F () Sunny () Partly Cloudy () Cloudy Light Rain Hvy. Rain () Snow
 Wind Conditions: 0-5mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK
 Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 27.47 ft - SWL: 9.04 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 2.9 gals Purge Vol: 225 gals.
 Start Purge: 1335 Pumping Rate: 125 ^{sec} / 500 mL Purge Duration: 1hr 5min Start Sampling: 1440
 Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mv)	DTW (ft)
<u>1.25</u>	<u>1410</u>	<u>12.16</u>	<u>978</u>	<u>4.90</u>	<u>6.67</u>	<u>10.6</u>	<u>-37.0</u>	<u>15.74</u>
<u>1.4</u>	<u>1425</u>	<u>12.16</u>	<u>975</u>	<u>3.81</u>	<u>6.77</u>	<u>10.6</u>	<u>-35.8</u>	<u>16.73</u>
<u>1.6</u>	<u>1430</u>	<u>12.15</u>	<u>979</u>	<u>4.00</u>	<u>6.23</u>	<u>10.5</u>	<u>-34.9</u>	<u>17.61</u>
<u>1.75</u>	<u>1425</u>	<u>12.16</u>	<u>978</u>	<u>5.11</u>	<u>6.13</u>	<u>10.3</u>	<u>-33.8</u>	<u>18.33</u>
<u>1.9</u>	<u>1430</u>	<u>12.18</u>	<u>984</u>	<u>4.85</u>	<u>6.32</u>	<u>10.1</u>	<u>-33.4</u>	<u>19.02</u>
<u>2.1</u>	<u>1435</u>	<u>12.18</u>	<u>988</u>	<u>4.35</u>	<u>6.15</u>	<u>10.1</u>	<u>-33.0</u>	<u>20.41</u>
<u>2.25</u>	<u>1440</u>	<u>12.17</u>	<u>990</u>	<u>4.87</u>	<u>6.10</u>	<u>10.0</u>	<u>-32.0</u>	<u>21.34</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's + Metals Number of Containers: 4
 Well Sampling Completion: Date 10-20-20 Time 1457 Samplers KD/E

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/21/20

Monitoring Well: CW-3A^B

Sample ID: CW3A^B-1020

Arrival Time: 0830

Weather Conditions

Temp. 59° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 37.70 ft – SWL: 20.93 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 2.6 gals Purge Vol: 2.75 gals.

Start Purge: 0840 Pumping Rate: 98 sec /500 mL Purge Duration: 1 hr Start Sampling: 0940

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.5</u>	<u>0915</u>	<u>6.74</u>	<u>584.7</u>	<u>1.22</u>	<u>1.06</u>	<u>13.3</u>	<u>157.8</u>	<u>23.10</u>
<u>1.8</u>	<u>0920</u>	<u>6.77</u>	<u>585.3</u>	<u>.54</u>	<u>1.02</u>	<u>13.4</u>	<u>154.0</u>	<u>23.14</u>
<u>2.0</u>	<u>0925</u>	<u>6.80</u>	<u>588.0</u>	<u>.55</u>	<u>1.17</u>	<u>13.4</u>	<u>151.4</u>	<u>23.23</u>
<u>2.25</u>	<u>0930</u>	<u>6.82</u>	<u>589.1</u>	<u>.43</u>	<u>1.31</u>	<u>13.4</u>	<u>149.0</u>	<u>23.40</u>
<u>2.5</u>	<u>0935</u>	<u>6.85</u>	<u>589.7</u>	<u>.43</u>	<u>1.22</u>	<u>13.5</u>	<u>148.3</u>	<u>23.60</u>
<u>2.75</u>	<u>0940</u>	<u>6.84</u>	<u>590.7</u>	<u>.33</u>	<u>1.16</u>	<u>13.5</u>	<u>146.8</u>	<u>23.77</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ± 3% conductivity, ± 10 mv ORP, ± 10% DO, ± 10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: clear No color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10-21-20 Time 0956 Samplers K D/E

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/21/20

Monitoring Well: CW-4A Sample ID: CW4A-1020

Arrival Time: 1120

Weather Conditions

Temp. 70 ° F () Sunny () Partly Cloudy (X) Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 19.12 ft – SWL: 9.34 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 1.5 gals Purge Vol: 2.1 gals.

Start Purge: 1125 Pumping Rate: 108 ^{sec} / 500 mL Purge Duration: 55 min Start Sampling: 1220

Purging Method: (X) Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 12410) Measured in: (X) Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.1</u>	<u>1155</u>	<u>6.45</u>	<u>309.9</u>	<u>22.0</u>	<u>1.68</u>	<u>19.0</u>	<u>161.6</u>	<u>9.84</u>
<u>1.3</u>	<u>1200</u>	<u>6.46</u>	<u>310.1</u>	<u>24.3</u>	<u>1.63</u>	<u>19.0</u>	<u>160.7</u>	<u>10.22</u>
<u>1.5</u>	<u>1205</u>	<u>6.47</u>	<u>309.7</u>	<u>22.6</u>	<u>1.64</u>	<u>19.0</u>	<u>160.0</u>	<u>10.43</u>
<u>1.73</u>	<u>1210</u>	<u>6.46</u>	<u>308.8</u>	<u>23.8</u>	<u>1.75</u>	<u>18.6</u>	<u>159.7</u>	<u>10.52</u>
<u>1.9</u>	<u>1215</u>	<u>6.45</u>	<u>307.4</u>	<u>21.9</u>	<u>1.77</u>	<u>18.6</u>	<u>160.3</u>	<u>10.68</u>
<u>2.1</u>	<u>1220</u>	<u>6.45</u>	<u>307.0</u>	<u>19.1</u>	<u>1.79</u>	<u>18.6</u>	<u>159.6</u>	<u>10.82</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10-21-20 Time 1235 Samplers R D/E

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/21/20

Monitoring Well: CW-4B Sample ID: CW4B-1020 Arrival Time: 1005

Weather Conditions

Temp. 66° F Sunny Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 30.16 ft – SWL: 6.51 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 3.7 gals Purge Vol: 2.5 gals.

Start Purge: 1010 Pumping Rate: 103^{sec} /500 mL Purge Duration: 55 min Start Sampling: 1105

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 12410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.3</u>	<u>1040</u>	<u>7.07</u>	<u>350.4</u>	<u>.60</u>	<u>4.23</u>	<u>16.4</u>	<u>159.3</u>	<u>10.59</u>
<u>1.5</u>	<u>1045</u>	<u>7.05</u>	<u>350.0</u>	<u>.55</u>	<u>4.03</u>	<u>16.5</u>	<u>159.9</u>	<u>11.17</u>
<u>1.75</u>	<u>1050</u>	<u>7.03</u>	<u>350.6</u>	<u>.96</u>	<u>3.89</u>	<u>16.5</u>	<u>159.6</u>	<u>11.60</u>
<u>2.0</u>	<u>1055</u>	<u>6.98</u>	<u>350.0</u>	<u>1.32</u>	<u>3.64</u>	<u>16.2</u>	<u>160.8</u>	<u>12.05</u>
<u>2.3</u>	<u>1100</u>	<u>6.94</u>	<u>349.8</u>	<u>1.87</u>	<u>3.56</u>	<u>16.0</u>	<u>161.4</u>	<u>12.36</u>
<u>2.5</u>	<u>1105</u>	<u>6.91</u>	<u>349.9</u>	<u>.66</u>	<u>3.40</u>	<u>15.9</u>	<u>163.1</u>	<u>12.72</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's + Metals Number of Containers: 4
 Well Sampling Completion: Date 10-21-20 Time 1117 Samplers R Dye

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/19/20

Monitoring Well: MW-3D Sample ID: MW3D-1020

Arrival Time: 1216

Weather Conditions

Temp. 48° F () Sunny () Partly Cloudy (X) Cloudy () Light Rain (X) Hvy. Rain () Snow

Wind Conditions: 0-5mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: ok Surface pad: ok

Well Visibility (paint): ok Well Label: ok Comment: _____

Depth & Purging Information

TD: 46.75 ft – SWL: 21.21 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 4.0 gals Purge Vol: 1.25 gals.

Start Purge: 1220 Pumping Rate: 408 sec / 500 mL Purge Duration: 1 hr Start Sampling: 1320

Purging Method: () Bladder Pump # _____ () Grundfos Pump () Bail () Peristaltic (X) Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 12410) Measured in: (X) Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>0.75</u>	<u>1305</u>	<u>6.69</u>	<u>634.7</u>	<u>1.11</u>	<u>.49</u>	<u>9.1</u>	<u>205.5</u>	<u>29.72</u>
<u>.9</u>	<u>1310</u>	<u>6.70</u>	<u>633.8</u>	<u>.78</u>	<u>.50</u>	<u>9.3</u>	<u>205.0</u>	
<u>1.0</u>	<u>1315</u>	<u>6.70</u>	<u>634.4</u>	<u>.50</u>	<u>.51</u>	<u>9.3</u>	<u>204.2</u>	
<u>1.25</u>	<u>1320</u>	<u>6.72</u>	<u>634.0</u>	<u>.63</u>	<u>.51</u>	<u>9.3</u>	<u>203.7</u>	<u>29.63</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Pencil Pump Sample clarity/color: Clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10/19/20 Time 1336 Samplers KDyle

EB-1020
1030

On-Site Technical Services, Inc. Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/19/20

Monitoring Well: MW-35 Sample ID: MW35-1020 Arrival Time: 1100

Weather Conditions

Temp. 49° F () Sunny () Partly Cloudy (X) Cloudy (X) Light Rain (X) Hvy. Rain () Snow

Wind Conditions: 0-5mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 25.92 ft - SWL: 12.87 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 2.0 gals Purge Vol: 1.3 gals.

Start Purge: 1110 Pumping Rate: 394 sec / 500 mL Purge Duration: 55 min Start Sampling: 1205

Purging Method: () Bladder Pump # _____ () Grundfos Pump () Bail () Peristaltic (X) Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 12410) Measured in: (X) Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mv)	DTW (ft)
<u>.75</u>	<u>1145</u>	<u>7.00</u>	<u>535.8</u>	<u>9.29</u>	<u>1.97</u>	<u>9.1</u>	<u>206.4</u>	<u>16.30</u>
<u>.9</u>	<u>1150</u>	<u>7.01</u>	<u>535.4</u>	<u>8.56</u>	<u>1.94</u>	<u>9.2</u>	<u>205.2</u>	
<u>1.1</u>	<u>1155</u>	<u>7.01</u>	<u>535.7</u>	<u>7.03</u>	<u>1.91</u>	<u>9.1</u>	<u>204.60</u>	
<u>1.25</u>	<u>1200</u>	<u>7.01</u>	<u>535.8</u>	<u>6.63</u>	<u>1.92</u>	<u>9.1</u>	<u>204.1</u>	
<u>1.3</u>	<u>1205</u>	<u>7.02</u>	<u>535.3</u>	<u>4.72</u>	<u>1.82</u>	<u>9.1</u>	<u>203.60</u>	<u>16.30</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Pencil Pump Sample clarity/color: clear no color Sample Odor: no odor

Other Observations/Comments: Rainy Hard Got 1st & last DTW

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10/19/20 Time 1215 Samplers K D/E

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/16/20

Monitoring Well: MW-4D Sample ID: MW4D-1020

Arrival Time: 0810

Weather Conditions

Temp. 43 ° F () Sunny () Partly Cloudy (X) Cloudy (X) Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 24.63 ft – SWL: 16.33 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 1.3 gals Purge Vol: 1.4 gals.

Start Purge: 0820 Pumping Rate: 179^{sec} /500 mL Purge Duration: 50 min Start Sampling: _____

Purging Method: (X) Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 20H101689), Hach 2100P (sn: 13309) Measured in: (X) Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>0.75</u>	<u>0850</u>	<u>6.07</u>	<u>255.0</u>	<u>1.71</u>	<u>1.77</u>	<u>6.6</u>	<u>-32.0</u>	<u>18.72</u>
<u>0.9</u>	<u>0855</u>	<u>6.06</u>	<u>254.6</u>	<u>2.10</u>	<u>1.68</u>	<u>6.6</u>	<u>-34.2</u>	<u>19.20</u>
<u>1.1</u>	<u>0900</u>	<u>6.11</u>	<u>254.6</u>	<u>2.19</u>	<u>1.63</u>	<u>6.6</u>	<u>-35.8</u>	<u>19.69</u>
<u>1.25</u>	<u>0905</u>	<u>6.12</u>	<u>254.7</u>	<u>2.16</u>	<u>1.69</u>	<u>6.7</u>	<u>-37.1</u>	<u>20.04</u>
<u>1.4</u>	<u>0910</u>	<u>6.15</u>	<u>255.0</u>	<u>2.25</u>	<u>1.76</u>	<u>6.6</u>	<u>-38.9</u>	<u>20.36</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Vocis + Metals Number of Containers: 4

Well Sampling Completion: Date 10/16/20 Time 0926 Samplers KDE

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10-15-20

Monitoring Well: MW-5D Sample ID: MW5D-1020 Arrival Time: 1:5-20

Weather Conditions

Temp. 76 ° F () Sunny (X) Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-10 mph w/ gusts

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 37.65 ft – SWL: 5.11 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 5.2 gals Purge Vol: 4.1 gals.

Start Purge: 1525 Pumping Rate: 75 sec / 500 mL Purge Duration: 50 min Start Sampling: 1615

Purging Method: (X) Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 20H101689), Hach 2100P (sn: 13309) Measured in: (X) Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>2.3</u>	<u>1550</u>	<u>6.63</u>	<u>163.9</u>	<u>1.58</u>	<u>5.12</u>	<u>16.0</u>	<u>124.8</u>	<u>7.24</u>
<u>2.8</u>	<u>1555</u>	<u>6.67</u>	<u>167.5</u>	<u>1.92</u>	<u>5.07</u>	<u>15.5</u>	<u>126.7</u>	
<u>3.1</u>	<u>1600</u>	<u>6.67</u>	<u>163.4</u>	<u>1.17</u>	<u>4.97</u>	<u>15.4</u>	<u>127.7</u>	
<u>3.4</u>	<u>1605</u>	<u>6.67</u>	<u>163.4</u>	<u>1.17</u>	<u>4.84</u>	<u>15.2</u>	<u>129.6</u>	
<u>3.25</u>	<u>1610</u>	<u>6.63</u>	<u>162.9</u>	<u>1.21</u>	<u>4.64</u>	<u>15.3</u>	<u>129.3</u>	
<u>4.1</u>	<u>1615</u>	<u>6.65</u>	<u>162.3</u>	<u>1.01</u>	<u>4.54</u>	<u>15.2</u>	<u>127.8</u>	

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10-15-20 Time 1626 Samplers K DYE

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/15/20

Monitoring Well: MW-58 Sample ID: MW58-1020 Arrival Time: 1400

Weather Conditions

Temp. 75 ° F Sunny Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 10 mph w/ Gusts

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 21.20 ft - SWL: 10 4.43 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 2.6 gals Purge Vol: 3.6 gals.

Start Purge: 1405 Pumping Rate: 68^{sec} /500 mL Purge Duration: 55 min Start Sampling: 1500

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 20H101689), Hach 2100P (sn: 13309) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>2.0</u>	<u>1440</u>	<u>6.27</u>	<u>157.4</u>	<u>3.29</u>	<u>1.06</u>	<u>18.4</u>	<u>-16.5</u>	<u>6.93</u>
<u>2.4</u>	<u>1445</u>	<u>6.28</u>	<u>157.4</u>	<u>3.12</u>	<u>.95</u>	<u>18.4</u>	<u>-9.2</u>	<u>7.12</u>
<u>2.8</u>	<u>1450</u>	<u>6.25</u>	<u>157.5</u>	<u>2.91</u>	<u>.83</u>	<u>18.3</u>	<u>-7.8</u>	<u>7.32</u>
<u>3.25</u>	<u>1455</u>	<u>6.26</u>	<u>157.4</u>	<u>2.46</u>	<u>.92</u>	<u>18.2</u>	<u>-10.2</u>	<u>7.50</u>
<u>3.6</u>	<u>1500</u>	<u>6.24</u>	<u>157.2</u>	<u>3.01</u>	<u>1.09</u>	<u>18.3</u>	<u>-8.9</u>	<u>7.68</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: VOC's + Metals Number of Containers: 4

Well Sampling Completion: Date 10/15/20 Time 1516 Samplers K DYE

Dup 1
1345

On-Site Technical Services, Inc. Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/15/20

Monitoring Well: MW-119 Sample ID: MW119-1020 Arrival Time: 1240

Weather Conditions

Temp. 65° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 w/gusts

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 20.40 ft – SWL: 8.82 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 1.8 gals Purge Vol: 2.4 gals.

Start Purge: 1245 Pumping Rate: 118 sec /500 mL Purge Duration: 55min Start Sampling: 1340

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 13309) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
1.1	1310	6.85	522.4	9.12	1.15	18.1	82.7	9.82
1.3	1315	6.83	521.6	15.7	1.26	18.6	82.1	9.92
1.5	1320	6.80	521.5	8.38	.78	18.3	80.0	10.11
1.75	1325	6.80	521.3	4.96	1.08	18.1	75.3	10.20
2.0	1330	6.80	521.1	4.12	.96	18.0	72.0	10.27
2.25	1335	6.80	520.9	4.67	1.04	18.0	70.8	10.40
2.4	1340	6.79	520.3	2.78	1.18	18.0	69.1	10.49
2.	1345							

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No Color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: VOC's + Metals Number of Containers: 4 + Dup 1

Well Sampling Completion: Date 10-15-20 Time 1350 Samplers KD/E

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/21/20

Monitoring Well: MW-155 Sample ID: No Sample Arrival Time: 1310

Weather Conditions

Temp. 70 ° F () Sunny () Partly Cloudy Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: DRY

Depth & Purging Information

TD: 22.05 ft – SWL: DRY ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: _____ gals Purge Vol: _____ gals.

Start Purge: _____ Pumping Rate: _____ /500 mL Purge Duration: _____ Start Sampling: _____

Purging Method: () Bladder Pump # _____ () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: _____), Hach 2100P (sn: _____) Measured in: () Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: NONE Sample clarity/color: NA Sample Odor: NA

Other Observations/Comments: DRY

Analysis Requested: Voc's + Metals Number of Containers: 0

Well Sampling Completion: Date 10/21/20 Time 1315 Samplers KDE

~~MS/MS~~ K0

On-Site Technical Services, Inc. Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/15/20

Monitoring Well: MW-16S Sample ID: MW16S-1020

Arrival Time: 1125

Weather Conditions

Temp. 65 ° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: light breeze w/ gusts

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 18.67 ft – SWL: 14.67 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 0.6 gals Purge Vol: 1.0 gals.

Start Purge: 1135 Pumping Rate: 193 ^{sec} / 500 mL Purge Duration: 45 min Start Sampling: 1220

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101682), Hach 2100P (sn: 13309) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
.4	1150	7.11	184.6	61.2	3.21	20.0	16.1	16.61
.5	1155	7.13	184.6	29.7	3.27	20.1	20.4	16.70
.6	1200	7.14	184.9	30.6	3.39	20.1	22.8	16.74
.75	1205	7.14	184.5	21.2	3.50	20.0	24.0	16.82
.8	1210	7.12	184.5	20.6	3.74	20.0	25.8	Top of Pump
.9	1215	7.14	184.3	20.4	3.79	19.8	27.2	Top of Pump
1.0	1220	7.12	184.0	61.8	3.65	19.8	28.9	Top of Pump

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No color Sample Odor: No odor

Other Observations/Comments: Pump almost on bottom. Switch to cell quick because of low level water
Turbid at start and in cells. Final reading taken direct from tubing

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10/15/20 Time 1234 Samplers K Dye

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/20/20

Monitoring Well: MW-17D Sample ID: MW17D-1020 Arrival Time: 1145

Weather Conditions

Temp. 54° F () Sunny () Partly Cloudy Cloudy Light Rain Hvy. Rain () Snow

Wind Conditions: 0-5mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 65.10 ft – SWL: 38.21 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 20.7 gals Purge Vol: 2.75 gals.

Start Purge: 1150 Pumping Rate: 176^{sec} /500 mL Purge Duration: 1hr 15min Start Sampling: 1305

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 13410) Measured in: Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.4</u>	<u>1240</u>	<u>9.47</u>	<u>290.1</u>	<u>40.1</u>	<u>5.77</u>	<u>9.0</u>	<u>71.4</u>	<u>34.65</u>
<u>1.75</u>	<u>1245</u>	<u>9.48</u>	<u>290.1</u>	<u>42.5</u>	<u>5.94</u>	<u>9.0</u>	<u>69.6</u>	<u>34.82</u>
<u>2.0</u>	<u>1250</u>	<u>9.49</u>	<u>290.1</u>	<u>38.6</u>	<u>6.05</u>	<u>9.0</u>	<u>68.2</u>	<u>34.96</u>
<u>2.25</u>	<u>1255</u>	<u>9.50</u>	<u>290.0</u>	<u>38.7</u>	<u>5.81</u>	<u>9.1</u>	<u>67.5</u>	<u>35.14</u>
<u>2.5</u>	<u>1300</u>	<u>9.52</u>	<u>290.0</u>	<u>38.5</u>	<u>5.94</u>	<u>9.1</u>	<u>66.8</u>	<u>35.28</u>
<u>2.75</u>	<u>1305</u>	<u>9.53</u>	<u>290.1</u>	<u>40.4</u>	<u>5.68</u>	<u>9.1</u>	<u>65.5</u>	<u>35.39</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: slightly cloudy ^{light orange tint} Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: VOC's + Metals Number of Containers: 4

Well Sampling Completion: Date 10-20-20 Time 1318 Samplers KRj

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/20/20

Monitoring Well: MW-17S Sample ID: MW17S-1020 Arrival Time: 10p

Weather Conditions

Temp. 56° F () Sunny () Partly Cloudy Cloudy Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 26.94 ft – SWL: 10.05 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 2.7 gals Purge Vol: 2.5 gals.

Start Purge: 1020 Pumping Rate: 110 ^{sec} /500 mL Purge Duration: _____ Start Sampling: 1120

Purging Method: Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 20H101689), Hach 2100P (sn: 12410) Measured in: () Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.3</u>	<u>1055</u>	<u>7.13</u>	<u>1069</u>	<u>4.79</u>	<u>1.74</u>	<u>11.2</u>	<u>70.8</u>	<u>11.89</u>
<u>1.5</u>	<u>1100</u>	<u>7.14</u>	<u>1066</u>	<u>5.27</u>	<u>1.19</u>	<u>11.1</u>	<u>71.0</u>	<u>12.60</u>
<u>1.75</u>	<u>1105</u>	<u>7.14</u>	<u>1069</u>	<u>5.60</u>	<u>1.80</u>	<u>11.1</u>	<u>70.9</u>	<u>12.89</u>
<u>2.0</u>	<u>1110</u>	<u>7.16</u>	<u>1066</u>	<u>6.42</u>	<u>1.91</u>	<u>10.9</u>	<u>71.9</u>	<u>12.94</u>
<u>2.25</u>	<u>1115</u>	<u>7.16</u>	<u>1070</u>	<u>5.83</u>	<u>1.21</u>	<u>10.8</u>	<u>72.4</u>	<u>13.12</u>
<u>2.5</u>	<u>1120</u>	<u>7.17</u>	<u>1071</u>	<u>5.90</u>	<u>1.85</u>	<u>10.8</u>	<u>71.8</u>	<u>13.26</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: clear No color Sample Odor: No odor

Other Observations/Comments: _____

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10-20-20 Time 1137 Samplers KDE

On-Site Technical Services, Inc.

Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/20/20

Monitoring Well: MW-18D Sample ID: MW18D-1020 Arrival Time: 0840

Weather Conditions

Temp. 54 ° F () Sunny () Partly Cloudy (X) Cloudy (X) Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 28.50 ft - SWL: 15.13 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 8.4 gals Purge Vol: 2.0 gals.

Start Purge: 0850 Pumping Rate: 129 ^{sec} /500 mL Purge Duration: 1hr Start Sampling: 0950

Purging Method: (X) Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 204101689), Hach 2100P (sn: 12410) Measured in: (X) Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
1.25	0925	7.46	393.9	65.6	1.24	12.9	-182.0	15.72 ^{outer casing}
1.4	0930	7.47	393.5	54.4	1.00	12.9	-185.7	
1.5	0935	7.46	392.7	55.7	1.82	12.9	-186.8	
1.75	0940	7.45	393.6	56.4	1.13	12.9	-185.2	16.29
1.9	0945	7.45	393.3	58.8	1.39	12.8	-187.0	
2.0	0950	7.47	391.9	53.5	1.27	12.8	-188.9	16.79

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Slightly Cloudy ^{light orange tint} Sample Odor: _____

Other Observations/Comments: Wood Bridge very Slippery from Rain - Only Have minimal DTW Readings

Analysis Requested: Voc's + Metals Number of Containers: 4

Well Sampling Completion: Date 10-20-20 Time 1005 Samplers K D/E

MS/MSD

On-Site Technical Services, Inc. Groundwater Purging and Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/19/20

Monitoring Well: MW-185 Sample ID: MW185-1020

Arrival Time: 1348

Weather Conditions

Temp. 46 ° F () Sunny () Partly Cloudy (X) Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Well Condition Checklist

Bump posts: NA Pro. Casing/lock: OK Surface pad: OK

Well Visibility (paint): OK Well Label: OK Comment: _____

Depth & Purging Information

TD: 20.49 ft - SWL: 11.80 ft x 0.16 if 2" or 0.65 if 4" = 1 Well Volume: 1.3 gals Purge Vol: 2.8 gals.

Start Purge: 1355 Pumping Rate: 97 sec /500 mL Purge Duration: 1 hr Start Sampling: 1455

Purging Method: (X) Bladder Pump # 3 () Grundfos Pump () Bail () Peristaltic () Pencil Bladder

Field Parameters

Meters: YSI (sn: 20H101889), Hach 2100P (sn: 12410) Measured in: (X) Flow Cell () Cup

Purge (gal)	Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)	DTW (ft)
<u>1.75</u>	<u>1430</u>	<u>6.60</u>	<u>299.3</u>	<u>8.11</u>	<u>3.11</u>	<u>10.9</u>	<u>-81.3</u>	<u>13.85</u>
<u>2.0</u>	<u>1435</u>	<u>6.60</u>	<u>299.6</u>	<u>5.04</u>	<u>1.66</u>	<u>11.0</u>	<u>-84.3</u>	
<u>2.25</u>	<u>1440</u>	<u>6.58</u>	<u>299.7</u>	<u>3.83</u>	<u>1.42</u>	<u>11.0</u>	<u>-83.7</u>	
<u>2.4</u>	<u>1445</u>	<u>6.57</u>	<u>300.4</u>	<u>2.62</u>	<u>1.29</u>	<u>10.9</u>	<u>-84.1</u>	<u>14.49</u>
<u>2.6</u>	<u>1450</u>	<u>6.58</u>	<u>303.3</u>	<u>1.86</u>	<u>1.11</u>	<u>10.8</u>	<u>-82.8</u>	
<u>2.8</u>	<u>1455</u>	<u>6.58</u>	<u>304.2</u>	<u>1.60</u>	<u>1.16</u>	<u>10.9</u>	<u>-81.2</u>	<u>14.94</u>

Stabilization Criteria: 1) field parameters ± 0.1 pH, ±3% conductivity, ±10 mv ORP, ±10% DO, ±10% Turbidity; 2) 3 well volumes or dry

Sample Collection Method: Bladder Pump Sample clarity/color: Clear No color Sample Odor: No odor

Other Observations/Comments: Wood bridge very slippery & wet Minimal Trips

Analysis Requested: VOC's + Metals Number of Containers: 8

Well Sampling Completion: Date 10-19-20 Time 1512 Samplers K Dye

On-Site Technical Services, Inc.

Groundwater Cutoff, Leachate, Surface Water, Sediment, Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/21/20

Sampling Location: LS-1 Sample ID: LS1-1020 Arrival Time: 1244

Weather Conditions

Temp. 70 ° F () Sunny () Partly Cloudy Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5 mph

Location Type

() Groundwater Cutoff, Leachate, () Surface Water, () Sediment, Other _____

Flow and Depth Information (as appropriate)

Depth: 34" Estimated Flow: NA Comments: Soft Sludgy Bottom

Field Parameters (as appropriate)

Meter: YSI (sn: 204101689), Hach 2100P (sn: 12410)
Measured in: () Directly Submerged Probe () Cup Note: Turbidity measured from a vial grab sample

Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)
<u>1250</u>	<u>7.55</u>	<u>901</u>	<u>49.5</u>	<u>NA</u>	<u>14.8</u>	<u>122.8</u>

Sample Information

Sample Type: Grab () Composite Sample Location: () Discharge Pipe () Pond () Ditch Leachate Sump

Location Description/Condition: Sump

Sample Collection Equipment/Method: Bailer Sample Description (clarity/color): Cloudy light Amber tint

Sample Odor: No odor Other Observations/Comments: Flooding Particulates

Analysis Requested: Voc's + Metals Sample Time: 1250 Number of Containers: 4

Sampling Completion: Time 1305 Date 10/21/20 Samplers K Dye

On-Site Technical Services, Inc.

Groundwater Cutoff, Leachate, Surface Water, Sediment, Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/16/20

Sampling Location: MH-32 Sample ID: MH32-1020 Arrival Time: 0938

Weather Conditions

Temp. 42 ° F () Sunny () Partly Cloudy (X) Cloudy (X) Light Rain () Hvy. Rain () Snow

Wind Conditions: 0-5mph

Location Type

() Groundwater Cutoff, (X) Leachate, () Surface Water, () Sediment, Other _____

Flow and Depth Information (as appropriate)

Depth: Approx 6" Estimated Flow: No Visible Flow Comments: Soft Sludge Bottom

Field Parameters (as appropriate)

Meter: YSI (sn: 20H101689), Hach 2100P (sn: 13309)
Measured in: () Directly Submerged Probe (X) Cup Note: Turbidity measured from a vial grab sample

Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)
<u>0950</u>	<u>7.25</u>	<u>593.3</u>	<u>24.7</u>	<u>NA</u>	<u>11.8</u>	<u>108.9</u>

Sample Information

Sample Type: (X) Grab () Composite Sample Location: () Discharge Pipe () Pond () Ditch (X) Leachate Sump M.H.

Location Description/Condition: North West Corner of Landfill Manhole

Sample Collection Equipment/Method: dipper Sample Description (clarity/color): Slightly Cloudy light yellow tint
Sample Odor: light leachate odor Other Observations/Comments: _____

Analysis Requested: VOCS+Metals+NO₂+TDS Sample Time: 0950 Number of Containers: 5

Sampling Completion: Time 1009 Date 10/16/20 Samplers K Dye

On-Site Technical Services, Inc.

Groundwater Cutoff, Leachate, Surface Water, Sediment, Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/16/20

Sampling Location: MH-33 Sample ID: MH33-1020 Arrival Time: 1015

Weather Conditions

Temp. 42 ° F () Sunny () Partly Cloudy (X) Cloudy (X) Light Rain () Hvy. Rain () Snow
 Wind Conditions: 0-5mph

Location Type

() Groundwater Cutoff, (X) Leachate, () Surface Water, () Sediment, Other _____

Flow and Depth Information (as appropriate)

Depth: Approx 6" Estimated Flow: No Visible Flow Comments: Soft Sludge Bottom

Field Parameters (as appropriate)

Meter: YSI (sn: 20H101689), Hach 2100P (sn: 13309)
 Measured in: () Directly Submerged Probe (X) Cup Note: Turbidity measured from a vial grab sample

Time	pH	Conductivity (us/cm)	Turbidity (ntu)	D.O. (mg/L)	Temp. (°C)	ORP (mV)
<u>1030</u>	<u>7.45</u>	<u>549.0</u>	<u>26.8</u>	<u>NA</u>	<u>11.2</u>	<u>39.2</u>

Sample Information

Sample Type: () Grab () Composite Sample Location: () Discharge Pipe () Pond () Ditch (X) Leachate Sump Manhole

Location Description/Condition: Manhole in South east corner of landfill

Sample Collection Equipment/Method: dipper Sample Description (clarity/color): Slightly Cloudy light
 Sample Odor: No odor Other Observations/Comments: Amber tint

Analysis Requested: VOC's + Metals + NO₃ + TDS Sample Time: 1030 Number of Containers: 5

Sampling Completion: Time 1046 Date 10/16/20 Samplers R Dye

On-Site Geological Services, D.P.C. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/28/20

Sampling Location: WAL-1 Sample ID: WAL2-1020 Arrival Time: 0958

Weather Conditions

Temp. 40 ° F () Sunny () Partly Cloudy (X) Cloudy (X) Light Rain () Hvy. Rain () Snow

Wind Conditions: light

Sample Information

Sample Type: (X) Grab () Composite Sample Location: Kitchen Sink CWT

Location Description/Condition: Kitchen Sink splot w/ filter removed

Sample Collection Equipment/Method: direct grab Sample Description (clarity/color): clear, no color

Sample Odor: no Other Observations/Comments: _____

Analysis Requested: VOCS, Metals, EC Sample Time: 1010 Number of Containers: 8

Comment:

Sampling Completion: Time 1016 Date 10/28/20 Samplers J. Brandes

On-Site Geological Services, D.P.C. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 11/14/20

Sampling Location: WAL-2 Sample ID: WAL2-1120 Arrival Time: 1300

Weather Conditions

Temp. 50 ° F () Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: light

Sample Information

Sample Type: () Grab () Composite

Sample Location: Kitchen Sink CWT

Location Description/Condition: good

Sample Collection Equipment/Method: direct Sample Description (clarity/color): clear, no color

Sample Odor: none Other Observations/Comments: _____

Analysis Requested: EC, Metals Sample Time: 1310 Number of Containers: 5

Comment:

owner indicates water was run @ kitchen sink for approx. 40 min. prior to my arrival.

Sampling Completion: Time 1320 Date 11/14/20 Samplers J. Brudey

On-Site Geological Services, D.P.C. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/21/20

WAL19 Post-1020
WAL19 Inter-1020
WAL19 Pre-1020

Sampling Location: WAL-19 Sample ID: _____ Arrival Time: 0900

Weather Conditions

Temp. 58 ° F () Sunny (x) Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: Moderate

Sample Information

Sample Type: () Grab () Composite

Sample Location: Post = Kitchen Sink CWT
Inter = between carbon filters
Pre = before carbon filters

Location Description/Condition: _____

Sample Collection Equipment/Method: direct grab Sample Description (clarity/color): clear, no color

Sample Odor: no odor Other Observations/Comments: _____

Analysis Requested: VOCs for all 3 samples Sample Time: Post = 910 Number of Containers: Post = 7
Inter = 0935 Inter = 3
Pre = 0945 Pre = 7
Additionally EC for Post & Pre

Comment: _____

Sampling Completion: Time 0955 Date 10/21/20 Samplers J. Brady

Appendix D

2020 Quarterly Inspection & Maintenance Checklist

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
 WELLSVILLE/ANDOVER LANDFILL SITE
 NYSDEC SITE NO. 9-02-004

Inspector: JMD Morrison Date: 3/30/20
 Weather: Partly Sunny Temperature: 22°

Area	Item	Action	Comments
Cover system	Seeps	Delineate, sample, evaluate.	OK
	Subsidence/ponding	Delineate, fill, and revegetate.	OK
	Erosion/gullies	Determine cause, grade, and vegetate.	OK
	Slope stability	Check for erosion, slippage, slope failure.	OK
	Vegetation	Check for areas of weak/no vegetation, revegetate.	OK
		Mow semiannually.	OCT 2019
		Remove scrubs and trees from cover system and drainage ways.	OK
Vectors	Check for burrows and backfill with clean soil.	OK	
Leachate collection and storage system	USTs	Check leachate levels, check/test leak detection system and auto dialer; check for sediment in bottom of tanks.	Jan, Feb, March 810,000 gallons
	Pump stations	Check pump operation.	OK
		Check float operation. Perform manufacturer's recommended maintenance. Operate/cycle valves. Check sump for floating debris and sediments.	OK
	Forcemain	Check for leaks.	OK
	Laterals and trunk line	Check for and record VOCs at each manhole and cleanout; check for line blockage visually; lubricate locks.	Performed by On-Site
	Groundwater cutoff manholes	Collect and analyze sample of liquid in cutoff trench. Note which line (surface drainage or LCS) is plugged.	Performed by On-Site
Gas venting system	Odors	Check for and record VOCs and methane (explosimeter) upwind, at each vent, and at perimeter of property. Check physical condition of vent and screen.	Performed by On-Site

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
WELLSVILLE/ANDOVER LANDFILL SITE
NYSDEC SITE NO. 9-02-004

Inspector: <u>BRAD MATTHEWSON</u>		Date: <u>3/30/20</u>	
Weather: <u>PARTLY SUNNY</u>		Temperature: <u>22°</u>	
Area	Item	Action	Comments
Stormwater system	Ditches and swales	Check for pooling, erosion, excessive vegetation, and weak vegetation.	OK
	Cover system drainage	Check for cover soils that are excessively wet, slope failure without evidence of fill subsidence. Check condition of geocomposite drainage layer at cover perimeter.	OK
	Culverts	Check condition and for blockage and erosion.	OK
	Detention ponds	Check outlet structure for blockage and general condition.	OK
Check for siltation/silt buildup, erosion, condition of vegetation and embankments.		OK	
Groundwater monitoring system	Sampling wells	See Section 4.	
		Check condition of caps, locks, surface seals, and markings. Lubricate locks.	Performed by On-Site
Facility access system	Roads	Check condition. Check for erosion, potholes.	OK
	Access gate	Check condition. Lubricate lock.	OK
Other	Comments		

Signed: BRADLEY J. MATTHEWSON

Date: 3/30/20

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
WELLSVILLE/ANDOVER LANDFILL SITE
NYSDEC SITE NO. 9-02-004

Inspector: <u>Brodley T. MATIS</u>		Date: <u>6/30/2020</u>	
Weather: <u>Mostly Sunny</u>		Temperature: <u>72° F</u>	
Area	Item	Action	Comments
Cover system	Seeps	Delineate, sample, evaluate.	OK
	Subsidence/ponding	Delineate, fill, and revegetate.	OK
	Erosion/gullies	Determine cause, grade, and vegetate.	OK
	Slope stability	Check for erosion, slippage, slope failure.	OK
	Vegetation	Check for areas of weak/no vegetation, revegetate.	OK
		Mow semiannually.	OK OCT 2019
		Remove scrubs and trees from cover system and drainage ways.	OK
Vectors	Check for burrows and backfill with clean soil.	OK	
Leachate collection and storage system	USTs	Check leachate levels, check/test leak detection system and auto dialer; check for sediment in bottom of tanks.	April, May June 480,000 gal
	Pump stations	Check pump operation.	OK
		Check float operation. Perform manufacturer's recommended maintenance. Operate/cycle valves. Check sump for floating debris and sediments.	OK
	Forcemain	Check for leaks.	OK
	Laterals and trunk line	Check for and record VOCs at each manhole and cleanout; check for line blockage visually; lubricate locks.	Performed by On-Site
	Groundwater cutoff manholes	Collect and analyze sample of liquid in cutoff trench. Note which line (surface drainage or LCS) is plugged.	Performed by On-Site
Gas venting system	Odors	Check for and record VOCs and methane (explosimeter) upwind, at each vent, and at perimeter of property. Check physical condition of vent and screen.	Performed by On-Site

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
WELLSVILLE/ANDOVER LANDFILL SITE
NYSDEC SITE NO. 9-02-004

Inspector: <u>Bradley J Morris</u>		Date: <u>6/30/2020</u>	
Weather: <u>Mostly Sunny</u>		Temperature: <u>72° F</u>	
Area	Item	Action	Comments
Stormwater system	Ditches and swales	Check for pooling, erosion, excessive vegetation, and weak vegetation.	OK
	Cover system drainage	Check for cover soils that are excessively wet, slope failure without evidence of fill subsidence. Check condition of geocomposite drainage layer at cover perimeter.	OK
	Culverts	Check condition and for blockage and erosion.	OK
	Detention ponds	Check outlet structure for blockage and general condition.	OK
Check for siltation/silt buildup, erosion, condition of vegetation and embankments.		OK	
Groundwater monitoring system	Sampling wells	See Section 4.	
		Check condition of caps, locks, surface seals, and markings. Lubricate locks.	Performed by On-Site
Facility access system	Roads	Check condition. Check for erosion, potholes.	OK
	Access gate	Check condition. Lubricate lock.	OK
Other	Comments		

Signed: Bradley J Morris

Date: 6/30/2020

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
WELLSVILLE/ANDOVER LANDFILL SITE
NYSDEC SITE NO. 9-02-004

Inspector: <u>Bradley J. Watson</u>		Date: <u>9/29/2020</u>		
Weather: <u>Rain / Cloudy</u>		Temperature: <u>60° F</u>		
Area	Item	Action	Comments	
Cover system	Seeps	Delineate, sample, evaluate.	OK	
	Subsidence/ponding	Delineate, fill, and revegetate.	OK	
	Erosion/gullies	Determine cause, grade, and vegetate.	OK	
	Slope stability	Check for erosion, slippage, slope failure.	OK	
	Vegetation		Check for areas of weak/no vegetation, revegetate.	OK
			Mow semiannually.	OCT 2019
			Remove scrubs and trees from cover system and drainage ways.	OK
Vectors	Check for burrows and backfill with clean soil.	OK		
Leachate collection and storage system	USTs	Check leachate levels, check/test leak detection system and auto dialer; check for sediment in bottom of tanks.	July, Aug, Sept 130,000 gal	
	Pump stations	Check pump operation.	OK	
		Check float operation. Perform manufacturer's recommended maintenance. Operate/cycle valves. Check sump for floating debris and sediments.	OK	
	Forcemain	Check for leaks.	OK	
	Laterals and trunk line	Check for and record VOCs at each manhole and cleanout; check for line blockage visually; lubricate locks.	Performed by On-Site	
Groundwater cutoff manholes	Collect and analyze sample of liquid in cutoff trench. Note which line (surface drainage or LCS) is plugged.	Performed by On-Site		
Gas venting system	Odors	Check for and record VOCs and methane (explosimeter) upwind, at each vent, and at perimeter of property. Check physical condition of vent and screen.	Performed by On-Site	

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
WELLSVILLE/ANDOVER LANDFILL SITE
NYSDEC SITE NO. 9-02-004

Inspector: <u>Bradley J. MATSUI</u>		Date: <u>9/29/2020</u>	
Weather: <u>Rain / Cloudy</u>		Temperature: <u>60° F</u>	
Area	Item	Action	Comments
Stormwater system	Ditches and swales	Check for pooling, erosion, excessive vegetation, and weak vegetation.	OK
	Cover system drainage	Check for cover soils that are excessively wet, slope failure without evidence of fill subsidence. Check condition of geocomposite drainage layer at cover perimeter.	OK
	Culverts	Check condition and for blockage and erosion.	OK
	Detention ponds	Check outlet structure for blockage and general condition.	OK
Check for siltation/silt buildup, erosion, condition of vegetation and embankments.		OK	
Groundwater monitoring system	Sampling wells	See Section 4.	OK
		Check condition of caps, locks, surface seals, and markings. Lubricate locks.	Performed by On-Site
Facility access system	Roads	Check condition. Check for erosion, potholes.	OK
	Access gate	Check condition. Lubricate lock.	OK
Other	Comments: <u>Installed new pump #2 in leachate manhole with the help of On-Site</u>		

Signed: Bradley J. Matsui

Date: 9/29/2020

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
 WELLSVILLE/ANDOVER LANDFILL SITE
 NYSDEC SITE NO. 9-02-004

Inspector: Bradley J. MATISON Date: 12/31/2020
 Weather: Cloudy Temperature: 22°F

Area	Item	Action	Comments
Cover system	Seeps	Delineate, sample, evaluate.	OK
	Subsidence/ponding	Delineate, fill, and revegetate.	OK
	Erosion/gullies	Determine cause, grade, and vegetate.	OK
	Slope stability	Check for erosion, slippage, slope failure.	OK
	Vegetation	Check for areas of weak/no vegetation, revegetate.	OK
		Mow semiannually.	OCT 2020
		Remove scrubs and trees from cover system and drainage ways.	OK
Vectors	Check for burrows and backfill with clean soil.	OK	
Leachate collection and storage system	USTs	Check leachate levels, check/test leak detection system and auto dialer; check for sediment in bottom of tanks.	Oct, Nov, Dec 570,000 gal
	Pump stations	Check pump operation.	OK
		Check float operation. Perform manufacturer's recommended maintenance. Operate/cycle valves. Check sump for floating debris and sediments.	OK
	Forcemain	Check for leaks.	OK
	Laterals and trunk line	Check for and record VOCs at each manhole and cleanout; check for line blockage visually; lubricate locks.	Performed by On-Site
	Groundwater cutoff manholes	Collect and analyze sample of liquid in cutoff trench. Note which line (surface drainage or LCS) is plugged.	Performed by On-Site
Gas venting system	Odors	Check for and record VOCs and methane (explosimeter) upwind, at each vent, and at perimeter of property. Check physical condition of vent and screen.	Performed by On-Site

Figure 5-3

QUARTERLY INSPECTION AND MAINTENANCE CHECKLIST
 WELLSVILLE/ANDOVER LANDFILL SITE
 NYSDEC SITE NO. 9-02-004

Inspector: <u>Bradley Mattison</u>		Date: <u>12/31/2020</u>	
Weather: <u>Cloudy</u>		Temperature: <u>22°F</u>	
Area	Item	Action	Comments
Stormwater system	Ditches and swales	Check for pooling, erosion, excessive vegetation, and weak vegetation.	OK
	Cover system drainage	Check for cover soils that are excessively wet, slope failure without evidence of fill subsidence. Check condition of geocomposite drainage layer at cover perimeter.	OK
	Culverts	Check condition and for blockage and erosion.	OK
	Detention ponds	Check outlet structure for blockage and general condition.	OK
Check for siltation/silt buildup, erosion, condition of vegetation and embankments.		OK	
Groundwater monitoring system	Sampling wells	See Section 4.	
		Check condition of caps, locks, surface seals, and markings. Lubricate locks.	Performed by On-Site
Facility access system	Roads	Check condition. Check for erosion, potholes.	OK
	Access gate	Check condition. Lubricate lock.	OK
Other	Comments		

Signed: Bradley J Mattison
 Date: 12/31/2020

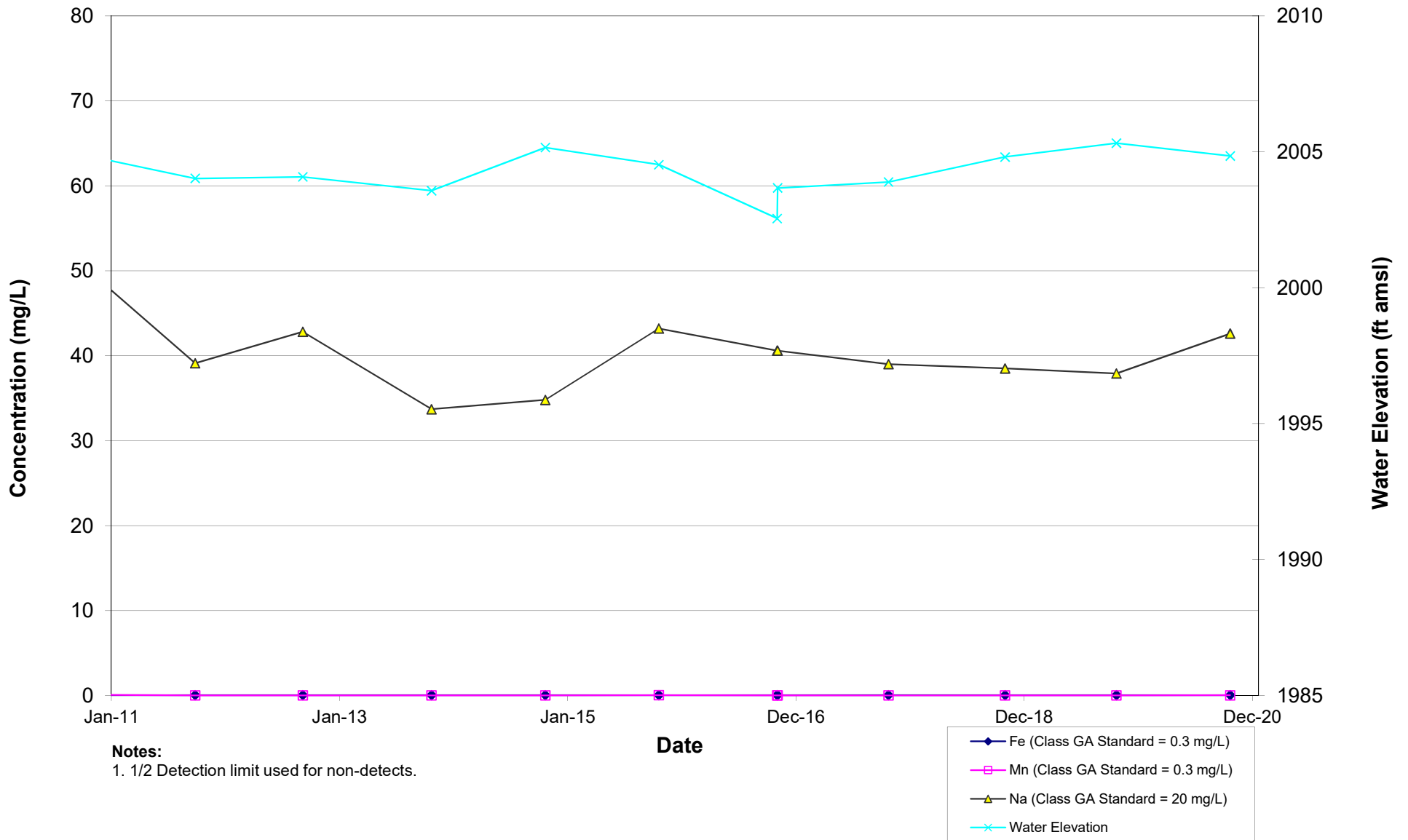
Appendix E

Groundwater Concentration Time Trend Plots

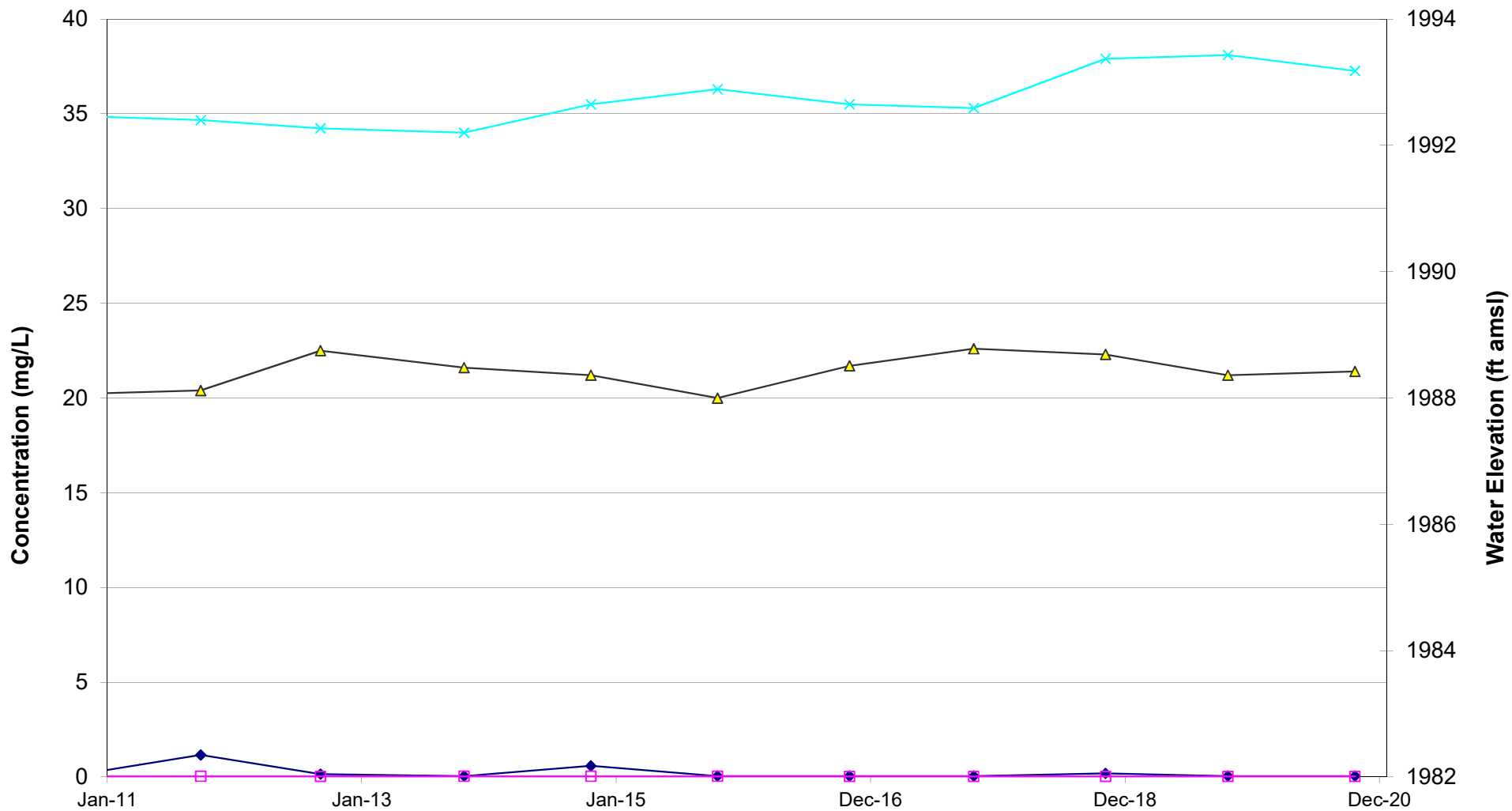
Metals

Groundwater Concentration
Time Trend Plots

CW-3A Metals

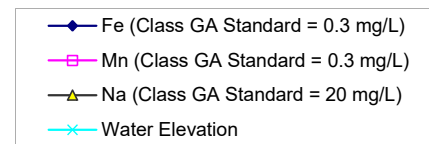


CW-3B Metals

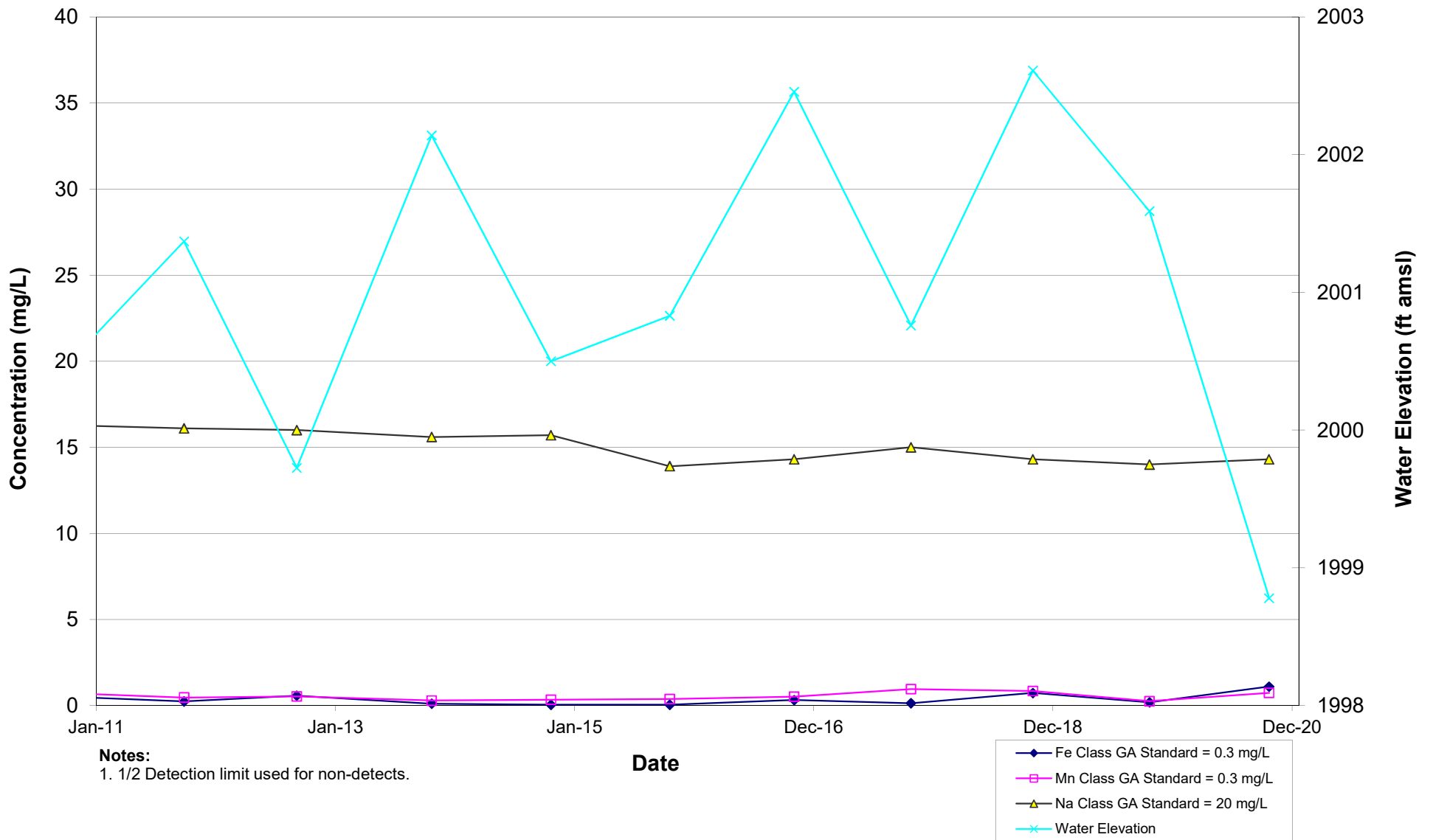


Notes:

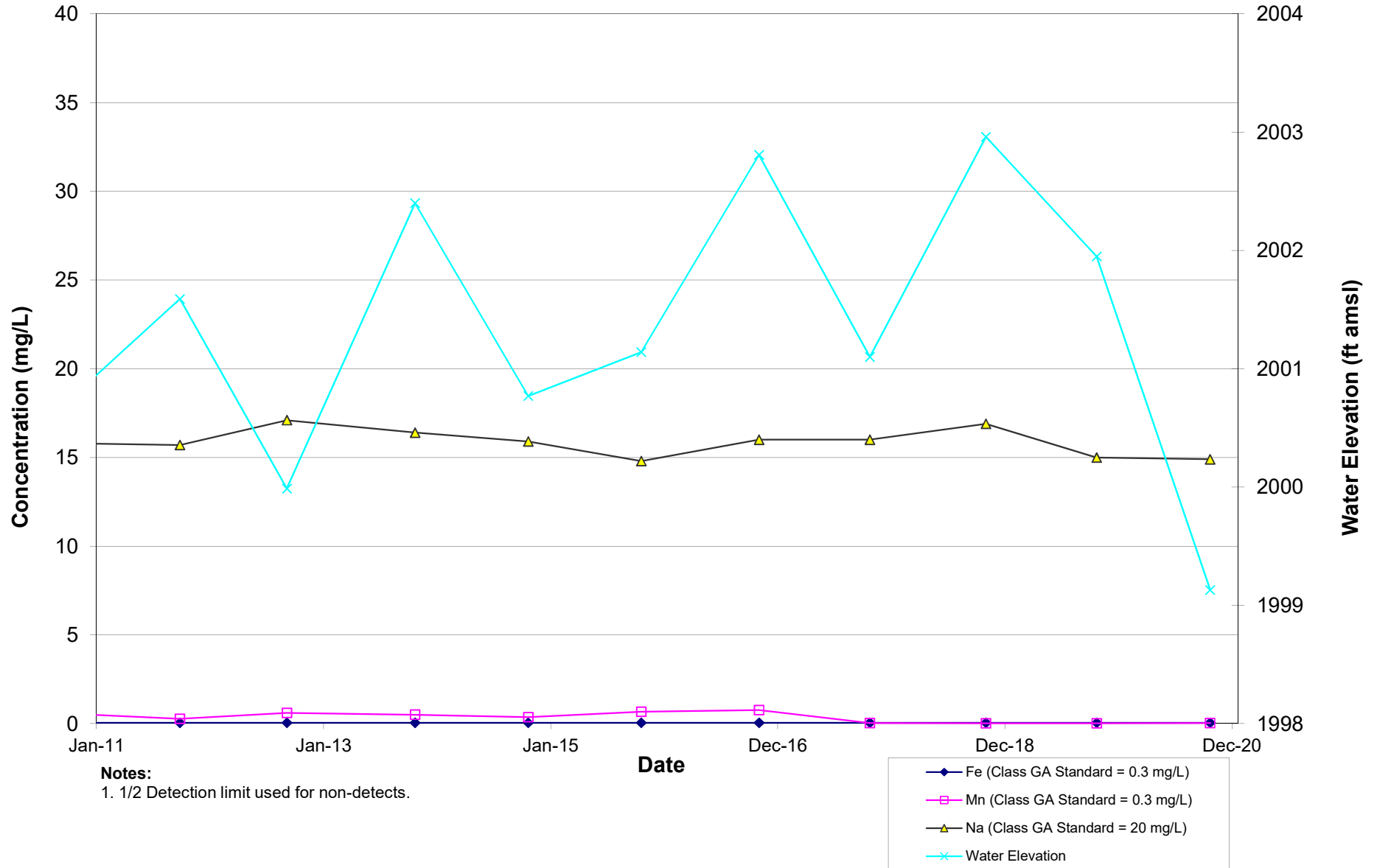
1. 1/2 Detection limit used for non-detects.



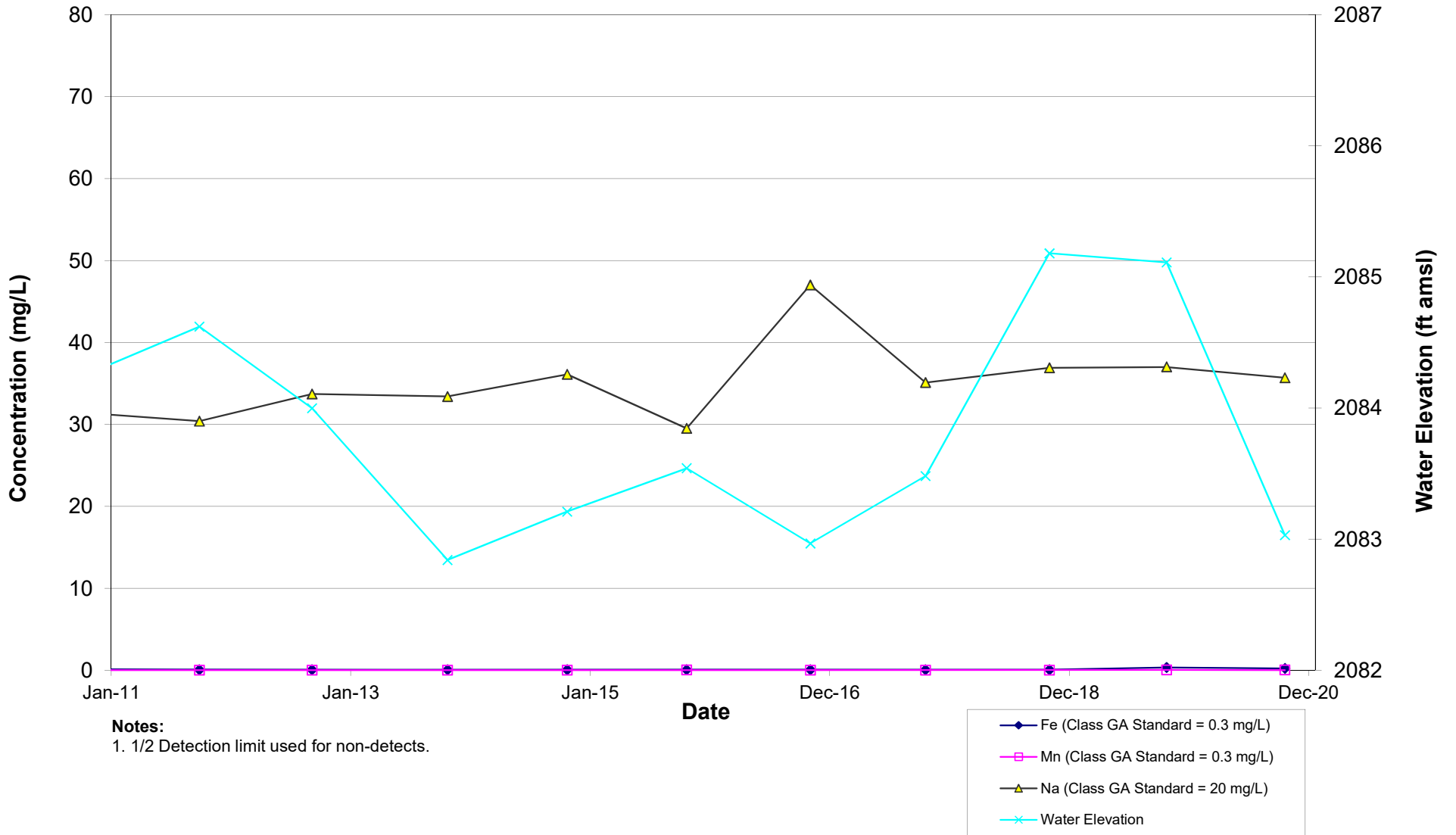
CW-4A Metals



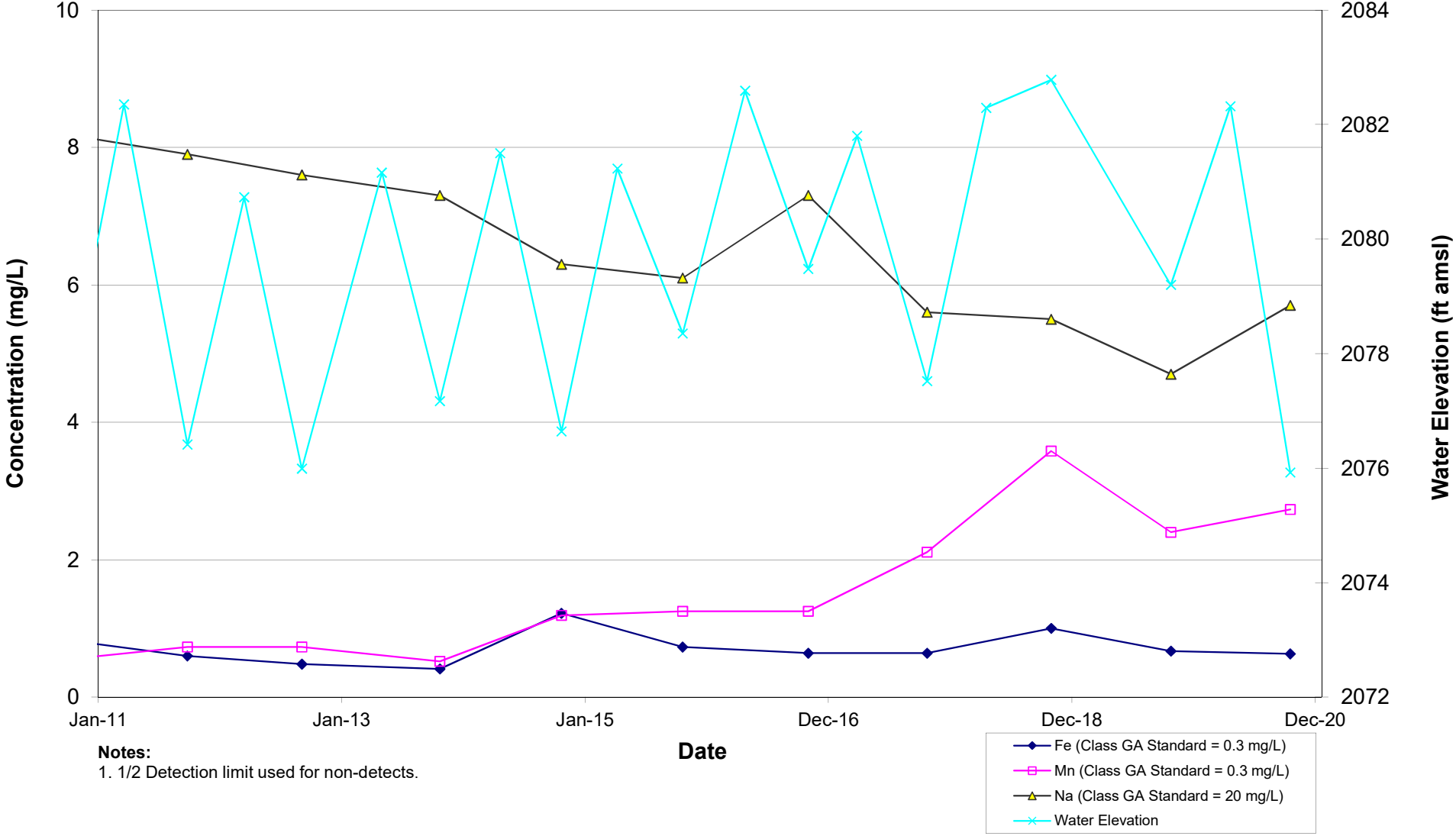
CW-4B Metals



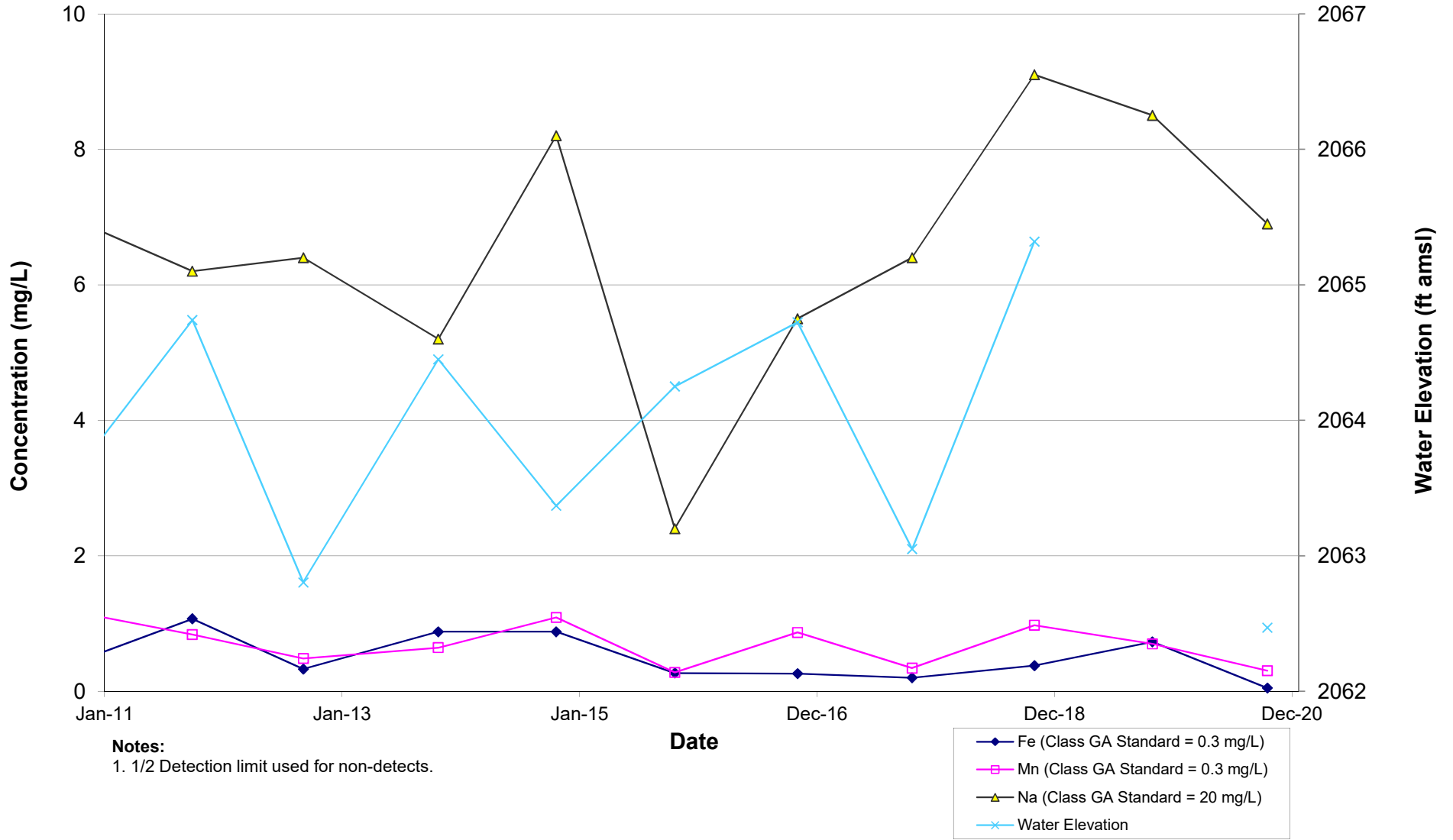
MW-3S Metals



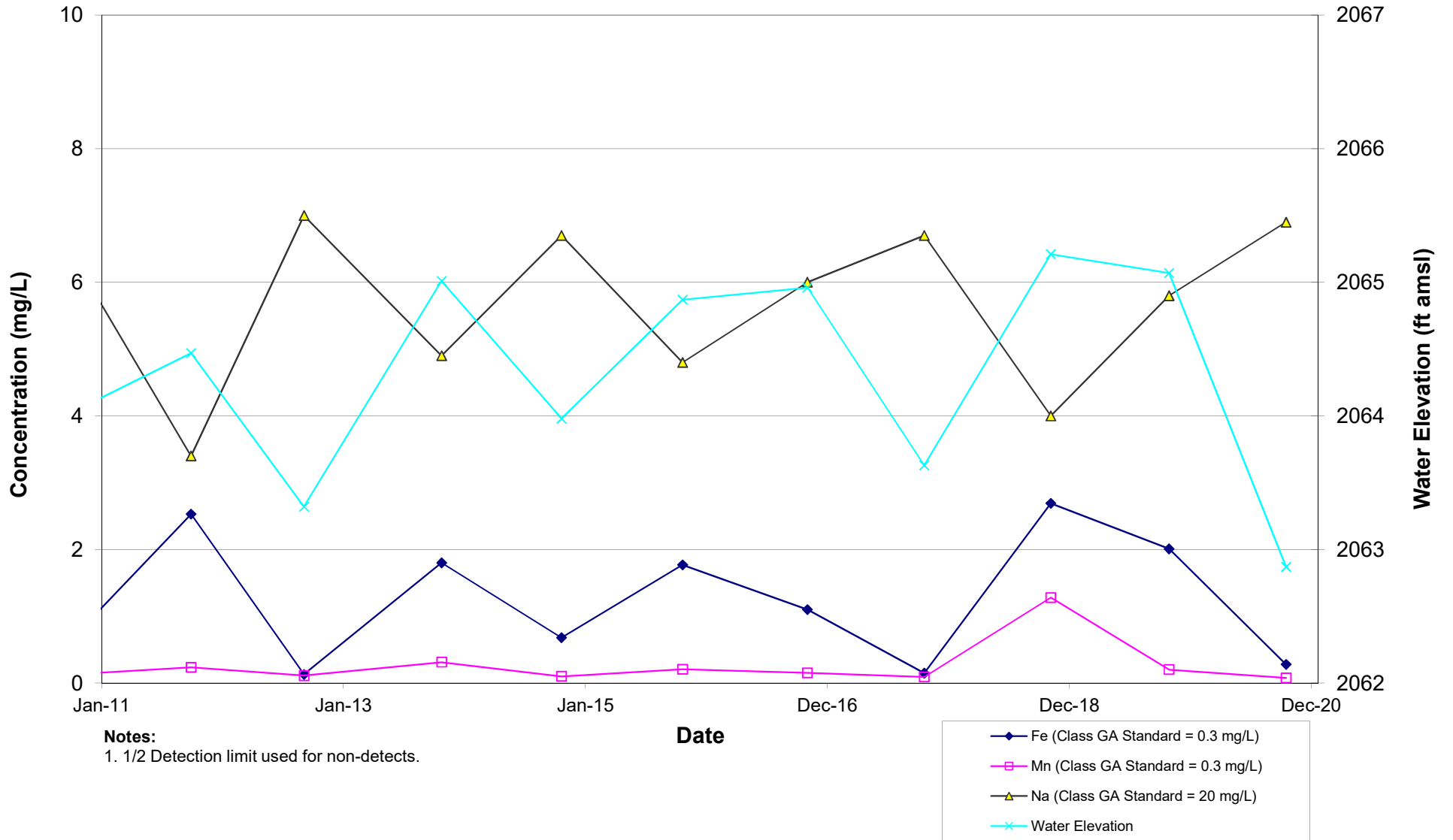
MW-4D Metals



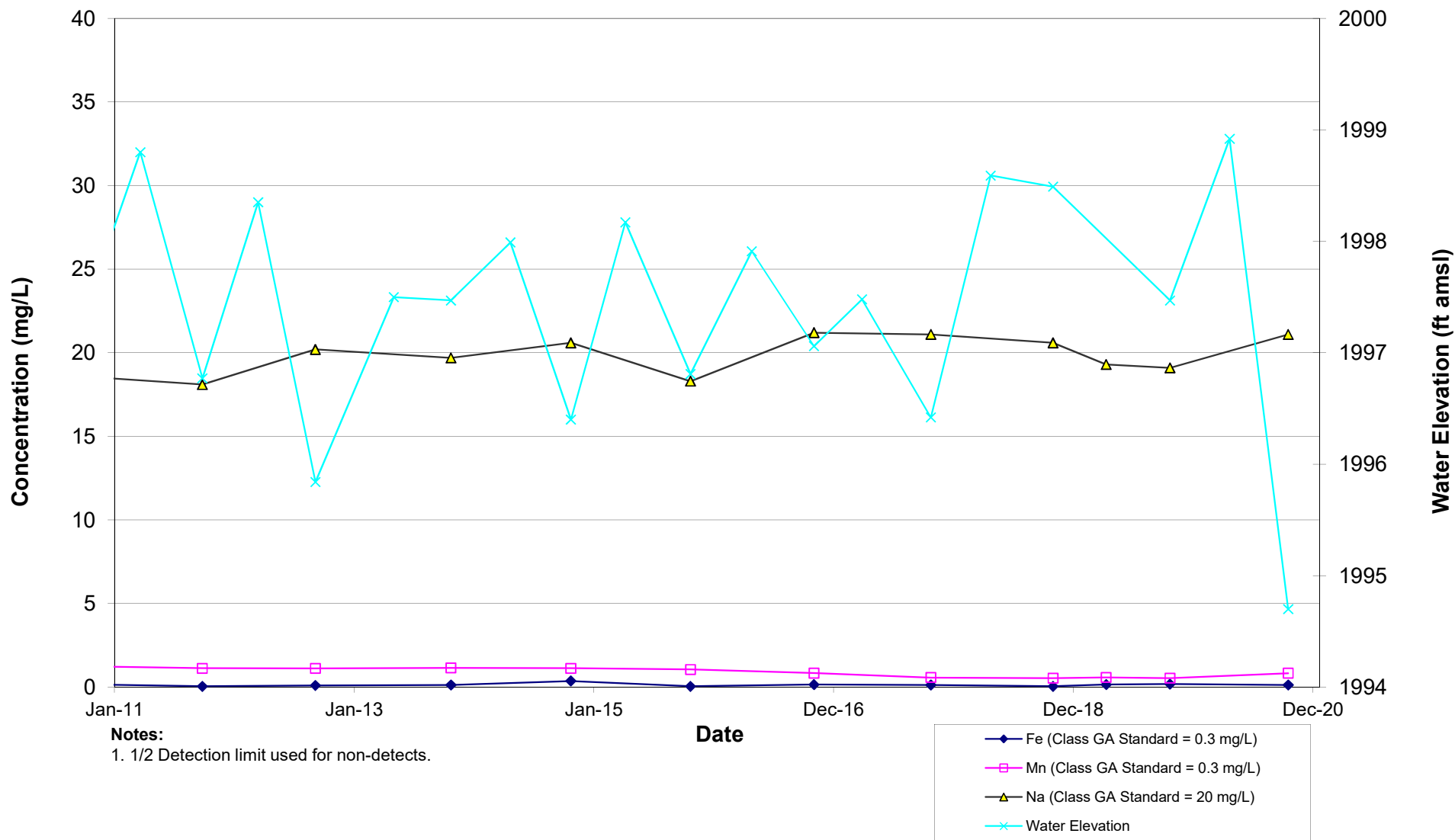
MW-5D Metals



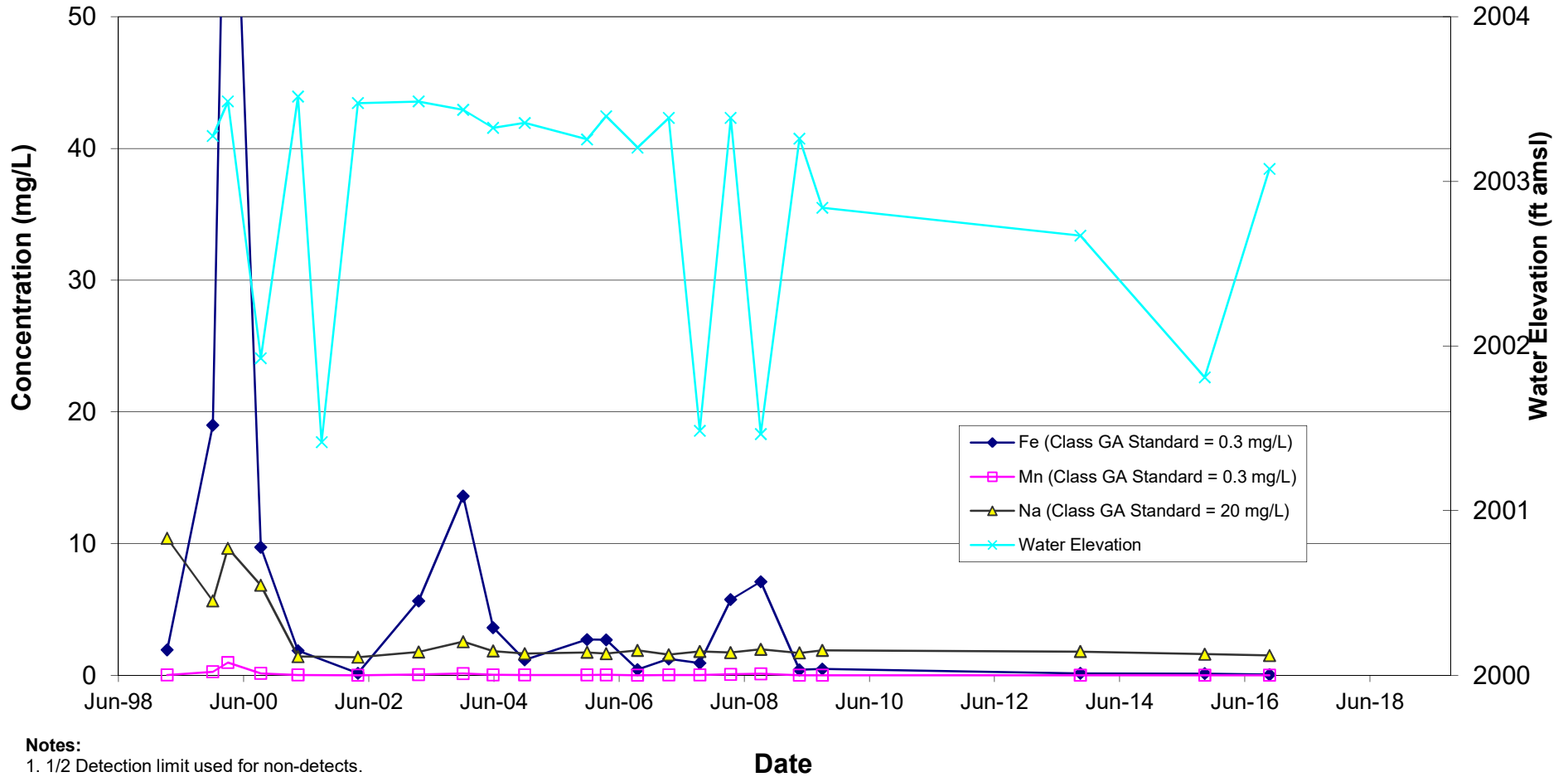
MW-5S Metals



MW-11S Metals

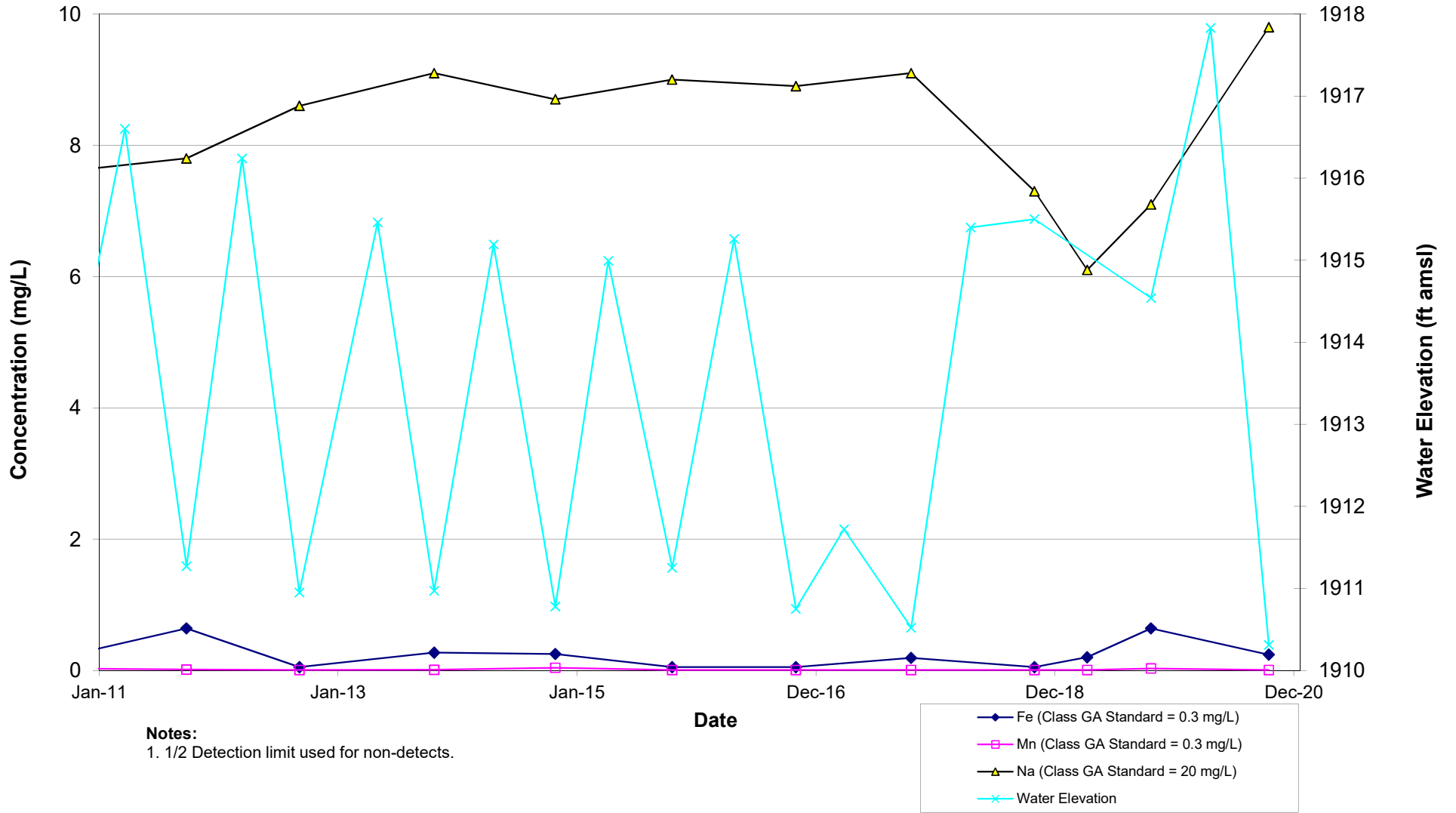


MW-15S Metals

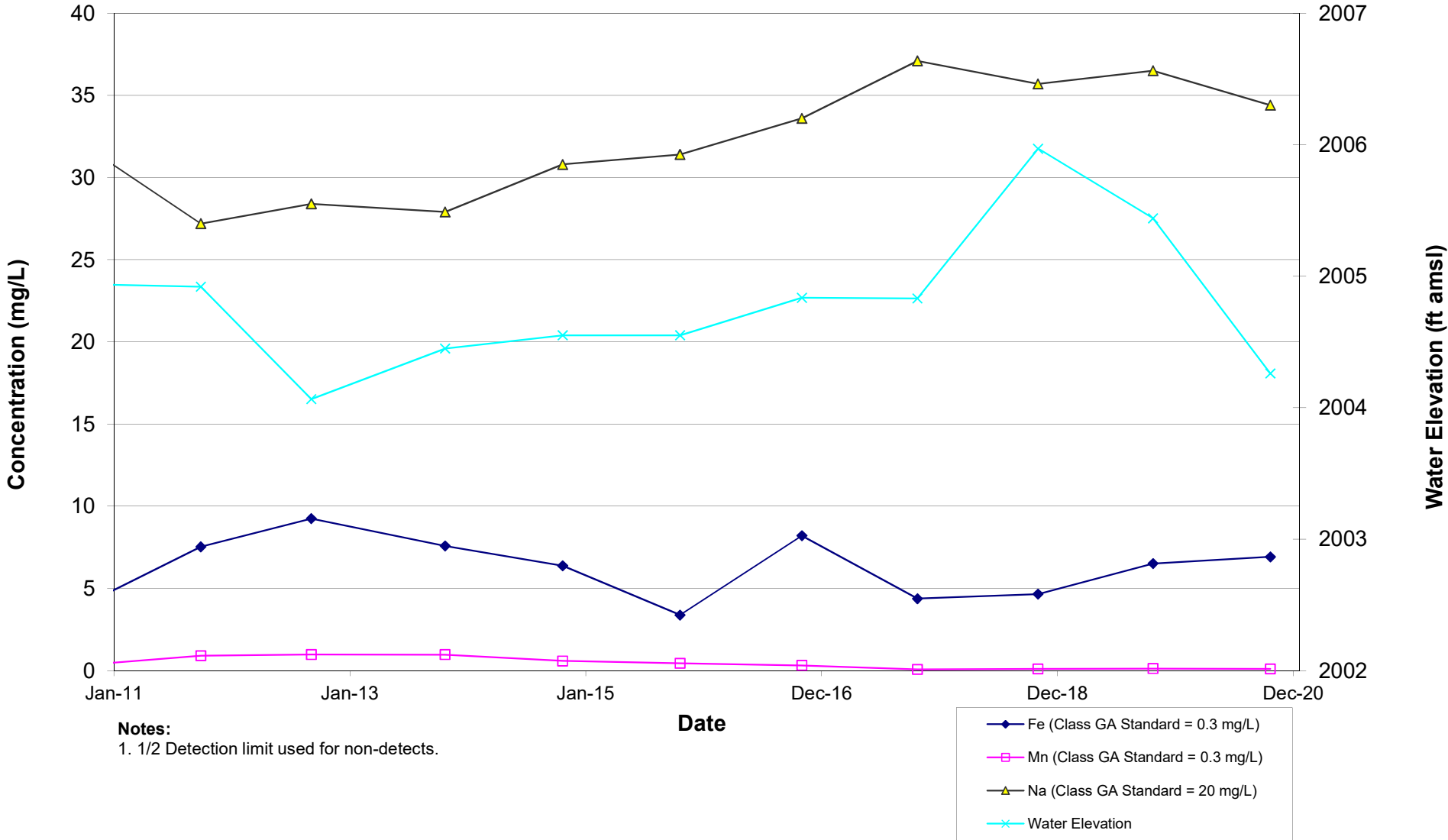


Notes:
 1. 1/2 Detection limit used for non-detects.
 2. Manganese is non-detect on 4/10/2002, 9/28/2006 and 4/29/2009.

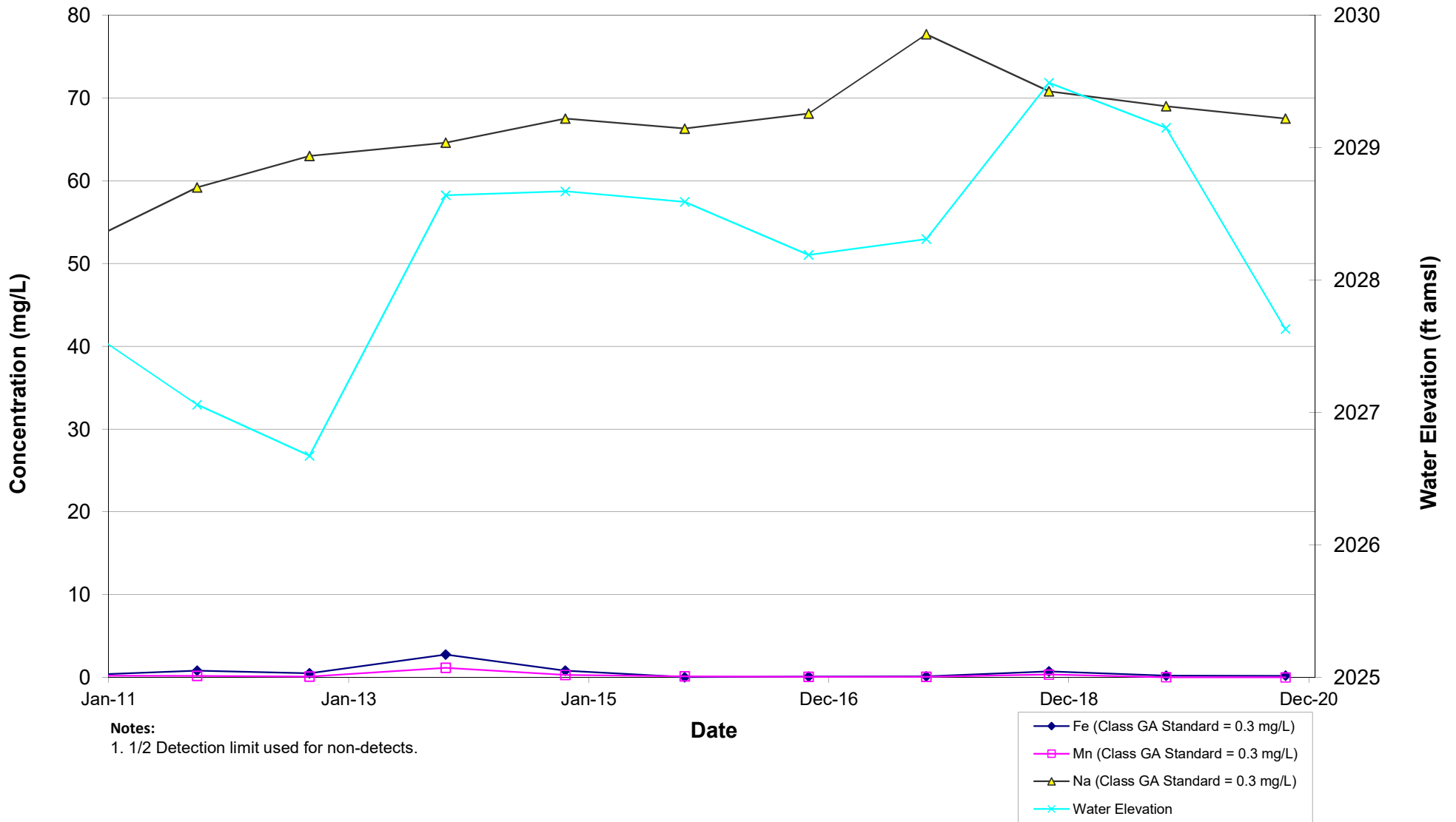
MW-16S Metals



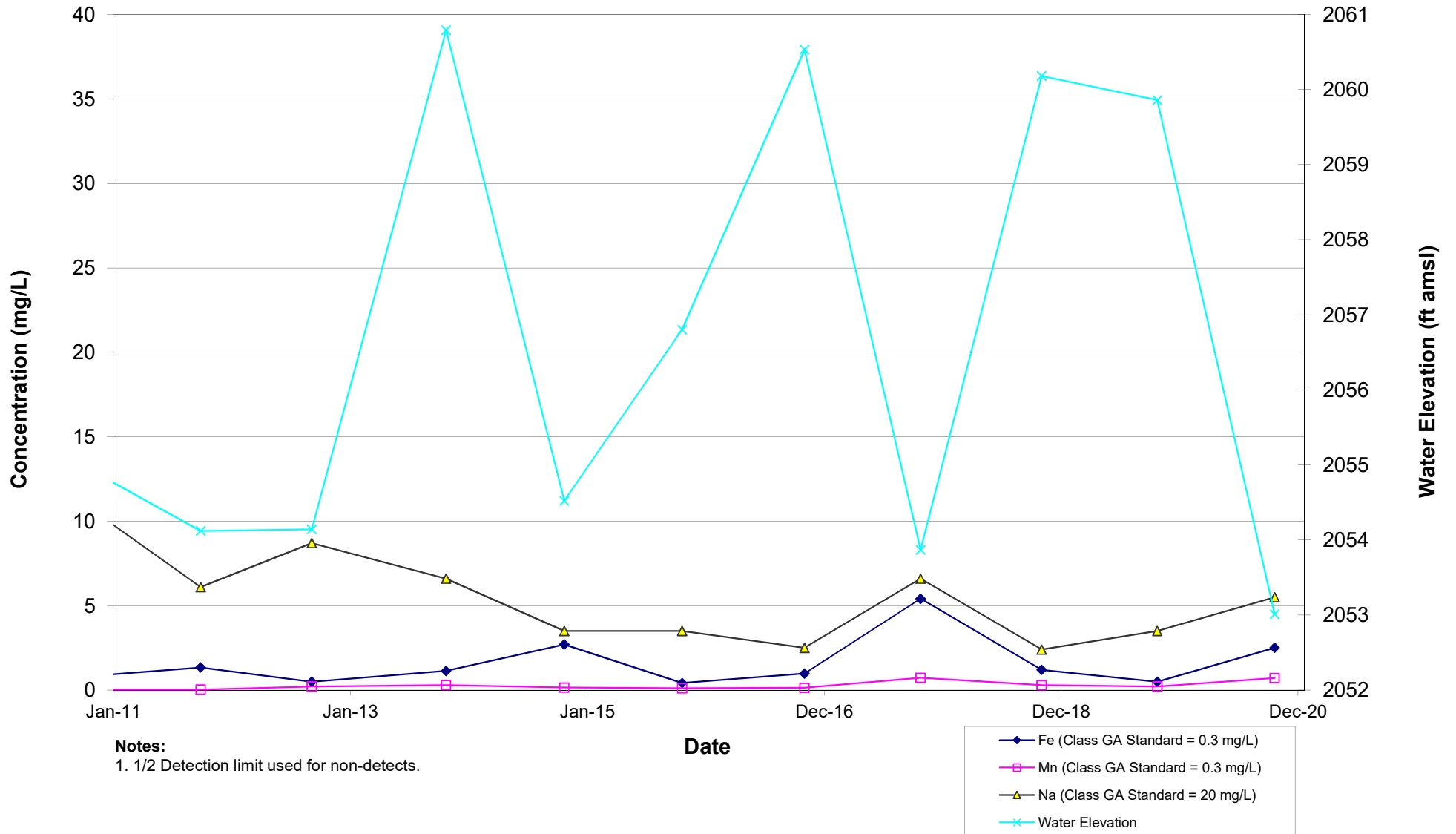
MW-17D Metals



MW-17S Metals



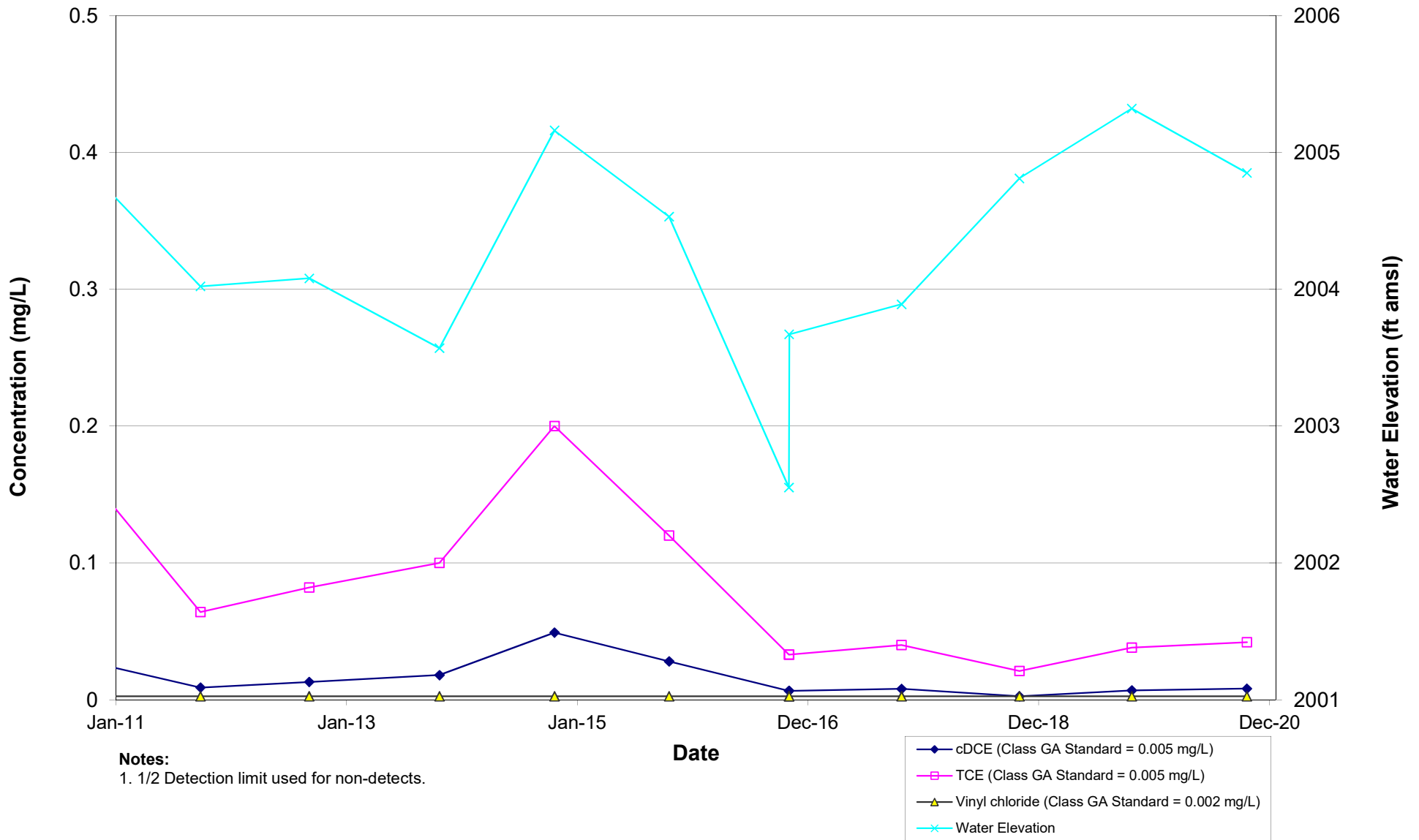
MW-18S Metals



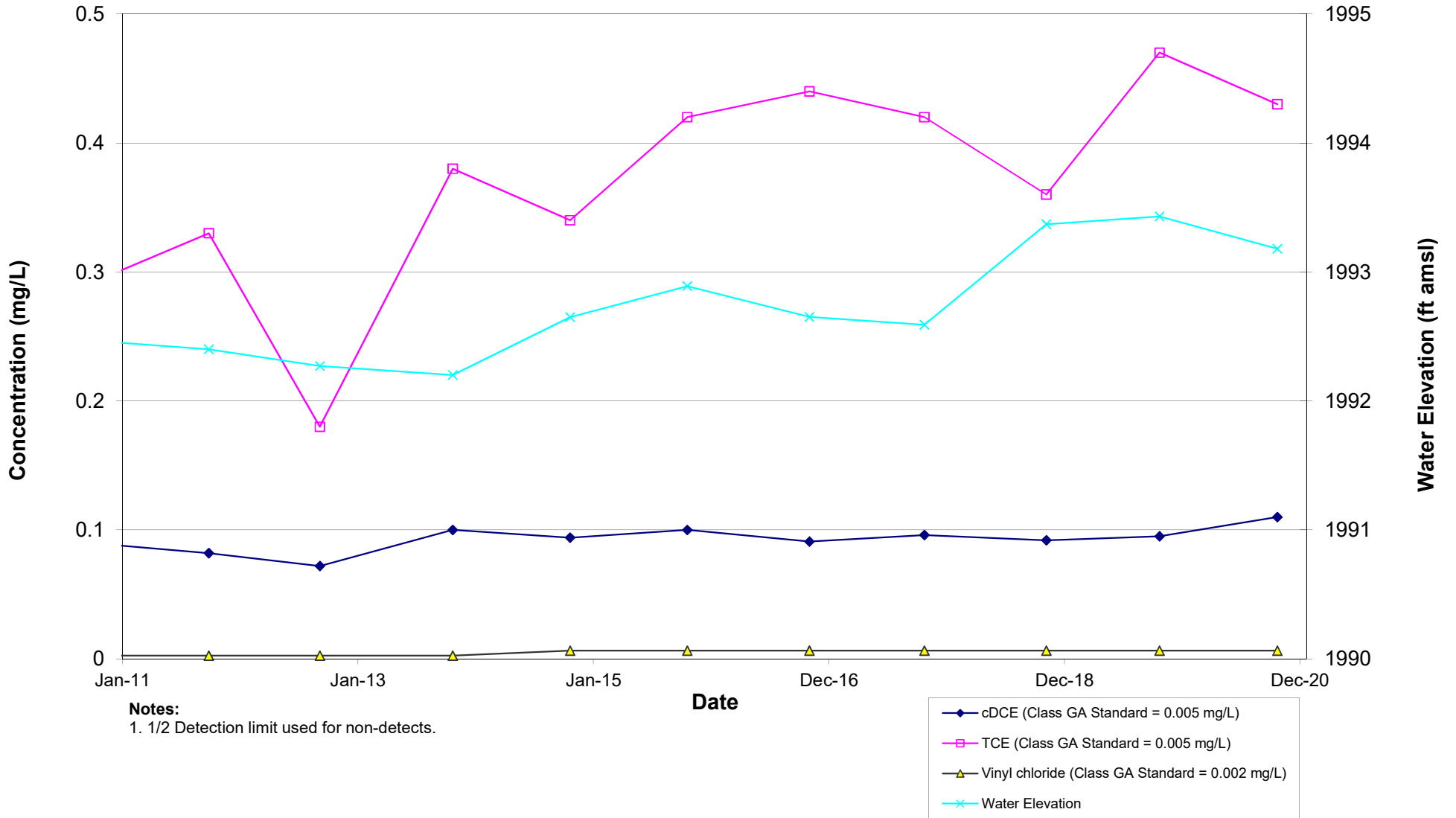
VOC's

**Groundwater Concentration
Time Trend Plots**

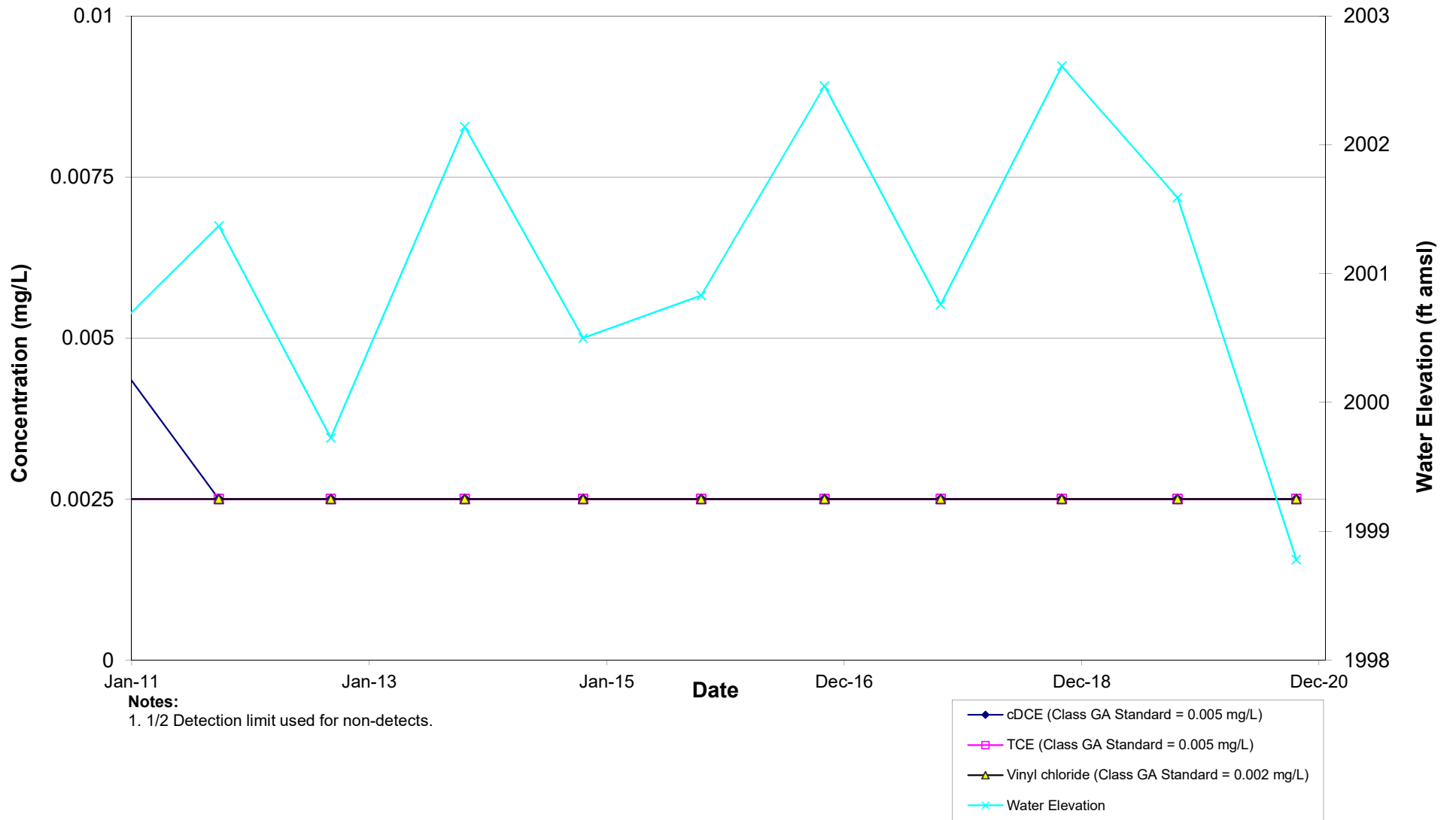
CW-3A VOCs



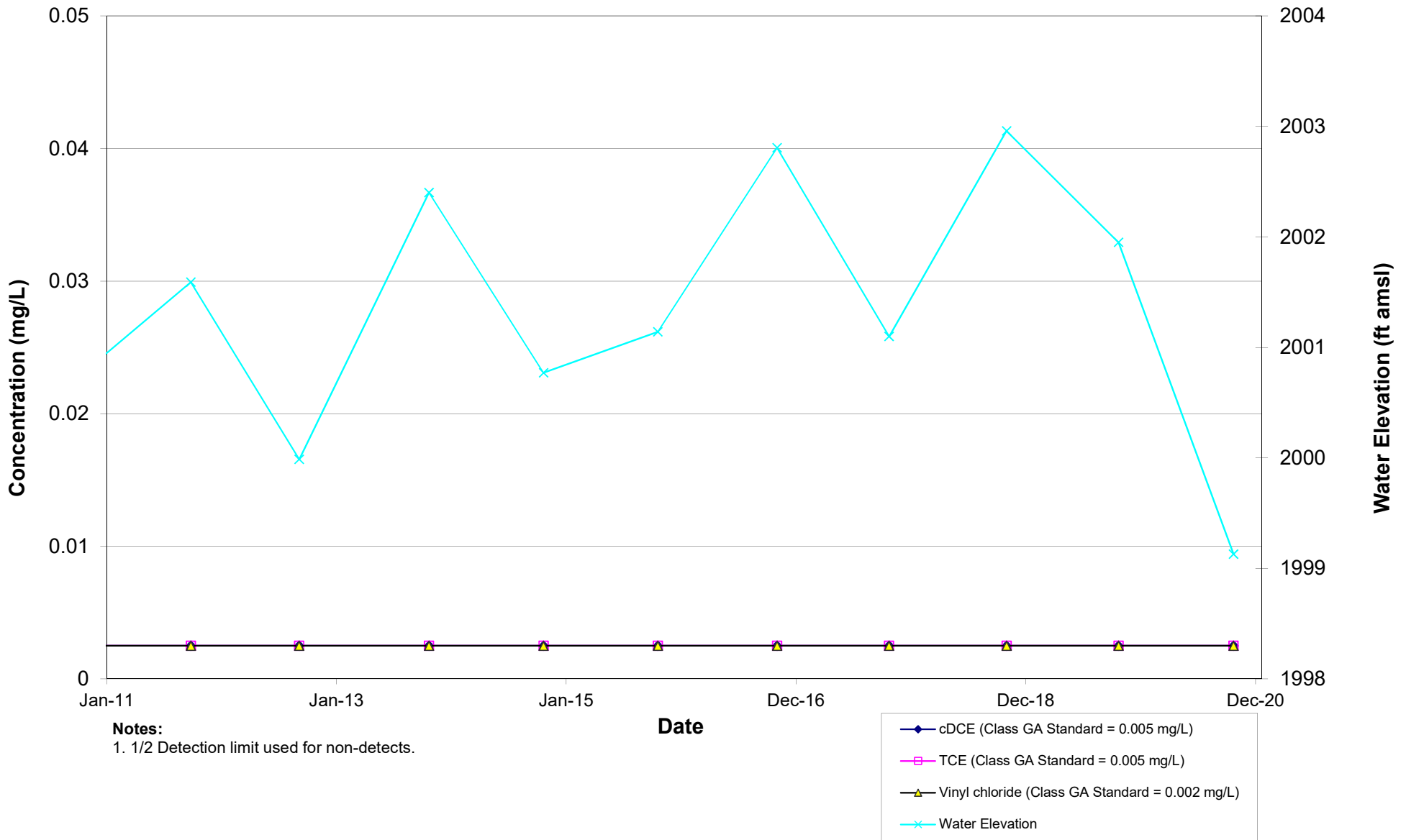
CW-3B VOCs



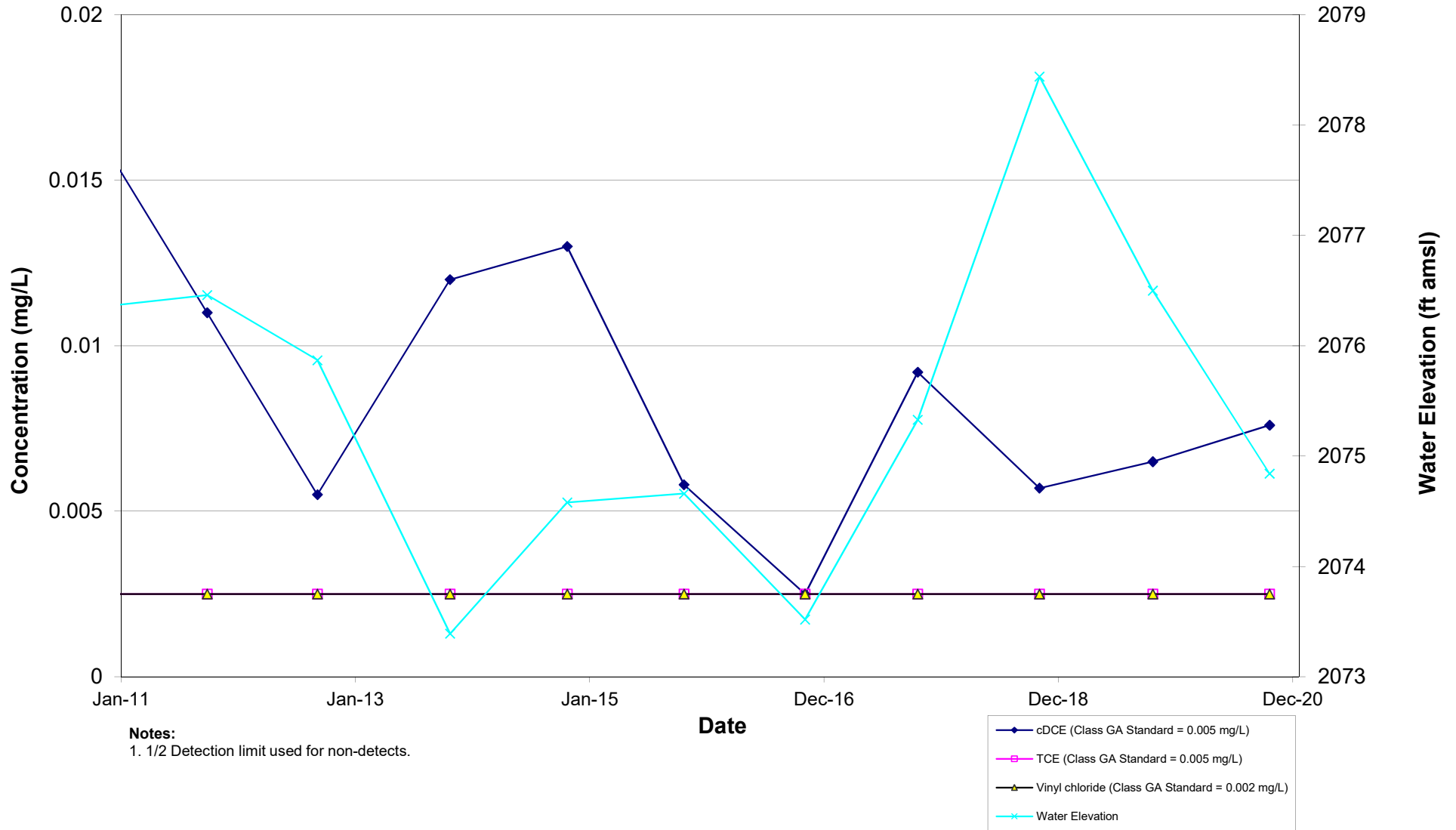
CW-4A VOCs



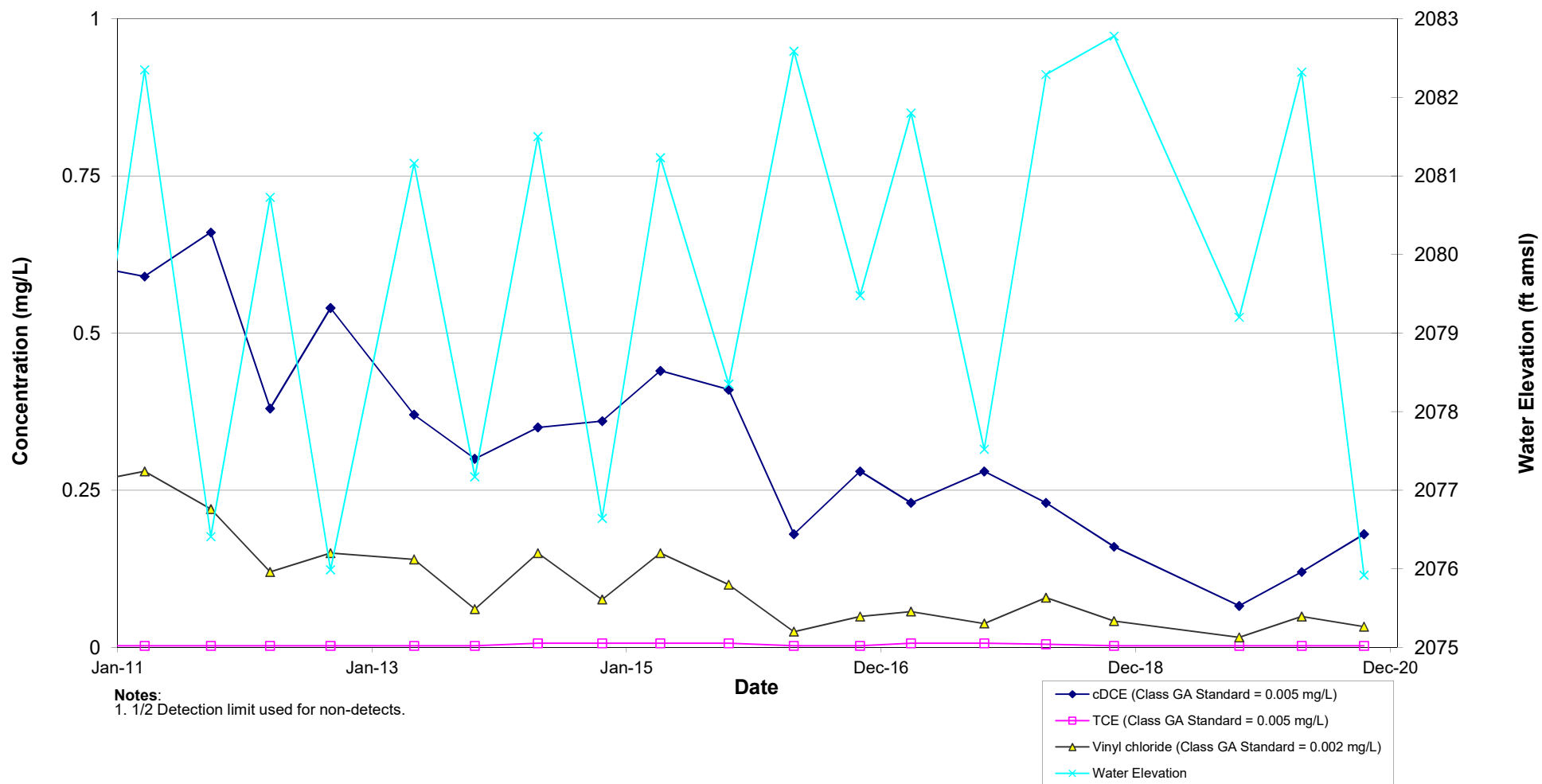
CW-4B VOCs



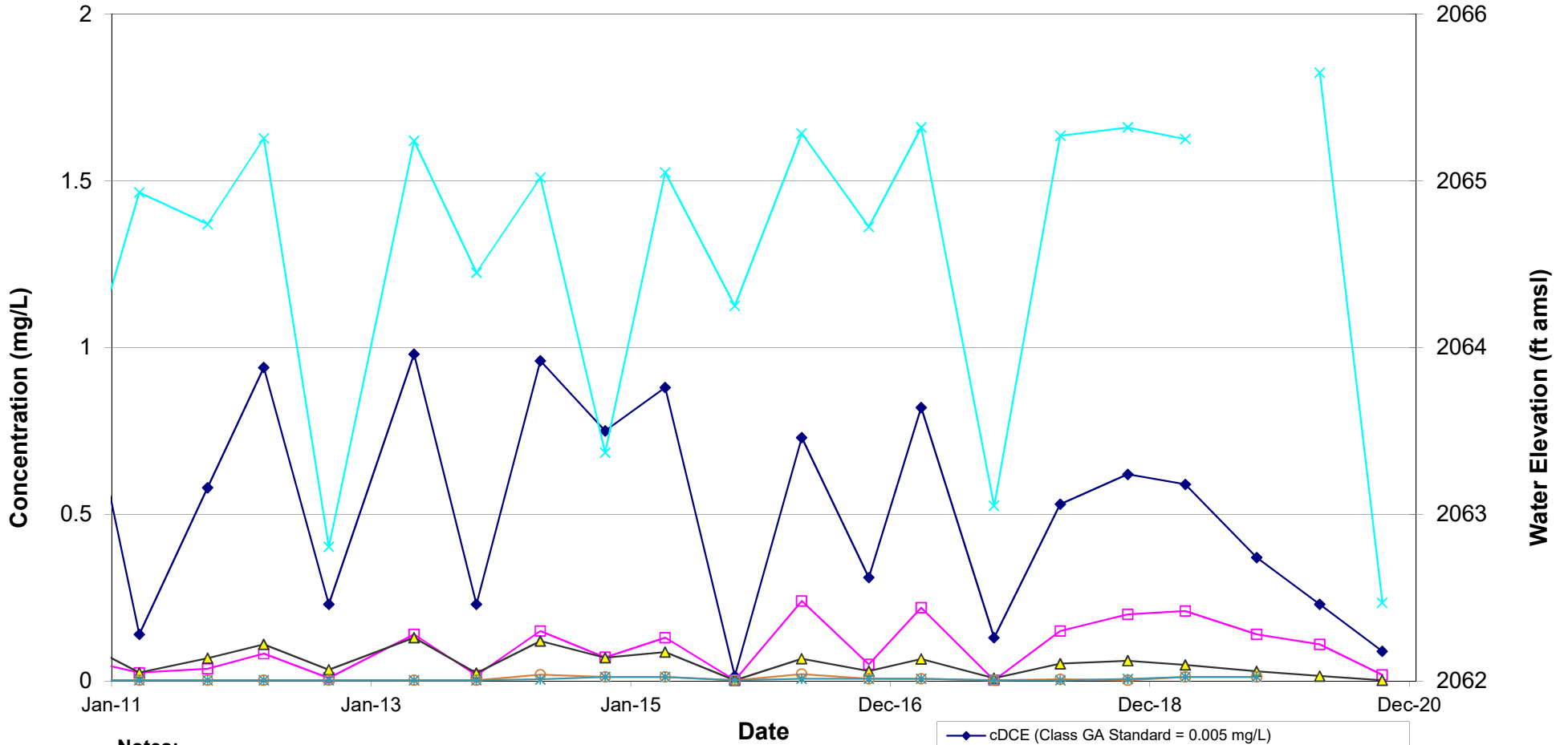
MW-3D VOCs



MW-4D VOCs

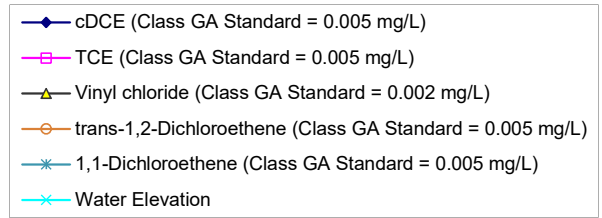


MW-5D VOCs

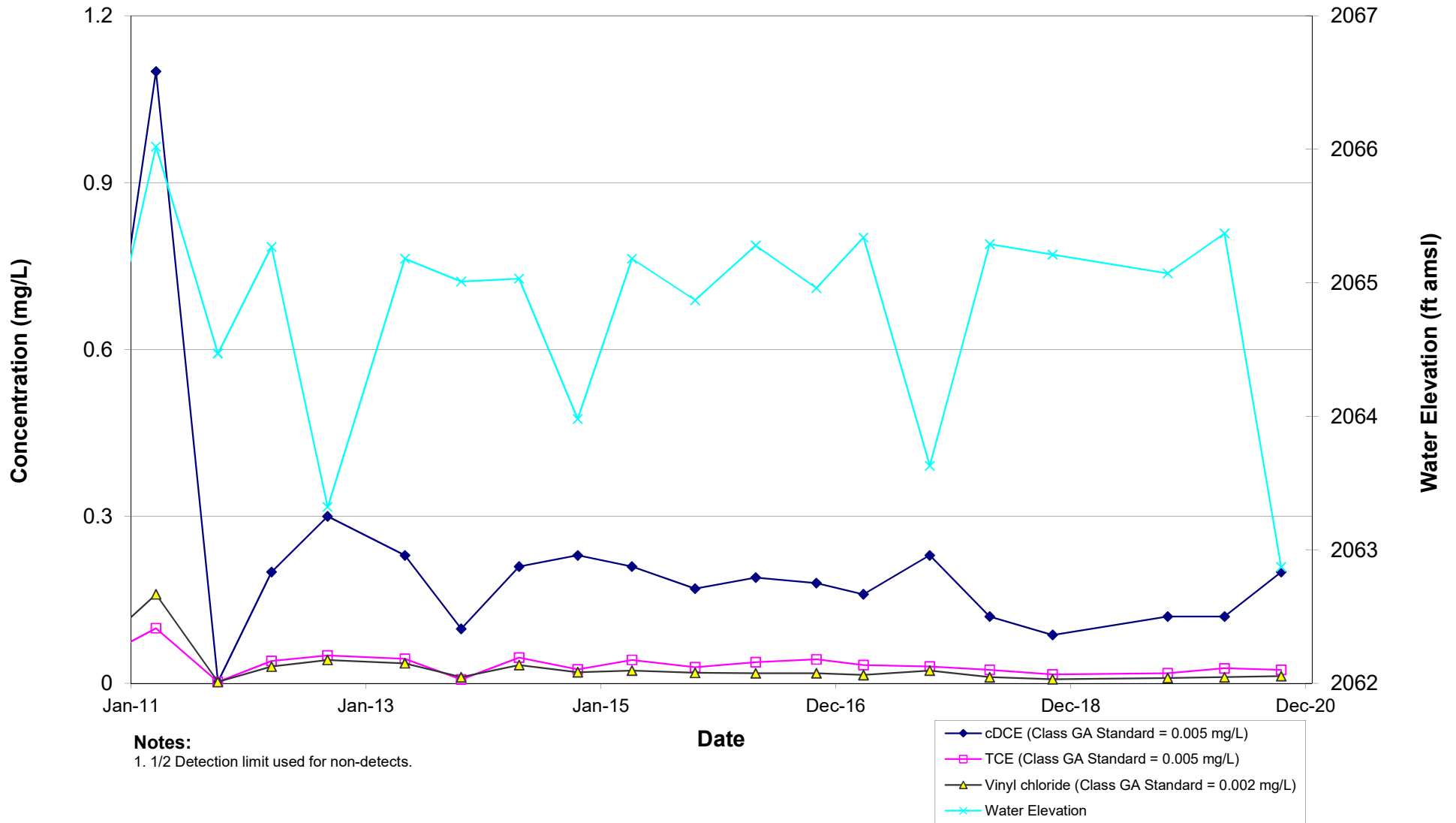


Notes:

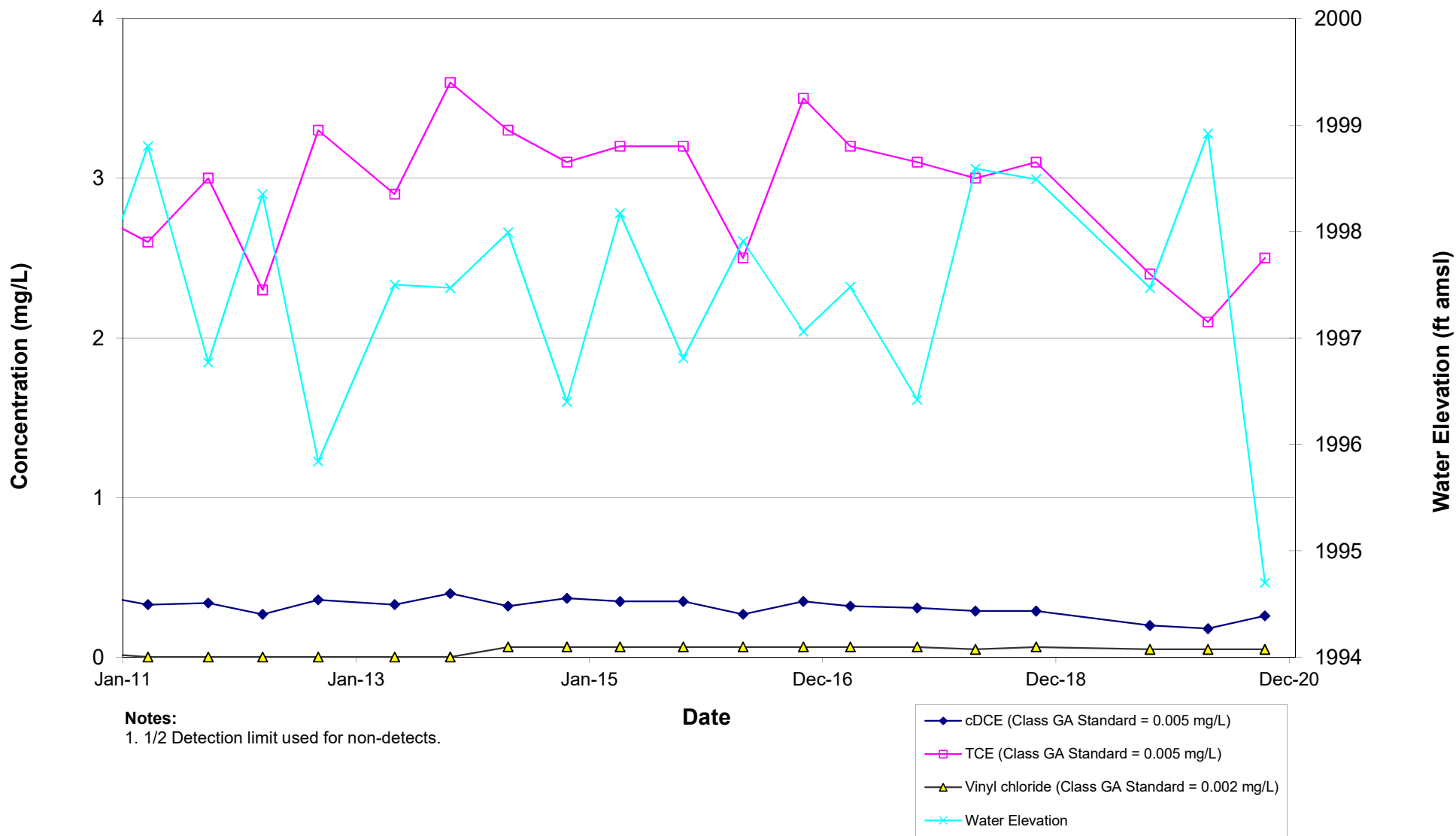
1. 1/2 Detection limit used for non-detects.



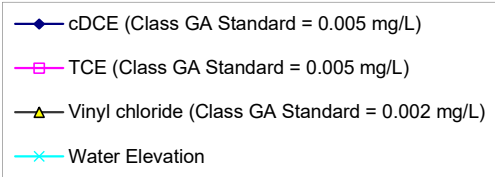
MW-5S VOCs



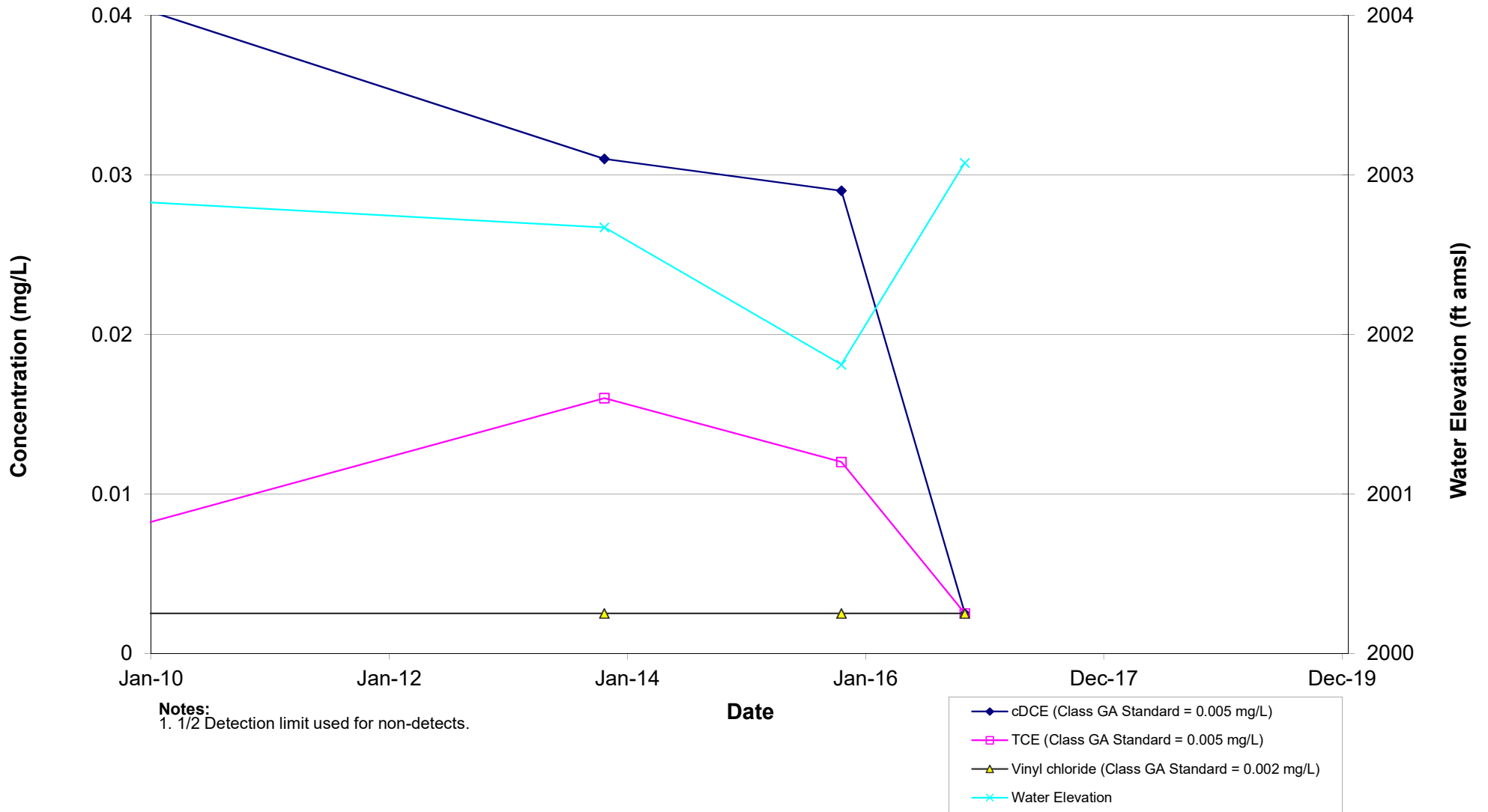
MW-11S VOCs



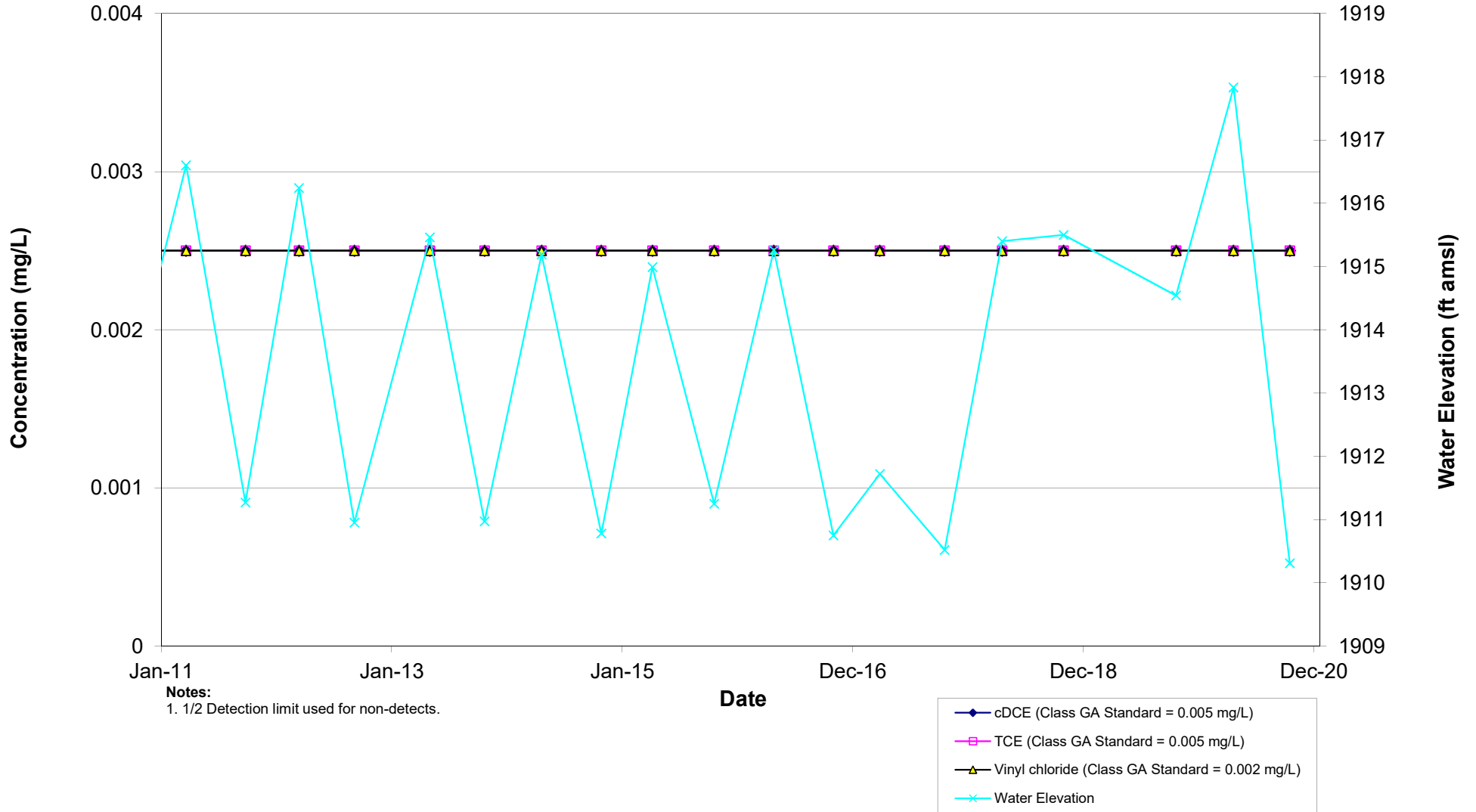
Notes:
1. 1/2 Detection limit used for non-detects.



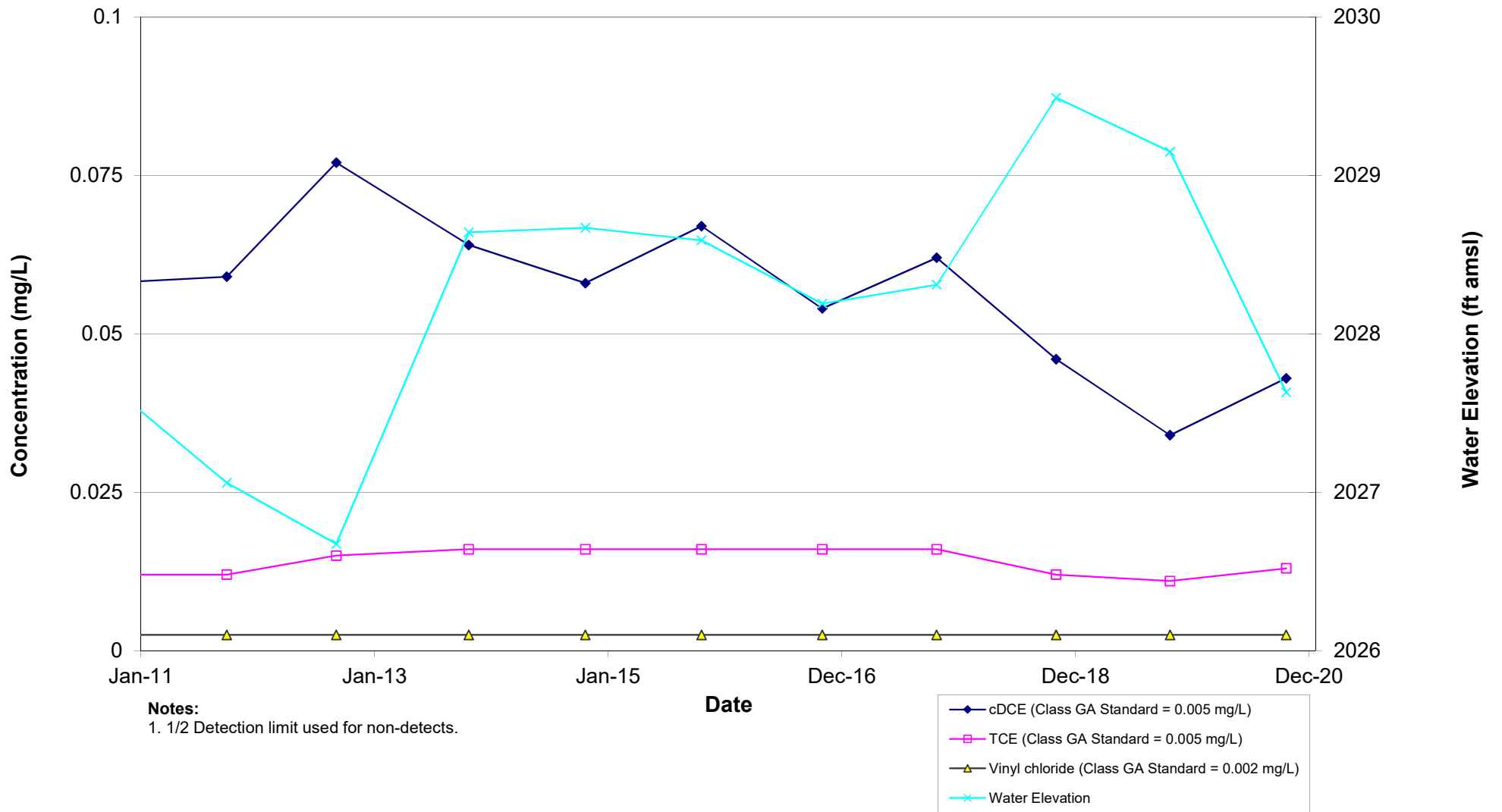
MW-15S VOCs



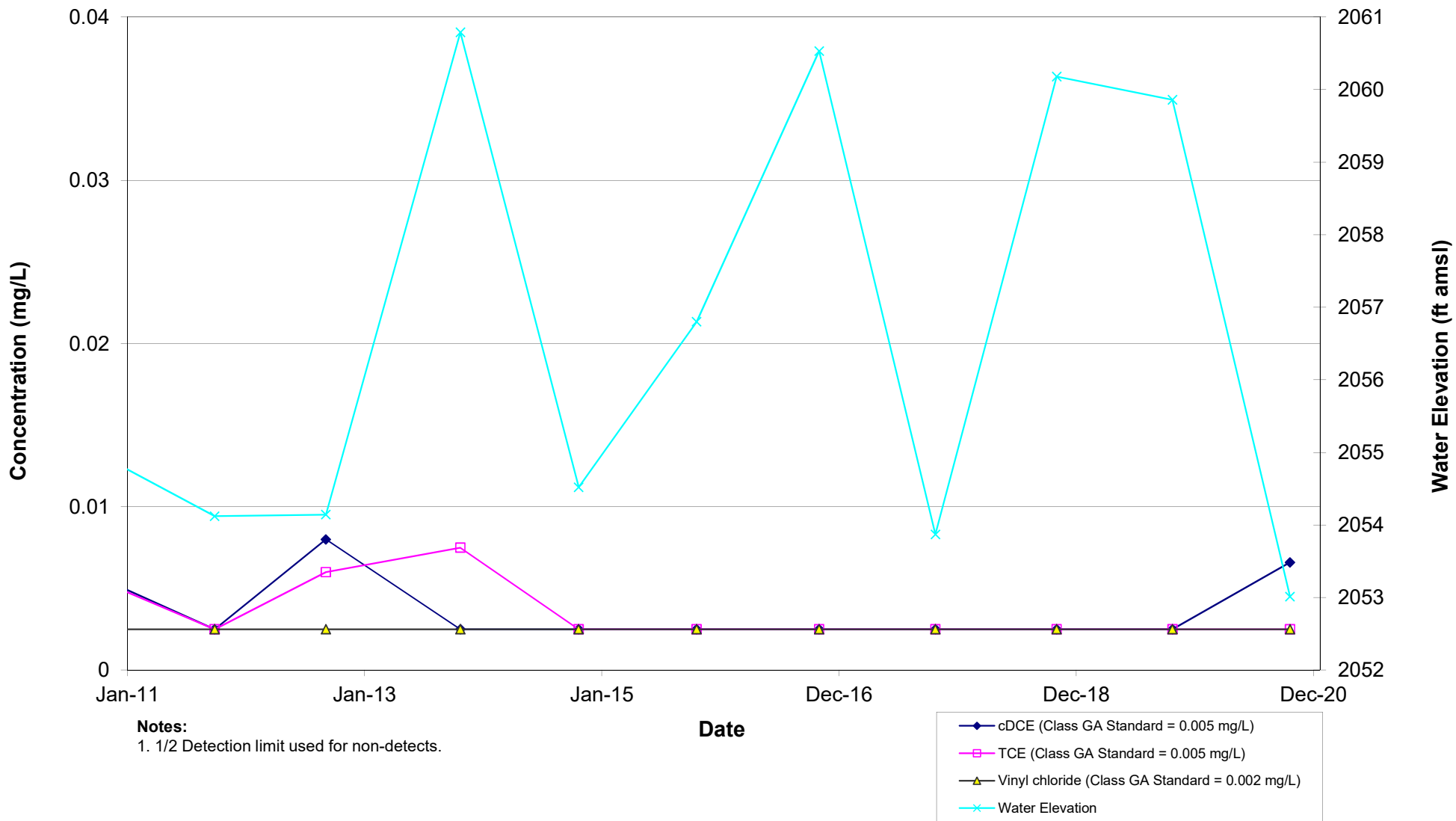
MW-16S VOCs



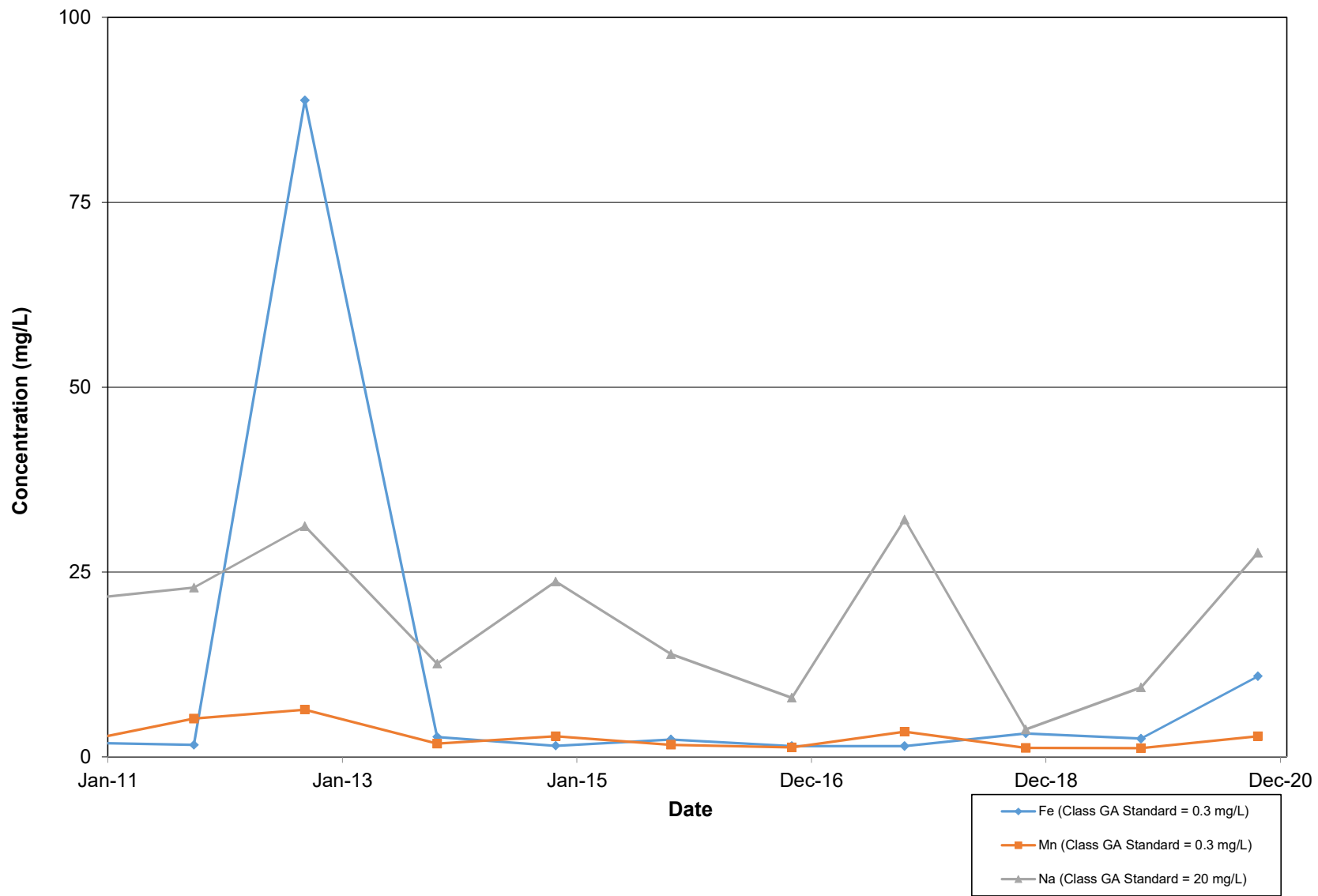
MW-17S VOCs



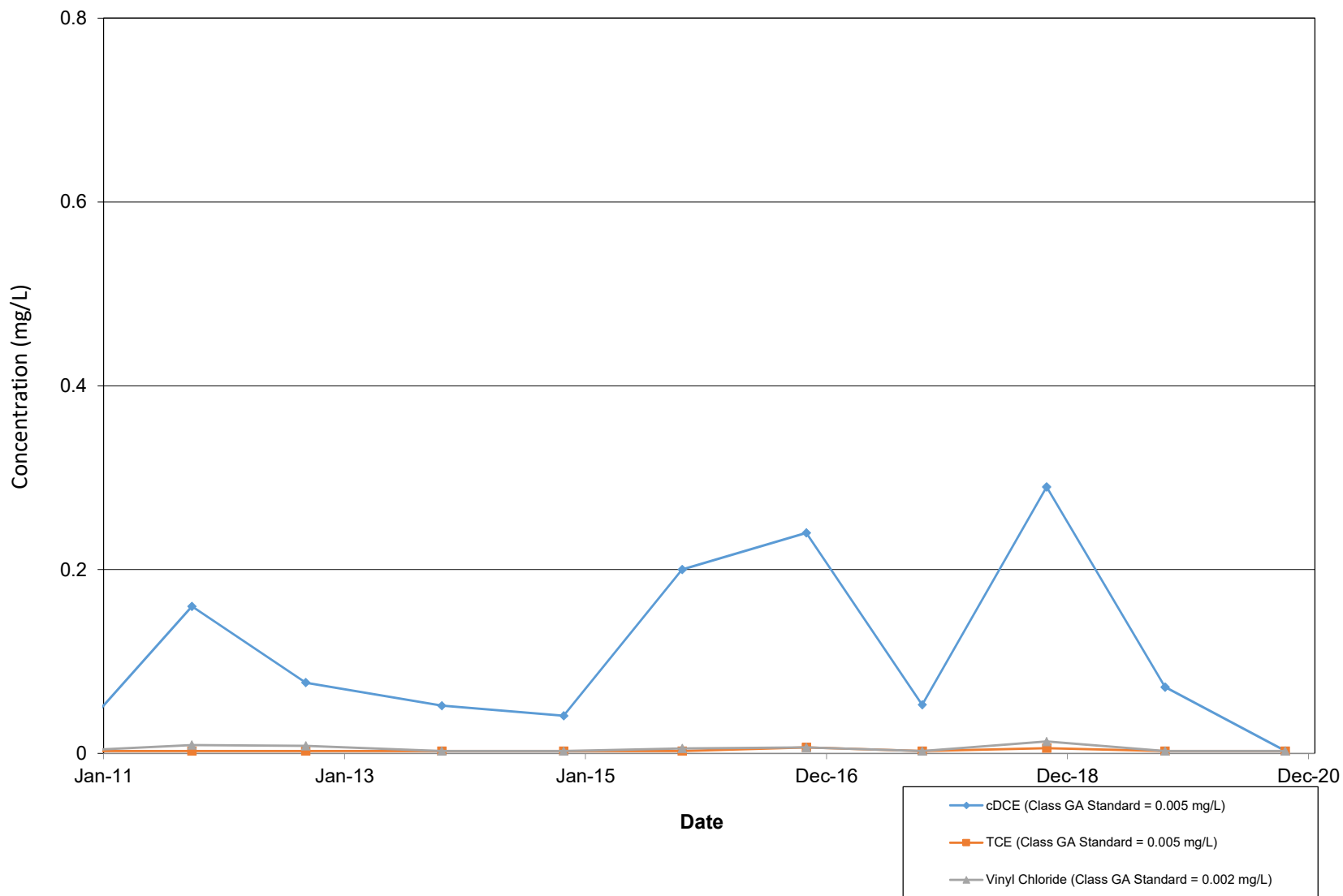
MW-18S VOCs



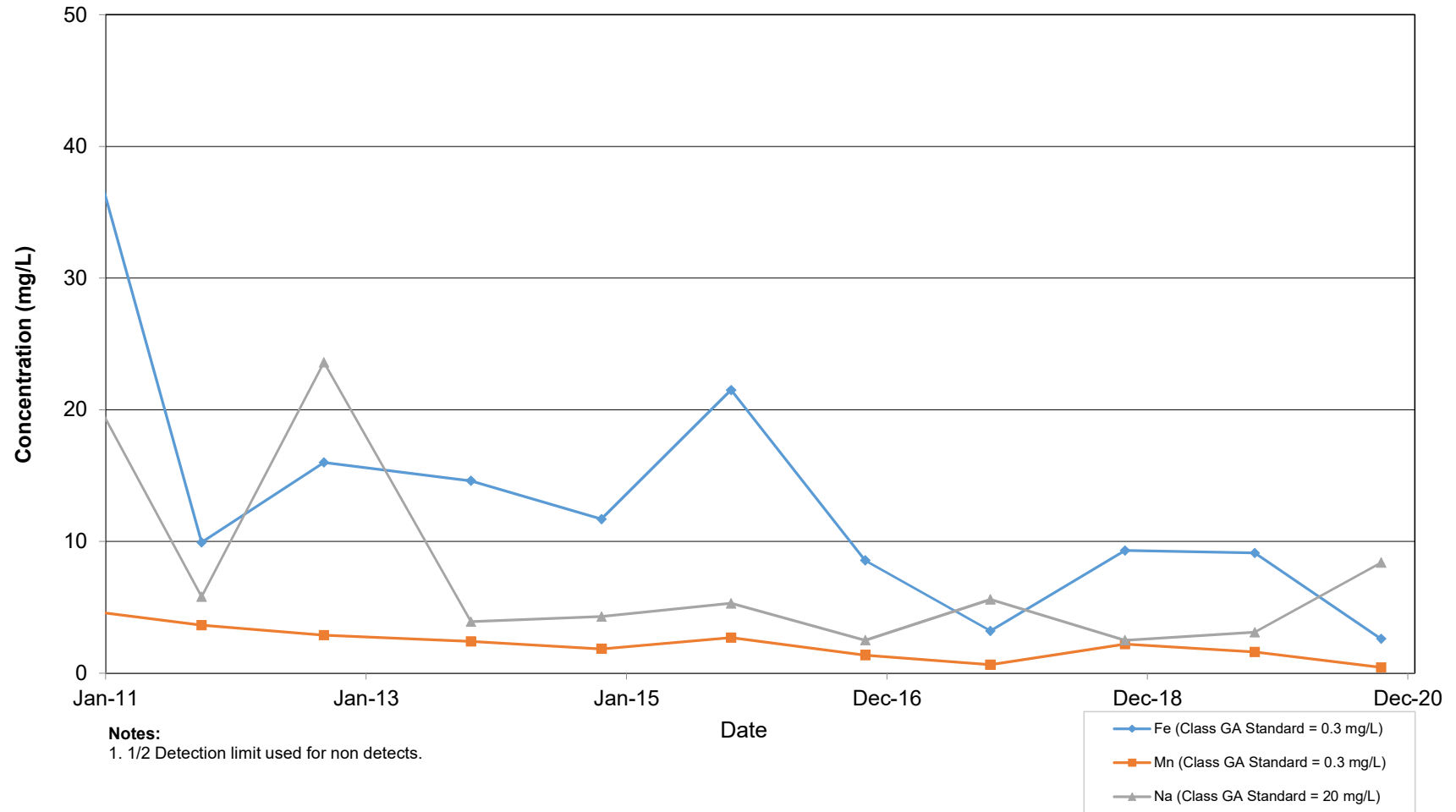
LS-1 Metals



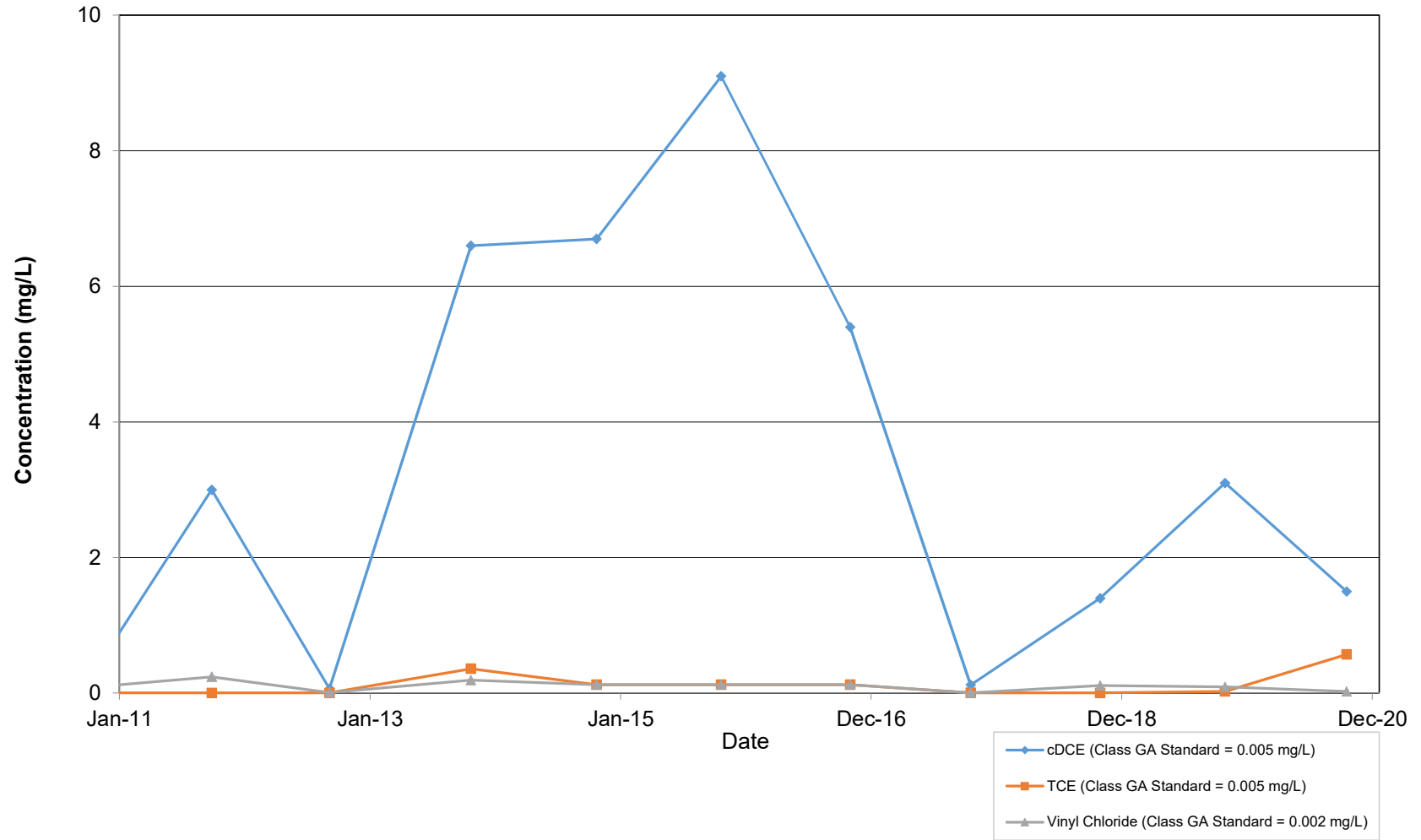
LS-1 VOCs



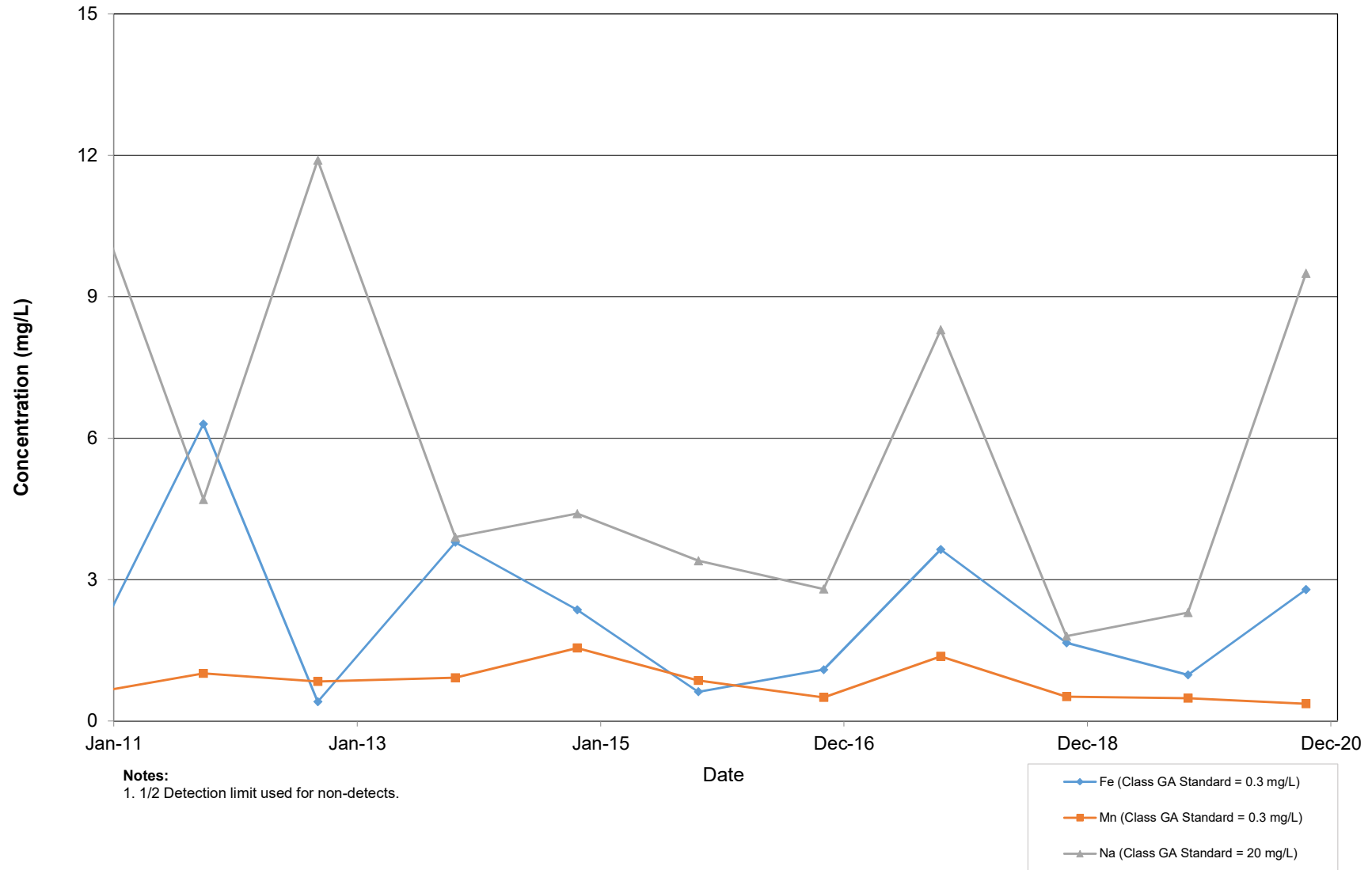
MH-32 Metals



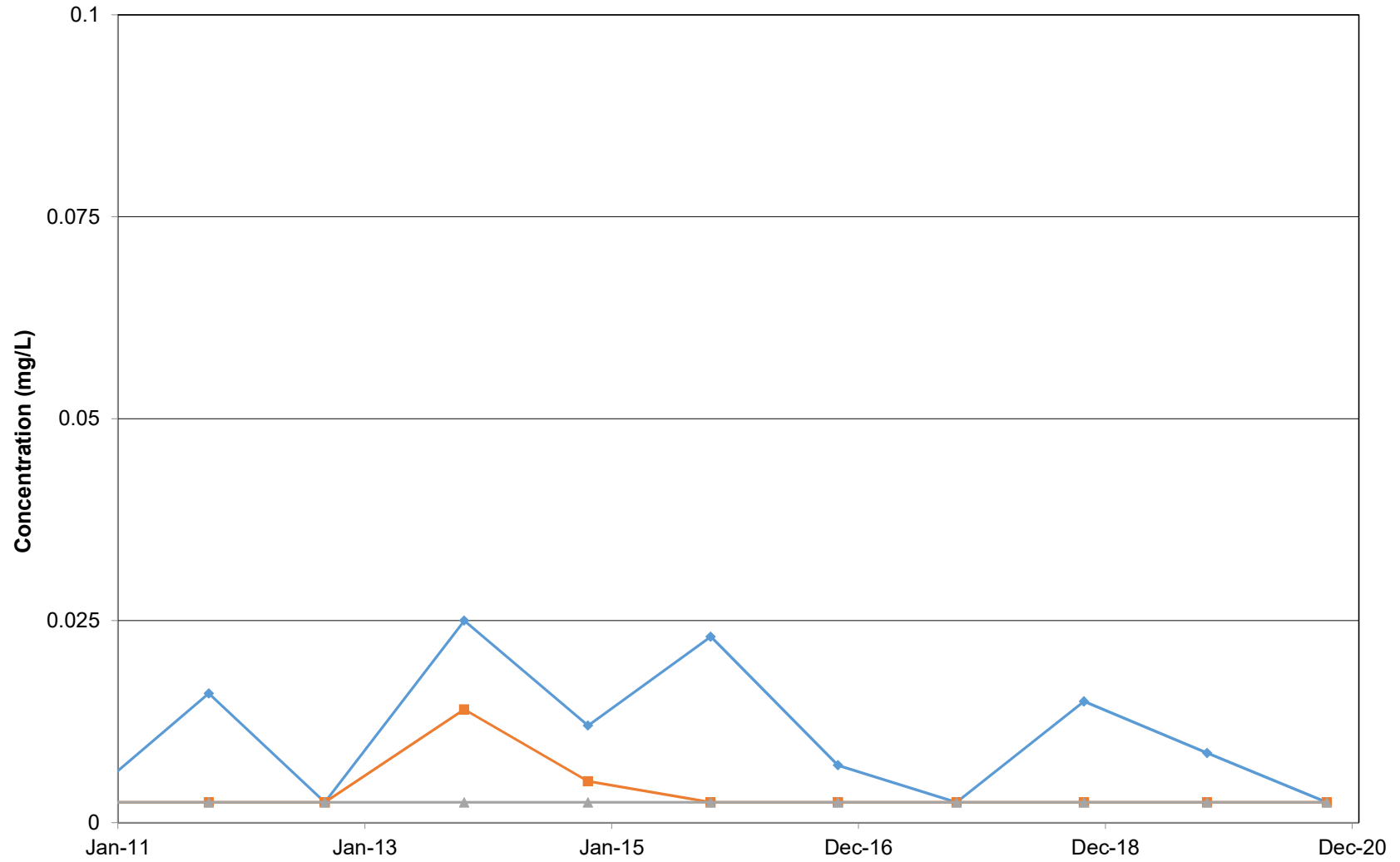
MH-32 VOCs



MH-33 Metals



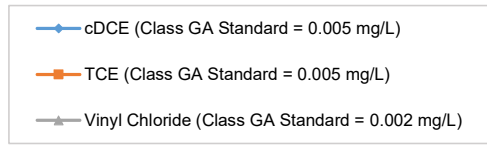
MH-33 VOCs



Notes:

1. 1/2 Detection limit used for non-detects.

Date



Appendix F

2020 Laboratory Analytical
Reports



April 30, 2020

Service Request No:R2003344

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF - Annual Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory April 23, 2020
For your reference, these analyses have been assigned our service request number **R2003344**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Received: 04/23/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Nine water samples were received for analysis at ALS Environmental on 04/23/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 04/24/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 04/27/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

A handwritten signature in black ink, appearing to read "Samanta", is written over a horizontal line.

Approved by _____

Date 04/30/2020



SAMPLE DETECTION SUMMARY

CLIENT ID: MW4D-0420 **Lab ID: R2003344-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
cis-1,2-Dichloroethene	120			5.0	ug/L	8260C
Vinyl Chloride	49			5.0	ug/L	8260C

CLIENT ID: MW11S-0420 **Lab ID: R2003344-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
cis-1,2-Dichloroethene	180			100	ug/L	8260C
Trichloroethene	2100			100	ug/L	8260C

CLIENT ID: MW5S-0420 **Lab ID: R2003344-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
cis-1,2-Dichloroethene	120			5.0	ug/L	8260C
Trichloroethene	27			5.0	ug/L	8260C
Vinyl Chloride	11			5.0	ug/L	8260C

CLIENT ID: MW5D-0420 **Lab ID: R2003344-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
cis-1,2-Dichloroethene	230			13	ug/L	8260C
Trichloroethene	110			13	ug/L	8260C
Vinyl Chloride	15			13	ug/L	8260C

CLIENT ID: SWS1-0420 **Lab ID: R2003344-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO3	131			2.0	mg/L	SM 2320 B-1997 (2011)
Carbon, Total Organic (TOC)	5.7			1.0	mg/L	SM 5310 C-2000 (2011)
Chemical Oxygen Demand, Total	17.5			5.0	mg/L	410.4
Chloride	29.0			2.0	mg/L	300.0
Color, True	35.0			1.0	ColorUnits	SM 2120 B-2001 (2011)
Nitrogen, Total Kjeldahl (TKN)	0.35			0.20	mg/L	351.2
pH of Color Analysis	7.57				pH Units	SM 2120 B-2001 (2011)
Solids, Total Dissolved (TDS)	197			10	mg/L	SM 2540 C-1997 (2011)
Barium, Total	22			20	ug/L	6010C
Calcium, Total	35800			1000	ug/L	6010C
Iron, Total	130			100	ug/L	6010C
Magnesium, Total	13000			1000	ug/L	6010C
Manganese, Total	40			10	ug/L	6010C
Sodium, Total	16000			1000	ug/L	6010C



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling

Service Request:R2003344

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2003344-001	MW16S-0420	4/20/2020	1035
R2003344-002	DUP1-0420	4/20/2020	1040
R2003344-003	MW4D-0420	4/20/2020	1220
R2003344-004	MW11S-0420	4/20/2020	1400
R2003344-005	EB1-0420	4/21/2020	1045
R2003344-006	MW5S-0420	4/22/2020	1135
R2003344-007	MW5D-0420	4/22/2020	1300
R2003344-008	SWS1-0420	4/22/2020	1345
R2003344-009	Trip Blank	4/22/2020	1315



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**
72 Railroad Ave.
Wellsville, NY 14895
Project Manager: **Jon Brandes**

CHAIN of CUSTODY

Project: **WAL - Annual Sampling**
Telephone No. 585-593-1824
Email: jonb@on-sitehs.com

Page 1 of 1
Method of Shipment: **On-Site KD**

Special Detection Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	GC:MS VOA's 8260 (HCl)	GC:MS VOA's 524.2 (C6H8O6)	T-Metals (HNO3)	TDS, NO3, Br, Cl, SO4 (NP) (SW/SED)	NH3, TKN, COD (H2SO4) (SW/SED)	Total Color (NP) (SW/SED)	BOD (NP) (SW/SED)	Alkalinity (NP) (SW/SED)	TDS, NO3 (NP) (Manhole)	Phenols, TOC - (H2SO4)
			Soil	Water	Air	Other	Yes	No												
MW16S-0420		3	X			X		4-20-20	1035	X										
Dup1-0420		3	X			X		4-20-20	1040	X										
MW4D-0420		3	X			X		4-20-20	1220	X										
MW11S-0420		3	X			X		4-20-20	1400	X										
EBI-0420		3	X			X		4-21-20	1045	X										
MW5S-0420		6	X			X		4-22-20	1135	X										
MW5D-0420		3	X			X		4-22-20	1300	X										
SWS1-0420		10	X			X	X	4-22-20	1345	X	X	X	X	X	X	X	X	X	X	X
Trip Blank		3	X			X		4-22-20	1315	X										

REMARKS
ms/msd

Sample Received Intact: Yes No Temperature received: Ice No ice

Relinquished by: <i>Kevin Dye / Kevin Dye</i>	Date: 4/23/20	Time: 0920	Received by (Sign & Print Name):
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by laboratory: <i>Gregory DeLano</i>
	Date: 4/23/2020	Time: 0920	

Lab Work No.

R2003344 5
On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Cooler Receipt and Preservation Check Form

R2003344 **5**
 On-Site Technical Services, Inc.
 Welleville-Andover LF - Annual Sampling

Project/Client Cont On-site Folder Number _____

Cooler received on 4/23/2020 by: AD COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <input checked="" type="radio"/> N <input type="radio"/>
2	Custody papers properly completed (ink, signed)?	<input checked="" type="radio"/> Y <input type="radio"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="radio"/> Y <input type="radio"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="radio"/> Y <input type="radio"/> N

5a	Perchlorate samples have required headspace?	Y N <input checked="" type="radio"/> NA
5b	Did <u>VOA</u> vials, <u>Alk</u> or Sulfide have sig* bubbles?	Y <input checked="" type="radio"/> N NA
6	Where did the bottles originate?	<u>ALS/ROD</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<input checked="" type="radio"/> NA

8. Temperature Readings Date: 4/23/2020 Time: 0921 ID: IR#7 R#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>1.3</u>						
Within 0-6°C?	<input checked="" type="radio"/> Y <input type="radio"/> N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
 & Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by AD on 4/23/2020 at 0925
 5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 4/23/2020 Time: 1344 by: AD

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact with MS? YES NO Canisters Pressurized YES NO Tedlar® Bags Inflated YES NO

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≈	<u>223419</u>	HNO ₃	<input checked="" type="checkbox"/>		<u>1119091</u>					
≈	<u>↓</u>	H ₂ SO ₄	<input checked="" type="checkbox"/>		<u>207353</u>	<u>4/21</u>				
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 2524-17, 80120-07, 19-11-29, 91119-01
 Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: AD
 PC Secondary Review: AD 4/24/20

*significant air bubbles: VOA > 5-6 mm ; WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed (>100% Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2003344

Sample Name: MW16S-0420
Lab Code: R2003344-001
Sample Matrix: Water

Date Collected: 04/20/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: DUP1-0420
Lab Code: R2003344-002
Sample Matrix: Water

Date Collected: 04/20/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: MW4D-0420
Lab Code: R2003344-003
Sample Matrix: Water

Date Collected: 04/20/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: MW11S-0420
Lab Code: R2003344-004
Sample Matrix: Water

Date Collected: 04/20/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: EB1-0420
Lab Code: R2003344-005
Sample Matrix: Water

Date Collected: 04/21/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST

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Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2003344

Sample Name: MW5S-0420
Lab Code: R2003344-006
Sample Matrix: Water

Date Collected: 04/22/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: MW5D-0420
Lab Code: R2003344-007
Sample Matrix: Water

Date Collected: 04/22/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST

Sample Name: SWS1-0420
Lab Code: R2003344-008
Sample Matrix: Water

Date Collected: 04/22/20
Date Received: 04/23/20

Analysis Method
300.0
350.1
351.2
410.4
420.4
6010C
8260C
SM 2120 B-2001(2011)
SM 2320 B-1997(2011)
SM 2540 C-1997(2011)
SM 5210 B-2001(2011)
SM 5310 C-2000(2011)

Extracted/Digested By

BBOWE

Analyzed By
KWONG
SMEDBURY
GNITAJOUPPI
SMEDBURY
BBOWE
KMCLAEN
KRUEST
KAWONG
KWONG
KAWONG
CWOODS
SMEDBURY

ALS Group USA, Corp.

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Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2003344

Sample Name: Trip Blank
Lab Code: R2003344-009
Sample Matrix: Water

Date Collected: 04/22/20
Date Received: 04/23/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
KRUEST



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Volatile Organic Compounds by GC/MS

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 10:35
Date Received: 04/23/20 09:20

Sample Name: MW16S-0420
Lab Code: R2003344-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/24/20 19:42	
Benzene	5.0 U	5.0	1	04/24/20 19:42	
Bromodichloromethane	5.0 U	5.0	1	04/24/20 19:42	
Bromoform	5.0 U	5.0	1	04/24/20 19:42	
Bromomethane	5.0 U	5.0	1	04/24/20 19:42	
2-Butanone (MEK)	10 U	10	1	04/24/20 19:42	
Carbon Disulfide	10 U	10	1	04/24/20 19:42	
Carbon Tetrachloride	5.0 U	5.0	1	04/24/20 19:42	
Chlorobenzene	5.0 U	5.0	1	04/24/20 19:42	
Chloroethane	5.0 U	5.0	1	04/24/20 19:42	
Chloroform	5.0 U	5.0	1	04/24/20 19:42	
Chloromethane	5.0 U	5.0	1	04/24/20 19:42	
Dibromochloromethane	5.0 U	5.0	1	04/24/20 19:42	
1,1-Dichloroethane	5.0 U	5.0	1	04/24/20 19:42	
1,2-Dibromoethane	5.0 U	5.0	1	04/24/20 19:42	
1,2-Dichloroethane	5.0 U	5.0	1	04/24/20 19:42	
1,1-Dichloroethene	5.0 U	5.0	1	04/24/20 19:42	
cis-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 19:42	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 19:42	
1,2-Dichloropropane	5.0 U	5.0	1	04/24/20 19:42	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 19:42	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 19:42	
Ethylbenzene	5.0 U	5.0	1	04/24/20 19:42	
2-Hexanone	10 U	10	1	04/24/20 19:42	
Methylene Chloride	5.0 U	5.0	1	04/24/20 19:42	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/24/20 19:42	
Styrene	5.0 U	5.0	1	04/24/20 19:42	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	04/24/20 19:42	
Tetrachloroethene	5.0 U	5.0	1	04/24/20 19:42	
Toluene	5.0 U	5.0	1	04/24/20 19:42	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/24/20 19:42	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/24/20 19:42	
Trichloroethene	5.0 U	5.0	1	04/24/20 19:42	
Vinyl Chloride	5.0 U	5.0	1	04/24/20 19:42	
o-Xylene	5.0 U	5.0	1	04/24/20 19:42	
m,p-Xylenes	5.0 U	5.0	1	04/24/20 19:42	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 10:35
Date Received: 04/23/20 09:20

Sample Name: MW16S-0420
Lab Code: R2003344-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	85 - 122	04/24/20 19:42	
Toluene-d8	98	87 - 121	04/24/20 19:42	
Dibromofluoromethane	90	89 - 119	04/24/20 19:42	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 10:40
Date Received: 04/23/20 09:20

Sample Name: DUP1-0420
Lab Code: R2003344-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/27/20 14:38	
Benzene	5.0 U	5.0	1	04/27/20 14:38	
Bromodichloromethane	5.0 U	5.0	1	04/27/20 14:38	
Bromoform	5.0 U	5.0	1	04/27/20 14:38	
Bromomethane	5.0 U	5.0	1	04/27/20 14:38	
2-Butanone (MEK)	10 U	10	1	04/27/20 14:38	
Carbon Disulfide	10 U	10	1	04/27/20 14:38	
Carbon Tetrachloride	5.0 U	5.0	1	04/27/20 14:38	
Chlorobenzene	5.0 U	5.0	1	04/27/20 14:38	
Chloroethane	5.0 U	5.0	1	04/27/20 14:38	
Chloroform	5.0 U	5.0	1	04/27/20 14:38	
Chloromethane	5.0 U	5.0	1	04/27/20 14:38	
Dibromochloromethane	5.0 U	5.0	1	04/27/20 14:38	
1,1-Dichloroethane	5.0 U	5.0	1	04/27/20 14:38	
1,2-Dibromoethane	5.0 U	5.0	1	04/27/20 14:38	
1,2-Dichloroethane	5.0 U	5.0	1	04/27/20 14:38	
1,1-Dichloroethene	5.0 U	5.0	1	04/27/20 14:38	
cis-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 14:38	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 14:38	
1,2-Dichloropropane	5.0 U	5.0	1	04/27/20 14:38	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 14:38	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 14:38	
Ethylbenzene	5.0 U	5.0	1	04/27/20 14:38	
2-Hexanone	10 U	10	1	04/27/20 14:38	
Methylene Chloride	5.0 U	5.0	1	04/27/20 14:38	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/27/20 14:38	
Styrene	5.0 U	5.0	1	04/27/20 14:38	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	04/27/20 14:38	
Tetrachloroethene	5.0 U	5.0	1	04/27/20 14:38	
Toluene	5.0 U	5.0	1	04/27/20 14:38	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/27/20 14:38	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/27/20 14:38	
Trichloroethene	5.0 U	5.0	1	04/27/20 14:38	
Vinyl Chloride	5.0 U	5.0	1	04/27/20 14:38	
o-Xylene	5.0 U	5.0	1	04/27/20 14:38	
m,p-Xylenes	5.0 U	5.0	1	04/27/20 14:38	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 10:40
Date Received: 04/23/20 09:20

Sample Name: DUP1-0420
Lab Code: R2003344-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	85 - 122	04/27/20 14:38	
Toluene-d8	93	87 - 121	04/27/20 14:38	
Dibromofluoromethane	94	89 - 119	04/27/20 14:38	

ALS Group USA, Corp.
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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 12:20
Date Received: 04/23/20 09:20

Sample Name: MW4D-0420
Lab Code: R2003344-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/24/20 20:25	
Benzene	5.0 U	5.0	1	04/24/20 20:25	
Bromodichloromethane	5.0 U	5.0	1	04/24/20 20:25	
Bromoform	5.0 U	5.0	1	04/24/20 20:25	
Bromomethane	5.0 U	5.0	1	04/24/20 20:25	
2-Butanone (MEK)	10 U	10	1	04/24/20 20:25	
Carbon Disulfide	10 U	10	1	04/24/20 20:25	
Carbon Tetrachloride	5.0 U	5.0	1	04/24/20 20:25	
Chlorobenzene	5.0 U	5.0	1	04/24/20 20:25	
Chloroethane	5.0 U	5.0	1	04/24/20 20:25	
Chloroform	5.0 U	5.0	1	04/24/20 20:25	
Chloromethane	5.0 U	5.0	1	04/24/20 20:25	
Dibromochloromethane	5.0 U	5.0	1	04/24/20 20:25	
1,2-Dibromoethane	5.0 U	5.0	1	04/24/20 20:25	
1,1-Dichloroethane	5.0 U	5.0	1	04/24/20 20:25	
1,2-Dichloroethane	5.0 U	5.0	1	04/24/20 20:25	
1,1-Dichloroethene	5.0 U	5.0	1	04/24/20 20:25	
cis-1,2-Dichloroethene	120	5.0	1	04/24/20 20:25	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 20:25	
1,2-Dichloropropane	5.0 U	5.0	1	04/24/20 20:25	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 20:25	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 20:25	
Ethylbenzene	5.0 U	5.0	1	04/24/20 20:25	
2-Hexanone	10 U	10	1	04/24/20 20:25	
Methylene Chloride	5.0 U	5.0	1	04/24/20 20:25	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/24/20 20:25	
Styrene	5.0 U	5.0	1	04/24/20 20:25	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	04/24/20 20:25	
Tetrachloroethene	5.0 U	5.0	1	04/24/20 20:25	
Toluene	5.0 U	5.0	1	04/24/20 20:25	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/24/20 20:25	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/24/20 20:25	
Trichloroethene	5.0 U	5.0	1	04/24/20 20:25	
Vinyl Chloride	49	5.0	1	04/24/20 20:25	
o-Xylene	5.0 U	5.0	1	04/24/20 20:25	
m,p-Xylenes	5.0 U	5.0	1	04/24/20 20:25	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 12:20
Date Received: 04/23/20 09:20

Sample Name: MW4D-0420
Lab Code: R2003344-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	04/24/20 20:25	
Toluene-d8	99	87 - 121	04/24/20 20:25	
Dibromofluoromethane	94	89 - 119	04/24/20 20:25	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 14:00
Date Received: 04/23/20 09:20

Sample Name: MW11S-0420
Lab Code: R2003344-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	200 U	200	20	04/24/20 20:47	
Benzene	100 U	100	20	04/24/20 20:47	
Bromodichloromethane	100 U	100	20	04/24/20 20:47	
Bromoform	100 U	100	20	04/24/20 20:47	
Bromomethane	100 U	100	20	04/24/20 20:47	
2-Butanone (MEK)	200 U	200	20	04/24/20 20:47	
Carbon Disulfide	200 U	200	20	04/24/20 20:47	
Carbon Tetrachloride	100 U	100	20	04/24/20 20:47	
Chlorobenzene	100 U	100	20	04/24/20 20:47	
Chloroethane	100 U	100	20	04/24/20 20:47	
Chloroform	100 U	100	20	04/24/20 20:47	
Chloromethane	100 U	100	20	04/24/20 20:47	
Dibromochloromethane	100 U	100	20	04/24/20 20:47	
1,1-Dichloroethane	100 U	100	20	04/24/20 20:47	
1,2-Dibromoethane	100 U	100	20	04/24/20 20:47	
1,2-Dichloroethane	100 U	100	20	04/24/20 20:47	
1,1-Dichloroethene	100 U	100	20	04/24/20 20:47	
cis-1,2-Dichloroethene	180	100	20	04/24/20 20:47	
trans-1,2-Dichloroethene	100 U	100	20	04/24/20 20:47	
1,2-Dichloropropane	100 U	100	20	04/24/20 20:47	
cis-1,3-Dichloropropene	100 U	100	20	04/24/20 20:47	
trans-1,3-Dichloropropene	100 U	100	20	04/24/20 20:47	
Ethylbenzene	100 U	100	20	04/24/20 20:47	
2-Hexanone	200 U	200	20	04/24/20 20:47	
Methylene Chloride	100 U	100	20	04/24/20 20:47	
4-Methyl-2-pentanone (MIBK)	200 U	200	20	04/24/20 20:47	
Styrene	100 U	100	20	04/24/20 20:47	
1,1,2,2-Tetrachloroethane	100 U	100	20	04/24/20 20:47	
Tetrachloroethene	100 U	100	20	04/24/20 20:47	
Toluene	100 U	100	20	04/24/20 20:47	
1,1,1-Trichloroethane	100 U	100	20	04/24/20 20:47	
1,1,2-Trichloroethane	100 U	100	20	04/24/20 20:47	
Trichloroethene	2100	100	20	04/24/20 20:47	
Vinyl Chloride	100 U	100	20	04/24/20 20:47	
o-Xylene	100 U	100	20	04/24/20 20:47	
m,p-Xylenes	100 U	100	20	04/24/20 20:47	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/20/20 14:00
Date Received: 04/23/20 09:20

Sample Name: MW11S-0420
Lab Code: R2003344-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85 - 122	04/24/20 20:47	
Toluene-d8	97	87 - 121	04/24/20 20:47	
Dibromofluoromethane	92	89 - 119	04/24/20 20:47	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/21/20 10:45
Date Received: 04/23/20 09:20

Sample Name: EB1-0420
Lab Code: R2003344-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/27/20 14:16	
Benzene	5.0 U	5.0	1	04/27/20 14:16	
Bromodichloromethane	5.0 U	5.0	1	04/27/20 14:16	
Bromoform	5.0 U	5.0	1	04/27/20 14:16	
Bromomethane	5.0 U	5.0	1	04/27/20 14:16	
2-Butanone (MEK)	10 U	10	1	04/27/20 14:16	
Carbon Disulfide	10 U	10	1	04/27/20 14:16	
Carbon Tetrachloride	5.0 U	5.0	1	04/27/20 14:16	
Chlorobenzene	5.0 U	5.0	1	04/27/20 14:16	
Chloroethane	5.0 U	5.0	1	04/27/20 14:16	
Chloroform	5.0 U	5.0	1	04/27/20 14:16	
Chloromethane	5.0 U	5.0	1	04/27/20 14:16	
Dibromochloromethane	5.0 U	5.0	1	04/27/20 14:16	
1,2-Dibromoethane	5.0 U	5.0	1	04/27/20 14:16	
1,1-Dichloroethane	5.0 U	5.0	1	04/27/20 14:16	
1,2-Dichloroethane	5.0 U	5.0	1	04/27/20 14:16	
1,1-Dichloroethene	5.0 U	5.0	1	04/27/20 14:16	
cis-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 14:16	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 14:16	
1,2-Dichloropropane	5.0 U	5.0	1	04/27/20 14:16	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 14:16	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 14:16	
Ethylbenzene	5.0 U	5.0	1	04/27/20 14:16	
2-Hexanone	10 U	10	1	04/27/20 14:16	
Methylene Chloride	5.0 U	5.0	1	04/27/20 14:16	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/27/20 14:16	
Styrene	5.0 U	5.0	1	04/27/20 14:16	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	04/27/20 14:16	
Tetrachloroethene	5.0 U	5.0	1	04/27/20 14:16	
Toluene	5.0 U	5.0	1	04/27/20 14:16	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/27/20 14:16	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/27/20 14:16	
Trichloroethene	5.0 U	5.0	1	04/27/20 14:16	
Vinyl Chloride	5.0 U	5.0	1	04/27/20 14:16	
o-Xylene	5.0 U	5.0	1	04/27/20 14:16	
m,p-Xylenes	5.0 U	5.0	1	04/27/20 14:16	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/21/20 10:45
Date Received: 04/23/20 09:20

Sample Name: EB1-0420
Lab Code: R2003344-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85 - 122	04/27/20 14:16	
Toluene-d8	99	87 - 121	04/27/20 14:16	
Dibromofluoromethane	93	89 - 119	04/27/20 14:16	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 11:35
Date Received: 04/23/20 09:20

Sample Name: MW5S-0420
Lab Code: R2003344-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/24/20 21:30	
Benzene	5.0 U	5.0	1	04/24/20 21:30	
Bromodichloromethane	5.0 U	5.0	1	04/24/20 21:30	
Bromoform	5.0 U	5.0	1	04/24/20 21:30	
Bromomethane	5.0 U	5.0	1	04/24/20 21:30	
2-Butanone (MEK)	10 U	10	1	04/24/20 21:30	
Carbon Disulfide	10 U	10	1	04/24/20 21:30	
Carbon Tetrachloride	5.0 U	5.0	1	04/24/20 21:30	
Chlorobenzene	5.0 U	5.0	1	04/24/20 21:30	
Chloroethane	5.0 U	5.0	1	04/24/20 21:30	
Chloroform	5.0 U	5.0	1	04/24/20 21:30	
Chloromethane	5.0 U	5.0	1	04/24/20 21:30	
Dibromochloromethane	5.0 U	5.0	1	04/24/20 21:30	
1,2-Dibromoethane	5.0 U	5.0	1	04/24/20 21:30	
1,1-Dichloroethane	5.0 U	5.0	1	04/24/20 21:30	
1,2-Dichloroethane	5.0 U	5.0	1	04/24/20 21:30	
1,1-Dichloroethene	5.0 U	5.0	1	04/24/20 21:30	
cis-1,2-Dichloroethene	120	5.0	1	04/24/20 21:30	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 21:30	
1,2-Dichloropropane	5.0 U	5.0	1	04/24/20 21:30	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 21:30	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 21:30	
Ethylbenzene	5.0 U	5.0	1	04/24/20 21:30	
2-Hexanone	10 U	10	1	04/24/20 21:30	
Methylene Chloride	5.0 U	5.0	1	04/24/20 21:30	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/24/20 21:30	
Styrene	5.0 U	5.0	1	04/24/20 21:30	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	04/24/20 21:30	
Tetrachloroethene	5.0 U	5.0	1	04/24/20 21:30	
Toluene	5.0 U	5.0	1	04/24/20 21:30	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/24/20 21:30	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/24/20 21:30	
Trichloroethene	27	5.0	1	04/24/20 21:30	
Vinyl Chloride	11	5.0	1	04/24/20 21:30	
o-Xylene	5.0 U	5.0	1	04/24/20 21:30	
m,p-Xylenes	5.0 U	5.0	1	04/24/20 21:30	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 11:35
Date Received: 04/23/20 09:20

Sample Name: MW5S-0420
Lab Code: R2003344-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	85 - 122	04/24/20 21:30	
Toluene-d8	105	87 - 121	04/24/20 21:30	
Dibromofluoromethane	100	89 - 119	04/24/20 21:30	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 13:00
Date Received: 04/23/20 09:20

Sample Name: MW5D-0420
Lab Code: R2003344-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	25 U	25	2.5	04/24/20 21:08	
Benzene	13 U	13	2.5	04/24/20 21:08	
Bromodichloromethane	13 U	13	2.5	04/24/20 21:08	
Bromoform	13 U	13	2.5	04/24/20 21:08	
Bromomethane	13 U	13	2.5	04/24/20 21:08	
2-Butanone (MEK)	25 U	25	2.5	04/24/20 21:08	
Carbon Disulfide	25 U	25	2.5	04/24/20 21:08	
Carbon Tetrachloride	13 U	13	2.5	04/24/20 21:08	
Chlorobenzene	13 U	13	2.5	04/24/20 21:08	
Chloroethane	13 U	13	2.5	04/24/20 21:08	
Chloroform	13 U	13	2.5	04/24/20 21:08	
Chloromethane	13 U	13	2.5	04/24/20 21:08	
Dibromochloromethane	13 U	13	2.5	04/24/20 21:08	
1,1-Dichloroethane	13 U	13	2.5	04/24/20 21:08	
1,2-Dibromoethane	13 U	13	2.5	04/24/20 21:08	
1,2-Dichloroethane	13 U	13	2.5	04/24/20 21:08	
1,1-Dichloroethene	13 U	13	2.5	04/24/20 21:08	
cis-1,2-Dichloroethene	230	13	2.5	04/24/20 21:08	
trans-1,2-Dichloroethene	13 U	13	2.5	04/24/20 21:08	
1,2-Dichloropropane	13 U	13	2.5	04/24/20 21:08	
cis-1,3-Dichloropropene	13 U	13	2.5	04/24/20 21:08	
trans-1,3-Dichloropropene	13 U	13	2.5	04/24/20 21:08	
Ethylbenzene	13 U	13	2.5	04/24/20 21:08	
2-Hexanone	25 U	25	2.5	04/24/20 21:08	
Methylene Chloride	13 U	13	2.5	04/24/20 21:08	
4-Methyl-2-pentanone (MIBK)	25 U	25	2.5	04/24/20 21:08	
Styrene	13 U	13	2.5	04/24/20 21:08	
1,1,2,2-Tetrachloroethane	13 U	13	2.5	04/24/20 21:08	
Tetrachloroethene	13 U	13	2.5	04/24/20 21:08	
Toluene	13 U	13	2.5	04/24/20 21:08	
1,1,1-Trichloroethane	13 U	13	2.5	04/24/20 21:08	
1,1,2-Trichloroethane	13 U	13	2.5	04/24/20 21:08	
Trichloroethene	110	13	2.5	04/24/20 21:08	
Vinyl Chloride	15	13	2.5	04/24/20 21:08	
o-Xylene	13 U	13	2.5	04/24/20 21:08	
m,p-Xylenes	13 U	13	2.5	04/24/20 21:08	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 13:00
Date Received: 04/23/20 09:20

Sample Name: MW5D-0420
Lab Code: R2003344-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	85 - 122	04/24/20 21:08	
Toluene-d8	100	87 - 121	04/24/20 21:08	
Dibromofluoromethane	96	89 - 119	04/24/20 21:08	

ALS Group USA, Corp.
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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 13:45
Date Received: 04/23/20 09:20

Sample Name: SWS1-0420
Lab Code: R2003344-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/24/20 20:03	
Benzene	5.0 U	5.0	1	04/24/20 20:03	
Bromodichloromethane	5.0 U	5.0	1	04/24/20 20:03	
Bromoform	5.0 U	5.0	1	04/24/20 20:03	
Bromomethane	5.0 U	5.0	1	04/24/20 20:03	
2-Butanone (MEK)	10 U	10	1	04/24/20 20:03	
Carbon Disulfide	10 U	10	1	04/24/20 20:03	
Carbon Tetrachloride	5.0 U	5.0	1	04/24/20 20:03	
Chlorobenzene	5.0 U	5.0	1	04/24/20 20:03	
Chloroethane	5.0 U	5.0	1	04/24/20 20:03	
Chloroform	5.0 U	5.0	1	04/24/20 20:03	
Chloromethane	5.0 U	5.0	1	04/24/20 20:03	
Dibromochloromethane	5.0 U	5.0	1	04/24/20 20:03	
1,1-Dichloroethane	5.0 U	5.0	1	04/24/20 20:03	
1,2-Dibromoethane	5.0 U	5.0	1	04/24/20 20:03	
1,2-Dichloroethane	5.0 U	5.0	1	04/24/20 20:03	
1,1-Dichloroethene	5.0 U	5.0	1	04/24/20 20:03	
cis-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 20:03	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 20:03	
1,2-Dichloropropane	5.0 U	5.0	1	04/24/20 20:03	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 20:03	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 20:03	
Ethylbenzene	5.0 U	5.0	1	04/24/20 20:03	
2-Hexanone	10 U	10	1	04/24/20 20:03	
Methylene Chloride	5.0 U	5.0	1	04/24/20 20:03	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/24/20 20:03	
Styrene	5.0 U	5.0	1	04/24/20 20:03	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	04/24/20 20:03	
Tetrachloroethene	5.0 U	5.0	1	04/24/20 20:03	
Toluene	5.0 U	5.0	1	04/24/20 20:03	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/24/20 20:03	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/24/20 20:03	
Trichloroethene	5.0 U	5.0	1	04/24/20 20:03	
Vinyl Chloride	5.0 U	5.0	1	04/24/20 20:03	
o-Xylene	5.0 U	5.0	1	04/24/20 20:03	
m,p-Xylenes	5.0 U	5.0	1	04/24/20 20:03	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 13:45
Date Received: 04/23/20 09:20

Sample Name: SWS1-0420
Lab Code: R2003344-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	04/24/20 20:03	
Toluene-d8	103	87 - 121	04/24/20 20:03	
Dibromofluoromethane	98	89 - 119	04/24/20 20:03	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 13:15
Date Received: 04/23/20 09:20

Sample Name: Trip Blank
Lab Code: R2003344-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/27/20 13:54	
Benzene	5.0 U	5.0	1	04/27/20 13:54	
Bromodichloromethane	5.0 U	5.0	1	04/27/20 13:54	
Bromoform	5.0 U	5.0	1	04/27/20 13:54	
Bromomethane	5.0 U	5.0	1	04/27/20 13:54	
2-Butanone (MEK)	10 U	10	1	04/27/20 13:54	
Carbon Disulfide	10 U	10	1	04/27/20 13:54	
Carbon Tetrachloride	5.0 U	5.0	1	04/27/20 13:54	
Chlorobenzene	5.0 U	5.0	1	04/27/20 13:54	
Chloroethane	5.0 U	5.0	1	04/27/20 13:54	
Chloroform	5.0 U	5.0	1	04/27/20 13:54	
Chloromethane	5.0 U	5.0	1	04/27/20 13:54	
Dibromochloromethane	5.0 U	5.0	1	04/27/20 13:54	
1,1-Dichloroethane	5.0 U	5.0	1	04/27/20 13:54	
1,2-Dibromoethane	5.0 U	5.0	1	04/27/20 13:54	
1,2-Dichloroethane	5.0 U	5.0	1	04/27/20 13:54	
1,1-Dichloroethene	5.0 U	5.0	1	04/27/20 13:54	
cis-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 13:54	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 13:54	
1,2-Dichloropropane	5.0 U	5.0	1	04/27/20 13:54	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 13:54	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 13:54	
Ethylbenzene	5.0 U	5.0	1	04/27/20 13:54	
2-Hexanone	10 U	10	1	04/27/20 13:54	
Methylene Chloride	5.0 U	5.0	1	04/27/20 13:54	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/27/20 13:54	
Styrene	5.0 U	5.0	1	04/27/20 13:54	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	04/27/20 13:54	
Tetrachloroethene	5.0 U	5.0	1	04/27/20 13:54	
Toluene	5.0 U	5.0	1	04/27/20 13:54	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/27/20 13:54	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/27/20 13:54	
Trichloroethene	5.0 U	5.0	1	04/27/20 13:54	
Vinyl Chloride	5.0 U	5.0	1	04/27/20 13:54	
o-Xylene	5.0 U	5.0	1	04/27/20 13:54	
m,p-Xylenes	5.0 U	5.0	1	04/27/20 13:54	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20 13:15
Date Received: 04/23/20 09:20

Sample Name: Trip Blank
Lab Code: R2003344-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	04/27/20 13:54	
Toluene-d8	103	87 - 121	04/27/20 13:54	
Dibromofluoromethane	93	89 - 119	04/27/20 13:54	



Metals

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: SWS1-0420
Lab Code: R2003344-008

Service Request: R2003344
Date Collected: 04/22/20 13:45
Date Received: 04/23/20 09:20

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	04/24/20 20:28	04/23/20	
Barium, Total	6010C	22	ug/L	20	1	04/24/20 20:28	04/23/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	04/24/20 20:28	04/23/20	
Calcium, Total	6010C	35800	ug/L	1000	1	04/24/20 20:28	04/23/20	
Chromium, Total	6010C	10 U	ug/L	10	1	04/24/20 20:28	04/23/20	
Copper, Total	6010C	20 U	ug/L	20	1	04/27/20 12:05	04/23/20	
Iron, Total	6010C	130	ug/L	100	1	04/24/20 20:28	04/23/20	
Lead, Total	6010C	50 U	ug/L	50	1	04/24/20 20:28	04/23/20	
Magnesium, Total	6010C	13000	ug/L	1000	1	04/24/20 20:28	04/23/20	
Manganese, Total	6010C	40	ug/L	10	1	04/24/20 20:28	04/23/20	
Nickel, Total	6010C	40 U	ug/L	40	1	04/24/20 20:28	04/23/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	04/24/20 20:28	04/23/20	
Selenium, Total	6010C	10 U	ug/L	10	1	04/24/20 20:28	04/23/20	
Sodium, Total	6010C	16000	ug/L	1000	1	04/24/20 20:28	04/23/20	
Zinc, Total	6010C	20 U	ug/L	20	1	04/24/20 20:28	04/23/20	



General Chemistry

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: SWS1-0420
Lab Code: R2003344-008

Service Request: R2003344
Date Collected: 04/22/20 13:45
Date Received: 04/23/20 09:20

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	131	mg/L	2.0	1	04/26/20 00:22	NA	
Ammonia as Nitrogen, undistilled	350.1	0.050 U	mg/L	0.050	1	04/25/20 13:14	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B-2001(2011)	2.0 U	mg/L	2.0	1	04/24/20 06:24	NA	
Bromide	300.0	1.0 U	mg/L	1.0	10	04/23/20 16:15	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	5.7	mg/L	1.0	1	04/24/20 00:46	NA	
Chemical Oxygen Demand, Total	410.4	17.5	mg/L	5.0	1	04/25/20 12:00	NA	
Chloride	300.0	29.0	mg/L	2.0	10	04/23/20 16:15	NA	
Color, True	SM 2120 B-2001(2011)	35.0	ColorUnits	1.0	1	04/24/20 05:45	NA	
Nitrate as Nitrogen	300.0	1.0 U	mg/L	1.0	10	04/23/20 16:15	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.35	mg/L	0.20	1	04/28/20 12:21	04/27/20	
pH of Color Analysis	SM 2120 B-2001(2011)	7.57	pH Units	-	1	04/24/20 15:15	NA	*
Phenolics, Total Recoverable	420.4	0.0050 U	mg/L	0.0050	1	04/27/20 16:24	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	197	mg/L	10	1	04/28/20 14:15	NA	
Sulfate	300.0	2.0 U	mg/L	2.0	10	04/23/20 16:15	NA	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene	Toluene-d8	Dibromofluoromethane
		85-122	87-121	89-119
MW16S-0420	R2003344-001	94	98	90
DUP1-0420	R2003344-002	88	93	94
MW4D-0420	R2003344-003	91	99	94
MW11S-0420	R2003344-004	92	97	92
EB1-0420	R2003344-005	92	99	93
MW5S-0420	R2003344-006	96	105	100
MW5D-0420	R2003344-007	96	100	96
SWS1-0420	R2003344-008	99	103	98
Trip Blank	R2003344-009	98	103	93
Method Blank	RQ2004070-04	99	97	99
Method Blank	RQ2004141-04	95	99	96
Lab Control Sample	RQ2004070-03	97	100	98
Lab Control Sample	RQ2004141-03	94	98	92
MW5S-0420 MS	RQ2004070-05	96	100	98
MW5S-0420 DMS	RQ2004070-06	93	97	97

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20
Date Received: 04/23/20
Date Analyzed: 04/24/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW5S-0420
Lab Code: R2003344-006
Analysis Method: 8260C
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Matrix Spike RQ2004070-05				Duplicate Matrix Spike RQ2004070-06				RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
Acetone	10 U	47.3	50.0	95	53.1	50.0	106	35-183	11	30
Benzene	5.0 U	52.6	50.0	105	52.6	50.0	105	76-129	<1	30
Bromodichloromethane	5.0 U	49.8	50.0	100	50.9	50.0	102	78-133	2	30
Bromoform	5.0 U	48.0	50.0	96	51.2	50.0	102	58-133	6	30
Bromomethane	5.0 U	36.8	50.0	74	37.3	50.0	75	10-184	1	30
2-Butanone (MEK)	10 U	48.5	50.0	97	53.1	50.0	106	61-137	9	30
Carbon Disulfide	10 U	51.3	50.0	103	54.6	50.0	109	59-140	6	30
Carbon Tetrachloride	5.0 U	49.7	50.0	99	51.1	50.0	102	65-135	3	30
Chlorobenzene	5.0 U	53.3	50.0	107	54.1	50.0	108	76-125	1	30
Chloroethane	5.0 U	49.6	50.0	99	50.7	50.0	101	48-146	2	30
Chloroform	5.0 U	48.4	50.0	97	49.7	50.0	99	75-130	3	30
Chloromethane	5.0 U	58.6	50.0	117	61.4	50.0	123	55-160	5	30
Dibromochloromethane	5.0 U	52.0	50.0	104	55.7	50.0	111	72-128	7	30
1,1-Dichloroethane	5.0 U	57.8	50.0	116	59.3	50.0	119	74-132	3	30
1,2-Dibromoethane	5.0 U	47.7	50.0	95	50.0	50.0	100	67-127	5	30
1,2-Dichloroethane	5.0 U	47.6	50.0	95	48.5	50.0	97	68-130	2	30
1,1-Dichloroethene	5.0 U	52.9	50.0	106	56.7	50.0	113	71-118	7	30
cis-1,2-Dichloroethene	120	167	50.0	93	174	50.0	107	77-127	4	30
trans-1,2-Dichloroethene	5.0 U	52.3	50.0	105	54.4	50.0	109	73-118	4	30
1,2-Dichloropropane	5.0 U	53.0	50.0	106	54.2	50.0	108	79-124	2	30
cis-1,3-Dichloropropene	5.0 U	49.7	50.0	99	50.7	50.0	101	52-134	2	30
trans-1,3-Dichloropropene	5.0 U	46.9	50.0	94	48.7	50.0	97	71-133	4	30
Ethylbenzene	5.0 U	53.7	50.0	107	54.5	50.0	109	72-134	2	30
2-Hexanone	10 U	47.8	50.0	96	51.3	50.0	103	56-132	7	30
Methylene Chloride	5.0 U	46.8	50.0	94	48.3	50.0	97	73-122	3	30
4-Methyl-2-pentanone (MIBK)	10 U	48.8	50.0	98	50.4	50.0	101	60-141	3	30
Styrene	5.0 U	51.8	50.0	104	52.5	50.0	105	74-136	1	30
1,1,2,2-Tetrachloroethane	5.0 U	51.9	50.0	104	52.6	50.0	105	72-122	2	30
Tetrachloroethene	5.0 U	51.7	50.0	103	52.4	50.0	105	72-125	1	30
Toluene	5.0 U	53.4	50.0	107	52.5	50.0	105	79-119	2	30
1,1,1-Trichloroethane	5.0 U	50.4	50.0	101	53.2	50.0	106	74-127	5	30
1,1,2-Trichloroethane	5.0 U	47.0	50.0	94	47.3	50.0	95	82-121	<1	30
Trichloroethene	27	76.2	50.0	98	76.9	50.0	100	74-122	<1	30
Vinyl Chloride	11	66.0	50.0	111	69.4	50.0	118	74-159	5	30
o-Xylene	5.0 U	54.2	50.0	108	54.6	50.0	109	79-123	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20
Date Received: 04/23/20
Date Analyzed: 04/24/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW5S-0420
Lab Code: R2003344-006
Analysis Method: 8260C
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike RQ2004070-05			Duplicate Matrix Spike RQ2004070-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
m,p-Xylenes	5.0 U	110	100	110	111	100	111	80-126	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2004070-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/24/20 13:44	
Benzene	5.0 U	5.0	1	04/24/20 13:44	
Bromodichloromethane	5.0 U	5.0	1	04/24/20 13:44	
Bromoform	5.0 U	5.0	1	04/24/20 13:44	
Bromomethane	5.0 U	5.0	1	04/24/20 13:44	
2-Butanone (MEK)	10 U	10	1	04/24/20 13:44	
Carbon Disulfide	10 U	10	1	04/24/20 13:44	
Carbon Tetrachloride	5.0 U	5.0	1	04/24/20 13:44	
Chlorobenzene	5.0 U	5.0	1	04/24/20 13:44	
Chloroethane	5.0 U	5.0	1	04/24/20 13:44	
Chloroform	5.0 U	5.0	1	04/24/20 13:44	
Chloromethane	5.0 U	5.0	1	04/24/20 13:44	
Dibromochloromethane	5.0 U	5.0	1	04/24/20 13:44	
1,2-Dibromoethane	5.0 U	5.0	1	04/24/20 13:44	
1,1-Dichloroethane	5.0 U	5.0	1	04/24/20 13:44	
1,2-Dichloroethane	5.0 U	5.0	1	04/24/20 13:44	
1,1-Dichloroethene	5.0 U	5.0	1	04/24/20 13:44	
cis-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 13:44	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/24/20 13:44	
1,2-Dichloropropane	5.0 U	5.0	1	04/24/20 13:44	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 13:44	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/24/20 13:44	
Ethylbenzene	5.0 U	5.0	1	04/24/20 13:44	
2-Hexanone	10 U	10	1	04/24/20 13:44	
Methylene Chloride	5.0 U	5.0	1	04/24/20 13:44	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/24/20 13:44	
Styrene	5.0 U	5.0	1	04/24/20 13:44	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	04/24/20 13:44	
Tetrachloroethene	5.0 U	5.0	1	04/24/20 13:44	
Toluene	5.0 U	5.0	1	04/24/20 13:44	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/24/20 13:44	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/24/20 13:44	
Trichloroethene	5.0 U	5.0	1	04/24/20 13:44	
Vinyl Chloride	5.0 U	5.0	1	04/24/20 13:44	
o-Xylene	5.0 U	5.0	1	04/24/20 13:44	
m,p-Xylenes	5.0 U	5.0	1	04/24/20 13:44	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2004070-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	04/24/20 13:44	
Toluene-d8	97	87 - 121	04/24/20 13:44	
Dibromofluoromethane	99	89 - 119	04/24/20 13:44	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2004141-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	04/27/20 12:41	
Benzene	5.0 U	5.0	1	04/27/20 12:41	
Bromodichloromethane	5.0 U	5.0	1	04/27/20 12:41	
Bromoform	5.0 U	5.0	1	04/27/20 12:41	
Bromomethane	5.0 U	5.0	1	04/27/20 12:41	
2-Butanone (MEK)	10 U	10	1	04/27/20 12:41	
Carbon Disulfide	10 U	10	1	04/27/20 12:41	
Carbon Tetrachloride	5.0 U	5.0	1	04/27/20 12:41	
Chlorobenzene	5.0 U	5.0	1	04/27/20 12:41	
Chloroethane	5.0 U	5.0	1	04/27/20 12:41	
Chloroform	5.0 U	5.0	1	04/27/20 12:41	
Chloromethane	5.0 U	5.0	1	04/27/20 12:41	
Dibromochloromethane	5.0 U	5.0	1	04/27/20 12:41	
1,2-Dibromoethane	5.0 U	5.0	1	04/27/20 12:41	
1,1-Dichloroethane	5.0 U	5.0	1	04/27/20 12:41	
1,2-Dichloroethane	5.0 U	5.0	1	04/27/20 12:41	
1,1-Dichloroethene	5.0 U	5.0	1	04/27/20 12:41	
cis-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 12:41	
trans-1,2-Dichloroethene	5.0 U	5.0	1	04/27/20 12:41	
1,2-Dichloropropane	5.0 U	5.0	1	04/27/20 12:41	
cis-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 12:41	
trans-1,3-Dichloropropene	5.0 U	5.0	1	04/27/20 12:41	
Ethylbenzene	5.0 U	5.0	1	04/27/20 12:41	
2-Hexanone	10 U	10	1	04/27/20 12:41	
Methylene Chloride	5.0 U	5.0	1	04/27/20 12:41	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	04/27/20 12:41	
Styrene	5.0 U	5.0	1	04/27/20 12:41	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	04/27/20 12:41	
Tetrachloroethene	5.0 U	5.0	1	04/27/20 12:41	
Toluene	5.0 U	5.0	1	04/27/20 12:41	
1,1,1-Trichloroethane	5.0 U	5.0	1	04/27/20 12:41	
1,1,2-Trichloroethane	5.0 U	5.0	1	04/27/20 12:41	
Trichloroethene	5.0 U	5.0	1	04/27/20 12:41	
Vinyl Chloride	5.0 U	5.0	1	04/27/20 12:41	
o-Xylene	5.0 U	5.0	1	04/27/20 12:41	
m,p-Xylenes	5.0 U	5.0	1	04/27/20 12:41	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2004141-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	85 - 122	04/27/20 12:41	
Toluene-d8	99	87 - 121	04/27/20 12:41	
Dibromofluoromethane	96	89 - 119	04/27/20 12:41	

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Analyzed: 04/24/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2004070-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Acetone	8260C	19.1	20.0	95	40-161
Benzene	8260C	21.7	20.0	109	79-119
Bromodichloromethane	8260C	21.3	20.0	107	81-123
Bromoform	8260C	22.1	20.0	110	65-146
Bromomethane	8260C	16.4	20.0	82	42-166
2-Butanone (MEK)	8260C	19.5	20.0	98	61-137
Carbon Disulfide	8260C	19.3	20.0	96	66-128
Carbon Tetrachloride	8260C	22.5	20.0	112	70-127
Chlorobenzene	8260C	21.9	20.0	109	80-121
Chloroethane	8260C	19.8	20.0	99	62-131
Chloroform	8260C	20.5	20.0	103	79-120
Chloromethane	8260C	23.7	20.0	118	65-135
Dibromochloromethane	8260C	21.9	20.0	109	72-128
1,1-Dichloroethane	8260C	22.8	20.0	114	80-124
1,2-Dibromoethane	8260C	20.4	20.0	102	82-127
1,2-Dichloroethane	8260C	20.6	20.0	103	71-127
1,1-Dichloroethene	8260C	21.0	20.0	105	71-118
cis-1,2-Dichloroethene	8260C	21.3	20.0	106	80-121
trans-1,2-Dichloroethene	8260C	21.1	20.0	105	73-118
1,2-Dichloropropane	8260C	22.1	20.0	111	80-119
cis-1,3-Dichloropropene	8260C	21.5	20.0	107	77-122
trans-1,3-Dichloropropene	8260C	21.0	20.0	105	71-133
Ethylbenzene	8260C	22.0	20.0	110	76-120
2-Hexanone	8260C	19.0	20.0	95	63-124
Methylene Chloride	8260C	19.2	20.0	96	73-122
4-Methyl-2-pentanone (MIBK)	8260C	19.5	20.0	97	66-124
Styrene	8260C	20.9	20.0	105	80-124
1,1,2,2-Tetrachloroethane	8260C	21.2	20.0	106	78-126
Tetrachloroethene	8260C	21.5	20.0	107	72-125
Toluene	8260C	21.9	20.0	110	79-119
1,1,1-Trichloroethane	8260C	21.3	20.0	107	75-125
1,1,2-Trichloroethane	8260C	19.8	20.0	99	82-121
Trichloroethene	8260C	20.8	20.0	104	74-122

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Analyzed: 04/24/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2004070-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	8260C	21.7	20.0	108	74-159
o-Xylene	8260C	21.8	20.0	109	79-123
m,p-Xylenes	8260C	44.2	40.0	111	80-126

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Analyzed: 04/27/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2004141-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Acetone	8260C	19.6	20.0	98	40-161
Benzene	8260C	21.9	20.0	110	79-119
Bromodichloromethane	8260C	21.2	20.0	106	81-123
Bromoform	8260C	20.9	20.0	105	65-146
Bromomethane	8260C	17.3	20.0	86	42-166
2-Butanone (MEK)	8260C	19.0	20.0	95	61-137
Carbon Disulfide	8260C	20.2	20.0	101	66-128
Carbon Tetrachloride	8260C	21.3	20.0	106	70-127
Chlorobenzene	8260C	21.7	20.0	109	80-121
Chloroethane	8260C	20.3	20.0	101	62-131
Chloroform	8260C	20.6	20.0	103	79-120
Chloromethane	8260C	24.3	20.0	121	65-135
Dibromochloromethane	8260C	22.0	20.0	110	72-128
1,1-Dichloroethane	8260C	23.3	20.0	117	80-124
1,2-Dibromoethane	8260C	19.7	20.0	99	82-127
1,2-Dichloroethane	8260C	20.3	20.0	102	71-127
1,1-Dichloroethene	8260C	21.5	20.0	107	71-118
cis-1,2-Dichloroethene	8260C	21.0	20.0	105	80-121
trans-1,2-Dichloroethene	8260C	21.1	20.0	105	73-118
1,2-Dichloropropane	8260C	21.9	20.0	109	80-119
cis-1,3-Dichloropropene	8260C	20.8	20.0	104	77-122
trans-1,3-Dichloropropene	8260C	20.0	20.0	100	71-133
Ethylbenzene	8260C	21.3	20.0	106	76-120
2-Hexanone	8260C	18.5	20.0	93	63-124
Methylene Chloride	8260C	19.3	20.0	97	73-122
4-Methyl-2-pentanone (MIBK)	8260C	20.1	20.0	101	66-124
Styrene	8260C	21.1	20.0	106	80-124
1,1,2,2-Tetrachloroethane	8260C	20.6	20.0	103	78-126
Tetrachloroethene	8260C	20.1	20.0	101	72-125
Toluene	8260C	21.6	20.0	108	79-119
1,1,1-Trichloroethane	8260C	20.2	20.0	101	75-125
1,1,2-Trichloroethane	8260C	18.6	20.0	93	82-121
Trichloroethene	8260C	19.4	20.0	97	74-122

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Analyzed: 04/27/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2004141-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	8260C	22.9	20.0	114	74-159
o-Xylene	8260C	21.3	20.0	107	79-123
m,p-Xylenes	8260C	44.0	40.0	110	80-126



Metals

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R2003344-MB

Service Request: R2003344
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	04/24/20 19:06	04/23/20	
Barium, Total	6010C	20 U	ug/L	20	1	04/24/20 19:06	04/23/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	04/24/20 19:06	04/23/20	
Calcium, Total	6010C	1000 U	ug/L	1000	1	04/24/20 19:06	04/23/20	
Chromium, Total	6010C	10 U	ug/L	10	1	04/24/20 19:06	04/23/20	
Copper, Total	6010C	20 U	ug/L	20	1	04/27/20 11:59	04/23/20	
Iron, Total	6010C	100 U	ug/L	100	1	04/24/20 19:06	04/23/20	
Lead, Total	6010C	50 U	ug/L	50	1	04/24/20 19:06	04/23/20	
Magnesium, Total	6010C	1000 U	ug/L	1000	1	04/24/20 19:06	04/23/20	
Manganese, Total	6010C	10 U	ug/L	10	1	04/24/20 19:06	04/23/20	
Nickel, Total	6010C	40 U	ug/L	40	1	04/24/20 19:06	04/23/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	04/24/20 19:06	04/23/20	
Selenium, Total	6010C	10 U	ug/L	10	1	04/24/20 19:06	04/23/20	
Sodium, Total	6010C	1000 U	ug/L	1000	1	04/24/20 19:06	04/23/20	
Zinc, Total	6010C	20 U	ug/L	20	1	04/24/20 19:06	04/23/20	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Analyzed: 04/24/20 - 04/27/20

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R2003344-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	6010C	36	40	91	80-120
Barium, Total	6010C	2040	2000	102	80-120
Cadmium, Total	6010C	51.5	50.0	103	80-120
Calcium, Total	6010C	2000	2000	102	80-120
Chromium, Total	6010C	204	200	102	80-120
Copper, Total	6010C	237	250	95	80-120
Iron, Total	6010C	970	1000	97	80-120
Lead, Total	6010C	500	500	100	80-120
Magnesium, Total	6010C	1900	2000	97	80-120
Manganese, Total	6010C	494	500	99	80-120
Nickel, Total	6010C	508	500	102	80-120
Potassium, Total	6010C	18900	20000	94	80-120
Selenium, Total	6010C	1050	1010	104	80-120
Sodium, Total	6010C	19400	20000	97	80-120
Zinc, Total	6010C	504	500	101	80-120



General Chemistry

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R2003344-MB1

Service Request: R2003344
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	2.0 U	mg/L	2.0	1	04/26/20 00:04	NA	
Ammonia as Nitrogen, undistilled	350.1	0.050 U	mg/L	0.050	1	04/25/20 12:43	NA	
Biochemical Oxygen Demand (BOD)	SM 5210 B-2001(2011)	2.0 U	mg/L	2.0	1	04/24/20 12:04	NA	
Bromide	300.0	0.10 U	mg/L	0.10	1	04/23/20 13:21	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	1.0 U	mg/L	1.0	1	04/23/20 18:50	NA	
Chemical Oxygen Demand, Total	410.4	5.0 U	mg/L	5.0	1	04/25/20 12:00	NA	
Chloride	300.0	0.20 U	mg/L	0.20	1	04/23/20 13:21	NA	
Color, True	SM 2120 B-2001(2011)	1.0	ColorUnits	1.0	1	04/24/20 05:45	NA	
Nitrate as Nitrogen	300.0	0.10 U	mg/L	0.10	1	04/23/20 13:21	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.20 U	mg/L	0.20	1	04/28/20 12:03	04/27/20	
Phenolics, Total Recoverable	420.4	0.0050 U	mg/L	0.0050	1	04/27/20 15:44	NA	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10 U	mg/L	10	1	04/28/20 14:15	NA	
Sulfate	300.0	0.20 U	mg/L	0.20	1	04/23/20 13:21	NA	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R2003344-MB2

Service Request: R2003344
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Phenolics, Total Recoverable	420.4	0.0050 U	mg/L	0.0050	1	04/27/20 17:08	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request:R2003344
Date Collected:04/22/20
Date Received:04/23/20
Date Analyzed:04/23/20 - 04/27/20

**Duplicate Matrix Spike Summary
General Chemistry Parameters**

Sample Name: SWS1-0420
Lab Code: R2003344-008

Units:mg/L
Basis:NA

Matrix Spike
R2003344-008MS

Duplicate Matrix Spike
R2003344-008DMS

Analyte Name	Method	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Bromide	300.0	1.0 U	9.9	10.0	99	9.9	10.0	99	90-110	<1	20
Chloride	300.0	29.0	48.6	20.0	98	48.6	20.0	98	90-110	<1	20
Nitrate as Nitrogen	300.0	1.0 U	9.7	10.0	97	9.7	10.0	97	90-110	<1	20
Phenolics, Total Recoverable	420.4	0.0050 U	0.0412	0.0400	103	0.0423	0.0400	106	90-110	3	20
Sulfate	300.0	2.0 U	20.6	20.0	103	20.7	20.0	103	90-110	<1	20
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	5.7	16.2	10.0	105	16.3	10.0	106	48-135	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Collected: 04/22/20
Date Received: 04/23/20
Date Analyzed: 04/26/20 - 04/28/20

Replicate Sample Summary
General Chemistry Parameters

Sample Name: SWS1-0420
Lab Code: R2003344-008

Units: mg/L
Basis: NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample R2003344-008DUP Result	Average	RPD	RPD Limit
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	2.0	131	126	129	3	20
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10	197	191	194	3	10

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2003344
Date Analyzed: 04/23/20 - 04/28/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R2003344-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	19.2	20.0	96	80-120
Ammonia as Nitrogen, undistilled	350.1	0.540	0.500	108	90-110
Biochemical Oxygen Demand (BOD)	SM 5210 B-2001(2011)	207	198	104	85-115
Bromide	300.0	0.99	1.00	99	90-110
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	9.9	10.0	99	80-121
Chemical Oxygen Demand, Total	410.4	52.3	50.0	105	90-110
Chloride	300.0	1.95	2.00	97	90-110
Nitrate as Nitrogen	300.0	0.974	1.00	97	90-110
Nitrogen, Total Kjeldahl (TKN)	351.2	2.55	2.50	102	90-110
Phenolics, Total Recoverable	420.4	0.0410	0.0400	102	90-110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	900	914	98	90-110
Sulfate	300.0	1.95	2.00	98	90-110



June 12, 2020

Service Request No:R2004578

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: WAL - Annual Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory June 02, 2020
For your reference, these analyses have been assigned our service request number **R2004578**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: WAL - Annual Sampling
Sample Matrix: Drinking Water

Service Request: R2004578
Date Received: 06/02/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Three drinking water samples were received for analysis at ALS Environmental on 06/02/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

A handwritten signature in black ink, appearing to read "Samantha", is written over a horizontal line.

Approved by _____

Date 06/12/2020



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**
72 Railroad Ave.
Wellsville, NY 14895
Project Manager **Jon Brandes**

CHAIN of CUSTODY

Project: **WAL - Annual Sampling**
Telephone No. 585-593-1824
Email: jonb@on-sitehs.com

Page 1 of 1
Method of Shipment
UPS

Special Detection Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	GC/MS VOA's 8260 (HCl)	GC/MS VOA's 524.2 (C6H8O6)	T-Metals (HNO3)	TDS, NO3, Br, Cl, SO4 (NP) (SW/SED)	NH3, TKN, COD (H2SO4) (SW/SED)	Total Color (NP) (SW/SED)	BOD (NP) (SW/SED)	Alkalinity (NP) (SW/SED)	TDS, NO3 (NP) (Manhole)
			Soil	Water	Air	Other	Yes	No											
WAL19 Post-0620		3	X				X	6-1-20	1115		X								
WAL19 Inter-0620		3	X				X	6-1-20	1125		X								
WAL19 Pre-0620		3	X				X	6-1-20	1130		X								

Residential

R E M A R K S

Sample Received Intact: Yes No Temperature received: Ice No ice

Relinq. by sampler (Sign & Print Name) <i>Kevin Dye / Kevin Dye</i>	Date 6-1-20	Time 1300	Received by (Sign & Print Name)
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory <i>August Dye</i>
	Date	Time	Date 6/2/20
			Time 0950

Lab Work No.

R2004578 5
On-Site Technical Services, Inc.
WAL - Annual Sampling



Cooler Receipt and Preservation Check Form

R2004578
On-Site Technical Services, Inc.
WAL - Annual Sampling

5



Project/Client On-Site Folder Number _____

Cooler received on 6/2/2020 by: PO COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>(N)</u>
2	Custody papers properly completed (ink, signed)?	<u>(Y)</u> N
3	Did all bottles arrive in good condition (unbroken)?	<u>(Y)</u> N
4	Circle: <u>(Wet Ice)</u> Dry Ice Gel packs present?	<u>(Y)</u> N

5a	Perchlorate samples have required headspace?	Y N <u>(NA)</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y N <u>(NA)</u>
6	Where did the bottles originate?	<u>(ALS/ROC)</u> CLIENT
7	Soil VOA received as:	Bulk Encore 5035set <u>(NA)</u>

3. Temperature Readings Date: 6/2/2020 Time: 1005 ID: IR#7 (IR#10) From: Temp Blank (Sample Bottle)

Observed Temp (°C)	<u>4.8</u>							
Within 0-6°C?	<u>(Y)</u> N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by PO on 6/2/2020 at 1010
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 6/2/2020 Time: 1352 by: PO

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? (YES) NO
- 10. Did all bottle labels and tags agree with custody papers? (YES) NO
- 11. Were correct containers used for the tests indicated? (YES) NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃			<u>376740</u>					
		ZnAcetate	-	-						
		HCl	**	**	<u>59262</u>	<u>11/22</u>				

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 9-093-002

Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
<u>(SUB)</u>	HGFB
ALS	LL3541

Labels secondary reviewed by: PO
PC Secondary Review: [Signature] 6/5/20

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter
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Miscellaneous Forms

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Phone (585) 288-5380 Fax (585) 288-8475
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REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\times 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

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June 11, 2020

Reports and Invoices
ALS Environmental
1565 Jefferson Road
Building 300, Suite 360
Rochester, NY 14623

Certificate of Analysis

Project Name:	Custom EDD & QC, No MDL	Workorder:	3107005
Purchase Order:		Workorder ID:	R2004578

Dear Reports Invoices:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, June 9, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Michael Chevalier , Mr. Brady Kalkman , Ms. Janice Jaeger

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.



Ms. Sarah S Leung
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3107005 R2004578

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3107005001	WAL19Post-0620	NY Potable Water	6/1/2020 11:15	6/9/2020 08:59	Collected by Client
3107005002	WAL19Inter-0620	NY Potable Water	6/1/2020 11:25	6/9/2020 08:59	Collected by Client
3107005003	WAL19Pre-0620	NY Potable Water	6/1/2020 11:30	6/9/2020 08:59	Collected by Client

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SAMPLE SUMMARY

Workorder: 3107005 R2004578

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3107005 R2004578

Lab ID: **3107005001**
Sample ID: **WAL19Post-0620**

Date Collected: 6/1/2020 11:15 Matrix: NY Potable Water
Date Received: 6/9/2020 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Bromobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Bromochloromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Bromomethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Chloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Chloromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Dibromomethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Dichlorodifluoromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Styrene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A

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ANALYTICAL RESULTS

Workorder: 3107005 R2004578

Lab ID: **3107005001**
Sample ID: **WAL19Post-0620**

Date Collected: 6/1/2020 11:15 Matrix: NY Potable Water
Date Received: 6/9/2020 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Toluene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			6/11/20 00:43	PDK	A
o-Xylene	ND		ug/L	0.25	EPA 524.2			6/11/20 00:43	PDK	A
mp-Xylene	ND		ug/L	0.25	EPA 524.2			6/11/20 00:43	PDK	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	92.4		%	70 - 130	EPA 524.2			6/11/20 00:43	PDK	A
4-Bromofluorobenzene (S)	90.3		%	70 - 130	EPA 524.2			6/11/20 00:43	PDK	A



Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3107005 R2004578

Lab ID: **3107005002**
Sample ID: **WAL19Inter-0620**

Date Collected: 6/1/2020 11:25 Matrix: NY Potable Water
Date Received: 6/9/2020 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Bromobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Bromochloromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Bromomethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Chloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Chloromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Dibromomethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Dichlorodifluoromethane	ND	1,2	ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Styrene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A

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ANALYTICAL RESULTS

Workorder: 3107005 R2004578

Lab ID: **3107005002**
Sample ID: **WAL19Inter-0620**

Date Collected: 6/1/2020 11:25 Matrix: NY Potable Water
Date Received: 6/9/2020 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Toluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			6/11/20 01:09	PDK	A
o-Xylene	ND		ug/L	0.25	EPA 524.2			6/11/20 01:09	PDK	A
mp-Xylene	ND		ug/L	0.25	EPA 524.2			6/11/20 01:09	PDK	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichlorobenzene-d4 (S)	93.7		%	70 - 130	EPA 524.2			6/11/20 01:09	PDK	A
4-Bromofluorobenzene (S)	92.1		%	70 - 130	EPA 524.2			6/11/20 01:09	PDK	A



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ANALYTICAL RESULTS

Workorder: 3107005 R2004578

Lab ID: **3107005003**
Sample ID: **WAL19Pre-0620**

Date Collected: 6/1/2020 11:30 Matrix: NY Potable Water
Date Received: 6/9/2020 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Bromobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Bromochloromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Bromomethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Chloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Chloromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Dibromomethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Dichlorodifluoromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
cis-1,2-Dichloroethene	2.3		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Styrene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A

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ANALYTICAL RESULTS

Workorder: 3107005 R2004578

Lab ID: **3107005003**
Sample ID: **WAL19Pre-0620**

Date Collected: 6/1/2020 11:30 Matrix: NY Potable Water
Date Received: 6/9/2020 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Toluene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Trichloroethene	2.9		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			6/11/20 01:36	PDK	A
o-Xylene	ND		ug/L	0.25	EPA 524.2			6/11/20 01:36	PDK	A
mp-Xylene	ND		ug/L	0.25	EPA 524.2			6/11/20 01:36	PDK	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	90.4		%	70 - 130	EPA 524.2			6/11/20 01:36	PDK	A
4-Bromofluorobenzene (S)	89.5		%	70 - 130	EPA 524.2			6/11/20 01:36	PDK	A



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ANALYTICAL RESULTS

Workorder: 3107005 R2004578

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3107005002	1	WAL19Inter-0620	EPA 524.2	Dichlorodifluoromethane
The QC sample type MS for method EPA 524.2 was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 136 and the control limits were 70 to 130.				
3107005002	2	WAL19Inter-0620	EPA 524.2	Dichlorodifluoromethane
The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 137 and the control limits were 70 to 130.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3107005 R2004578

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3107005001	WAL19Post-0620	EPA 524.2		
3107005002	WAL19Inter-0620	EPA 524.2		
3107005003	WAL19Pre-0620	EPA 524.2		

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QUALITY CONTROL DATA

Workorder: 3107005 R2004578

QC Batch: VOMS/55320 **Analysis Method:** EPA 524.2

QC Batch Method: EPA 524.2

Associated Lab Samples: 3107005001, 3107005002, 3107005003

METHOD BLANK: 3147753

Parameter	Blank Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Bromobenzene	ND	ug/L	0.50
Bromochloromethane	ND	ug/L	0.50
Bromomethane	ND	ug/L	0.50
n-Butylbenzene	ND	ug/L	0.50
tert-Butylbenzene	ND	ug/L	0.50
sec-Butylbenzene	ND	ug/L	0.50
Carbon Tetrachloride	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	0.50
Chloroethane	ND	ug/L	0.50
Chloromethane	ND	ug/L	0.50
o-Chlorotoluene	ND	ug/L	0.50
p-Chlorotoluene	ND	ug/L	0.50
Dibromomethane	ND	ug/L	0.50
1,2-Dichlorobenzene	ND	ug/L	0.50
1,3-Dichlorobenzene	ND	ug/L	0.50
1,4-Dichlorobenzene	ND	ug/L	0.50
Dichlorodifluoromethane	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
1,2-Dichloroethane	ND	ug/L	0.50
1,1-Dichloroethene	ND	ug/L	0.50
cis-1,2-Dichloroethene	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
1,3-Dichloropropane	ND	ug/L	0.50
2,2-Dichloropropane	ND	ug/L	0.50
1,2-Dichloropropane	ND	ug/L	0.50
1,1-Dichloropropene	ND	ug/L	0.50
cis-1,3-Dichloropropene	ND	ug/L	0.50
trans-1,3-Dichloropropene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Hexachlorobutadiene	ND	ug/L	0.50
Isopropylbenzene	ND	ug/L	0.50
p-Isopropyltoluene	ND	ug/L	0.50
Methyl t-Butyl Ether	ND	ug/L	0.50
Methylene Chloride	ND	ug/L	0.50
n-Propylbenzene	ND	ug/L	0.50
Styrene	ND	ug/L	0.50
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50

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QUALITY CONTROL DATA

Workorder: 3107005 R2004578

1,1,2,2-Tetrachloroethane	ND	ug/L	0.50
Tetrachloroethene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
1,2,3-Trichlorobenzene	ND	ug/L	0.50
1,2,4-Trichlorobenzene	ND	ug/L	0.50
1,1,1-Trichloroethane	ND	ug/L	0.50
1,1,2-Trichloroethane	ND	ug/L	0.50
Trichloroethene	ND	ug/L	0.50
Trichlorofluoromethane	ND	ug/L	0.50
1,2,3-Trichloropropane	ND	ug/L	0.50
1,2,4-Trimethylbenzene	ND	ug/L	0.50
1,3,5-Trimethylbenzene	ND	ug/L	0.50
Vinyl Chloride	ND	ug/L	0.50
o-Xylene	ND	ug/L	0.25
mp-Xylene	ND	ug/L	0.25
1,2-Dichlorobenzene-d4 (S)	92.1	%	70 - 130
4-Bromofluorobenzene (S)	88.9	%	70 - 130

LABORATORY CONTROL SAMPLE: 3147754

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Vinyl Chloride	101	ug/L	2	2.0	70 - 130
1,2-Dichlorobenzene-d4 (S)	95.3	%			70 - 130
4-Bromofluorobenzene (S)	93.6	%			70 - 130

LABORATORY CONTROL SAMPLE: 3147755

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Benzene	105	ug/L	5	5.2	70 - 130
Bromobenzene	99.3	ug/L	5	5.0	70 - 130
Bromochloromethane	99.1	ug/L	5	5.0	70 - 130
Bromomethane	107	ug/L	5	5.3	70 - 130
n-Butylbenzene	78.6	ug/L	5	3.9	70 - 130
tert-Butylbenzene	102	ug/L	5	5.1	70 - 130
sec-Butylbenzene	92.9	ug/L	5	4.6	70 - 130
Carbon Tetrachloride	105	ug/L	5	5.2	70 - 130
Chlorobenzene	100	ug/L	5	5.0	70 - 130
Chloroethane	97.7	ug/L	5	4.9	70 - 130
Chloromethane	104	ug/L	5	5.2	70 - 130
o-Chlorotoluene	99.1	ug/L	5	5.0	70 - 130
p-Chlorotoluene	100	ug/L	5	5.0	70 - 130
Dibromomethane	105	ug/L	5	5.2	70 - 130

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QUALITY CONTROL DATA

Workorder: 3107005 R2004578

1,2-Dichlorobenzene	99.5	ug/L	5	5.0	70 - 130
1,3-Dichlorobenzene	99	ug/L	5	5.0	70 - 130
1,4-Dichlorobenzene	101	ug/L	5	5.0	70 - 130
Dichlorodifluoromethane	115	ug/L	5	5.8	70 - 130
1,1-Dichloroethane	101	ug/L	5	5.0	70 - 130
1,2-Dichloroethane	98	ug/L	5	4.9	70 - 130
1,1-Dichloroethene	107	ug/L	5	5.4	70 - 130
cis-1,2-Dichloroethene	104	ug/L	5	5.2	70 - 130
trans-1,2-Dichloroethene	108	ug/L	5	5.4	70 - 130
1,3-Dichloropropane	101	ug/L	5	5.1	70 - 130
2,2-Dichloropropane	98.5	ug/L	5	4.9	70 - 130
1,2-Dichloropropane	99	ug/L	5	4.9	70 - 130
1,1-Dichloropropene	104	ug/L	5	5.2	70 - 130
cis-1,3-Dichloropropene	95.8	ug/L	5	4.8	70 - 130
trans-1,3-Dichloropropene	99.9	ug/L	5	5.0	70 - 130
Ethylbenzene	108	ug/L	5	5.4	70 - 130
Hexachlorobutadiene	107	ug/L	5	5.4	70 - 130
Isopropylbenzene	102	ug/L	5	5.1	70 - 130
p-Isopropyltoluene	81.2	ug/L	5	4.1	70 - 130
Methyl t-Butyl Ether	104	ug/L	5	5.2	70 - 130
Methylene Chloride	113	ug/L	5	5.6	70 - 130
n-Propylbenzene	101	ug/L	5	5.1	70 - 130
Styrene	90	ug/L	5	4.5	70 - 130
1,1,1,2-Tetrachloroethane	96.5	ug/L	5	4.8	70 - 130
1,1,1,2,2-Tetrachloroethane	97.4	ug/L	5	4.9	70 - 130
Tetrachloroethene	102	ug/L	5	5.1	70 - 130
Toluene	101	ug/L	5	5.0	70 - 130
1,2,3-Trichlorobenzene	88.8	ug/L	5	4.4	70 - 130
1,2,4-Trichlorobenzene	90.5	ug/L	5	4.5	70 - 130
1,1,1-Trichloroethane	102	ug/L	5	5.1	70 - 130
1,1,2-Trichloroethane	95.8	ug/L	5	4.8	70 - 130
Trichloroethene	105	ug/L	5	5.2	70 - 130
Trichlorofluoromethane	105	ug/L	5	5.3	70 - 130
1,2,3-Trichloropropane	95.2	ug/L	5	4.8	70 - 130
1,2,4-Trimethylbenzene	87.4	ug/L	5	4.4	70 - 130
1,3,5-Trimethylbenzene	103	ug/L	5	5.1	70 - 130
Vinyl Chloride	101	ug/L	5	5.1	70 - 130
o-Xylene	104	ug/L	5	5.2	70 - 130
mp-Xylene	110	ug/L	10	11.0	70 - 130
1,2-Dichlorobenzene-d4 (S)	99.5	%			70 - 130
4-Bromofluorobenzene (S)	102	%			70 - 130

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QUALITY CONTROL DATA

Workorder: 3107005 R2004578

MATRIX SPIKE: 3147925 DUPLICATE: 3147926 ORIGINAL: 3107005002

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	0	ug/L	5	5.1732	5.1992	103	104	70 - 130	.5	40
Bromobenzene	0	ug/L	5	4.67802	4.94899	93.6	99	70 - 130	5.63	40
Bromochloromethane	0	ug/L	5	4.83423	5.17342	96.7	103	70 - 130	6.78	40
Bromomethane	0	ug/L	5	6.4925	5.95375	130	119	70 - 130	8.66	40
n-Butylbenzene	0	ug/L	5	4.05113	4.43462	81	88.7	70 - 130	9.04	40
tert-Butylbenzene	0	ug/L	5	4.96041	5.17719	99.2	104	70 - 130	4.28	40
sec-Butylbenzene	0	ug/L	5	4.8382	4.83948	96.8	96.8	70 - 130	.03	40
Carbon Tetrachloride	0	ug/L	5	5.38446	5.31896	108	106	70 - 130	1.22	40
Chlorobenzene	0	ug/L	5	5.06258	5.17485	101	103	70 - 130	2.19	40
Chloroethane	0	ug/L	5	5.5138	5.19832	110	104	70 - 130	5.89	40
Chloromethane	0	ug/L	5	5.90182	5.76314	118	115	70 - 130	2.38	40
o-Chlorotoluene	0	ug/L	5	4.86955	4.85736	97.4	97.1	70 - 130	.25	40
p-Chlorotoluene	0	ug/L	5	4.93257	4.954	98.7	99.1	70 - 130	.43	40
Dibromomethane	0	ug/L	5	5.2066	5.58779	104	112	70 - 130	7.06	40
1,2-Dichlorobenzene	0	ug/L	5	4.81106	4.89696	96.2	97.9	70 - 130	1.77	40
1,3-Dichlorobenzene	0	ug/L	5	4.81517	4.97398	96.3	99.5	70 - 130	3.24	40
1,4-Dichlorobenzene	0	ug/L	5	4.81229	5.1307	96.2	103	70 - 130	6.4	40
Dichlorodifluoromethane	0	ug/L	5	6.81345	6.84161	136*	137*	70 - 130	.41	40
1,1-Dichloroethane	0	ug/L	5	5.17569	5.27803	104	106	70 - 130	1.96	40
1,2-Dichloroethane	0	ug/L	5	4.70693	4.90371	94.1	98.1	70 - 130	4.1	40
1,1-Dichloroethene	0	ug/L	5	5.83213	5.66644	117	113	70 - 130	2.88	40
cis-1,2-Dichloroethene	0	ug/L	5	5.17372	5.08458	103	102	70 - 130	1.74	40
trans-1,2-Dichloroethene	0	ug/L	5	5.45766	5.37947	109	108	70 - 130	1.44	40
1,3-Dichloropropane	0	ug/L	5	4.37992	4.80064	87.6	96	70 - 130	9.17	40
2,2-Dichloropropane	0	ug/L	5	4.9818	4.92074	99.6	98.4	70 - 130	1.23	40
1,2-Dichloropropane	0	ug/L	5	4.86562	4.96554	97.3	99.3	70 - 130	2.03	40
1,1-Dichloropropene	0	ug/L	5	5.33067	5.35862	107	107	70 - 130	.52	40
cis-1,3-Dichloropropene	0	ug/L	5	4.60727	4.86439	92.1	97.3	70 - 130	5.43	40
trans-1,3-Dichloropropene	0	ug/L	5	4.66885	4.93143	93.4	98.6	70 - 130	5.47	40
Ethylbenzene	0	ug/L	5	5.42257	5.21268	108	104	70 - 130	3.95	40
Hexachlorobutadiene	0	ug/L	5	5.07437	5.71089	101	114	70 - 130	11.8	40
Isopropylbenzene	0	ug/L	5	5.09037	5.24938	102	105	70 - 130	3.08	40
p-Isopropyltoluene	0	ug/L	5	4.09078	4.24799	81.8	85	70 - 130	3.77	40
Methyl t-Butyl Ether	0	ug/L	5	4.33572	5.01442	86.7	100	70 - 130	14.5	40
Methylene Chloride	0	ug/L	5	5.63431	5.61518	113	112	70 - 130	.34	40
n-Propylbenzene	0	ug/L	5	5.04018	5.15545	101	103	70 - 130	2.26	40
Styrene	0	ug/L	5	4.0075	4.27923	80.2	85.6	70 - 130	6.56	40
1,1,1,2-Tetrachloroethane	0	ug/L	5	4.8243	4.91148	96.5	98.2	70 - 130	1.79	40
1,1,1,2,2-Tetrachloroethane	0	ug/L	5	4.14837	5.00393	83	100	70 - 130	18.7	40
Tetrachloroethene	0	ug/L	5	5.15932	5.24069	103	105	70 - 130	1.56	40
Toluene	0	ug/L	5	5.00035	4.99783	100	100	70 - 130	.05	40

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

QUALITY CONTROL DATA

Workorder: 3107005 R2004578

1,2,3-Trichlorobenzene	0	ug/L	5	3.61832	4.66761	72.4	93.4	70 - 130	25.3	40
1,2,4-Trichlorobenzene	0	ug/L	5	4.02658	4.72376	80.5	94.5	70 - 130	15.9	40
1,1,1-Trichloroethane	0	ug/L	5	5.13673	5.26206	103	105	70 - 130	2.41	40
1,1,2-Trichloroethane	0	ug/L	5	4.36221	4.81374	87.2	96.3	70 - 130	9.84	40
Trichloroethene	0	ug/L	5	5.29479	5.32196	106	106	70 - 130	.51	40
Trichlorofluoromethane	0	ug/L	5	5.6793	5.71412	114	114	70 - 130	.61	40
1,2,3-Trichloropropane	0	ug/L	5	3.91693	4.72668	78.3	94.5	70 - 130	18.7	40
1,2,4-Trimethylbenzene	0	ug/L	5	4.38099	4.47578	87.6	89.5	70 - 130	2.14	40
1,3,5-Trimethylbenzene	0	ug/L	5	5.06005	5.12368	101	102	70 - 130	1.25	40
Vinyl Chloride	0	ug/L	5	5.39067	5.51229	108	110	70 - 130	2.23	40
o-Xylene	0	ug/L	5	5.22895	5.24348	105	105	70 - 130	.28	40
mp-Xylene	0	ug/L	10	10.7752	10.8837	108	109	70 - 130	1	40
1,2-Dichlorobenzene-d4 (S)	99.4	%				99.4	103	70 - 130		
4-Bromofluorobenzene (S)	100	%				100	104	70 - 130		

ALS Environmental Laboratory Locations Across North America

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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3107005 R2004578

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3107005001	WAL19Post-0620			EPA 524.2	VOMS/55320
3107005002	WAL19Inter-0620			EPA 524.2	VOMS/55320
3107005003	WAL19Pre-0620			EPA 524.2	VOMS/55320

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay
 Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

ALS Environmental Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Janice Jaeger



Project Number: R2004578
 Project Manager: Janice Jaeger
 QAP: LAB QAP

see attached report list

Lab Code	Sample ID	# of Cont.	Matrix	Sample			Lab ID	VOC 524.2
				Date	Time	Time		
R2004578-001	WAL19Post-0620	3	Drinking Water	6/1/20	1115	Middletown ALS	X	
R2004578-002	WAL19Inter-0620	3	Drinking Water	6/1/20	1125	Middletown ALS	X	
R2004578-003	WAL19Pre-0620	3	Drinking Water	6/1/20	1130	Middletown ALS	X	

Folder Comments:
MRLU

Special Instructions/Comments <i>Excel add</i> NPDES H - Test is On Hold P - Test is Authorized for Prep Only	Turnaround Requirements ___ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: <u>06/12/20</u>	Report Requirements ___ I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries ___ III. Results + QC and Calibration Summaries ___ IV. Data Validation Report with Raw Data PQL/MDL/J <u>N</u> EDD <u>Y</u>	Invoice Information PO# 58R2004578 Bill to
	Requisitioned By: <i>Andrew C. 6/18/2020/1401</i> Received By: <i>Kevin Dye</i> <i>sample</i> <i>ATTN NUMBER</i>		

B 305*

7005

R2004578

 Ship To: Middletown ALS
ALS Environmental - Middletown
301 Fulling Mill Rd.
Middletown, PA 17057

PC AMS Date 6/3/20
SMO _____ Date _____

Instructions: _____
Ice- _____
Dry Ice _____
No Ice _____
Bill to Client Account _____

Shipping: _____
Overnight _____
2nd Day _____
Ground _____

Comments:

ALS Group USA, Corp.
www.alsglobal.com
An ALS Limited Company

Report List

200

List ID: 19784 ***Non-Routine List***
Name: DW+MTBE-DBCP,EDB,TBA
Description: DW List & MTBE
Status: Approved by JJAEGER on 11/12/2018

Method/Test: 524.2 / VOC
CAS Lab: ROCHESTER
Created By: JJAEGER on 11/12/18

Folder References

Internal Standards

CAS #	Analyte Name to appear on final Client Report	Comments	Group
462-06-6	Fluorobenzene		A
Internal Standards			
CAS #	Analyte Name to appear on final Client Report	Comments	Group
50	Tuning Ion 50		A
75	Tuning Ion 75		A
95	Tuning Ion 95		A
96	Tuning Ion 96		A
173	Tuning Ion 173		A
174	Tuning Ion 174		A
175	Tuning Ion 175		A
176	Tuning Ion 176		A
177	Tuning Ion 177		A

Surrogates

CAS #	Analyte Name to appear on final Client Report	Comments	Group
460-00-4	4-Bromofluorobenzene		A
2199-69-1	1,2-Dichlorobenzene-d4		A

Target Analytes

CAS #	Analyte Name to appear on final Client Report	Comments	Group
71-43-2	Benzene		A
108-86-1	Bromobenzene		A
74-97-5	Bromochloromethane		A
75-27-4	Bromodichloromethane		A
75-25-2	Bromoform		A
74-83-9	Bromomethane		A
1634-04-4	Methyl tert-Butyl Ether		A
98-06-6	tert-Butylbenzene		A
135-98-8	sec-Butylbenzene		A
104-51-8	n-Butylbenzene		A
56-23-5	Carbon Tetrachloride		A
108-90-7	Chlorobenzene		A
75-00-3	Chloroethane		A
67-66-3	Chloroform		A
74-87-3	Chloromethane		A
95-49-8	2-Chlorotoluene		A
106-43-4	4-Chlorotoluene		A
124-48-1	Dibromochloromethane		A
74-95-3	Dibromomethane		A
95-50-1	1,2-Dichlorobenzene		A
106-46-7	1,4-Dichlorobenzene		A
541-73-1	1,3-Dichlorobenzene		A
75-71-8	Dichlorodifluoromethane		A
75-34-3	1,1-Dichloroethane		A
107-06-2	1,2-Dichloroethane		A
75-35-4	1,1-Dichloroethene		A
156-60-5	trans-1,2-Dichloroethene		A
156-59-2	cis-1,2-Dichloroethene		A
594-20-7	2,2-Dichloropropane		A

List ID: 19784 ***Non-Routine List***
 Name: DW+MTBE-DBCP,EDB,TBA
 Description: DW List & MTBE
 Status: Approved by JJAEGER on 11/12/2018

Method/Test: 524.2 / VOC
 CAS Lab: ROCHESTER
 Created By: JJAEGER on 11/12/18

Folder References

Target Analytes

CAS #	Analyte Name to appear on final Client Report	Comments	Group
78-87-5	1,2-Dichloropropane		A
142-28-9	1,3-Dichloropropane		A
10061-02-6	trans-1,3-Dichloropropene		A
10061-01-5	cis-1,3-Dichloropropene		A
100-41-4	Ethylbenzene		A
87-68-3	Hexachlorobutadiene		A
98-82-8	Isopropylbenzene		A
99-87-6	p-Isopropyltoluene		A
75-09-2	Methylene Chloride		A
91-20-3	Naphthalene		A
103-65-1	n-Propylbenzene		A
100-42-5	Styrene		A
630-20-6	1,1,1,2-Tetrachloroethane		A
79-34-5	1,1,2,2-Tetrachloroethane		A
127-18-4	Tetrachloroethene		A
108-88-3	Toluene		A
120-82-1	1,2,4-Trichlorobenzene		A
87-61-6	1,2,3-Trichlorobenzene		A
79-00-5	1,1,2-Trichloroethane		A
79-01-6	Trichloroethene		A
75-69-4	Trichlorofluoromethane		A
96-18-4	1,2,3-Trichloropropane		A
108-67-8	1,3,5-Trimethylbenzene		A
95-63-6	1,2,4-Trimethylbenzene		A
75-01-4	Vinyl Chloride		A
179601-23-1	m,p-Xylenes		A
95-47-6	o-Xylene		A

This Report List is NOT currently designated as the "default/standard/normal" Report List for ANY tests



301 Fulling Mill Road
 Middletown, PA 17057
 P: (717) 944-5541
 F: (717) 944-1430

Condition of Sample Receipt Form

Client: ALS Rochester Work Order #: 7005 Initials: CS Date: 6/9/2020

1. Were airbills / tracking numbers present and recorded?..... NONE YES NO
 Tracking number: 1730 2430 2897
2. Are Custody Seals on shipping containers intact?..... NONE YES NO
3. Are Custody Seals on sample containers intact?..... NONE YES NO
4. Is there a COC (Chain-of-Custody) present?..... YES NO
5. Are the COC and bottle labels complete, legible and in agreement?..... YES NO
 - 5a. Does the COC contain sample locations?..... YES NO
 - 5b. Does the COC contain date and time of sample collection for all samples?..... YES NO
 - 5c. Does the COC contain sample collectors name?..... YES NO
 - 5d. Does the COC note the type(s) of preservation for all bottles?..... YES NO
 - 5e. Does the COC note the number of bottles submitted for each sample?..... YES NO
 - 5f. Does the COC note the type of sample, composite or grab?..... YES NO
 - 5g. Does the COC note the matrix of the sample(s)?..... YES NO
6. Are all aqueous samples requiring preservation preserved correctly?¹..... N/A YES NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?..... YES NO
8. Are all samples within holding times for the requested analyses?..... YES NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)..... YES NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?..... N/A YES NO
11. Were the samples received on ice?..... YES NO
12. Were sample temperatures measured at 0.0-6.0°C..... YES NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below..... YES NO
 - 13a. Are the samples required for SDWA compliance reporting?..... N/A YES NO
 - 13b. Did the client provide a SDWA PWS ID#?..... N/A YES NO
 - 13c. Are all aqueous unpreserved SDWA samples pH 5-9?..... N/A YES NO
 - 13d. Did the client provide the SDWA sample location ID/Description?..... N/A YES NO
 - 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?..... N/A YES NO

Cooler #: _____
 Temperature (°C): 6 _____
 Thermometer ID: 309 _____
 Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis



October 29, 2020

Service Request No:R2009888

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF - Annual Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory October 21, 2020
For your reference, these analyses have been assigned our service request number **R2009888**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water

Service Request: R2009888
Date Received: 10/21/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Three drinking water samples were received for analysis at ALS Environmental on 10/21/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Subcontracted Analytical Parameters:

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

A handwritten signature in black ink, appearing to read 'Samantha', is written over a horizontal line.

Approved by _____

Date 10/29/2020



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**
72 Railroad Ave.
Wellsville, NY 14895
Project Manager: **Jon Brandes**

CHAIN of CUSTODY

Project: **WAL - Annual Sampling**
Telephone No. 585-593-1824
Email: jonb@on-sitehs.com

Method of Shipment
Delivered by On Site

Special Detection Limit/Reporting

Sample I.D.

Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	GC:MS VOA's 8260 (HCl)	GC:MS VOA's 524.2 (C6H8O6)	T-Metals (HNO3)	TDS, NO3, Br, Cl, SO4 (NP) (SW/SED)	NH3, TKN, COD (H2SO4) (SW/SED)	Total Color (NP) (SW/SED)	BOD (NP) (SW/SED)	Alkalinity (NP) (SW/SED)	TDS, NO3 (NP) (Manhole)
		Soil	Water	Air	Other	Yes	No											
WAL19 Post - 1020	3	X				X		10/21/20	0910	3								
WAL19 Inter - 1020	3	X				X		10/21/20	0935	3								
WAL19 Pre - 1020	3	X				X		10/21/20	0945	3								

R E M A R K S

Sample Received Intact: Yes No Temperature received: Ice No ice

Relinquished by (Sign & Print Name) <i>Jon Brandes / Jonathan Brandes</i>	Date 10/21/20	Time 1420	Received by (Sign & Print Name) <i>Scott Watson</i>	Date 10-21-20	Time 1420
Relinquished by <i>Scott Watson</i>	Date 10/21/20	Time 1600	Received by		
Relinquished by	Date	Time	Received by		
Relinquished by	Date	Time	Received by laboratory <i>Henry [Signature]</i>	Date 10/21/20	Time 1600

Lab Work No.

R2009888 5
On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Cooler Receipt and Preservation Check Form

R2009888

5

On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Project/Client On-Site Folder Number _____

Cooler received on 10/21/2020 by: @ COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>(N)</u>
2	Custody papers properly completed (ink, signed)?	<u>(Y)</u> N
3	Did all bottles arrive in good condition (unbroken)?	<u>(Y)</u> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<u>(Y)</u> N

5a	Perchlorate samples have required headspace?	Y N <u>(NA)</u>
5b	Did <u>VOA</u> vials Alk, or Sulfide have sig* bubbles?	Y <u>(N)</u> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>(NA)</u>

8. Temperature Readings Date: 10/21/2020 Time: 15:1602 ID: IR#7 (IR#10) From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>7.1</u>	<u>7.5</u>	<u>6.4</u>				
Within 0-6°C?	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-402 by @ on 10/21/2020 at 1606
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 10/22/2020 Time: 2125 by: dlw

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If+, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: _____
Explain all Discrepancies/ Other Comments: _____

HPROD	BULK
HTR	FLDT
<u>SUB</u>	HGFB
ALS	LL3541

Labels secondary reviewed by: dlw
PC Secondary Review: dlw 10/21/2020 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed (>100% Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
---	---



Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

October 27, 2020

Reports and Invoices
ALS Environmental
1565 Jefferson Road
Building 300, Suite 360
Rochester, NY 14623

Certificate of Analysis

Project Name:	RESULTS ONLY: No EDD, No MDL, No QC	Workorder:	3136610
Purchase Order:		Workorder ID:	R2009888

Dear Reports Invoices:

Enclosed are the analytical results for samples received by the laboratory on Saturday, October 24, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Michael Chevalier , Ms. Meghan Pedro , Mr. Brady Kalkman ,
Ms. Janice Jaeger

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Ms. Sarah S Leung
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3136610 R2009888

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3136610001	WAL19POST-1020	NY Potable Water	10/21/2020 09:10	10/24/2020 09:22	Collected by Client
3136610002	WAL19INTER-1020	NY Potable Water	10/21/2020 09:35	10/24/2020 09:22	Collected by Client
3136610003	WAL19PRE-1020	NY Potable Water	10/21/2020 09:45	10/24/2020 09:22	Collected by Client

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SAMPLE SUMMARY

Workorder: 3136610 R2009888

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3136610 R2009888

Lab ID: **3136610001**
Sample ID: **WAL19POST-1020**

Date Collected: 10/21/2020 09:10 Matrix: NY Potable Water
Date Received: 10/24/2020 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Bromobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Bromochloromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Bromomethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Chloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Chloromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Dibromomethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Dichlorodifluoromethane	ND	1	ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Styrene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A

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ANALYTICAL RESULTS

Workorder: 3136610 R2009888

Lab ID: **3136610001**
Sample ID: **WAL19POST-1020**

Date Collected: 10/21/2020 09:10 Matrix: NY Potable Water
Date Received: 10/24/2020 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Toluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:06	PDK	A
o-Xylene	ND		ug/L	0.25	EPA 524.2			10/27/20 09:06	PDK	A
mp-Xylene	ND		ug/L	0.25	EPA 524.2			10/27/20 09:06	PDK	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	95.2		%	70 - 130	EPA 524.2			10/27/20 09:06	PDK	A
4-Bromofluorobenzene (S)	83.1		%	70 - 130	EPA 524.2			10/27/20 09:06	PDK	A



Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3136610 R2009888

Lab ID: **3136610002** Date Collected: 10/21/2020 09:35 Matrix: NY Potable Water
Sample ID: **WAL19INTER-1020** Date Received: 10/24/2020 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Bromobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Bromochloromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Bromomethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Chloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Chloromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Dibromomethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Dichlorodifluoromethane	ND	1	ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Styrene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A

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ANALYTICAL RESULTS

Workorder: 3136610 R2009888

Lab ID: **3136610002** Date Collected: 10/21/2020 09:35 Matrix: NY Potable Water
Sample ID: **WAL19INTER-1020** Date Received: 10/24/2020 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Toluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:32	PDK	A
o-Xylene	ND		ug/L	0.25	EPA 524.2			10/27/20 09:32	PDK	A
mp-Xylene	ND		ug/L	0.25	EPA 524.2			10/27/20 09:32	PDK	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	83.7		%	70 - 130	EPA 524.2			10/27/20 09:32	PDK	A
4-Bromofluorobenzene (S)	79.7		%	70 - 130	EPA 524.2			10/27/20 09:32	PDK	A



Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3136610 R2009888

Lab ID: **3136610003**
Sample ID: **WAL19PRE-1020**

Date Collected: 10/21/2020 09:45 Matrix: NY Potable Water
Date Received: 10/24/2020 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Bromobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Bromochloromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Bromomethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Chloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Chloromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Dibromomethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Dichlorodifluoromethane	ND	1	ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
cis-1,2-Dichloroethene	2.3		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Styrene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A

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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

ANALYTICAL RESULTS

Workorder: 3136610 R2009888

Lab ID: **3136610003** Date Collected: 10/21/2020 09:45 Matrix: NY Potable Water
Sample ID: **WAL19PRE-1020** Date Received: 10/24/2020 09:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Toluene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Trichloroethene	3.3		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			10/27/20 09:59	PDK	A
o-Xylene	ND		ug/L	0.25	EPA 524.2			10/27/20 09:59	PDK	A
mp-Xylene	ND		ug/L	0.25	EPA 524.2			10/27/20 09:59	PDK	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	91.2		%	70 - 130	EPA 524.2			10/27/20 09:59	PDK	A
4-Bromofluorobenzene (S)	84.2		%	70 - 130	EPA 524.2			10/27/20 09:59	PDK	A



Ms. Sarah S Leung
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3136610 R2009888

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3136610001	1	WAL19POST-1020	EPA 524.2	Dichlorodifluoromethane
The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 177 and the control limits were 70 to 130.				
3136610002	1	WAL19INTER-1020	EPA 524.2	Dichlorodifluoromethane
The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 177 and the control limits were 70 to 130.				
3136610003	1	WAL19PRE-1020	EPA 524.2	Dichlorodifluoromethane
The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 177 and the control limits were 70 to 130.				

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Mexico: Monterrey

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3136610 R2009888

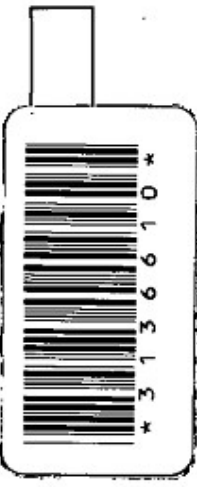
Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3136610001	WAL19POST-1020	EPA 524.2		
3136610002	WAL19INTER-1020	EPA 524.2		
3136610003	WAL19PRE-1020	EPA 524.2		

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 Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

ALS Environmental Chain of Custody
 1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

Project Number: R2009888
 Project Manager: Janice Jaeger
 QAP: LAB QAP



NYDwlist + MTBE

Lab Code	Sample ID	# of Cont.	Matrix	Sample			Lab ID
				Date	Time	Time	
R2009888-001	WAL19POST-1020	3	Drinking Water	10/21/20	0910	Middletown ALS	X VOC 524.2
R2009888-002	WAL19INTER-1020	1	Drinking Water	10/21/20	0935	Middletown ALS	X
R2009888-003	WAL19PRE-1020	1	Drinking Water	10/21/20	0945	Middletown ALS	X

Folder Comments:
 MRL U

Special Instructions/Comments <i>No add</i>	Turnaround Requirements RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 STANDARD Requested FAX Date: _____ Requested Report Date: <u>10/30/20</u>	Report Requirements I. Results Only _____ II. Results + QC Summaries _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data _____ PQL/MDL/ EDD <u>N</u> / <u>Y</u>	Invoice Information PO# 58R2009888 Bill to _____
	NPDES H - Test is On Hold P - Test is Authorized for Prep Only		

Relinquished By: *Janice Jaeger* 10/23/2020 / 1145 Received By: _____

Account Number: *58R2009888*

6660

R2009888

Ship To: Middletown ALS
ALS Environmental - Middletown
301 Fulling Mill Rd.
Middletown, PA 17057

PC CHD Date 10/23/20
SMO _____ Date _____

Instructions:	Shipping:
Ice _____	Overnight _____
Dry Ice _____	2nd Day _____
No Ice _____	Ground _____
Bill to Client Account _____	

Comments:

ALS Group USA, Corp.
www.alsglobal.com
An ALS Limited Company

ALS



301 Fulling Mill Road
 Middletown, PA 17057
 P: (717) 944-5541
 F: (717) 944-1430

Condition of Sample Receipt Form

Client: ALS Requests Work Order #: 3136610 Initials: TS Date: 10/27/20

- | | | | |
|--|---------------------------------------|--------------------------------------|-------------------------------------|
| 1. Were airbills / tracking numbers present and recorded?..... | NONE | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| Tracking number: <u>1730 2432 9746</u> | | | |
| 2. Are Custody Seals on shipping containers intact?..... | NONE | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 3. Are Custody Seals on sample containers intact?..... | <input checked="" type="radio"/> NONE | <input type="radio"/> YES | <input type="radio"/> NO |
| 4. Is there a COC (Chain-of-Custody) present?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5. Are the COC and bottle labels complete, legible and in agreement?..... | | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 5a. Does the COC contain sample locations?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5b. Does the COC contain date and time of sample collection for all samples?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5c. Does the COC contain sample collectors name?..... | | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 5d. Does the COC note the type(s) of preservation for all bottles?..... | | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 5e. Does the COC note the number of bottles submitted for each sample?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5f. Does the COC note the type of sample, composite or grab?..... | | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 5g. Does the COC note the matrix of the sample(s)?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 6. Are all aqueous samples requiring preservation preserved correctly? ¹ | N/A | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 8. Are all samples within holding times for the requested analyses?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?..... | N/A | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 11. Were the samples received on ice?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 12. Were sample temperatures measured at 0.0-6.0°C..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 13a. Are the samples required for SDWA compliance reporting?..... | N/A | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 13b. Did the client provide a SDWA PWS ID#?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |
| 13c. Are all aqueous unpreserved SDWA samples pH 5-9?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |
| 13d. Did the client provide the SDWA sample location ID/Description?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |
| 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |

Cooler #: _____
 Temperature (°C): 6 _____
 Thermometer ID: 401 _____
 Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis





October 29, 2020

Service Request No:R2009737

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF - Annual Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory October 16, 2020
For your reference, these analyses have been assigned our service request number **R2009737**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Received: 10/16/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eight water samples were received for analysis at ALS Environmental on 10/16/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 10/26/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.
Method 8260C, 10/27/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

A handwritten signature in black ink, appearing to read "Samantha", is written over a horizontal line.

Approved by _____

Date 10/29/2020



SAMPLE DETECTION SUMMARY

CLIENT ID: MW16S-1020 **Lab ID: R2009737-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	21			20	ug/L	6010C
Calcium, Total	18000			1000	ug/L	6010C
Iron, Total	240			100	ug/L	6010C
Magnesium, Total	10100			1000	ug/L	6010C
Sodium, Total	9800			1000	ug/L	6010C

CLIENT ID: MW11S-1020 **Lab ID: R2009737-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	26			20	ug/L	6010C
Calcium, Total	55300			1000	ug/L	6010C
Iron, Total	130			100	ug/L	6010C
Magnesium, Total	33600			1000	ug/L	6010C
Manganese, Total	836			10	ug/L	6010C
Sodium, Total	21100			1000	ug/L	6010C
cis-1,2-Dichloroethene	260			100	ug/L	8260C
Trichloroethene	2500			100	ug/L	8260C

CLIENT ID: Dup1-1020 **Lab ID: R2009737-003**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	26			20	ug/L	6010C
Calcium, Total	54300			1000	ug/L	6010C
Iron, Total	140			100	ug/L	6010C
Magnesium, Total	33000			1000	ug/L	6010C
Manganese, Total	823			10	ug/L	6010C
Sodium, Total	20800			1000	ug/L	6010C
cis-1,2-Dichloroethene	250			100	ug/L	8260C
Trichloroethene	2300			100	ug/L	8260C

CLIENT ID: MW5S-1020 **Lab ID: R2009737-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Calcium, Total	14000			1000	ug/L	6010C
Iron, Total	280			100	ug/L	6010C
Magnesium, Total	10100			1000	ug/L	6010C
Manganese, Total	79			10	ug/L	6010C
Sodium, Total	6900			1000	ug/L	6010C
cis-1,2-Dichloroethene	200			5.0	ug/L	8260C
Trichloroethene	24			5.0	ug/L	8260C
Vinyl Chloride	13			5.0	ug/L	8260C

CLIENT ID: MW5D-1020 **Lab ID: R2009737-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	24			20	ug/L	6010C
Calcium, Total	15500			1000	ug/L	6010C



SAMPLE DETECTION SUMMARY

CLIENT ID: MW5D-1020	Lab ID: R2009737-005
-----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Magnesium, Total	9500			1000	ug/L	6010C
Manganese, Total	306			10	ug/L	6010C
Sodium, Total	6900			1000	ug/L	6010C
cis-1,2-Dichloroethene	89			5.0	ug/L	8260C
Trichloroethene	18			5.0	ug/L	8260C

CLIENT ID: MW4D-1020	Lab ID: R2009737-006
-----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	28			20	ug/L	6010C
Calcium, Total	24100			1000	ug/L	6010C
Iron, Total	630			100	ug/L	6010C
Magnesium, Total	19500			1000	ug/L	6010C
Manganese, Total	2730			10	ug/L	6010C
Potassium, Total	2400			2000	ug/L	6010C
Sodium, Total	5700			1000	ug/L	6010C
cis-1,2-Dichloroethene	180			5.0	ug/L	8260C
Vinyl Chloride	33			5.0	ug/L	8260C

CLIENT ID: MH32-1020	Lab ID: R2009737-007
-----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved (TDS)	353			10	mg/L	SM 2540 C-1997 (2011)
Barium, Total	81			20	ug/L	6010C
Calcium, Total	96900			1000	ug/L	6010C
Iron, Total	2600			100	ug/L	6010C
Magnesium, Total	11500			1000	ug/L	6010C
Manganese, Total	438			10	ug/L	6010C
Potassium, Total	11400			2000	ug/L	6010C
Sodium, Total	8400			1000	ug/L	6010C
cis-1,2-Dichloroethene	1500			50	ug/L	8260C
Methylene Chloride	210			50	ug/L	8260C
Trichloroethene	570			50	ug/L	8260C

CLIENT ID: MH33-1020	Lab ID: R2009737-008
-----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Solids, Total Dissolved (TDS)	372			10	mg/L	SM 2540 C-1997 (2011)
Barium, Total	48			20	ug/L	6010C
Calcium, Total	99000			1000	ug/L	6010C
Iron, Total	2790			100	ug/L	6010C
Magnesium, Total	20800			1000	ug/L	6010C
Manganese, Total	368			10	ug/L	6010C
Sodium, Total	9500			1000	ug/L	6010C



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling

Service Request:R2009737

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2009737-001	MW16S-1020	10/15/2020	1220
R2009737-002	MW11S-1020	10/15/2020	1340
R2009737-003	Dup1-1020	10/15/2020	1345
R2009737-004	MW5S-1020	10/15/2020	1500
R2009737-005	MW5D-1020	10/15/2020	1615
R2009737-006	MW4D-1020	10/16/2020	0910
R2009737-007	MH32-1020	10/16/2020	0950
R2009737-008	MH33-1020	10/16/2020	1030



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**
72 Railroad Ave.
Wellsville, NY 14895
Project Manager: **Jon Brandes**

CHAIN of CUSTODY

Project: **WAL - Annual Sampling**
Telephone No. 585-593-1824
Email: jonb@on-sites.com

Method of Shipment
On-Site
RD

Special Detection
Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	GC:MS VOA's 8260 (HCl)	GC:MS VOA's 524.2 (C6H8O6)	T-Metals (HNO3)	TDS, NO3, Br, Cl, SO4 (NP) (SW/SED)	NH3, TKN, COD (H2SO4) (SW/SED)	Total Color (NP) (SW/SED)	BOD (NP) (SW/SED)	Alkalinity (NP) (SW/SED)	TDS, NO3 (NP) (Manhole)
			Soil	Water	Air	Other	Yes	No											
MW16S-1020		4	X				X		10/15/20	1220	X	X							
MW16S-1020		4	X				X		10/15/20	1340	X	X							
Dup1-1020		4	X				X		10/15/20	1345	X	X							
MW5S-1020		4	X				X		10/15/20	1500	X	X							
MW5D-1020		4	X				X		10/15/20	1615	X	X							
MW4D-1020		4	X				X		10/16/20	0910	X	X							
MH32-1020		5	X				X	X	10/16/20	0950	X	X						X	
MH33-1020		5	X				X	X	10/16/20	1030	X	X						X	

REMARKS

Sample Received Intact: Yes No Temperature received: Ice No ice

Relinq. by sampler (Sign & Print Name) <i>Kevin Dye / Kevin Dye</i>	Date Time 10/16/20 1240	Received by (Sign & Print Name)
Relinquished by	Date Time	Received by
Relinquished by	Date Time	Received by
Relinquished by	Date Time	Received by laboratory <i>ALS</i> Date 10/11/20 Time 1240

Lab Work No.

R2009737 5
On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Cooler Receipt and Preservation Check Form

R2009737**5**On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual SamplingProject/Client Casella Folder Number _____Cooler received on 10/16/2020 by: dlwCOURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <input checked="" type="checkbox"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="checkbox"/> Y N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="checkbox"/> Y N
4	Circle: Wet Ice Dry Ice Gel packs present?	<input checked="" type="checkbox"/> Y N

5a	Perchlorate samples have required headspace?	Y N <u>NA</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	<input checked="" type="checkbox"/> Y N NA
6	Where did the bottles originate?	ALS/ROC CLIENT
7	Soil VOA received as:	Bulk Encore 5035set <u>NA</u>

3. Temperature Readings Date: 10/16/2020 Time: 1742 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>2.1P</u>						
Within 0-6°C?	<input checked="" type="checkbox"/> Y N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
 & Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-112 by dlw on 10/16/2020 at 1742
 5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 10/17/2020 Time: 1715 by: dlw

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
 10. Did all bottle labels and tags agree with custody papers? YES NO
 11. Were correct containers used for the tests indicated? YES NO
 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO NA
 13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated NA

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2	<u>22549</u>	HNO ₃	<input checked="" type="checkbox"/>		<u>20700 4314</u>					
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 2561-3, 081020-2AA0, 70-09-01

Explain all Discrepancies/ Other Comments:

1 vial, MW115-1020

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: dlwPC Secondary Review: dlw 10/20/20 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed (>100% Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
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Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2009737

Sample Name: MW16S-1020
Lab Code: R2009737-001
Sample Matrix: Water

Date Collected: 10/15/20
Date Received: 10/16/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
KRUEST

Sample Name: MW11S-1020
Lab Code: R2009737-002
Sample Matrix: Water

Date Collected: 10/15/20
Date Received: 10/16/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
KRUEST

Sample Name: Dup1-1020
Lab Code: R2009737-003
Sample Matrix: Water

Date Collected: 10/15/20
Date Received: 10/16/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
KRUEST

Sample Name: MW5S-1020
Lab Code: R2009737-004
Sample Matrix: Water

Date Collected: 10/15/20
Date Received: 10/16/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
KRUEST

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2009737

Sample Name: MW5D-1020
Lab Code: R2009737-005
Sample Matrix: Water

Date Collected: 10/15/20
Date Received: 10/16/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
KRUEST

Sample Name: MW4D-1020
Lab Code: R2009737-006
Sample Matrix: Water

Date Collected: 10/16/20
Date Received: 10/16/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
KRUEST

Sample Name: MH32-1020
Lab Code: R2009737-007
Sample Matrix: Water

Date Collected: 10/16/20
Date Received: 10/16/20

Analysis Method
300.0
6010C
8260C
SM 2540 C-1997(2011)

Extracted/Digested By

AKONZEL

Analyzed By
KWONG
KMCLAEN
KRUEST
KAWONG

Sample Name: MH33-1020
Lab Code: R2009737-008
Sample Matrix: Water

Date Collected: 10/16/20
Date Received: 10/16/20

Analysis Method
300.0
6010C
8260C
SM 2540 C-1997(2011)

Extracted/Digested By

AKONZEL

Analyzed By
KWONG
KMCLAEN
KRUEST
KAWONG



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
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www.alsglobal.com



Volatile Organic Compounds by GC/MS

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 12:20
Date Received: 10/16/20 12:40

Sample Name: MW16S-1020
Lab Code: R2009737-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/26/20 17:05	
Benzene	5.0 U	5.0	1	10/26/20 17:05	
Bromodichloromethane	5.0 U	5.0	1	10/26/20 17:05	
Bromoform	5.0 U	5.0	1	10/26/20 17:05	
Bromomethane	5.0 U	5.0	1	10/26/20 17:05	
2-Butanone (MEK)	10 U	10	1	10/26/20 17:05	
Carbon Disulfide	10 U	10	1	10/26/20 17:05	
Carbon Tetrachloride	5.0 U	5.0	1	10/26/20 17:05	
Chlorobenzene	5.0 U	5.0	1	10/26/20 17:05	
Chloroethane	5.0 U	5.0	1	10/26/20 17:05	
Chloroform	5.0 U	5.0	1	10/26/20 17:05	
Chloromethane	5.0 U	5.0	1	10/26/20 17:05	
Dibromochloromethane	5.0 U	5.0	1	10/26/20 17:05	
1,1-Dichloroethane	5.0 U	5.0	1	10/26/20 17:05	
1,2-Dibromoethane	5.0 U	5.0	1	10/26/20 17:05	
1,2-Dichloroethane	5.0 U	5.0	1	10/26/20 17:05	
1,1-Dichloroethene	5.0 U	5.0	1	10/26/20 17:05	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 17:05	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 17:05	
1,2-Dichloropropane	5.0 U	5.0	1	10/26/20 17:05	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 17:05	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 17:05	
Ethylbenzene	5.0 U	5.0	1	10/26/20 17:05	
2-Hexanone	10 U	10	1	10/26/20 17:05	
Methylene Chloride	5.0 U	5.0	1	10/26/20 17:05	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/26/20 17:05	
Styrene	5.0 U	5.0	1	10/26/20 17:05	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/26/20 17:05	
Tetrachloroethene	5.0 U	5.0	1	10/26/20 17:05	
Toluene	5.0 U	5.0	1	10/26/20 17:05	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/26/20 17:05	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/26/20 17:05	
Trichloroethene	5.0 U	5.0	1	10/26/20 17:05	
Vinyl Chloride	5.0 U	5.0	1	10/26/20 17:05	
o-Xylene	5.0 U	5.0	1	10/26/20 17:05	
m,p-Xylenes	5.0 U	5.0	1	10/26/20 17:05	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 12:20
Date Received: 10/16/20 12:40

Sample Name: MW16S-1020
Lab Code: R2009737-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85 - 122	10/26/20 17:05	
Toluene-d8	96	87 - 121	10/26/20 17:05	
Dibromofluoromethane	90	80 - 116	10/26/20 17:05	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 13:40
Date Received: 10/16/20 12:40

Sample Name: MW11S-1020
Lab Code: R2009737-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	200 U	200	20	10/26/20 18:55	
Benzene	100 U	100	20	10/26/20 18:55	
Bromodichloromethane	100 U	100	20	10/26/20 18:55	
Bromoform	100 U	100	20	10/26/20 18:55	
Bromomethane	100 U	100	20	10/26/20 18:55	
2-Butanone (MEK)	200 U	200	20	10/26/20 18:55	
Carbon Disulfide	200 U	200	20	10/26/20 18:55	
Carbon Tetrachloride	100 U	100	20	10/26/20 18:55	
Chlorobenzene	100 U	100	20	10/26/20 18:55	
Chloroethane	100 U	100	20	10/26/20 18:55	
Chloroform	100 U	100	20	10/26/20 18:55	
Chloromethane	100 U	100	20	10/26/20 18:55	
Dibromochloromethane	100 U	100	20	10/26/20 18:55	
1,2-Dibromoethane	100 U	100	20	10/26/20 18:55	
1,1-Dichloroethane	100 U	100	20	10/26/20 18:55	
1,2-Dichloroethane	100 U	100	20	10/26/20 18:55	
1,1-Dichloroethene	100 U	100	20	10/26/20 18:55	
cis-1,2-Dichloroethene	260	100	20	10/26/20 18:55	
trans-1,2-Dichloroethene	100 U	100	20	10/26/20 18:55	
1,2-Dichloropropane	100 U	100	20	10/26/20 18:55	
cis-1,3-Dichloropropene	100 U	100	20	10/26/20 18:55	
trans-1,3-Dichloropropene	100 U	100	20	10/26/20 18:55	
Ethylbenzene	100 U	100	20	10/26/20 18:55	
2-Hexanone	200 U	200	20	10/26/20 18:55	
Methylene Chloride	100 U	100	20	10/26/20 18:55	
4-Methyl-2-pentanone (MIBK)	200 U	200	20	10/26/20 18:55	
Styrene	100 U	100	20	10/26/20 18:55	
1,1,2,2-Tetrachloroethane	100 U	100	20	10/26/20 18:55	
Tetrachloroethene	100 U	100	20	10/26/20 18:55	
Toluene	100 U	100	20	10/26/20 18:55	
1,1,1-Trichloroethane	100 U	100	20	10/26/20 18:55	
1,1,2-Trichloroethane	100 U	100	20	10/26/20 18:55	
Trichloroethene	2500	100	20	10/26/20 18:55	
Vinyl Chloride	100 U	100	20	10/26/20 18:55	
o-Xylene	100 U	100	20	10/26/20 18:55	
m,p-Xylenes	100 U	100	20	10/26/20 18:55	

ALS Group USA, Corp.
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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 13:40
Date Received: 10/16/20 12:40

Sample Name: MW11S-1020
Lab Code: R2009737-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	85 - 122	10/26/20 18:55	
Toluene-d8	97	87 - 121	10/26/20 18:55	
Dibromofluoromethane	90	80 - 116	10/26/20 18:55	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 13:45
Date Received: 10/16/20 12:40

Sample Name: Dup1-1020
Lab Code: R2009737-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	200 U	200	20	10/26/20 19:38	
Benzene	100 U	100	20	10/26/20 19:38	
Bromodichloromethane	100 U	100	20	10/26/20 19:38	
Bromoform	100 U	100	20	10/26/20 19:38	
Bromomethane	100 U	100	20	10/26/20 19:38	
2-Butanone (MEK)	200 U	200	20	10/26/20 19:38	
Carbon Disulfide	200 U	200	20	10/26/20 19:38	
Carbon Tetrachloride	100 U	100	20	10/26/20 19:38	
Chlorobenzene	100 U	100	20	10/26/20 19:38	
Chloroethane	100 U	100	20	10/26/20 19:38	
Chloroform	100 U	100	20	10/26/20 19:38	
Chloromethane	100 U	100	20	10/26/20 19:38	
Dibromochloromethane	100 U	100	20	10/26/20 19:38	
1,1-Dichloroethane	100 U	100	20	10/26/20 19:38	
1,2-Dibromoethane	100 U	100	20	10/26/20 19:38	
1,2-Dichloroethane	100 U	100	20	10/26/20 19:38	
1,1-Dichloroethene	100 U	100	20	10/26/20 19:38	
cis-1,2-Dichloroethene	250	100	20	10/26/20 19:38	
trans-1,2-Dichloroethene	100 U	100	20	10/26/20 19:38	
1,2-Dichloropropane	100 U	100	20	10/26/20 19:38	
cis-1,3-Dichloropropene	100 U	100	20	10/26/20 19:38	
trans-1,3-Dichloropropene	100 U	100	20	10/26/20 19:38	
Ethylbenzene	100 U	100	20	10/26/20 19:38	
2-Hexanone	200 U	200	20	10/26/20 19:38	
Methylene Chloride	100 U	100	20	10/26/20 19:38	
4-Methyl-2-pentanone (MIBK)	200 U	200	20	10/26/20 19:38	
Styrene	100 U	100	20	10/26/20 19:38	
1,1,2,2-Tetrachloroethane	100 U	100	20	10/26/20 19:38	
Tetrachloroethene	100 U	100	20	10/26/20 19:38	
Toluene	100 U	100	20	10/26/20 19:38	
1,1,1-Trichloroethane	100 U	100	20	10/26/20 19:38	
1,1,2-Trichloroethane	100 U	100	20	10/26/20 19:38	
Trichloroethene	2300	100	20	10/26/20 19:38	
Vinyl Chloride	100 U	100	20	10/26/20 19:38	
o-Xylene	100 U	100	20	10/26/20 19:38	
m,p-Xylenes	100 U	100	20	10/26/20 19:38	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 13:45
Date Received: 10/16/20 12:40

Sample Name: Dup1-1020
Lab Code: R2009737-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	10/26/20 19:38	
Toluene-d8	96	87 - 121	10/26/20 19:38	
Dibromofluoromethane	89	80 - 116	10/26/20 19:38	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 15:00
Date Received: 10/16/20 12:40

Sample Name: MW5S-1020
Lab Code: R2009737-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/26/20 17:49	
Benzene	5.0 U	5.0	1	10/26/20 17:49	
Bromodichloromethane	5.0 U	5.0	1	10/26/20 17:49	
Bromoform	5.0 U	5.0	1	10/26/20 17:49	
Bromomethane	5.0 U	5.0	1	10/26/20 17:49	
2-Butanone (MEK)	10 U	10	1	10/26/20 17:49	
Carbon Disulfide	10 U	10	1	10/26/20 17:49	
Carbon Tetrachloride	5.0 U	5.0	1	10/26/20 17:49	
Chlorobenzene	5.0 U	5.0	1	10/26/20 17:49	
Chloroethane	5.0 U	5.0	1	10/26/20 17:49	
Chloroform	5.0 U	5.0	1	10/26/20 17:49	
Chloromethane	5.0 U	5.0	1	10/26/20 17:49	
Dibromochloromethane	5.0 U	5.0	1	10/26/20 17:49	
1,2-Dibromoethane	5.0 U	5.0	1	10/26/20 17:49	
1,1-Dichloroethane	5.0 U	5.0	1	10/26/20 17:49	
1,2-Dichloroethane	5.0 U	5.0	1	10/26/20 17:49	
1,1-Dichloroethene	5.0 U	5.0	1	10/26/20 17:49	
cis-1,2-Dichloroethene	200	5.0	1	10/26/20 17:49	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 17:49	
1,2-Dichloropropane	5.0 U	5.0	1	10/26/20 17:49	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 17:49	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 17:49	
Ethylbenzene	5.0 U	5.0	1	10/26/20 17:49	
2-Hexanone	10 U	10	1	10/26/20 17:49	
Methylene Chloride	5.0 U	5.0	1	10/26/20 17:49	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/26/20 17:49	
Styrene	5.0 U	5.0	1	10/26/20 17:49	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/26/20 17:49	
Tetrachloroethene	5.0 U	5.0	1	10/26/20 17:49	
Toluene	5.0 U	5.0	1	10/26/20 17:49	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/26/20 17:49	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/26/20 17:49	
Trichloroethene	24	5.0	1	10/26/20 17:49	
Vinyl Chloride	13	5.0	1	10/26/20 17:49	
o-Xylene	5.0 U	5.0	1	10/26/20 17:49	
m,p-Xylenes	5.0 U	5.0	1	10/26/20 17:49	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 15:00
Date Received: 10/16/20 12:40

Sample Name: MW5S-1020
Lab Code: R2009737-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	85 - 122	10/26/20 17:49	
Toluene-d8	97	87 - 121	10/26/20 17:49	
Dibromofluoromethane	92	80 - 116	10/26/20 17:49	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 16:15
Date Received: 10/16/20 12:40

Sample Name: MW5D-1020
Lab Code: R2009737-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 17:55	
Benzene	5.0 U	5.0	1	10/27/20 17:55	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 17:55	
Bromoform	5.0 U	5.0	1	10/27/20 17:55	
Bromomethane	5.0 U	5.0	1	10/27/20 17:55	
2-Butanone (MEK)	10 U	10	1	10/27/20 17:55	
Carbon Disulfide	10 U	10	1	10/27/20 17:55	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 17:55	
Chlorobenzene	5.0 U	5.0	1	10/27/20 17:55	
Chloroethane	5.0 U	5.0	1	10/27/20 17:55	
Chloroform	5.0 U	5.0	1	10/27/20 17:55	
Chloromethane	5.0 U	5.0	1	10/27/20 17:55	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 17:55	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 17:55	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 17:55	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 17:55	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 17:55	
cis-1,2-Dichloroethene	89	5.0	1	10/27/20 17:55	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 17:55	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 17:55	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 17:55	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 17:55	
Ethylbenzene	5.0 U	5.0	1	10/27/20 17:55	
2-Hexanone	10 U	10	1	10/27/20 17:55	
Methylene Chloride	5.0 U	5.0	1	10/27/20 17:55	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 17:55	
Styrene	5.0 U	5.0	1	10/27/20 17:55	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 17:55	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 17:55	
Toluene	5.0 U	5.0	1	10/27/20 17:55	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 17:55	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 17:55	
Trichloroethene	18	5.0	1	10/27/20 17:55	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 17:55	
o-Xylene	5.0 U	5.0	1	10/27/20 17:55	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 17:55	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20 16:15
Date Received: 10/16/20 12:40

Sample Name: MW5D-1020
Lab Code: R2009737-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	85 - 122	10/27/20 17:55	
Toluene-d8	98	87 - 121	10/27/20 17:55	
Dibromofluoromethane	93	80 - 116	10/27/20 17:55	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/16/20 09:10
Date Received: 10/16/20 12:40

Sample Name: MW4D-1020
Lab Code: R2009737-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/26/20 18:11	
Benzene	5.0 U	5.0	1	10/26/20 18:11	
Bromodichloromethane	5.0 U	5.0	1	10/26/20 18:11	
Bromoform	5.0 U	5.0	1	10/26/20 18:11	
Bromomethane	5.0 U	5.0	1	10/26/20 18:11	
2-Butanone (MEK)	10 U	10	1	10/26/20 18:11	
Carbon Disulfide	10 U	10	1	10/26/20 18:11	
Carbon Tetrachloride	5.0 U	5.0	1	10/26/20 18:11	
Chlorobenzene	5.0 U	5.0	1	10/26/20 18:11	
Chloroethane	5.0 U	5.0	1	10/26/20 18:11	
Chloroform	5.0 U	5.0	1	10/26/20 18:11	
Chloromethane	5.0 U	5.0	1	10/26/20 18:11	
Dibromochloromethane	5.0 U	5.0	1	10/26/20 18:11	
1,2-Dibromoethane	5.0 U	5.0	1	10/26/20 18:11	
1,1-Dichloroethane	5.0 U	5.0	1	10/26/20 18:11	
1,2-Dichloroethane	5.0 U	5.0	1	10/26/20 18:11	
1,1-Dichloroethene	5.0 U	5.0	1	10/26/20 18:11	
cis-1,2-Dichloroethene	180	5.0	1	10/26/20 18:11	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 18:11	
1,2-Dichloropropane	5.0 U	5.0	1	10/26/20 18:11	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 18:11	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 18:11	
Ethylbenzene	5.0 U	5.0	1	10/26/20 18:11	
2-Hexanone	10 U	10	1	10/26/20 18:11	
Methylene Chloride	5.0 U	5.0	1	10/26/20 18:11	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/26/20 18:11	
Styrene	5.0 U	5.0	1	10/26/20 18:11	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/26/20 18:11	
Tetrachloroethene	5.0 U	5.0	1	10/26/20 18:11	
Toluene	5.0 U	5.0	1	10/26/20 18:11	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/26/20 18:11	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/26/20 18:11	
Trichloroethene	5.0 U	5.0	1	10/26/20 18:11	
Vinyl Chloride	33	5.0	1	10/26/20 18:11	
o-Xylene	5.0 U	5.0	1	10/26/20 18:11	
m,p-Xylenes	5.0 U	5.0	1	10/26/20 18:11	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/16/20 09:10
Date Received: 10/16/20 12:40

Sample Name: MW4D-1020
Lab Code: R2009737-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	10/26/20 18:11	
Toluene-d8	97	87 - 121	10/26/20 18:11	
Dibromofluoromethane	93	80 - 116	10/26/20 18:11	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/16/20 09:50
Date Received: 10/16/20 12:40

Sample Name: MH32-1020
Lab Code: R2009737-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	100 U	100	10	10/27/20 18:17	
Benzene	50 U	50	10	10/27/20 18:17	
Bromodichloromethane	50 U	50	10	10/27/20 18:17	
Bromoform	50 U	50	10	10/27/20 18:17	
Bromomethane	50 U	50	10	10/27/20 18:17	
2-Butanone (MEK)	100 U	100	10	10/27/20 18:17	
Carbon Disulfide	100 U	100	10	10/27/20 18:17	
Carbon Tetrachloride	50 U	50	10	10/27/20 18:17	
Chlorobenzene	50 U	50	10	10/27/20 18:17	
Chloroethane	50 U	50	10	10/27/20 18:17	
Chloroform	50 U	50	10	10/27/20 18:17	
Chloromethane	50 U	50	10	10/27/20 18:17	
Dibromochloromethane	50 U	50	10	10/27/20 18:17	
1,2-Dibromoethane	50 U	50	10	10/27/20 18:17	
1,1-Dichloroethane	50 U	50	10	10/27/20 18:17	
1,2-Dichloroethane	50 U	50	10	10/27/20 18:17	
1,1-Dichloroethene	50 U	50	10	10/27/20 18:17	
cis-1,2-Dichloroethene	1500	50	10	10/27/20 18:17	
trans-1,2-Dichloroethene	50 U	50	10	10/27/20 18:17	
1,2-Dichloropropane	50 U	50	10	10/27/20 18:17	
cis-1,3-Dichloropropene	50 U	50	10	10/27/20 18:17	
trans-1,3-Dichloropropene	50 U	50	10	10/27/20 18:17	
Ethylbenzene	50 U	50	10	10/27/20 18:17	
2-Hexanone	100 U	100	10	10/27/20 18:17	
Methylene Chloride	210	50	10	10/27/20 18:17	
4-Methyl-2-pentanone (MIBK)	100 U	100	10	10/27/20 18:17	
Styrene	50 U	50	10	10/27/20 18:17	
1,1,2,2-Tetrachloroethane	50 U	50	10	10/27/20 18:17	
Tetrachloroethene	50 U	50	10	10/27/20 18:17	
Toluene	50 U	50	10	10/27/20 18:17	
1,1,1-Trichloroethane	50 U	50	10	10/27/20 18:17	
1,1,2-Trichloroethane	50 U	50	10	10/27/20 18:17	
Trichloroethene	570	50	10	10/27/20 18:17	
Vinyl Chloride	50 U	50	10	10/27/20 18:17	
o-Xylene	50 U	50	10	10/27/20 18:17	
m,p-Xylenes	50 U	50	10	10/27/20 18:17	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/16/20 09:50
Date Received: 10/16/20 12:40

Sample Name: MH32-1020
Lab Code: R2009737-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	85 - 122	10/27/20 18:17	
Toluene-d8	99	87 - 121	10/27/20 18:17	
Dibromofluoromethane	92	80 - 116	10/27/20 18:17	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/16/20 10:30
Date Received: 10/16/20 12:40

Sample Name: MH33-1020
Lab Code: R2009737-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/26/20 17:27	
Benzene	5.0 U	5.0	1	10/26/20 17:27	
Bromodichloromethane	5.0 U	5.0	1	10/26/20 17:27	
Bromoform	5.0 U	5.0	1	10/26/20 17:27	
Bromomethane	5.0 U	5.0	1	10/26/20 17:27	
2-Butanone (MEK)	10 U	10	1	10/26/20 17:27	
Carbon Disulfide	10 U	10	1	10/26/20 17:27	
Carbon Tetrachloride	5.0 U	5.0	1	10/26/20 17:27	
Chlorobenzene	5.0 U	5.0	1	10/26/20 17:27	
Chloroethane	5.0 U	5.0	1	10/26/20 17:27	
Chloroform	5.0 U	5.0	1	10/26/20 17:27	
Chloromethane	5.0 U	5.0	1	10/26/20 17:27	
Dibromochloromethane	5.0 U	5.0	1	10/26/20 17:27	
1,1-Dichloroethane	5.0 U	5.0	1	10/26/20 17:27	
1,2-Dibromoethane	5.0 U	5.0	1	10/26/20 17:27	
1,2-Dichloroethane	5.0 U	5.0	1	10/26/20 17:27	
1,1-Dichloroethene	5.0 U	5.0	1	10/26/20 17:27	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 17:27	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 17:27	
1,2-Dichloropropane	5.0 U	5.0	1	10/26/20 17:27	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 17:27	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 17:27	
Ethylbenzene	5.0 U	5.0	1	10/26/20 17:27	
2-Hexanone	10 U	10	1	10/26/20 17:27	
Methylene Chloride	5.0 U	5.0	1	10/26/20 17:27	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/26/20 17:27	
Styrene	5.0 U	5.0	1	10/26/20 17:27	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/26/20 17:27	
Tetrachloroethene	5.0 U	5.0	1	10/26/20 17:27	
Toluene	5.0 U	5.0	1	10/26/20 17:27	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/26/20 17:27	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/26/20 17:27	
Trichloroethene	5.0 U	5.0	1	10/26/20 17:27	
Vinyl Chloride	5.0 U	5.0	1	10/26/20 17:27	
o-Xylene	5.0 U	5.0	1	10/26/20 17:27	
m,p-Xylenes	5.0 U	5.0	1	10/26/20 17:27	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/16/20 10:30
Date Received: 10/16/20 12:40

Sample Name: MH33-1020
Lab Code: R2009737-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	85 - 122	10/26/20 17:27	
Toluene-d8	92	87 - 121	10/26/20 17:27	
Dibromofluoromethane	87	80 - 116	10/26/20 17:27	



Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW16S-1020
Lab Code: R2009737-001

Service Request: R2009737
Date Collected: 10/15/20 12:20
Date Received: 10/16/20 12:40
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 17:57	10/19/20	
Barium, Total	6010C	21	ug/L	20	1	10/21/20 17:57	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 17:57	10/19/20	
Calcium, Total	6010C	18000	ug/L	1000	1	10/21/20 17:57	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 17:57	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 17:57	10/19/20	
Iron, Total	6010C	240	ug/L	100	1	10/21/20 17:57	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 17:57	10/19/20	
Magnesium, Total	6010C	10100	ug/L	1000	1	10/21/20 17:57	10/19/20	
Manganese, Total	6010C	10 U	ug/L	10	1	10/21/20 17:57	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 17:57	10/19/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/21/20 17:57	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 17:57	10/19/20	
Sodium, Total	6010C	9800	ug/L	1000	1	10/21/20 17:57	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 17:57	10/19/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW11S-1020
Lab Code: R2009737-002

Service Request: R2009737
Date Collected: 10/15/20 13:40
Date Received: 10/16/20 12:40

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 18:00	10/19/20	
Barium, Total	6010C	26	ug/L	20	1	10/21/20 18:00	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 18:00	10/19/20	
Calcium, Total	6010C	55300	ug/L	1000	1	10/21/20 18:00	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:00	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 18:00	10/19/20	
Iron, Total	6010C	130	ug/L	100	1	10/21/20 18:00	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 18:00	10/19/20	
Magnesium, Total	6010C	33600	ug/L	1000	1	10/21/20 18:00	10/19/20	
Manganese, Total	6010C	836	ug/L	10	1	10/21/20 18:00	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 18:00	10/19/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/21/20 18:00	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:00	10/19/20	
Sodium, Total	6010C	21100	ug/L	1000	1	10/21/20 18:00	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 18:00	10/19/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: Dup1-1020
Lab Code: R2009737-003

Service Request: R2009737
Date Collected: 10/15/20 13:45
Date Received: 10/16/20 12:40

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 18:03	10/19/20	
Barium, Total	6010C	26	ug/L	20	1	10/21/20 18:03	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 18:03	10/19/20	
Calcium, Total	6010C	54300	ug/L	1000	1	10/21/20 18:03	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:03	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 18:03	10/19/20	
Iron, Total	6010C	140	ug/L	100	1	10/21/20 18:03	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 18:03	10/19/20	
Magnesium, Total	6010C	33000	ug/L	1000	1	10/21/20 18:03	10/19/20	
Manganese, Total	6010C	823	ug/L	10	1	10/21/20 18:03	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 18:03	10/19/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/21/20 18:03	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:03	10/19/20	
Sodium, Total	6010C	20800	ug/L	1000	1	10/21/20 18:03	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 18:03	10/19/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW5S-1020
Lab Code: R2009737-004

Service Request: R2009737
Date Collected: 10/15/20 15:00
Date Received: 10/16/20 12:40

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 18:07	10/19/20	
Barium, Total	6010C	20 U	ug/L	20	1	10/21/20 18:07	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 18:07	10/19/20	
Calcium, Total	6010C	14000	ug/L	1000	1	10/21/20 18:07	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:07	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 18:07	10/19/20	
Iron, Total	6010C	280	ug/L	100	1	10/21/20 18:07	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 18:07	10/19/20	
Magnesium, Total	6010C	10100	ug/L	1000	1	10/21/20 18:07	10/19/20	
Manganese, Total	6010C	79	ug/L	10	1	10/21/20 18:07	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 18:07	10/19/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/21/20 18:07	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:07	10/19/20	
Sodium, Total	6010C	6900	ug/L	1000	1	10/21/20 18:07	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 18:07	10/19/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW5D-1020
Lab Code: R2009737-005

Service Request: R2009737
Date Collected: 10/15/20 16:15
Date Received: 10/16/20 12:40

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 18:16	10/19/20	
Barium, Total	6010C	24	ug/L	20	1	10/21/20 18:16	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 18:16	10/19/20	
Calcium, Total	6010C	15500	ug/L	1000	1	10/21/20 18:16	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:16	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 18:16	10/19/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/21/20 18:16	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 18:16	10/19/20	
Magnesium, Total	6010C	9500	ug/L	1000	1	10/21/20 18:16	10/19/20	
Manganese, Total	6010C	306	ug/L	10	1	10/21/20 18:16	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 18:16	10/19/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/21/20 18:16	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:16	10/19/20	
Sodium, Total	6010C	6900	ug/L	1000	1	10/21/20 18:16	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 18:16	10/19/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW4D-1020
Lab Code: R2009737-006

Service Request: R2009737
Date Collected: 10/16/20 09:10
Date Received: 10/16/20 12:40

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 18:20	10/19/20	
Barium, Total	6010C	28	ug/L	20	1	10/21/20 18:20	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 18:20	10/19/20	
Calcium, Total	6010C	24100	ug/L	1000	1	10/21/20 18:20	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:20	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 18:20	10/19/20	
Iron, Total	6010C	630	ug/L	100	1	10/21/20 18:20	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 18:20	10/19/20	
Magnesium, Total	6010C	19500	ug/L	1000	1	10/21/20 18:20	10/19/20	
Manganese, Total	6010C	2730	ug/L	10	1	10/21/20 18:20	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 18:20	10/19/20	
Potassium, Total	6010C	2400	ug/L	2000	1	10/21/20 18:20	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:20	10/19/20	
Sodium, Total	6010C	5700	ug/L	1000	1	10/21/20 18:20	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 18:20	10/19/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MH32-1020
Lab Code: R2009737-007

Service Request: R2009737
Date Collected: 10/16/20 09:50
Date Received: 10/16/20 12:40
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 18:23	10/19/20	
Barium, Total	6010C	81	ug/L	20	1	10/21/20 18:23	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 18:23	10/19/20	
Calcium, Total	6010C	96900	ug/L	1000	1	10/21/20 18:23	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:23	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 18:23	10/19/20	
Iron, Total	6010C	2600	ug/L	100	1	10/21/20 18:23	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 18:23	10/19/20	
Magnesium, Total	6010C	11500	ug/L	1000	1	10/21/20 18:23	10/19/20	
Manganese, Total	6010C	438	ug/L	10	1	10/21/20 18:23	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 18:23	10/19/20	
Potassium, Total	6010C	11400	ug/L	2000	1	10/21/20 18:23	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:23	10/19/20	
Sodium, Total	6010C	8400	ug/L	1000	1	10/21/20 18:23	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 18:23	10/19/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MH33-1020
Lab Code: R2009737-008

Service Request: R2009737
Date Collected: 10/16/20 10:30
Date Received: 10/16/20 12:40

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 18:26	10/19/20	
Barium, Total	6010C	48	ug/L	20	1	10/21/20 18:26	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 18:26	10/19/20	
Calcium, Total	6010C	99000	ug/L	1000	1	10/21/20 18:26	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:26	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 18:26	10/19/20	
Iron, Total	6010C	2790	ug/L	100	1	10/21/20 18:26	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 18:26	10/19/20	
Magnesium, Total	6010C	20800	ug/L	1000	1	10/21/20 18:26	10/19/20	
Manganese, Total	6010C	368	ug/L	10	1	10/21/20 18:26	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 18:26	10/19/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/21/20 18:26	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 18:26	10/19/20	
Sodium, Total	6010C	9500	ug/L	1000	1	10/21/20 18:26	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 18:26	10/19/20	



General Chemistry

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MH32-1020
Lab Code: R2009737-007

Service Request: R2009737
Date Collected: 10/16/20 09:50
Date Received: 10/16/20 12:40
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Nitrate as Nitrogen	300.0	1.0 U	mg/L	1.0	10	10/16/20 18:55	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	353	mg/L	10	1	10/22/20 12:35	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MH33-1020
Lab Code: R2009737-008

Service Request: R2009737
Date Collected: 10/16/20 10:30
Date Received: 10/16/20 12:40
Basis: NA

Inorganic Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Nitrate as Nitrogen	300.0	1.0 U	mg/L	1.0	10	10/16/20 19:02	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	372	mg/L	10	1	10/22/20 12:35	



QC Summary Forms

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Volatile Organic Compounds by GC/MS

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene	Toluene-d8	Dibromofluoromethane
		85-122	87-121	80-116
MW16S-1020	R2009737-001	92	96	90
MW11S-1020	R2009737-002	93	97	90
Dup1-1020	R2009737-003	91	96	89
MW5S-1020	R2009737-004	92	97	92
MW5D-1020	R2009737-005	93	98	93
MW4D-1020	R2009737-006	91	97	93
MH32-1020	R2009737-007	94	99	92
MH33-1020	R2009737-008	87	92	87
Method Blank	RQ2012991-04	91	96	91
Method Blank	RQ2013053-04	91	95	89
Lab Control Sample	RQ2012991-03	95	96	92
Lab Control Sample	RQ2013053-03	96	98	95
MW16S-1020 MS	RQ2012991-05	94	98	95
MW16S-1020 DMS	RQ2012991-06	96	98	96

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20
Date Received: 10/16/20
Date Analyzed: 10/26/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW16S-1020
Lab Code: R2009737-001
Analysis Method: 8260C
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Matrix Spike RQ2012991-05				Duplicate Matrix Spike RQ2012991-06				% Rec Limits	RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec				
Acetone	10 U	46.6	50.0	93	44.6	50.0	89	35-183	5	30	
Benzene	5.0 U	50.4	50.0	101	51.6	50.0	103	76-129	2	30	
Bromodichloromethane	5.0 U	45.9	50.0	92	47.5	50.0	95	78-133	3	30	
Bromoform	5.0 U	49.8	50.0	100	53.4	50.0	107	58-133	7	30	
Bromomethane	5.0 U	37.7	50.0	75	37.4	50.0	75	10-184	<1	30	
2-Butanone (MEK)	10 U	51.7	50.0	103	51.4	50.0	103	61-137	<1	30	
Carbon Disulfide	10 U	51.2	50.0	102	53.4	50.0	107	59-140	4	30	
Carbon Tetrachloride	5.0 U	47.2	50.0	94	49.0	50.0	98	65-135	4	30	
Chlorobenzene	5.0 U	47.2	50.0	94	48.2	50.0	96	76-125	2	30	
Chloroethane	5.0 U	45.4	50.0	91	46.7	50.0	93	48-146	3	30	
Chloroform	5.0 U	49.0	50.0	98	50.6	50.0	101	75-130	3	30	
Chloromethane	5.0 U	61.0	50.0	122	60.8	50.0	122	55-160	<1	30	
Dibromochloromethane	5.0 U	50.8	50.0	102	52.8	50.0	106	72-128	4	30	
1,1-Dichloroethane	5.0 U	51.0	50.0	102	52.0	50.0	104	74-132	2	30	
1,2-Dibromoethane	5.0 U	47.7	50.0	95	49.5	50.0	99	67-127	4	30	
1,2-Dichloroethane	5.0 U	43.9	50.0	88	45.2	50.0	90	68-130	3	30	
1,1-Dichloroethene	5.0 U	58.1	50.0	116	59.1	50.0	118	71-118	2	30	
cis-1,2-Dichloroethene	5.0 U	51.6	50.0	103	53.0	50.0	106	77-127	3	30	
trans-1,2-Dichloroethene	5.0 U	57.1	50.0	114	57.2	50.0	114	73-118	<1	30	
1,2-Dichloropropane	5.0 U	50.7	50.0	101	51.7	50.0	103	79-124	2	30	
cis-1,3-Dichloropropene	5.0 U	49.7	50.0	99	50.4	50.0	101	52-134	1	30	
trans-1,3-Dichloropropene	5.0 U	49.6	50.0	99	50.6	50.0	101	71-133	2	30	
Ethylbenzene	5.0 U	48.6	50.0	97	49.7	50.0	99	72-134	2	30	
2-Hexanone	10 U	53.6	50.0	107	53.3	50.0	107	56-132	<1	30	
Methylene Chloride	5.0 U	49.0	50.0	98	50.1	50.0	100	73-122	2	30	
4-Methyl-2-pentanone (MIBK)	10 U	54.5	50.0	109	53.0	50.0	106	60-141	3	30	
Styrene	5.0 U	50.5	50.0	101	52.1	50.0	104	74-136	3	30	
1,1,2,2-Tetrachloroethane	5.0 U	56.8	50.0	114	60.2	50.0	120	72-122	6	30	
Tetrachloroethene	5.0 U	48.6	50.0	97	49.7	50.0	99	72-125	2	30	
Toluene	5.0 U	50.8	50.0	102	51.5	50.0	103	79-119	1	30	
1,1,1-Trichloroethane	5.0 U	48.2	50.0	96	50.0	50.0	100	74-127	4	30	
1,1,2-Trichloroethane	5.0 U	49.1	50.0	98	49.9	50.0	100	82-121	2	30	
Trichloroethene	5.0 U	43.3	50.0	87	44.0	50.0	88	74-122	2	30	

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: 10/15/20
Date Received: 10/16/20
Date Analyzed: 10/26/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW16S-1020
Lab Code: R2009737-001
Analysis Method: 8260C
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike RQ2012991-05			Duplicate Matrix Spike RQ2012991-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Vinyl Chloride	5.0 U	50.3	50.0	101	50.2	50.0	100	74-159	<1	30
o-Xylene	5.0 U	50.2	50.0	100	51.9	50.0	104	79-123	3	30
m,p-Xylenes	5.0 U	101	100	101	103	100	103	80-126	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2012991-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/26/20 12:13	
Benzene	5.0 U	5.0	1	10/26/20 12:13	
Bromodichloromethane	5.0 U	5.0	1	10/26/20 12:13	
Bromoform	5.0 U	5.0	1	10/26/20 12:13	
Bromomethane	5.0 U	5.0	1	10/26/20 12:13	
2-Butanone (MEK)	10 U	10	1	10/26/20 12:13	
Carbon Disulfide	10 U	10	1	10/26/20 12:13	
Carbon Tetrachloride	5.0 U	5.0	1	10/26/20 12:13	
Chlorobenzene	5.0 U	5.0	1	10/26/20 12:13	
Chloroethane	5.0 U	5.0	1	10/26/20 12:13	
Chloroform	5.0 U	5.0	1	10/26/20 12:13	
Chloromethane	5.0 U	5.0	1	10/26/20 12:13	
Dibromochloromethane	5.0 U	5.0	1	10/26/20 12:13	
1,1-Dichloroethane	5.0 U	5.0	1	10/26/20 12:13	
1,2-Dibromoethane	5.0 U	5.0	1	10/26/20 12:13	
1,2-Dichloroethane	5.0 U	5.0	1	10/26/20 12:13	
1,1-Dichloroethene	5.0 U	5.0	1	10/26/20 12:13	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 12:13	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/26/20 12:13	
1,2-Dichloropropane	5.0 U	5.0	1	10/26/20 12:13	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 12:13	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/26/20 12:13	
Ethylbenzene	5.0 U	5.0	1	10/26/20 12:13	
2-Hexanone	10 U	10	1	10/26/20 12:13	
Methylene Chloride	5.0 U	5.0	1	10/26/20 12:13	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/26/20 12:13	
Styrene	5.0 U	5.0	1	10/26/20 12:13	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/26/20 12:13	
Tetrachloroethene	5.0 U	5.0	1	10/26/20 12:13	
Toluene	5.0 U	5.0	1	10/26/20 12:13	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/26/20 12:13	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/26/20 12:13	
Trichloroethene	5.0 U	5.0	1	10/26/20 12:13	
Vinyl Chloride	5.0 U	5.0	1	10/26/20 12:13	
o-Xylene	5.0 U	5.0	1	10/26/20 12:13	
m,p-Xylenes	5.0 U	5.0	1	10/26/20 12:13	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2012991-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	10/26/20 12:13	
Toluene-d8	96	87 - 121	10/26/20 12:13	
Dibromofluoromethane	91	80 - 116	10/26/20 12:13	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013053-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	5.0 U	5.0	1	10/27/20 11:57	
Benzene	1.0 U	1.0	1	10/27/20 11:57	
Bromodichloromethane	1.0 U	1.0	1	10/27/20 11:57	
Bromoform	1.0 U	1.0	1	10/27/20 11:57	
Bromomethane	1.0 U	1.0	1	10/27/20 11:57	
2-Butanone (MEK)	5.0 U	5.0	1	10/27/20 11:57	
Carbon Disulfide	1.0 U	1.0	1	10/27/20 11:57	
Carbon Tetrachloride	1.0 U	1.0	1	10/27/20 11:57	
Chlorobenzene	1.0 U	1.0	1	10/27/20 11:57	
Chloroethane	1.0 U	1.0	1	10/27/20 11:57	
Chloroform	1.0 U	1.0	1	10/27/20 11:57	
Chloromethane	0.44 J	1.0	1	10/27/20 11:57	
Dibromochloromethane	1.0 U	1.0	1	10/27/20 11:57	
1,1-Dichloroethane	1.0 U	1.0	1	10/27/20 11:57	
1,2-Dibromoethane	1.0 U	1.0	1	10/27/20 11:57	
1,2-Dichloroethane	1.0 U	1.0	1	10/27/20 11:57	
1,1-Dichloroethene	1.0 U	1.0	1	10/27/20 11:57	
cis-1,2-Dichloroethene	1.0 U	1.0	1	10/27/20 11:57	
trans-1,2-Dichloroethene	1.0 U	1.0	1	10/27/20 11:57	
1,2-Dichloropropane	1.0 U	1.0	1	10/27/20 11:57	
cis-1,3-Dichloropropene	1.0 U	1.0	1	10/27/20 11:57	
trans-1,3-Dichloropropene	1.0 U	1.0	1	10/27/20 11:57	
Ethylbenzene	1.0 U	1.0	1	10/27/20 11:57	
2-Hexanone	5.0 U	5.0	1	10/27/20 11:57	
Methylene Chloride	1.0 U	1.0	1	10/27/20 11:57	
4-Methyl-2-pentanone (MIBK)	5.0 U	5.0	1	10/27/20 11:57	
Styrene	1.0 U	1.0	1	10/27/20 11:57	
1,1,2,2-Tetrachloroethane	1.0 U	1.0	1	10/27/20 11:57	
Tetrachloroethene	1.0 U	1.0	1	10/27/20 11:57	
Toluene	1.0 U	1.0	1	10/27/20 11:57	
1,1,1-Trichloroethane	1.0 U	1.0	1	10/27/20 11:57	
1,1,2-Trichloroethane	1.0 U	1.0	1	10/27/20 11:57	
Trichloroethene	1.0 U	1.0	1	10/27/20 11:57	
Vinyl Chloride	1.0 U	1.0	1	10/27/20 11:57	
o-Xylene	1.0 U	1.0	1	10/27/20 11:57	
m,p-Xylenes	2.0 U	2.0	1	10/27/20 11:57	

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dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013053-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	10/27/20 11:57	
Toluene-d8	95	87 - 121	10/27/20 11:57	
Dibromofluoromethane	89	80 - 116	10/27/20 11:57	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Analyzed: 10/26/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2012991-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Acetone	8260C	18.3	20.0	91	40-161
Benzene	8260C	20.7	20.0	103	79-119
Bromodichloromethane	8260C	19.2	20.0	96	81-123
Bromoform	8260C	22.3	20.0	112	65-146
Bromomethane	8260C	17.2	20.0	86	42-166
2-Butanone (MEK)	8260C	20.5	20.0	102	61-137
Carbon Disulfide	8260C	20.2	20.0	101	66-128
Carbon Tetrachloride	8260C	19.2	20.0	96	70-127
Chlorobenzene	8260C	20.1	20.0	100	80-121
Chloroethane	8260C	17.8	20.0	89	62-131
Chloroform	8260C	19.9	20.0	99	79-120
Chloromethane	8260C	24.5	20.0	123	65-135
Dibromochloromethane	8260C	22.9	20.0	114	72-128
1,1-Dichloroethane	8260C	20.6	20.0	103	80-124
1,2-Dibromoethane	8260C	20.9	20.0	105	82-127
1,2-Dichloroethane	8260C	18.7	20.0	93	71-127
1,1-Dichloroethene	8260C	22.7	20.0	113	71-118
cis-1,2-Dichloroethene	8260C	20.2	20.0	101	80-121
trans-1,2-Dichloroethene	8260C	23.3	20.0	117	73-118
1,2-Dichloropropane	8260C	20.6	20.0	103	80-119
cis-1,3-Dichloropropene	8260C	20.8	20.0	104	77-122
trans-1,3-Dichloropropene	8260C	21.1	20.0	105	71-133
Ethylbenzene	8260C	19.7	20.0	99	76-120
2-Hexanone	8260C	21.7	20.0	109	63-124
Methylene Chloride	8260C	19.5	20.0	97	73-122
4-Methyl-2-pentanone (MIBK)	8260C	20.5	20.0	102	66-124
Styrene	8260C	21.2	20.0	106	80-124
1,1,2,2-Tetrachloroethane	8260C	23.7	20.0	119	78-126
Tetrachloroethene	8260C	20.7	20.0	103	72-125
Toluene	8260C	20.7	20.0	103	79-119
1,1,1-Trichloroethane	8260C	18.8	20.0	94	75-125
1,1,2-Trichloroethane	8260C	20.3	20.0	101	82-121
Trichloroethene	8260C	17.7	20.0	89	74-122

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Analyzed: 10/26/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2012991-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	8260C	18.9	20.0	94	74-159
o-Xylene	8260C	20.9	20.0	105	79-123
m,p-Xylenes	8260C	42.4	40.0	106	80-126

ALS Group USA, Corp.
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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Analyzed: 10/27/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013053-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Acetone	8260C	18.1	20.0	91	40-161
Benzene	8260C	21.0	20.0	105	79-119
Bromodichloromethane	8260C	18.9	20.0	94	81-123
Bromoform	8260C	21.4	20.0	107	65-146
Bromomethane	8260C	17.1	20.0	85	42-166
2-Butanone (MEK)	8260C	20.3	20.0	102	61-137
Carbon Disulfide	8260C	19.5	20.0	98	66-128
Carbon Tetrachloride	8260C	18.4	20.0	92	70-127
Chlorobenzene	8260C	20.0	20.0	100	80-121
Chloroethane	8260C	18.4	20.0	92	62-131
Chloroform	8260C	20.1	20.0	101	79-120
Chloromethane	8260C	24.2	20.0	121	65-135
Dibromochloromethane	8260C	22.0	20.0	110	72-128
1,1-Dichloroethane	8260C	20.5	20.0	102	80-124
1,2-Dibromoethane	8260C	20.2	20.0	101	82-127
1,2-Dichloroethane	8260C	19.2	20.0	96	71-127
1,1-Dichloroethene	8260C	23.1	20.0	115	71-118
cis-1,2-Dichloroethene	8260C	21.1	20.0	105	80-121
trans-1,2-Dichloroethene	8260C	23.1	20.0	115	73-118
1,2-Dichloropropane	8260C	20.9	20.0	105	80-119
cis-1,3-Dichloropropene	8260C	20.8	20.0	104	77-122
trans-1,3-Dichloropropene	8260C	20.5	20.0	102	71-133
Ethylbenzene	8260C	19.8	20.0	99	76-120
2-Hexanone	8260C	20.7	20.0	104	63-124
Methylene Chloride	8260C	20.6	20.0	103	73-122
4-Methyl-2-pentanone (MIBK)	8260C	20.3	20.0	101	66-124
Styrene	8260C	21.0	20.0	105	80-124
1,1,2,2-Tetrachloroethane	8260C	23.0	20.0	115	78-126
Tetrachloroethene	8260C	20.4	20.0	102	72-125
Toluene	8260C	20.6	20.0	103	79-119
1,1,1-Trichloroethane	8260C	19.2	20.0	96	75-125
1,1,2-Trichloroethane	8260C	20.9	20.0	105	82-121
Trichloroethene	8260C	18.5	20.0	92	74-122

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Analyzed: 10/27/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013053-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	8260C	19.6	20.0	98	74-159
o-Xylene	8260C	21.0	20.0	105	79-123
m,p-Xylenes	8260C	42.1	40.0	105	80-126



Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R2009737-MB

Service Request: R2009737
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/21/20 16:58	10/19/20	
Barium, Total	6010C	20 U	ug/L	20	1	10/21/20 16:58	10/19/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/21/20 16:58	10/19/20	
Calcium, Total	6010C	1000 U	ug/L	1000	1	10/21/20 16:58	10/19/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/21/20 16:58	10/19/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/21/20 16:58	10/19/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/21/20 16:58	10/19/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/21/20 16:58	10/19/20	
Magnesium, Total	6010C	1000 U	ug/L	1000	1	10/21/20 16:58	10/19/20	
Manganese, Total	6010C	10 U	ug/L	10	1	10/21/20 16:58	10/19/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/21/20 16:58	10/19/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/21/20 16:58	10/19/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/21/20 16:58	10/19/20	
Sodium, Total	6010C	1000 U	ug/L	1000	1	10/21/20 16:58	10/19/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/21/20 16:58	10/19/20	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Analyzed: 10/21/20

Duplicate Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R2009737-LCS

Duplicate Lab Control Sample
R2009737-DLCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Arsenic, Total	6010C	36.7	40	92	37.3	40	93	80-120	2	20
Barium, Total	6010C	2050	2000	103	2080	2000	104	80-120	1	20
Cadmium, Total	6010C	50.5	50.0	101	51.2	50.0	102	80-120	1	20
Calcium, Total	6010C	2050	2000	103	2070	2000	103	80-120	<1	20
Chromium, Total	6010C	204	200	102	206	200	103	80-120	<1	20
Copper, Total	6010C	242	250	97	244	250	98	80-120	1	20
Iron, Total	6010C	992	1000	99	1000	1000	100	80-120	<1	20
Lead, Total	6010C	501	500	100	506	500	101	80-120	1	20
Magnesium, Total	6010C	1970	2000	98	1980	2000	99	80-120	<1	20
Manganese, Total	6010C	498	500	100	502	500	100	80-120	<1	20
Nickel, Total	6010C	511	500	102	514	500	103	80-120	<1	20
Potassium, Total	6010C	19400	20000	97	19600	20000	98	80-120	<1	20
Selenium, Total	6010C	980	1010	97	982	1010	97	80-120	<1	20
Sodium, Total	6010C	20400	20000	102	20500	20000	102	80-120	<1	20
Zinc, Total	6010C	499	500	100	504	500	101	80-120	<1	20



General Chemistry

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R2009737-MB

Service Request: R2009737
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Nitrate as Nitrogen	300.0	0.10 U	mg/L	0.10	1	10/16/20 17:11	
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	10 U	mg/L	10	1	10/22/20 12:35	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009737
Date Analyzed: 10/16/20 - 10/22/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R2009737-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Nitrate as Nitrogen	300.0	1.01	1.00	101	90-110
Solids, Total Dissolved (TDS)	SM 2540 C-1997(2011)	902	914	99	90-110



November 02, 2020

Service Request No:R2009886

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF - Annual Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory October 21, 2020
For your reference, these analyses have been assigned our service request number **R2009886**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Vicky Collom for:

Janice Jaeger
Project Manager

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Received: 10/21/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Twelve water samples were received for analysis at ALS Environmental on 10/21/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

Method 8260C, 10/27/2020: The upper control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question above the Method Reporting Limit (MRL). Since the exceedance equates to a potential high bias, the data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 10/28/2020: The lower control limit was exceeded for one or more analytes in the Continuing Calibration Verification (CCV). Since there were no detections of the analyte(s) above the MRL in the associated field samples, the quantitation is not affected. The data quality was not significantly affected and no further corrective action was taken.

Method 8260C, 10/28/2020: The upper control criterion was exceeded for one or more analytes in the Laboratory Control Sample (LCS). There were no detections of the analyte(s) above the MRL in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was appropriate.

Approved by _____

Date 11/02/2020



SAMPLE DETECTION SUMMARY

CLIENT ID: MW3S-1020 **Lab ID: R2009886-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	46			20	ug/L	6010C
Calcium, Total	45200			1000	ug/L	6010C
Iron, Total	220			100	ug/L	6010C
Magnesium, Total	33400			1000	ug/L	6010C
Manganese, Total	13			10	ug/L	6010C
Potassium, Total	3100			2000	ug/L	6010C
Sodium, Total	35700			1000	ug/L	6010C

CLIENT ID: MW3D-1020 **Lab ID: R2009886-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	110			20	ug/L	6010C
Calcium, Total	69400			1000	ug/L	6010C
Magnesium, Total	35900			1000	ug/L	6010C
Manganese, Total	22			10	ug/L	6010C
Potassium, Total	2200			2000	ug/L	6010C
Sodium, Total	15800			1000	ug/L	6010C
cis-1,2-Dichloroethene	7.6			5.0	ug/L	8260C

CLIENT ID: MW18S-1020 **Lab ID: R2009886-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	49			20	ug/L	6010C
Calcium, Total	38600			1000	ug/L	6010C
Iron, Total	2510			100	ug/L	6010C
Magnesium, Total	18100			1000	ug/L	6010C
Manganese, Total	719			10	ug/L	6010C
Potassium, Total	2100			2000	ug/L	6010C
Sodium, Total	5500			1000	ug/L	6010C
cis-1,2-Dichloroethene	6.6			5.0	ug/L	8260C

CLIENT ID: MW18D-1020 **Lab ID: R2009886-005**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	73			20	ug/L	6010C
Calcium, Total	41600			1000	ug/L	6010C
Iron, Total	15500			100	ug/L	6010C
Magnesium, Total	18600			1000	ug/L	6010C
Manganese, Total	805			10	ug/L	6010C
Potassium, Total	2900			2000	ug/L	6010C
Sodium, Total	20700			1000	ug/L	6010C

CLIENT ID: MW17S-1020 **Lab ID: R2009886-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	41			20	ug/L	6010C
Calcium, Total	89900			1000	ug/L	6010C



SAMPLE DETECTION SUMMARY

CLIENT ID: MW17S-1020 **Lab ID: R2009886-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Iron, Total	210			100	ug/L	6010C
Magnesium, Total	61000			1000	ug/L	6010C
Manganese, Total	24			10	ug/L	6010C
Potassium, Total	3800			2000	ug/L	6010C
Sodium, Total	67500			1000	ug/L	6010C
cis-1,2-Dichloroethene	43			5.0	ug/L	8260C
Trichloroethene	13			5.0	ug/L	8260C

CLIENT ID: MW17D-1020 **Lab ID: R2009886-007**

Analyte	Results	Flag	MDL	MRL	Units	Method
Calcium, Total	3000			1000	ug/L	6010C
Iron, Total	6920			100	ug/L	6010C
Magnesium, Total	19100			1000	ug/L	6010C
Manganese, Total	97			10	ug/L	6010C
Potassium, Total	5200			2000	ug/L	6010C
Sodium, Total	34400			1000	ug/L	6010C

CLIENT ID: CW3A-1020 **Lab ID: R2009886-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	80			20	ug/L	6010C
Calcium, Total	86900			1000	ug/L	6010C
Magnesium, Total	1500			1000	ug/L	6010C
Manganese, Total	26			10	ug/L	6010C
Potassium, Total	11800			2000	ug/L	6010C
Sodium, Total	42600			1000	ug/L	6010C
cis-1,2-Dichloroethene	8.1			5.0	ug/L	8260C
Trichloroethene	42			5.0	ug/L	8260C

CLIENT ID: CW3B-1020 **Lab ID: R2009886-009**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	38			20	ug/L	6010C
Calcium, Total	67400			1000	ug/L	6010C
Magnesium, Total	34200			1000	ug/L	6010C
Manganese, Total	29			10	ug/L	6010C
Potassium, Total	2500			2000	ug/L	6010C
Sodium, Total	21400			1000	ug/L	6010C
cis-1,2-Dichloroethene	110			13	ug/L	8260C
Trichloroethene	430	D		25	ug/L	8260C

CLIENT ID: CW4B-1020 **Lab ID: R2009886-010**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	31			20	ug/L	6010C
Calcium, Total	39000			1000	ug/L	6010C



SAMPLE DETECTION SUMMARY

CLIENT ID: CW4B-1020	Lab ID: R2009886-010
-----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Magnesium, Total	16200			1000	ug/L	6010C
Manganese, Total	37			10	ug/L	6010C
Sodium, Total	14900			1000	ug/L	6010C

CLIENT ID: CW4A-1020	Lab ID: R2009886-011
-----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	76			20	ug/L	6010C
Calcium, Total	29400			1000	ug/L	6010C
Iron, Total	1100			100	ug/L	6010C
Magnesium, Total	16200			1000	ug/L	6010C
Manganese, Total	736			10	ug/L	6010C
Sodium, Total	14300			1000	ug/L	6010C

CLIENT ID: LS1-1020	Lab ID: R2009886-012
----------------------------	-----------------------------

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	117			20	ug/L	6010C
Calcium, Total	122000			1000	ug/L	6010C
Iron, Total	10900			100	ug/L	6010C
Magnesium, Total	33800			1000	ug/L	6010C
Manganese, Total	2800			10	ug/L	6010C
Potassium, Total	4700			2000	ug/L	6010C
Sodium, Total	27600			1000	ug/L	6010C



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling

Service Request:R2009886

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2009886-001	MW3S-1020	10/19/2020	1205
R2009886-002	MW3D-1020	10/19/2020	1320
R2009886-003	EB1-1020	10/19/2020	1030
R2009886-004	MW18S-1020	10/19/2020	1455
R2009886-005	MW18D-1020	10/20/2020	0950
R2009886-006	MW17S-1020	10/20/2020	1120
R2009886-007	MW17D-1020	10/20/2020	1305
R2009886-008	CW3A-1020	10/20/2020	1440
R2009886-009	CW3B-1020	10/21/2020	0940
R2009886-010	CW4B-1020	10/21/2020	1105
R2009886-011	CW4A-1020	10/21/2020	1220
R2009886-012	LS1-1020	10/21/2020	1250



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**
72 Railroad Ave.
Wellsville, NY 14895
Project Manager: **Jon Brandes**

CHAIN of CUSTODY

Project: **WAL - Annual Sampling**
Telephone No. 585-593-1824
Email: jonb@on-sites.com

Method of Shipment
On-Site SW

Special Detection
Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	GC:MS VOA's 8260 (HCl)	GC:MS VOA's 524.2 (C6H8O6)	T-Metals (HNO3)	TDS, NO3, Br, Cl, SO4 (NP) (SW/SED)	NH3, TKN, COD (H2SO4) (SW/SED)	Total Color (NP) (SW/SED)	BOD (NP) (SW/SED)	Alkalinity (NP) (SW/SED)	TDS, NO3 (NP) (Manhole)
			Soil	Water	Air	Other	Yes	No											
MW3S-1020		4	X			X		10-19-20	1305	X	X								
MW3D-1020		4	X			X		10-19-20	1320	X	X								
EBI-1020		4	X			X		10-19-20	1038	X	X								
MW18S-1020		8	X			X		10-19-20	1455	X	X								
MW18D-1020		4	X			X		10-20-20	0950	X	X								
MW17S-1020		4	X			X		10-20-20	1120	X	X								
MW17D-1020		4	X			X		10-20-20	1305	X	X								
CW3A-1020		4	X			X		10-20-20	1440	X	X								
CW3B-1020		4	X			X		10-21-20	0940	X	X								
CW4B-1020		4	X			X		10-21-20	1105	X	X								
CW4A-1020		4	X			X		10-21-20	1220	X	X								
LS1-1020		4	X			X		10-21-20	1250	X	X								

REMARKS
ms/msd

Sample Received Intact: Yes No Temperature received: Ice No ice

Relinq. by sampler (Sign & Print Name) <i>Kevin Dyer Kevin Dyer</i>	Date 10/21/20	Time 1350	Received by (Sign & Print Name) <i>Scott Watson</i>	Date 10/21/20	Time 1600
Relinquished by <i>Scott Watson</i>	Date 10/21/20	Time 1600	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by laboratory <i>Allyson</i>	Date 10/21/2020	Time 1600

Lab Work No.

R2009886 **5**
On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Cooler Receipt and Preservation Check Form

R2009886

5

On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Project/Client On-Site Folder Number _____

Cooler received on 10/21/2020 by: @

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <u>(N)</u>
2	Custody papers properly completed (ink, signed)?	<u>(Y)</u> N
3	Did all bottles arrive in good condition (unbroken)?	<u>(Y)</u> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<u>(Y)</u> N

5a	Perchlorate samples have required headspace?	Y N <u>(NA)</u>
5b	Did <u>VOA vials</u> Alk, or Sulfide have sig* bubbles?	Y <u>(N)</u> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>(NA)</u>

8. Temperature Readings Date: 10/21/2020 Time: 15:16:02 ID: IR#7 (IR#1) From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>7.1</u>	<u>7.5</u>	<u>6.4</u>				
Within 0-6°C?	Y <u>(N)</u>	Y <u>(N)</u>	Y <u>(N)</u>	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-02 by @ on 10/21/2020 at 1606
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 10/22/2020 Time: 2:25 by: DW

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
- 13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2	<u>2234M</u>	HNO ₃	<u>✓</u>		<u>202004314</u>					
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If+, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 20-09-09, 2561-3
Explain all Discrepancies/ Other Comments: _____

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: al
PC Secondary Review: DW 10/26/20 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed (>100% Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2009886

Sample Name: MW3S-1020
Lab Code: R2009886-001
Sample Matrix: Water

Date Collected: 10/19/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

Sample Name: MW3D-1020
Lab Code: R2009886-002
Sample Matrix: Water

Date Collected: 10/19/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

Sample Name: EB1-1020
Lab Code: R2009886-003
Sample Matrix: Water

Date Collected: 10/19/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

Sample Name: MW18S-1020
Lab Code: R2009886-004
Sample Matrix: Water

Date Collected: 10/19/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2009886

Sample Name: MW18D-1020
Lab Code: R2009886-005
Sample Matrix: Water

Date Collected: 10/20/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

Sample Name: MW17S-1020
Lab Code: R2009886-006
Sample Matrix: Water

Date Collected: 10/20/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

Sample Name: MW17D-1020
Lab Code: R2009886-007
Sample Matrix: Water

Date Collected: 10/20/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

Sample Name: CW3A-1020
Lab Code: R2009886-008
Sample Matrix: Water

Date Collected: 10/20/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2009886

Sample Name: CW3B-1020
Lab Code: R2009886-009
Sample Matrix: Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
KRUEST

Sample Name: CW3B-1020
Lab Code: R2009886-009.R01
Sample Matrix: Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
8260C

Extracted/Digested By

Analyzed By
FNAEGLER

Sample Name: CW4B-1020
Lab Code: R2009886-010
Sample Matrix: Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

Sample Name: CW4A-1020
Lab Code: R2009886-011
Sample Matrix: Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
6010C
8260C

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN
FNAEGLER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2009886

Sample Name: LS1-1020
Lab Code: R2009886-012
Sample Matrix: Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method

6010C
8260C

Extracted/Digested By

AKONZEL

Analyzed By

KMCLAEN
FNAEGLER



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 12:05
Date Received: 10/21/20 16:00

Sample Name: MW3S-1020
Lab Code: R2009886-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 19:30	
Benzene	5.0 U	5.0	1	10/27/20 19:30	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 19:30	
Bromoform	5.0 U	5.0	1	10/27/20 19:30	
Bromomethane	5.0 U	5.0	1	10/27/20 19:30	
2-Butanone (MEK)	10 U	10	1	10/27/20 19:30	
Carbon Disulfide	10 U	10	1	10/27/20 19:30	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 19:30	
Chlorobenzene	5.0 U	5.0	1	10/27/20 19:30	
Chloroethane	5.0 U	5.0	1	10/27/20 19:30	
Chloroform	5.0 U	5.0	1	10/27/20 19:30	
Chloromethane	5.0 U	5.0	1	10/27/20 19:30	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 19:30	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 19:30	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 19:30	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 19:30	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 19:30	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 19:30	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 19:30	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 19:30	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 19:30	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 19:30	
Ethylbenzene	5.0 U	5.0	1	10/27/20 19:30	
2-Hexanone	10 U	10	1	10/27/20 19:30	
Methylene Chloride	5.0 U	5.0	1	10/27/20 19:30	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 19:30	
Styrene	5.0 U	5.0	1	10/27/20 19:30	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 19:30	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 19:30	
Toluene	5.0 U	5.0	1	10/27/20 19:30	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 19:30	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 19:30	
Trichloroethene	5.0 U	5.0	1	10/27/20 19:30	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 19:30	
o-Xylene	5.0 U	5.0	1	10/27/20 19:30	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 19:30	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 12:05
Date Received: 10/21/20 16:00

Sample Name: MW3S-1020
Lab Code: R2009886-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	10/27/20 19:30	
Toluene-d8	108	87 - 121	10/27/20 19:30	
Dibromofluoromethane	109	89 - 119	10/27/20 19:30	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 13:20
Date Received: 10/21/20 16:00

Sample Name: MW3D-1020
Lab Code: R2009886-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 19:53	
Benzene	5.0 U	5.0	1	10/27/20 19:53	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 19:53	
Bromoform	5.0 U	5.0	1	10/27/20 19:53	
Bromomethane	5.0 U	5.0	1	10/27/20 19:53	
2-Butanone (MEK)	10 U	10	1	10/27/20 19:53	
Carbon Disulfide	10 U	10	1	10/27/20 19:53	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 19:53	
Chlorobenzene	5.0 U	5.0	1	10/27/20 19:53	
Chloroethane	5.0 U	5.0	1	10/27/20 19:53	
Chloroform	5.0 U	5.0	1	10/27/20 19:53	
Chloromethane	5.0 U	5.0	1	10/27/20 19:53	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 19:53	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 19:53	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 19:53	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 19:53	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 19:53	
cis-1,2-Dichloroethene	7.6	5.0	1	10/27/20 19:53	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 19:53	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 19:53	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 19:53	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 19:53	
Ethylbenzene	5.0 U	5.0	1	10/27/20 19:53	
2-Hexanone	10 U	10	1	10/27/20 19:53	
Methylene Chloride	5.0 U	5.0	1	10/27/20 19:53	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 19:53	
Styrene	5.0 U	5.0	1	10/27/20 19:53	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 19:53	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 19:53	
Toluene	5.0 U	5.0	1	10/27/20 19:53	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 19:53	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 19:53	
Trichloroethene	5.0 U	5.0	1	10/27/20 19:53	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 19:53	
o-Xylene	5.0 U	5.0	1	10/27/20 19:53	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 19:53	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 13:20
Date Received: 10/21/20 16:00

Sample Name: MW3D-1020
Lab Code: R2009886-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	10/27/20 19:53	
Toluene-d8	108	87 - 121	10/27/20 19:53	
Dibromofluoromethane	110	89 - 119	10/27/20 19:53	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 10:30
Date Received: 10/21/20 16:00

Sample Name: EB1-1020
Lab Code: R2009886-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 19:08	
Benzene	5.0 U	5.0	1	10/27/20 19:08	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 19:08	
Bromoform	5.0 U	5.0	1	10/27/20 19:08	
Bromomethane	5.0 U	5.0	1	10/27/20 19:08	
2-Butanone (MEK)	10 U	10	1	10/27/20 19:08	
Carbon Disulfide	10 U	10	1	10/27/20 19:08	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 19:08	
Chlorobenzene	5.0 U	5.0	1	10/27/20 19:08	
Chloroethane	5.0 U	5.0	1	10/27/20 19:08	
Chloroform	5.0 U	5.0	1	10/27/20 19:08	
Chloromethane	5.0 U	5.0	1	10/27/20 19:08	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 19:08	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 19:08	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 19:08	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 19:08	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 19:08	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 19:08	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 19:08	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 19:08	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 19:08	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 19:08	
Ethylbenzene	5.0 U	5.0	1	10/27/20 19:08	
2-Hexanone	10 U	10	1	10/27/20 19:08	
Methylene Chloride	5.0 U	5.0	1	10/27/20 19:08	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 19:08	
Styrene	5.0 U	5.0	1	10/27/20 19:08	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 19:08	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 19:08	
Toluene	5.0 U	5.0	1	10/27/20 19:08	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 19:08	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 19:08	
Trichloroethene	5.0 U	5.0	1	10/27/20 19:08	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 19:08	
o-Xylene	5.0 U	5.0	1	10/27/20 19:08	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 19:08	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 10:30
Date Received: 10/21/20 16:00

Sample Name: EB1-1020
Lab Code: R2009886-003

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	85 - 122	10/27/20 19:08	
Toluene-d8	108	87 - 121	10/27/20 19:08	
Dibromofluoromethane	107	89 - 119	10/27/20 19:08	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 14:55
Date Received: 10/21/20 16:00

Sample Name: MW18S-1020
Lab Code: R2009886-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 20:15	
Benzene	5.0 U	5.0	1	10/27/20 20:15	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 20:15	
Bromoform	5.0 U	5.0	1	10/27/20 20:15	
Bromomethane	5.0 U	5.0	1	10/27/20 20:15	
2-Butanone (MEK)	10 U	10	1	10/27/20 20:15	
Carbon Disulfide	10 U	10	1	10/27/20 20:15	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 20:15	
Chlorobenzene	5.0 U	5.0	1	10/27/20 20:15	
Chloroethane	5.0 U	5.0	1	10/27/20 20:15	
Chloroform	5.0 U	5.0	1	10/27/20 20:15	
Chloromethane	5.0 U	5.0	1	10/27/20 20:15	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 20:15	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 20:15	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 20:15	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 20:15	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 20:15	
cis-1,2-Dichloroethene	6.6	5.0	1	10/27/20 20:15	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 20:15	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 20:15	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 20:15	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 20:15	
Ethylbenzene	5.0 U	5.0	1	10/27/20 20:15	
2-Hexanone	10 U	10	1	10/27/20 20:15	
Methylene Chloride	5.0 U	5.0	1	10/27/20 20:15	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 20:15	
Styrene	5.0 U	5.0	1	10/27/20 20:15	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 20:15	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 20:15	
Toluene	5.0 U	5.0	1	10/27/20 20:15	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 20:15	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 20:15	
Trichloroethene	5.0 U	5.0	1	10/27/20 20:15	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 20:15	
o-Xylene	5.0 U	5.0	1	10/27/20 20:15	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 20:15	

ALS Group USA, Corp.
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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20 14:55
Date Received: 10/21/20 16:00

Sample Name: MW18S-1020
Lab Code: R2009886-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	10/27/20 20:15	
Toluene-d8	109	87 - 121	10/27/20 20:15	
Dibromofluoromethane	107	89 - 119	10/27/20 20:15	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 09:50
Date Received: 10/21/20 16:00

Sample Name: MW18D-1020
Lab Code: R2009886-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 20:37	
Benzene	5.0 U	5.0	1	10/27/20 20:37	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 20:37	
Bromoform	5.0 U	5.0	1	10/27/20 20:37	
Bromomethane	5.0 U	5.0	1	10/27/20 20:37	
2-Butanone (MEK)	10 U	10	1	10/27/20 20:37	
Carbon Disulfide	10 U	10	1	10/27/20 20:37	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 20:37	
Chlorobenzene	5.0 U	5.0	1	10/27/20 20:37	
Chloroethane	5.0 U	5.0	1	10/27/20 20:37	
Chloroform	5.0 U	5.0	1	10/27/20 20:37	
Chloromethane	5.0 U	5.0	1	10/27/20 20:37	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 20:37	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 20:37	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 20:37	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 20:37	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 20:37	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 20:37	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 20:37	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 20:37	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 20:37	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 20:37	
Ethylbenzene	5.0 U	5.0	1	10/27/20 20:37	
2-Hexanone	10 U	10	1	10/27/20 20:37	
Methylene Chloride	5.0 U	5.0	1	10/27/20 20:37	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 20:37	
Styrene	5.0 U	5.0	1	10/27/20 20:37	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 20:37	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 20:37	
Toluene	5.0 U	5.0	1	10/27/20 20:37	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 20:37	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 20:37	
Trichloroethene	5.0 U	5.0	1	10/27/20 20:37	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 20:37	
o-Xylene	5.0 U	5.0	1	10/27/20 20:37	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 20:37	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 09:50
Date Received: 10/21/20 16:00

Sample Name: MW18D-1020
Lab Code: R2009886-005

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	10/27/20 20:37	
Toluene-d8	109	87 - 121	10/27/20 20:37	
Dibromofluoromethane	108	89 - 119	10/27/20 20:37	

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dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 11:20
Date Received: 10/21/20 16:00

Sample Name: MW17S-1020
Lab Code: R2009886-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 21:00	
Benzene	5.0 U	5.0	1	10/27/20 21:00	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 21:00	
Bromoform	5.0 U	5.0	1	10/27/20 21:00	
Bromomethane	5.0 U	5.0	1	10/27/20 21:00	
2-Butanone (MEK)	10 U	10	1	10/27/20 21:00	
Carbon Disulfide	10 U	10	1	10/27/20 21:00	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 21:00	
Chlorobenzene	5.0 U	5.0	1	10/27/20 21:00	
Chloroethane	5.0 U	5.0	1	10/27/20 21:00	
Chloroform	5.0 U	5.0	1	10/27/20 21:00	
Chloromethane	5.0 U	5.0	1	10/27/20 21:00	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 21:00	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 21:00	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 21:00	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 21:00	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 21:00	
cis-1,2-Dichloroethene	43	5.0	1	10/27/20 21:00	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 21:00	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 21:00	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 21:00	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 21:00	
Ethylbenzene	5.0 U	5.0	1	10/27/20 21:00	
2-Hexanone	10 U	10	1	10/27/20 21:00	
Methylene Chloride	5.0 U	5.0	1	10/27/20 21:00	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 21:00	
Styrene	5.0 U	5.0	1	10/27/20 21:00	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 21:00	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 21:00	
Toluene	5.0 U	5.0	1	10/27/20 21:00	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 21:00	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 21:00	
Trichloroethene	13	5.0	1	10/27/20 21:00	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 21:00	
o-Xylene	5.0 U	5.0	1	10/27/20 21:00	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 21:00	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 11:20
Date Received: 10/21/20 16:00

Sample Name: MW17S-1020
Lab Code: R2009886-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	10/27/20 21:00	
Toluene-d8	107	87 - 121	10/27/20 21:00	
Dibromofluoromethane	106	89 - 119	10/27/20 21:00	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 13:05
Date Received: 10/21/20 16:00

Sample Name: MW17D-1020
Lab Code: R2009886-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 21:22	
Benzene	5.0 U	5.0	1	10/27/20 21:22	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 21:22	
Bromoform	5.0 U	5.0	1	10/27/20 21:22	
Bromomethane	5.0 U	5.0	1	10/27/20 21:22	
2-Butanone (MEK)	10 U	10	1	10/27/20 21:22	
Carbon Disulfide	10 U	10	1	10/27/20 21:22	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 21:22	
Chlorobenzene	5.0 U	5.0	1	10/27/20 21:22	
Chloroethane	5.0 U	5.0	1	10/27/20 21:22	
Chloroform	5.0 U	5.0	1	10/27/20 21:22	
Chloromethane	5.0 U	5.0	1	10/27/20 21:22	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 21:22	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 21:22	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 21:22	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 21:22	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 21:22	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 21:22	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 21:22	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 21:22	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 21:22	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 21:22	
Ethylbenzene	5.0 U	5.0	1	10/27/20 21:22	
2-Hexanone	10 U	10	1	10/27/20 21:22	
Methylene Chloride	5.0 U	5.0	1	10/27/20 21:22	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 21:22	
Styrene	5.0 U	5.0	1	10/27/20 21:22	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 21:22	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 21:22	
Toluene	5.0 U	5.0	1	10/27/20 21:22	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 21:22	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 21:22	
Trichloroethene	5.0 U	5.0	1	10/27/20 21:22	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 21:22	
o-Xylene	5.0 U	5.0	1	10/27/20 21:22	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 21:22	

ALS Group USA, Corp.
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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 13:05
Date Received: 10/21/20 16:00

Sample Name: MW17D-1020
Lab Code: R2009886-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	85 - 122	10/27/20 21:22	
Toluene-d8	107	87 - 121	10/27/20 21:22	
Dibromofluoromethane	108	89 - 119	10/27/20 21:22	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 16:00

Sample Name: CW3A-1020
Lab Code: R2009886-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 21:44	
Benzene	5.0 U	5.0	1	10/27/20 21:44	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 21:44	
Bromoform	5.0 U	5.0	1	10/27/20 21:44	
Bromomethane	5.0 U	5.0	1	10/27/20 21:44	
2-Butanone (MEK)	10 U	10	1	10/27/20 21:44	
Carbon Disulfide	10 U	10	1	10/27/20 21:44	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 21:44	
Chlorobenzene	5.0 U	5.0	1	10/27/20 21:44	
Chloroethane	5.0 U	5.0	1	10/27/20 21:44	
Chloroform	5.0 U	5.0	1	10/27/20 21:44	
Chloromethane	5.0 U	5.0	1	10/27/20 21:44	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 21:44	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 21:44	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 21:44	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 21:44	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 21:44	
cis-1,2-Dichloroethene	8.1	5.0	1	10/27/20 21:44	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 21:44	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 21:44	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 21:44	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 21:44	
Ethylbenzene	5.0 U	5.0	1	10/27/20 21:44	
2-Hexanone	10 U	10	1	10/27/20 21:44	
Methylene Chloride	5.0 U	5.0	1	10/27/20 21:44	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 21:44	
Styrene	5.0 U	5.0	1	10/27/20 21:44	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 21:44	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 21:44	
Toluene	5.0 U	5.0	1	10/27/20 21:44	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 21:44	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 21:44	
Trichloroethene	42	5.0	1	10/27/20 21:44	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 21:44	
o-Xylene	5.0 U	5.0	1	10/27/20 21:44	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 21:44	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 16:00

Sample Name: CW3A-1020
Lab Code: R2009886-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	10/27/20 21:44	
Toluene-d8	108	87 - 121	10/27/20 21:44	
Dibromofluoromethane	107	89 - 119	10/27/20 21:44	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 09:40
Date Received: 10/21/20 16:00

Sample Name: CW3B-1020
Lab Code: R2009886-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	25 U	25	2.5	10/27/20 23:14	
Benzene	13 U	13	2.5	10/27/20 23:14	
Bromodichloromethane	13 U	13	2.5	10/27/20 23:14	
Bromoform	13 U	13	2.5	10/27/20 23:14	
Bromomethane	13 U	13	2.5	10/27/20 23:14	
2-Butanone (MEK)	25 U	25	2.5	10/27/20 23:14	
Carbon Disulfide	25 U	25	2.5	10/27/20 23:14	
Carbon Tetrachloride	13 U	13	2.5	10/27/20 23:14	
Chlorobenzene	13 U	13	2.5	10/27/20 23:14	
Chloroethane	13 U	13	2.5	10/27/20 23:14	
Chloroform	13 U	13	2.5	10/27/20 23:14	
Chloromethane	13 U	13	2.5	10/27/20 23:14	
Dibromochloromethane	13 U	13	2.5	10/27/20 23:14	
1,2-Dibromoethane	13 U	13	2.5	10/27/20 23:14	
1,1-Dichloroethane	13 U	13	2.5	10/27/20 23:14	
1,2-Dichloroethane	13 U	13	2.5	10/27/20 23:14	
1,1-Dichloroethene	13 U	13	2.5	10/27/20 23:14	
cis-1,2-Dichloroethene	110	13	2.5	10/27/20 23:14	
trans-1,2-Dichloroethene	13 U	13	2.5	10/27/20 23:14	
1,2-Dichloropropane	13 U	13	2.5	10/27/20 23:14	
cis-1,3-Dichloropropene	13 U	13	2.5	10/27/20 23:14	
trans-1,3-Dichloropropene	13 U	13	2.5	10/27/20 23:14	
Ethylbenzene	13 U	13	2.5	10/27/20 23:14	
2-Hexanone	25 U	25	2.5	10/27/20 23:14	
Methylene Chloride	13 U	13	2.5	10/27/20 23:14	
4-Methyl-2-pentanone (MIBK)	25 U	25	2.5	10/27/20 23:14	
Styrene	13 U	13	2.5	10/27/20 23:14	
1,1,2,2-Tetrachloroethane	13 U	13	2.5	10/27/20 23:14	
Tetrachloroethene	13 U	13	2.5	10/27/20 23:14	
Toluene	13 U	13	2.5	10/27/20 23:14	
1,1,1-Trichloroethane	13 U	13	2.5	10/27/20 23:14	
1,1,2-Trichloroethane	13 U	13	2.5	10/27/20 23:14	
Trichloroethene	430 D	25	5	10/29/20 06:22	
Vinyl Chloride	13 U	13	2.5	10/27/20 23:14	
o-Xylene	13 U	13	2.5	10/27/20 23:14	
m,p-Xylenes	13 U	13	2.5	10/27/20 23:14	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 09:40
Date Received: 10/21/20 16:00

Sample Name: CW3B-1020
Lab Code: R2009886-009

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	85 - 122	10/27/20 23:14	
Toluene-d8	111	87 - 121	10/27/20 23:14	
Dibromofluoromethane	111	89 - 119	10/27/20 23:14	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 11:05
Date Received: 10/21/20 16:00

Sample Name: CW4B-1020
Lab Code: R2009886-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 22:07	
Benzene	5.0 U	5.0	1	10/27/20 22:07	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 22:07	
Bromoform	5.0 U	5.0	1	10/27/20 22:07	
Bromomethane	5.0 U	5.0	1	10/27/20 22:07	
2-Butanone (MEK)	10 U	10	1	10/27/20 22:07	
Carbon Disulfide	10 U	10	1	10/27/20 22:07	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 22:07	
Chlorobenzene	5.0 U	5.0	1	10/27/20 22:07	
Chloroethane	5.0 U	5.0	1	10/27/20 22:07	
Chloroform	5.0 U	5.0	1	10/27/20 22:07	
Chloromethane	5.0 U	5.0	1	10/27/20 22:07	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 22:07	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 22:07	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 22:07	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 22:07	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 22:07	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 22:07	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 22:07	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 22:07	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 22:07	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 22:07	
Ethylbenzene	5.0 U	5.0	1	10/27/20 22:07	
2-Hexanone	10 U	10	1	10/27/20 22:07	
Methylene Chloride	5.0 U	5.0	1	10/27/20 22:07	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 22:07	
Styrene	5.0 U	5.0	1	10/27/20 22:07	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 22:07	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 22:07	
Toluene	5.0 U	5.0	1	10/27/20 22:07	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 22:07	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 22:07	
Trichloroethene	5.0 U	5.0	1	10/27/20 22:07	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 22:07	
o-Xylene	5.0 U	5.0	1	10/27/20 22:07	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 22:07	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 11:05
Date Received: 10/21/20 16:00

Sample Name: CW4B-1020
Lab Code: R2009886-010

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	85 - 122	10/27/20 22:07	
Toluene-d8	105	87 - 121	10/27/20 22:07	
Dibromofluoromethane	105	89 - 119	10/27/20 22:07	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 12:20
Date Received: 10/21/20 16:00

Sample Name: CW4A-1020
Lab Code: R2009886-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 22:29	
Benzene	5.0 U	5.0	1	10/27/20 22:29	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 22:29	
Bromoform	5.0 U	5.0	1	10/27/20 22:29	
Bromomethane	5.0 U	5.0	1	10/27/20 22:29	
2-Butanone (MEK)	10 U	10	1	10/27/20 22:29	
Carbon Disulfide	10 U	10	1	10/27/20 22:29	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 22:29	
Chlorobenzene	5.0 U	5.0	1	10/27/20 22:29	
Chloroethane	5.0 U	5.0	1	10/27/20 22:29	
Chloroform	5.0 U	5.0	1	10/27/20 22:29	
Chloromethane	5.0 U	5.0	1	10/27/20 22:29	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 22:29	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 22:29	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 22:29	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 22:29	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 22:29	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 22:29	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 22:29	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 22:29	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 22:29	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 22:29	
Ethylbenzene	5.0 U	5.0	1	10/27/20 22:29	
2-Hexanone	10 U	10	1	10/27/20 22:29	
Methylene Chloride	5.0 U	5.0	1	10/27/20 22:29	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 22:29	
Styrene	5.0 U	5.0	1	10/27/20 22:29	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 22:29	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 22:29	
Toluene	5.0 U	5.0	1	10/27/20 22:29	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 22:29	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 22:29	
Trichloroethene	5.0 U	5.0	1	10/27/20 22:29	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 22:29	
o-Xylene	5.0 U	5.0	1	10/27/20 22:29	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 22:29	

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dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 12:20
Date Received: 10/21/20 16:00

Sample Name: CW4A-1020
Lab Code: R2009886-011

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	10/27/20 22:29	
Toluene-d8	109	87 - 121	10/27/20 22:29	
Dibromofluoromethane	109	89 - 119	10/27/20 22:29	

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dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 12:50
Date Received: 10/21/20 16:00

Sample Name: LS1-1020
Lab Code: R2009886-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 22:51	
Benzene	5.0 U	5.0	1	10/27/20 22:51	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 22:51	
Bromoform	5.0 U	5.0	1	10/27/20 22:51	
Bromomethane	5.0 U	5.0	1	10/27/20 22:51	
2-Butanone (MEK)	10 U	10	1	10/27/20 22:51	
Carbon Disulfide	10 U	10	1	10/27/20 22:51	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 22:51	
Chlorobenzene	5.0 U	5.0	1	10/27/20 22:51	
Chloroethane	5.0 U	5.0	1	10/27/20 22:51	
Chloroform	5.0 U	5.0	1	10/27/20 22:51	
Chloromethane	5.0 U	5.0	1	10/27/20 22:51	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 22:51	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 22:51	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 22:51	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 22:51	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 22:51	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 22:51	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 22:51	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 22:51	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 22:51	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 22:51	
Ethylbenzene	5.0 U	5.0	1	10/27/20 22:51	
2-Hexanone	10 U	10	1	10/27/20 22:51	
Methylene Chloride	5.0 U	5.0	1	10/27/20 22:51	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 22:51	
Styrene	5.0 U	5.0	1	10/27/20 22:51	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 22:51	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 22:51	
Toluene	5.0 U	5.0	1	10/27/20 22:51	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 22:51	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 22:51	
Trichloroethene	5.0 U	5.0	1	10/27/20 22:51	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 22:51	
o-Xylene	5.0 U	5.0	1	10/27/20 22:51	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 22:51	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/21/20 12:50
Date Received: 10/21/20 16:00

Sample Name: LS1-1020
Lab Code: R2009886-012

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	85 - 122	10/27/20 22:51	
Toluene-d8	109	87 - 121	10/27/20 22:51	
Dibromofluoromethane	108	89 - 119	10/27/20 22:51	



Metals

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW3S-1020
Lab Code: R2009886-001

Service Request: R2009886
Date Collected: 10/19/20 12:05
Date Received: 10/21/20 16:00

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 20:22	10/26/20	
Barium, Total	6010C	46	ug/L	20	1	10/27/20 20:22	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 20:22	10/26/20	
Calcium, Total	6010C	45200	ug/L	1000	1	10/27/20 20:22	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:22	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 20:22	10/26/20	
Iron, Total	6010C	220	ug/L	100	1	10/27/20 20:22	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 20:22	10/26/20	
Magnesium, Total	6010C	33400	ug/L	1000	1	10/27/20 20:22	10/26/20	
Manganese, Total	6010C	13	ug/L	10	1	10/27/20 20:22	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 20:22	10/26/20	
Potassium, Total	6010C	3100	ug/L	2000	1	10/27/20 20:22	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:22	10/26/20	
Sodium, Total	6010C	35700	ug/L	1000	1	10/27/20 20:22	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 20:22	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW3D-1020
Lab Code: R2009886-002

Service Request: R2009886
Date Collected: 10/19/20 13:20
Date Received: 10/21/20 16:00

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 20:25	10/26/20	
Barium, Total	6010C	110	ug/L	20	1	10/27/20 20:25	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 20:25	10/26/20	
Calcium, Total	6010C	69400	ug/L	1000	1	10/27/20 20:25	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:25	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 20:25	10/26/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/27/20 20:25	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 20:25	10/26/20	
Magnesium, Total	6010C	35900	ug/L	1000	1	10/27/20 20:25	10/26/20	
Manganese, Total	6010C	22	ug/L	10	1	10/27/20 20:25	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 20:25	10/26/20	
Potassium, Total	6010C	2200	ug/L	2000	1	10/27/20 20:25	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:25	10/26/20	
Sodium, Total	6010C	15800	ug/L	1000	1	10/27/20 20:25	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 20:25	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: EB1-1020
Lab Code: R2009886-003

Service Request: R2009886
Date Collected: 10/19/20 10:30
Date Received: 10/21/20 16:00

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 20:29	10/26/20	
Barium, Total	6010C	20 U	ug/L	20	1	10/27/20 20:29	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 20:29	10/26/20	
Calcium, Total	6010C	1000 U	ug/L	1000	1	10/27/20 20:29	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:29	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 20:29	10/26/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/27/20 20:29	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 20:29	10/26/20	
Magnesium, Total	6010C	1000 U	ug/L	1000	1	10/27/20 20:29	10/26/20	
Manganese, Total	6010C	10 U	ug/L	10	1	10/27/20 20:29	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 20:29	10/26/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/27/20 20:29	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:29	10/26/20	
Sodium, Total	6010C	1000 U	ug/L	1000	1	10/27/20 20:29	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 20:29	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW18S-1020
Lab Code: R2009886-004

Service Request: R2009886
Date Collected: 10/19/20 14:55
Date Received: 10/21/20 16:00

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 20:32	10/26/20	
Barium, Total	6010C	49	ug/L	20	1	10/27/20 20:32	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 20:32	10/26/20	
Calcium, Total	6010C	38600	ug/L	1000	1	10/27/20 20:32	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:32	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 20:32	10/26/20	
Iron, Total	6010C	2510	ug/L	100	1	10/27/20 20:32	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 20:32	10/26/20	
Magnesium, Total	6010C	18100	ug/L	1000	1	10/27/20 20:32	10/26/20	
Manganese, Total	6010C	719	ug/L	10	1	10/27/20 20:32	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 20:32	10/26/20	
Potassium, Total	6010C	2100	ug/L	2000	1	10/27/20 20:32	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:32	10/26/20	
Sodium, Total	6010C	5500	ug/L	1000	1	10/27/20 20:32	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 20:32	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW18D-1020
Lab Code: R2009886-005

Service Request: R2009886
Date Collected: 10/20/20 09:50
Date Received: 10/21/20 16:00
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 20:55	10/26/20	
Barium, Total	6010C	73	ug/L	20	1	10/27/20 20:55	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 20:55	10/26/20	
Calcium, Total	6010C	41600	ug/L	1000	1	10/27/20 20:55	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:55	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 20:55	10/26/20	
Iron, Total	6010C	15500	ug/L	100	1	10/27/20 20:55	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 20:55	10/26/20	
Magnesium, Total	6010C	18600	ug/L	1000	1	10/27/20 20:55	10/26/20	
Manganese, Total	6010C	805	ug/L	10	1	10/27/20 20:55	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 20:55	10/26/20	
Potassium, Total	6010C	2900	ug/L	2000	1	10/27/20 20:55	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:55	10/26/20	
Sodium, Total	6010C	20700	ug/L	1000	1	10/27/20 20:55	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 20:55	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW17S-1020
Lab Code: R2009886-006

Service Request: R2009886
Date Collected: 10/20/20 11:20
Date Received: 10/21/20 16:00
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 20:58	10/26/20	
Barium, Total	6010C	41	ug/L	20	1	10/27/20 20:58	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 20:58	10/26/20	
Calcium, Total	6010C	89900	ug/L	1000	1	10/27/20 20:58	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:58	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 20:58	10/26/20	
Iron, Total	6010C	210	ug/L	100	1	10/27/20 20:58	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 20:58	10/26/20	
Magnesium, Total	6010C	61000	ug/L	1000	1	10/27/20 20:58	10/26/20	
Manganese, Total	6010C	24	ug/L	10	1	10/27/20 20:58	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 20:58	10/26/20	
Potassium, Total	6010C	3800	ug/L	2000	1	10/27/20 20:58	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:58	10/26/20	
Sodium, Total	6010C	67500	ug/L	1000	1	10/27/20 20:58	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 20:58	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: MW17D-1020
Lab Code: R2009886-007

Service Request: R2009886
Date Collected: 10/20/20 13:05
Date Received: 10/21/20 16:00
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 21:01	10/26/20	
Barium, Total	6010C	20 U	ug/L	20	1	10/27/20 21:01	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 21:01	10/26/20	
Calcium, Total	6010C	3000	ug/L	1000	1	10/27/20 21:01	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:01	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 21:01	10/26/20	
Iron, Total	6010C	6920	ug/L	100	1	10/27/20 21:01	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 21:01	10/26/20	
Magnesium, Total	6010C	19100	ug/L	1000	1	10/27/20 21:01	10/26/20	
Manganese, Total	6010C	97	ug/L	10	1	10/27/20 21:01	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 21:01	10/26/20	
Potassium, Total	6010C	5200	ug/L	2000	1	10/27/20 21:01	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:01	10/26/20	
Sodium, Total	6010C	34400	ug/L	1000	1	10/27/20 21:01	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 21:01	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: CW3A-1020
Lab Code: R2009886-008

Service Request: R2009886
Date Collected: 10/20/20 14:40
Date Received: 10/21/20 16:00

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 21:04	10/26/20	
Barium, Total	6010C	80	ug/L	20	1	10/27/20 21:04	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 21:04	10/26/20	
Calcium, Total	6010C	86900	ug/L	1000	1	10/27/20 21:04	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:04	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 21:04	10/26/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/27/20 21:04	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 21:04	10/26/20	
Magnesium, Total	6010C	1500	ug/L	1000	1	10/27/20 21:04	10/26/20	
Manganese, Total	6010C	26	ug/L	10	1	10/27/20 21:04	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 21:04	10/26/20	
Potassium, Total	6010C	11800	ug/L	2000	1	10/27/20 21:04	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:04	10/26/20	
Sodium, Total	6010C	42600	ug/L	1000	1	10/27/20 21:04	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 21:04	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: CW3B-1020
Lab Code: R2009886-009

Service Request: R2009886
Date Collected: 10/21/20 09:40
Date Received: 10/21/20 16:00
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 21:08	10/26/20	
Barium, Total	6010C	38	ug/L	20	1	10/27/20 21:08	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 21:08	10/26/20	
Calcium, Total	6010C	67400	ug/L	1000	1	10/27/20 21:08	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:08	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 21:08	10/26/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/27/20 21:08	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 21:08	10/26/20	
Magnesium, Total	6010C	34200	ug/L	1000	1	10/27/20 21:08	10/26/20	
Manganese, Total	6010C	29	ug/L	10	1	10/27/20 21:08	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 21:08	10/26/20	
Potassium, Total	6010C	2500	ug/L	2000	1	10/27/20 21:08	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:08	10/26/20	
Sodium, Total	6010C	21400	ug/L	1000	1	10/27/20 21:08	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 21:08	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: CW4B-1020
Lab Code: R2009886-010

Service Request: R2009886
Date Collected: 10/21/20 11:05
Date Received: 10/21/20 16:00
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 21:11	10/26/20	
Barium, Total	6010C	31	ug/L	20	1	10/27/20 21:11	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 21:11	10/26/20	
Calcium, Total	6010C	39000	ug/L	1000	1	10/27/20 21:11	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:11	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 21:11	10/26/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/27/20 21:11	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 21:11	10/26/20	
Magnesium, Total	6010C	16200	ug/L	1000	1	10/27/20 21:11	10/26/20	
Manganese, Total	6010C	37	ug/L	10	1	10/27/20 21:11	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 21:11	10/26/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/27/20 21:11	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:11	10/26/20	
Sodium, Total	6010C	14900	ug/L	1000	1	10/27/20 21:11	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 21:11	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: CW4A-1020
Lab Code: R2009886-011

Service Request: R2009886
Date Collected: 10/21/20 12:20
Date Received: 10/21/20 16:00

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 21:14	10/26/20	
Barium, Total	6010C	76	ug/L	20	1	10/27/20 21:14	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 21:14	10/26/20	
Calcium, Total	6010C	29400	ug/L	1000	1	10/27/20 21:14	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:14	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 21:14	10/26/20	
Iron, Total	6010C	1100	ug/L	100	1	10/27/20 21:14	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 21:14	10/26/20	
Magnesium, Total	6010C	16200	ug/L	1000	1	10/27/20 21:14	10/26/20	
Manganese, Total	6010C	736	ug/L	10	1	10/27/20 21:14	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 21:14	10/26/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/27/20 21:14	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:14	10/26/20	
Sodium, Total	6010C	14300	ug/L	1000	1	10/27/20 21:14	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 21:14	10/26/20	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: LS1-1020
Lab Code: R2009886-012

Service Request: R2009886
Date Collected: 10/21/20 12:50
Date Received: 10/21/20 16:00

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 21:17	10/26/20	
Barium, Total	6010C	117	ug/L	20	1	10/27/20 21:17	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 21:17	10/26/20	
Calcium, Total	6010C	122000	ug/L	1000	1	10/27/20 21:17	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:17	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 21:17	10/26/20	
Iron, Total	6010C	10900	ug/L	100	1	10/27/20 21:17	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 21:17	10/26/20	
Magnesium, Total	6010C	33800	ug/L	1000	1	10/27/20 21:17	10/26/20	
Manganese, Total	6010C	2800	ug/L	10	1	10/27/20 21:17	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 21:17	10/26/20	
Potassium, Total	6010C	4700	ug/L	2000	1	10/27/20 21:17	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 21:17	10/26/20	
Sodium, Total	6010C	27600	ug/L	1000	1	10/27/20 21:17	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 21:17	10/26/20	



QC Summary Forms

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Volatile Organic Compounds by GC/MS

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene	Toluene-d8	Dibromofluoromethane
		85-122	87-121	89-119
MW3S-1020	R2009886-001	98	108	109
MW3D-1020	R2009886-002	100	108	110
EB1-1020	R2009886-003	99	108	107
MW18S-1020	R2009886-004	100	109	107
MW18D-1020	R2009886-005	98	109	108
MW17S-1020	R2009886-006	98	107	106
MW17D-1020	R2009886-007	97	107	108
CW3A-1020	R2009886-008	98	108	107
CW3B-1020	R2009886-009	101	111	111
CW4B-1020	R2009886-010	96	105	105
CW4A-1020	R2009886-011	100	109	109
LS1-1020	R2009886-012	98	109	108
Method Blank	RQ2013084-04	100	110	111
Method Blank	RQ2013148-04	94	97	90
Lab Control Sample	RQ2013084-03	104	108	114
Lab Control Sample	RQ2013148-03	96	98	96
MW18S-1020 MS	RQ2013084-05	106	109	112
MW18S-1020 DMS	RQ2013084-06	111	109	116

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20
Date Received: 10/21/20
Date Analyzed: 10/27/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW18S-1020
Lab Code: R2009886-004
Analysis Method: 8260C
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Matrix Spike RQ2013084-05				Duplicate Matrix Spike RQ2013084-06				RPD	RPD Limit
	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
Acetone	10 U	54.1	50.0	108	56.6	50.0	113	35-183	5	30
Benzene	5.0 U	50.9	50.0	102	50.9	50.0	102	76-129	<1	30
Bromodichloromethane	5.0 U	50.3	50.0	101	51.0	50.0	102	78-133	1	30
Bromoform	5.0 U	47.3	50.0	95	50.3	50.0	101	58-133	6	30
Bromomethane	5.0 U	66.1	50.0	132	65.5	50.0	131	10-184	<1	30
2-Butanone (MEK)	10 U	55.9	50.0	112	56.6	50.0	113	61-137	1	30
Carbon Disulfide	10 U	37.5	50.0	75	42.0	50.0	84	59-140	11	30
Carbon Tetrachloride	5.0 U	59.5	50.0	119	61.0	50.0	122	65-135	3	30
Chlorobenzene	5.0 U	48.5	50.0	97	49.6	50.0	99	76-125	2	30
Chloroethane	5.0 U	58.0	50.0	116	56.1	50.0	112	48-146	3	30
Chloroform	5.0 U	52.3	50.0	105	52.0	50.0	104	75-130	<1	30
Chloromethane	5.0 U	55.7	50.0	111	56.7	50.0	113	55-160	2	30
Dibromochloromethane	5.0 U	49.3	50.0	99	51.1	50.0	102	72-128	4	30
1,1-Dichloroethane	5.0 U	50.8	50.0	102	50.3	50.0	101	74-132	1	30
1,2-Dibromoethane	5.0 U	50.1	50.0	100	51.0	50.0	102	67-127	2	30
1,2-Dichloroethane	5.0 U	54.0	50.0	108	54.9	50.0	110	68-130	2	30
1,1-Dichloroethene	5.0 U	57.1	50.0	114	57.5	50.0	115	71-118	<1	30
cis-1,2-Dichloroethene	6.6	56.1	50.0	99	54.9	50.0	97	77-127	2	30
trans-1,2-Dichloroethene	5.0 U	53.7	50.0	107	54.6	50.0	109	73-118	2	30
1,2-Dichloropropane	5.0 U	50.3	50.0	101	50.5	50.0	101	79-124	<1	30
cis-1,3-Dichloropropene	5.0 U	46.5	50.0	93	47.6	50.0	95	52-134	2	30
trans-1,3-Dichloropropene	5.0 U	47.7	50.0	95	48.8	50.0	98	71-133	2	30
Ethylbenzene	5.0 U	49.6	50.0	99	51.1	50.0	102	72-134	3	30
2-Hexanone	10 U	64.0	50.0	128	67.8	50.0	136 *	56-132	6	30
Methylene Chloride	5.0 U	45.0	50.0	90	44.6	50.0	89	73-122	<1	30
4-Methyl-2-pentanone (MIBK)	10 U	63.4	50.0	127	67.0	50.0	134	60-141	6	30
Styrene	5.0 U	50.7	50.0	101	51.2	50.0	102	74-136	1	30
1,1,2,2-Tetrachloroethane	5.0 U	48.3	50.0	97	50.0	50.0	100	72-122	4	30
Tetrachloroethene	5.0 U	51.4	50.0	103	52.7	50.0	105	72-125	2	30
Toluene	5.0 U	51.3	50.0	103	50.8	50.0	102	79-119	<1	30
1,1,1-Trichloroethane	5.0 U	55.8	50.0	112	56.2	50.0	112	74-127	<1	30
1,1,2-Trichloroethane	5.0 U	50.7	50.0	101	49.3	50.0	99	82-121	3	30
Trichloroethene	5.0 U	54.2	50.0	108	54.7	50.0	109	74-122	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: 10/19/20
Date Received: 10/21/20
Date Analyzed: 10/27/20
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: MW18S-1020
Lab Code: R2009886-004
Analysis Method: 8260C
Prep Method: EPA 5030C

Units: ug/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike RQ2013084-05			Duplicate Matrix Spike RQ2013084-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Vinyl Chloride	5.0 U	49.2	50.0	98	49.0	50.0	98	74-159	<1	30
o-Xylene	5.0 U	51.1	50.0	102	51.2	50.0	102	79-123	<1	30
m,p-Xylenes	5.0 U	104	100	104	104	100	104	80-126	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013084-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/27/20 15:48	
Benzene	5.0 U	5.0	1	10/27/20 15:48	
Bromodichloromethane	5.0 U	5.0	1	10/27/20 15:48	
Bromoform	5.0 U	5.0	1	10/27/20 15:48	
Bromomethane	5.0 U	5.0	1	10/27/20 15:48	
2-Butanone (MEK)	10 U	10	1	10/27/20 15:48	
Carbon Disulfide	10 U	10	1	10/27/20 15:48	
Carbon Tetrachloride	5.0 U	5.0	1	10/27/20 15:48	
Chlorobenzene	5.0 U	5.0	1	10/27/20 15:48	
Chloroethane	5.0 U	5.0	1	10/27/20 15:48	
Chloroform	5.0 U	5.0	1	10/27/20 15:48	
Chloromethane	5.0 U	5.0	1	10/27/20 15:48	
Dibromochloromethane	5.0 U	5.0	1	10/27/20 15:48	
1,2-Dibromoethane	5.0 U	5.0	1	10/27/20 15:48	
1,1-Dichloroethane	5.0 U	5.0	1	10/27/20 15:48	
1,2-Dichloroethane	5.0 U	5.0	1	10/27/20 15:48	
1,1-Dichloroethene	5.0 U	5.0	1	10/27/20 15:48	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 15:48	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/27/20 15:48	
1,2-Dichloropropane	5.0 U	5.0	1	10/27/20 15:48	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 15:48	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/27/20 15:48	
Ethylbenzene	5.0 U	5.0	1	10/27/20 15:48	
2-Hexanone	10 U	10	1	10/27/20 15:48	
Methylene Chloride	5.0 U	5.0	1	10/27/20 15:48	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/27/20 15:48	
Styrene	5.0 U	5.0	1	10/27/20 15:48	
1,1,1,2-Tetrachloroethane	5.0 U	5.0	1	10/27/20 15:48	
Tetrachloroethene	5.0 U	5.0	1	10/27/20 15:48	
Toluene	5.0 U	5.0	1	10/27/20 15:48	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/27/20 15:48	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/27/20 15:48	
Trichloroethene	5.0 U	5.0	1	10/27/20 15:48	
Vinyl Chloride	5.0 U	5.0	1	10/27/20 15:48	
o-Xylene	5.0 U	5.0	1	10/27/20 15:48	
m,p-Xylenes	5.0 U	5.0	1	10/27/20 15:48	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013084-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	85 - 122	10/27/20 15:48	
Toluene-d8	110	87 - 121	10/27/20 15:48	
Dibromofluoromethane	111	89 - 119	10/27/20 15:48	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013148-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Acetone	10 U	10	1	10/28/20 23:03	
Benzene	5.0 U	5.0	1	10/28/20 23:03	
Bromodichloromethane	5.0 U	5.0	1	10/28/20 23:03	
Bromoform	5.0 U	5.0	1	10/28/20 23:03	
Bromomethane	5.0 U	5.0	1	10/28/20 23:03	
2-Butanone (MEK)	10 U	10	1	10/28/20 23:03	
Carbon Disulfide	10 U	10	1	10/28/20 23:03	
Carbon Tetrachloride	5.0 U	5.0	1	10/28/20 23:03	
Chlorobenzene	5.0 U	5.0	1	10/28/20 23:03	
Chloroethane	5.0 U	5.0	1	10/28/20 23:03	
Chloroform	5.0 U	5.0	1	10/28/20 23:03	
Chloromethane	5.0 U	5.0	1	10/28/20 23:03	
Dibromochloromethane	5.0 U	5.0	1	10/28/20 23:03	
1,2-Dibromoethane	5.0 U	5.0	1	10/28/20 23:03	
1,1-Dichloroethane	5.0 U	5.0	1	10/28/20 23:03	
1,2-Dichloroethane	5.0 U	5.0	1	10/28/20 23:03	
1,1-Dichloroethene	5.0 U	5.0	1	10/28/20 23:03	
cis-1,2-Dichloroethene	5.0 U	5.0	1	10/28/20 23:03	
trans-1,2-Dichloroethene	5.0 U	5.0	1	10/28/20 23:03	
1,2-Dichloropropane	5.0 U	5.0	1	10/28/20 23:03	
cis-1,3-Dichloropropene	5.0 U	5.0	1	10/28/20 23:03	
trans-1,3-Dichloropropene	5.0 U	5.0	1	10/28/20 23:03	
Ethylbenzene	5.0 U	5.0	1	10/28/20 23:03	
2-Hexanone	10 U	10	1	10/28/20 23:03	
Methylene Chloride	5.0 U	5.0	1	10/28/20 23:03	
4-Methyl-2-pentanone (MIBK)	10 U	10	1	10/28/20 23:03	
Styrene	5.0 U	5.0	1	10/28/20 23:03	
1,1,2,2-Tetrachloroethane	5.0 U	5.0	1	10/28/20 23:03	
Tetrachloroethene	5.0 U	5.0	1	10/28/20 23:03	
Toluene	5.0 U	5.0	1	10/28/20 23:03	
1,1,1-Trichloroethane	5.0 U	5.0	1	10/28/20 23:03	
1,1,2-Trichloroethane	5.0 U	5.0	1	10/28/20 23:03	
Trichloroethene	5.0 U	5.0	1	10/28/20 23:03	
Vinyl Chloride	5.0 U	5.0	1	10/28/20 23:03	
o-Xylene	5.0 U	5.0	1	10/28/20 23:03	
m,p-Xylenes	5.0 U	5.0	1	10/28/20 23:03	

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013148-04

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	85 - 122	10/28/20 23:03	
Toluene-d8	97	87 - 121	10/28/20 23:03	
Dibromofluoromethane	90	89 - 119	10/28/20 23:03	

ALS Group USA, Corp.
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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Analyzed: 10/27/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013084-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Acetone	8260C	19.6	20.0	98	40-161
Benzene	8260C	17.4	20.0	87	79-119
Bromodichloromethane	8260C	17.9	20.0	89	81-123
Bromoform	8260C	18.1	20.0	91	65-146
Bromomethane	8260C	24.4	20.0	122	42-166
2-Butanone (MEK)	8260C	21.3	20.0	107	61-137
Carbon Disulfide	8260C	13.2	20.0	66	66-128
Carbon Tetrachloride	8260C	18.4	20.0	92	70-127
Chlorobenzene	8260C	17.2	20.0	86	80-121
Chloroethane	8260C	17.3	20.0	87	62-131
Chloroform	8260C	18.1	20.0	90	79-120
Chloromethane	8260C	18.7	20.0	94	65-135
Dibromochloromethane	8260C	19.2	20.0	96	72-128
1,1-Dichloroethane	8260C	17.2	20.0	86	80-124
1,2-Dibromoethane	8260C	19.3	20.0	96	82-127
1,2-Dichloroethane	8260C	20.8	20.0	104	71-127
1,1-Dichloroethene	8260C	18.5	20.0	93	71-118
cis-1,2-Dichloroethene	8260C	17.5	20.0	87	80-121
trans-1,2-Dichloroethene	8260C	18.1	20.0	90	73-118
1,2-Dichloropropane	8260C	18.2	20.0	91	80-119
cis-1,3-Dichloropropene	8260C	18.2	20.0	91	77-122
trans-1,3-Dichloropropene	8260C	19.4	20.0	97	71-133
Ethylbenzene	8260C	16.2	20.0	81	76-120
2-Hexanone	8260C	22.7	20.0	114	63-124
Methylene Chloride	8260C	16.5	20.0	83	73-122
4-Methyl-2-pentanone (MIBK)	8260C	23.8	20.0	119	66-124
Styrene	8260C	17.1	20.0	85	80-124
1,1,2,2-Tetrachloroethane	8260C	18.2	20.0	91	78-126
Tetrachloroethene	8260C	16.5	20.0	83	72-125
Toluene	8260C	17.0	20.0	85	79-119
1,1,1-Trichloroethane	8260C	17.8	20.0	89	75-125
1,1,2-Trichloroethane	8260C	19.4	20.0	97	82-121
Trichloroethene	8260C	17.5	20.0	88	74-122

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886

Date Analyzed: 10/27/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L

Basis:NA

Lab Control Sample

RQ2013084-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	8260C	15.7	20.0	78	74-159
o-Xylene	8260C	17.1	20.0	86	79-123
m,p-Xylenes	8260C	33.3	40.0	83	80-126

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Analyzed: 10/28/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013148-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Acetone	8260C	22.4	20.0	112	40-161
Benzene	8260C	22.3	20.0	112	79-119
Bromodichloromethane	8260C	19.4	20.0	97	81-123
Bromoform	8260C	23.0	20.0	115	65-146
Bromomethane	8260C	17.9	20.0	89	42-166
2-Butanone (MEK)	8260C	22.7	20.0	114	61-137
Carbon Disulfide	8260C	21.4	20.0	107	66-128
Carbon Tetrachloride	8260C	19.5	20.0	98	70-127
Chlorobenzene	8260C	20.8	20.0	104	80-121
Chloroethane	8260C	19.1	20.0	96	62-131
Chloroform	8260C	21.2	20.0	106	79-120
Chloromethane	8260C	26.4	20.0	132	65-135
Dibromochloromethane	8260C	22.9	20.0	115	72-128
1,1-Dichloroethane	8260C	21.9	20.0	110	80-124
1,2-Dibromoethane	8260C	21.8	20.0	109	82-127
1,2-Dichloroethane	8260C	20.3	20.0	102	71-127
1,1-Dichloroethene	8260C	23.9	20.0	119 *	71-118
cis-1,2-Dichloroethene	8260C	21.9	20.0	110	80-121
trans-1,2-Dichloroethene	8260C	23.6	20.0	118	73-118
1,2-Dichloropropane	8260C	22.2	20.0	111	80-119
cis-1,3-Dichloropropene	8260C	21.3	20.0	106	77-122
trans-1,3-Dichloropropene	8260C	20.8	20.0	104	71-133
Ethylbenzene	8260C	20.7	20.0	103	76-120
2-Hexanone	8260C	25.1	20.0	126 *	63-124
Methylene Chloride	8260C	21.2	20.0	106	73-122
4-Methyl-2-pentanone (MIBK)	8260C	24.4	20.0	122	66-124
Styrene	8260C	21.7	20.0	108	80-124
1,1,2,2-Tetrachloroethane	8260C	25.8	20.0	129 *	78-126
Tetrachloroethene	8260C	20.4	20.0	102	72-125
Toluene	8260C	21.6	20.0	108	79-119
1,1,1-Trichloroethane	8260C	19.7	20.0	98	75-125
1,1,2-Trichloroethane	8260C	22.4	20.0	112	82-121
Trichloroethene	8260C	18.7	20.0	93	74-122

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Analyzed: 10/28/20

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013148-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	8260C	20.5	20.0	102	74-159
o-Xylene	8260C	21.9	20.0	109	79-123
m,p-Xylenes	8260C	42.6	40.0	106	80-126



Metals

ALS Environmental—Rochester Laboratory
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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R2009886-MB

Service Request: R2009886
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	10/27/20 20:16	10/26/20	
Barium, Total	6010C	20 U	ug/L	20	1	10/27/20 20:16	10/26/20	
Cadmium, Total	6010C	5.0 U	ug/L	5.0	1	10/27/20 20:16	10/26/20	
Calcium, Total	6010C	1000 U	ug/L	1000	1	10/27/20 20:16	10/26/20	
Chromium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:16	10/26/20	
Copper, Total	6010C	20 U	ug/L	20	1	10/27/20 20:16	10/26/20	
Iron, Total	6010C	100 U	ug/L	100	1	10/27/20 20:16	10/26/20	
Lead, Total	6010C	50 U	ug/L	50	1	10/27/20 20:16	10/26/20	
Magnesium, Total	6010C	1000 U	ug/L	1000	1	10/27/20 20:16	10/26/20	
Manganese, Total	6010C	10 U	ug/L	10	1	10/27/20 20:16	10/26/20	
Nickel, Total	6010C	40 U	ug/L	40	1	10/27/20 20:16	10/26/20	
Potassium, Total	6010C	2000 U	ug/L	2000	1	10/27/20 20:16	10/26/20	
Selenium, Total	6010C	10 U	ug/L	10	1	10/27/20 20:16	10/26/20	
Sodium, Total	6010C	1000 U	ug/L	1000	1	10/27/20 20:16	10/26/20	
Zinc, Total	6010C	20 U	ug/L	20	1	10/27/20 20:16	10/26/20	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request:R2009886
Date Collected:10/19/20
Date Received:10/21/20
Date Analyzed:10/27/20

**Duplicate Matrix Spike Summary
Inorganic Parameters**

Sample Name: MW18S-1020
Lab Code: R2009886-004

Units:ug/L
Basis:NA

Analyte Name	Method	Matrix Spike R2009886-004MS				Duplicate Matrix Spike R2009886-004DMS				RPD	RPD Limit
		Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits		
Arsenic, Total	6010C	10 U	42	40	104	41	40	102	75-125	2	20
Barium, Total	6010C	49	2080	2000	101	2050	2000	100	75-125	1	20
Cadmium, Total	6010C	5.0 U	49.3	50.0	99	49.0	50.0	98	75-125	<1	20
Calcium, Total	6010C	38600	40800	2000	108 #	40200	2000	78 #	75-125	1	20
Chromium, Total	6010C	10 U	205	200	102	202	200	101	75-125	1	20
Copper, Total	6010C	20 U	246	250	98	244	250	97	75-125	<1	20
Iron, Total	6010C	2510	3510	1000	100	3470	1000	96	75-125	1	20
Lead, Total	6010C	50 U	494	500	99	490	500	98	75-125	<1	20
Magnesium, Total	6010C	18100	20300	2000	111 #	20000	2000	96 #	75-125	1	20
Manganese, Total	6010C	719	1220	500	101	1210	500	98	75-125	1	20
Nickel, Total	6010C	40 U	499	500	100	494	500	99	75-125	<1	20
Potassium, Total	6010C	2100	22000	20000	99	21700	20000	98	75-125	1	20
Selenium, Total	6010C	10 U	992	1010	98	983	1010	97	75-125	<1	20
Sodium, Total	6010C	5500	25400	20000	99	24900	20000	97	75-125	2	20
Zinc, Total	6010C	20 U	493	500	99	487	500	97	75-125	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Water

Service Request: R2009886
Date Analyzed: 10/27/20

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R2009886-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	6010C	39	40	99	80-120
Barium, Total	6010C	2040	2000	102	80-120
Cadmium, Total	6010C	50.3	50.0	101	80-120
Calcium, Total	6010C	2000	2000	102	80-120
Chromium, Total	6010C	203	200	102	80-120
Copper, Total	6010C	243	250	97	80-120
Iron, Total	6010C	990	1000	99	80-120
Lead, Total	6010C	499	500	100	80-120
Magnesium, Total	6010C	1900	2000	97	80-120
Manganese, Total	6010C	497	500	99	80-120
Nickel, Total	6010C	505	500	101	80-120
Potassium, Total	6010C	19300	20000	96	80-120
Selenium, Total	6010C	975	1010	97	80-120
Sodium, Total	6010C	19600	20000	98	80-120
Zinc, Total	6010C	493	500	99	80-120



November 25, 2020

Service Request No:R2010882

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF - Annual Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory November 17, 2020
For your reference, these analyses have been assigned our service request number **R2010882**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | **FAX** +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water

Service Request: R2010882
Date Received: 11/17/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

One drinking water sample was received for analysis at ALS Environmental on 11/17/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

A handwritten signature in black ink, appearing to read "Samanta", is written over a horizontal line.

Approved by _____

Date 11/25/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: WAL2-1120 **Lab ID: R2010882-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	34			20	ug/L	200.7
Calcium, Total	48300			1000	ug/L	200.7
Iron, Total	830			100	ug/L	200.7
Magnesium, Total	16200			1000	ug/L	200.7
Manganese, Total	873			10	ug/L	200.7
Sodium, Total	42700			1000	ug/L	200.7



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling

Service Request:R2010882

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010882-001	WAL2-1120	11/14/2020	1310



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**

72 Railroad Ave.
Wellsville, NY 14895

Project Manager **Jon Brandes**

CHAIN of CUSTODY

Project:

WAL - Annual Sampling

Telephone No.
585-593-1824

Email: jonb@on-sitehs.com

Method of Shipment

UPS

Special Detection Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	GC, MS VOA's 8260 (HCl)	GC, MS VOA's 524.2 (C6H8O6)	T-Metals (HNO3)	TDS, NO3, Br, Cl, SO4 (NP) (SW/SED)	NH3, TKN, COD (H2SO4) (SW/SED)	Total Color (NP) (SW/SED)	BOD (NP) (SW/SED)	Alkalinity (NP) (SW/SED)	TDS, NO3 (NP) (Manhole)
			Soil	Water	Air	Other	Yes	No											
WAL2-1120		1	X				Y	11/14/20	1310			1							

R E M A R K S

Sample Received Intact: Yes No Temperature received: Ice No ice

Relinquished by <i>[Signature]</i>	Date 11/16/20	Time 12:00	Received by (Sign & Print Name) <i>[Signature]</i> Gregory D. Esmerian
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory
	Date	Time	Date Time

Lab Work No.

R2010882 5
On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Cooler Receipt and Preservation Check Form

R2010882

5

On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling

Project/Client ON-site

Folder Number

Cooler received on 11-17-2020 by: JE

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

5a	Perchlorate samples have required headspace?	Y	N	<input checked="" type="checkbox"/> NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y	N	<input checked="" type="checkbox"/> NA
6	Where did the bottles originate?	<u>ALS/ROC</u>	<u>CLIENT</u>	
7	Soil VOA received as:	Bulk	Encore	5035set <input checked="" type="checkbox"/> NA

8. Temperature Readings Date: 11-17-2020 Time: 10:30 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>5.3</u>							
Within 0-6°C?	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> Y	<input type="checkbox"/> N
If <0°C, were samples frozen?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> Y	<input type="checkbox"/> N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by JE on 11/17/20 at 10:33
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 11/17/2020 Time: 16:45 by: aw

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2	<u>223419</u>	HNO ₃	<input checked="" type="checkbox"/>		<u>207024314</u>					
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 20-09-01
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: aw
PC Secondary Review: 11/19/20 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed (>100% Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2010882

Sample Name: WAL2-1120
Lab Code: R2010882-001
Sample Matrix: Drinking Water

Date Collected: 11/14/20
Date Received: 11/17/20

Analysis Method
200.7

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water
Sample Name: WAL2-1120
Lab Code: R2010882-001

Service Request: R2010882
Date Collected: 11/14/20 13:10
Date Received: 11/17/20 09:45
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	200.7	10 U	ug/L	10	1	11/19/20 13:10	11/18/20	
Barium, Total	200.7	34	ug/L	20	1	11/19/20 13:10	11/18/20	
Cadmium, Total	200.7	5.0 U	ug/L	5.0	1	11/19/20 13:10	11/18/20	
Calcium, Total	200.7	48300	ug/L	1000	1	11/19/20 13:10	11/18/20	
Chromium, Total	200.7	10 U	ug/L	10	1	11/19/20 13:10	11/18/20	
Copper, Total	200.7	20 U	ug/L	20	1	11/19/20 13:10	11/18/20	
Iron, Total	200.7	830	ug/L	100	1	11/19/20 13:10	11/18/20	
Lead, Total	200.7	50 U	ug/L	50	1	11/19/20 13:10	11/18/20	
Magnesium, Total	200.7	16200	ug/L	1000	1	11/19/20 13:10	11/18/20	
Manganese, Total	200.7	873	ug/L	10	1	11/19/20 13:10	11/18/20	
Nickel, Total	200.7	40 U	ug/L	40	1	11/19/20 13:10	11/18/20	
Potassium, Total	200.7	2000 U	ug/L	2000	1	11/19/20 13:10	11/18/20	
Selenium, Total	200.7	10 U	ug/L	10	1	11/19/20 13:10	11/18/20	
Sodium, Total	200.7	42700	ug/L	1000	1	11/19/20 13:10	11/18/20	
Zinc, Total	200.7	20 U	ug/L	20	1	11/19/20 13:10	11/18/20	



QC Summary Forms

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water
Sample Name: Method Blank
Lab Code: R2010882-MB

Service Request: R2010882
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	200.7	10 U	ug/L	10	1	11/19/20 11:49	11/18/20	
Barium, Total	200.7	20 U	ug/L	20	1	11/19/20 11:49	11/18/20	
Cadmium, Total	200.7	5.0 U	ug/L	5.0	1	11/19/20 11:49	11/18/20	
Calcium, Total	200.7	1000 U	ug/L	1000	1	11/19/20 11:49	11/18/20	
Chromium, Total	200.7	10 U	ug/L	10	1	11/19/20 11:49	11/18/20	
Copper, Total	200.7	20 U	ug/L	20	1	11/19/20 11:49	11/18/20	
Iron, Total	200.7	100 U	ug/L	100	1	11/19/20 11:49	11/18/20	
Lead, Total	200.7	50 U	ug/L	50	1	11/19/20 11:49	11/18/20	
Magnesium, Total	200.7	1000 U	ug/L	1000	1	11/19/20 11:49	11/18/20	
Manganese, Total	200.7	10 U	ug/L	10	1	11/19/20 11:49	11/18/20	
Nickel, Total	200.7	40 U	ug/L	40	1	11/19/20 11:49	11/18/20	
Potassium, Total	200.7	2000 U	ug/L	2000	1	11/19/20 11:49	11/18/20	
Selenium, Total	200.7	10 U	ug/L	10	1	11/19/20 11:49	11/18/20	
Sodium, Total	200.7	1000 U	ug/L	1000	1	11/19/20 11:49	11/18/20	
Zinc, Total	200.7	20 U	ug/L	20	1	11/19/20 11:49	11/18/20	

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dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water

Service Request: R2010882
Date Analyzed: 11/19/20

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R2010882-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	200.7	38.7	40	97	85-115
Barium, Total	200.7	2030	2000	101	85-115
Cadmium, Total	200.7	50.5	50.0	101	85-115
Calcium, Total	200.7	2000	2000	100	85-115
Chromium, Total	200.7	203	200	101	85-115
Copper, Total	200.7	242	250	97	85-115
Iron, Total	200.7	989	1000	99	85-115
Lead, Total	200.7	501	500	100	85-115
Magnesium, Total	200.7	2000	2000	98	85-115
Manganese, Total	200.7	493	500	99	85-115
Nickel, Total	200.7	499	500	100	85-115
Potassium, Total	200.7	19100	20000	96	85-115
Selenium, Total	200.7	909	1010	90	85-115
Sodium, Total	200.7	19100	20000	95	85-115
Zinc, Total	200.7	491	500	98	85-115



January 07, 2021

Service Request No:R2010180

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF - Annual Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory October 29, 2020
For your reference, these analyses have been assigned our service request number **R2010180**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water

Service Request: R2010180
Date Received: 10/29/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

One drinking water sample was received for analysis at ALS Environmental on 10/29/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

Method 200.7, 11/02/2020: The control limits for matrix spike recovery of one or more of the spiked analytes are not applicable and have been flagged with a "#". The concentration of the analyte(s) in the parent sample is more than 4x the spike concentration. No further corrective action was required.

Subcontracted Analytical Parameters:

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

A handwritten signature in black ink, appearing to read "Samanta", is written over a horizontal line.

Approved by _____

Date 11/13/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: WAL1-1020

Lab ID: R2010180-001

Analyte	Results	Flag	MDL	MRL	Units	Method
Barium, Total	71			20	ug/L	200.7
Calcium, Total	38400			1000	ug/L	200.7
Magnesium, Total	13000			1000	ug/L	200.7
Manganese, Total	110			10	ug/L	200.7
Sodium, Total	8000			1000	ug/L	200.7



Sample Receipt Information

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling

Service Request:R2010180

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010180-001	WAL1-1020	10/28/2020	1010



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**
72 Railroad Ave.
Wellsville, NY 14895

CHAIN of CUSTODY
Project: **WAL - Annual Sampling**
Telephone No. 585-593-1824
Email: jonb@on-sitehs.com

Page 1 of 1
Method of Shipment
UPS

Project Manager: **Jon Brandes**

Special Detection Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	GC:MS VOA's 8260 (HCl)	GC:MS VOA's 524.2 (C6H806)	T-Metals (HNO3)	TDS, NO3, Br, Cl, SO4 (NP) (SW/SED)	NH3, TKN, COD (H2SO4) (SW/SED)	Total Color (NP) (SW/SED)	BOD (NP) (SW/SED)	Alkalinity (NP) (SW/SED)	TDS, NO3 (NP) (Manhole)
			Soil	Water	Air	Other	Yes	No											
WAL-7020		4	X				X		10/28/20	1010	3	1							

REMARKS

Sample Received Intact: Yes No Temperature received: Ice No ice

Relinquished by <i>Jon Brandes / Jonathan E Brandes</i>	Date 10/28/20	Time 1400	Received by (Sign & Print Name) <i>Gregory O. Esmerian</i>
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory Date Time

Lab Work No.



Cooler Receipt and Preservation Check Form

R2010180

5

On-Site Technical Services, Inc.
Wellsville-Andover LF - Annual Sampling



Project/Client On-Site Folder Number _____

Cooler received on 10-29-2020 by: JE/G COURIER: ALS UPS PEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<input checked="" type="radio"/> Y <input type="radio"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="radio"/> Y <input type="radio"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="radio"/> Y <input type="radio"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="radio"/> Y <input type="radio"/> N

5a	Perchlorate samples have required headspace?	Y <input type="radio"/> N <input checked="" type="radio"/> NA
5b	Did VOA vials <u>Alk</u> Sulfide have sig* bubbles?	Y <input type="radio"/> N <input checked="" type="radio"/> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>NA</u>

8. Temperature Readings Date: 10/29/2020 Time: 09:35 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>4.6</u>	<u>2.9</u>					
Within 0-6°C?	<input checked="" type="radio"/> Y <input type="radio"/> N	<input checked="" type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
If <0°C, were samples frozen?	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by JE on 10/29/20 at 09:53
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 10/29/2020 Time: 1700 by: AW

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact Y/N with MS Y/N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
<u>2</u>	<u>775419</u>	HNO ₃	<input checked="" type="checkbox"/>		<u>20700454</u>					
<u>2</u>		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 20-04-07
Explain all Discrepancies/ Other Comments: _____

HPROD	BULK
HTR	FLDT
<u>SUB</u>	HGFB
ALS	LL3541

Labels secondary reviewed by: AL
PC Secondary Review: AW ID/20/20 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

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REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\times 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling/

Service Request: R2010180

Sample Name: WAL1-1020
Lab Code: R2010180-001
Sample Matrix: Drinking Water

Date Collected: 10/28/20
Date Received: 10/29/20

Analysis Method
200.7

Extracted/Digested By
AKONZEL

Analyzed By
KMCLAEN



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water
Sample Name: WAL1-1020
Lab Code: R2010180-001

Service Request: R2010180
Date Collected: 10/28/20 10:10
Date Received: 10/29/20 09:30

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	200.7	10 U	ug/L	10	1	11/02/20 20:36	11/02/20	
Barium, Total	200.7	71	ug/L	20	1	11/02/20 20:36	11/02/20	
Cadmium, Total	200.7	5.0 U	ug/L	5.0	1	11/02/20 20:36	11/02/20	
Calcium, Total	200.7	38400	ug/L	1000	1	11/02/20 20:36	11/02/20	
Chromium, Total	200.7	10 U	ug/L	10	1	11/02/20 20:36	11/02/20	
Copper, Total	200.7	20 U	ug/L	20	1	11/02/20 20:36	11/02/20	
Iron, Total	200.7	100 U	ug/L	100	1	11/02/20 20:36	11/02/20	
Lead, Total	200.7	50 U	ug/L	50	1	11/02/20 20:36	11/02/20	
Magnesium, Total	200.7	13000	ug/L	1000	1	11/02/20 20:36	11/02/20	
Manganese, Total	200.7	110	ug/L	10	1	11/02/20 20:36	11/02/20	
Nickel, Total	200.7	40 U	ug/L	40	1	11/02/20 20:36	11/02/20	
Potassium, Total	200.7	2000 U	ug/L	2000	1	11/02/20 20:36	11/02/20	
Selenium, Total	200.7	10 U	ug/L	10	1	11/02/20 20:36	11/02/20	
Sodium, Total	200.7	8000	ug/L	1000	1	11/02/20 20:36	11/02/20	
Zinc, Total	200.7	20 U	ug/L	20	1	11/02/20 20:36	11/02/20	



QC Summary Forms

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Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water
Sample Name: Method Blank
Lab Code: R2010180-MB

Service Request: R2010180
Date Collected: NA
Date Received: NA
Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	200.7	10 U	ug/L	10	1	11/02/20 20:30	11/02/20	
Barium, Total	200.7	20 U	ug/L	20	1	11/02/20 20:30	11/02/20	
Cadmium, Total	200.7	5.0 U	ug/L	5.0	1	11/02/20 20:30	11/02/20	
Calcium, Total	200.7	1000 U	ug/L	1000	1	11/02/20 20:30	11/02/20	
Chromium, Total	200.7	10 U	ug/L	10	1	11/02/20 20:30	11/02/20	
Copper, Total	200.7	20 U	ug/L	20	1	11/02/20 20:30	11/02/20	
Iron, Total	200.7	100 U	ug/L	100	1	11/02/20 20:30	11/02/20	
Lead, Total	200.7	50 U	ug/L	50	1	11/02/20 20:30	11/02/20	
Magnesium, Total	200.7	1000 U	ug/L	1000	1	11/02/20 20:30	11/02/20	
Manganese, Total	200.7	10 U	ug/L	10	1	11/02/20 20:30	11/02/20	
Nickel, Total	200.7	40 U	ug/L	40	1	11/02/20 20:30	11/02/20	
Potassium, Total	200.7	2000 U	ug/L	2000	1	11/02/20 20:30	11/02/20	
Selenium, Total	200.7	10 U	ug/L	10	1	11/02/20 20:30	11/02/20	
Sodium, Total	200.7	1000 U	ug/L	1000	1	11/02/20 20:30	11/02/20	
Zinc, Total	200.7	20 U	ug/L	20	1	11/02/20 20:30	11/02/20	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water

Service Request:R2010180
Date Collected:10/28/20
Date Received:10/29/20
Date Analyzed:11/2/20

**Duplicate Matrix Spike Summary
Inorganic Parameters**

Sample Name: WAL1-1020
Lab Code: R2010180-001

Units:ug/L
Basis:NA

Analyte Name	Method	Sample Result	Result	Matrix Spike R2010180-001MS		Duplicate Matrix Spike R2010180-001DMS		% Rec Limits	RPD	RPD Limit	
				Spike Amount	% Rec	Result	Spike Amount				% Rec
Arsenic, Total	200.7	10 U	37	40	92	37	40	93	70-130	<1	20
Barium, Total	200.7	71	2050	2000	99	2060	2000	99	70-130	<1	20
Cadmium, Total	200.7	5.0 U	48.2	50.0	96	48.2	50.0	96	70-130	<1	20
Calcium, Total	200.7	38400	41200	2000	139 #	40200	2000	90 #	70-130	2	20
Chromium, Total	200.7	10 U	200	200	100	199	200	100	70-130	<1	20
Copper, Total	200.7	20 U	239	250	96	238	250	95	70-130	<1	20
Iron, Total	200.7	100 U	990	1000	99	990	1000	99	70-130	<1	20
Lead, Total	200.7	50 U	482	500	96	480	500	96	70-130	<1	20
Magnesium, Total	200.7	13000	15300	2000	116 #	15000	2000	99 #	70-130	2	20
Manganese, Total	200.7	110	599	500	98	596	500	97	70-130	<1	20
Nickel, Total	200.7	40 U	469	500	94	468	500	94	70-130	<1	20
Potassium, Total	200.7	2000 U	20600	20000	103	20600	20000	103	70-130	<1	20
Selenium, Total	200.7	10 U	913	1010	90	914	1010	90	70-130	<1	20
Sodium, Total	200.7	8000	26900	20000	95	26700	20000	94	70-130	<1	20
Zinc, Total	200.7	20 U	495	500	99	494	500	99	70-130	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF - Annual Sampling
Sample Matrix: Drinking Water

Service Request: R2010180
Date Analyzed: 11/02/20

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R2010180-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	200.7	34	40	86	85-115
Barium, Total	200.7	2030	2000	101	85-115
Cadmium, Total	200.7	49.9	50.0	100	85-115
Calcium, Total	200.7	2000	2000	99	85-115
Chromium, Total	200.7	202	200	101	85-115
Copper, Total	200.7	240	250	96	85-115
Iron, Total	200.7	983	1000	98	85-115
Lead, Total	200.7	495	500	99	85-115
Magnesium, Total	200.7	1900	2000	96	85-115
Manganese, Total	200.7	490	500	98	85-115
Nickel, Total	200.7	491	500	98	85-115
Potassium, Total	200.7	19100	20000	95	85-115
Selenium, Total	200.7	925	1010	92	85-115
Sodium, Total	200.7	19000	20000	95	85-115
Zinc, Total	200.7	492	500	98	85-115



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

November 9, 2020

Reports and Invoices
ALS Environmental
1565 Jefferson Road
Building 300, Suite 360
Rochester, NY 14623

Certificate of Analysis

Revised Report - 11/9/2020 9:12:22 AM - See workorder comment section for explanation

Project Name:	Custom EDD & QC, No MDL	Workorder:	3137967
Purchase Order:		Workorder ID:	AER521 R2010180

Dear Reports Invoices:

Enclosed are the analytical results for samples received by the laboratory on Saturday, October 31, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Michael Chevalier , Mr. Brady Kalkman , Ms. Janice Jaeger

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.



Ms. Sarah S Leung
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3137967 AER521|R2010180

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3137967001	WAL1-1020	Drinking Water	10/28/2020 10:10	10/31/2020 09:03	Collected by Client

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SAMPLE SUMMARY

Workorder: 3137967 AER521|R2010180

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 3137967 AER521|R2010180

Workorder Comments

This certificate of analysis was modified to report MTBE and to generate a level IV data package.

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ANALYTICAL RESULTS

Workorder: 3137967 AER521|R2010180

Lab ID: **3137967001**

Date Collected: 10/28/2020 10:10

Matrix: Drinking Water

Sample ID: **WAL1-1020**

Date Received: 10/31/2020 09:03

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Bromobenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Bromochloromethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Bromomethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
n-Butylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
tert-Butylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
sec-Butylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Carbon Tetrachloride	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Chlorobenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Chloroethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Chloromethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
o-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
p-Chlorotoluene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2-Dibromo-3-chloropropane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Dibromomethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,3-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,4-Dichlorobenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Dichlorodifluoromethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,3-Dichloropropane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
2,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2-Dichloropropane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,1-Dichloropropene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
cis-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
trans-1,3-Dichloropropene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Hexachlorobutadiene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Isopropylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
p-Isopropyltoluene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Methyl t-Butyl Ether	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A

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ANALYTICAL RESULTS

Workorder: 3137967 AER521|R2010180

Lab ID: **3137967001**

Date Collected: 10/28/2020 10:10

Matrix: Drinking Water

Sample ID: **WAL1-1020**

Date Received: 10/31/2020 09:03

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
n-Propylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Styrene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Toluene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2,3-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2,4-Trichlorobenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,1,2-Trichloroethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2,3-Trichloropropane	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,2,4-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
1,3,5-Trimethylbenzene	ND		ug/L	0.50	EPA 524.2			11/4/20 04:44	PDK	A
o-Xylene	ND		ug/L	0.25	EPA 524.2			11/4/20 04:44	PDK	A
mp-Xylene	ND		ug/L	0.25	EPA 524.2			11/4/20 04:44	PDK	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichlorobenzene-d4 (S)	87.5		%	70 - 130	EPA 524.2			11/4/20 04:44	PDK	A
4-Bromofluorobenzene (S)	80.6		%	70 - 130	EPA 524.2			11/4/20 04:44	PDK	A



Ms. Sarah S Leung
Project Coordinator

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3137967 AER521|R2010180

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3137967001	WAL1-1020	EPA 524.2		

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QUALITY CONTROL DATA

Workorder: 3137967 AER521|R2010180

QC Batch: VOMS/57030 **Analysis Method:** EPA 524.2

QC Batch Method: EPA 524.2

Associated Lab Samples: 3137967001

METHOD BLANK: 3227276

Parameter	Blank Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Bromobenzene	ND	ug/L	0.50
Bromochloromethane	ND	ug/L	0.50
Bromomethane	ND	ug/L	0.50
n-Butylbenzene	ND	ug/L	0.50
tert-Butylbenzene	ND	ug/L	0.50
sec-Butylbenzene	ND	ug/L	0.50
Carbon Tetrachloride	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	0.50
Chloroethane	ND	ug/L	0.50
Chloromethane	ND	ug/L	0.50
o-Chlorotoluene	ND	ug/L	0.50
p-Chlorotoluene	ND	ug/L	0.50
1,2-Dibromo-3-chloropropane	ND	ug/L	0.50
Dibromomethane	ND	ug/L	0.50
1,2-Dichlorobenzene	ND	ug/L	0.50
1,3-Dichlorobenzene	ND	ug/L	0.50
1,4-Dichlorobenzene	ND	ug/L	0.50
Dichlorodifluoromethane	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
1,2-Dichloroethane	ND	ug/L	0.50
1,1-Dichloroethene	ND	ug/L	0.50
cis-1,2-Dichloroethene	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
1,3-Dichloropropane	ND	ug/L	0.50
2,2-Dichloropropane	ND	ug/L	0.50
1,2-Dichloropropane	ND	ug/L	0.50
1,1-Dichloropropene	ND	ug/L	0.50
cis-1,3-Dichloropropene	ND	ug/L	0.50
trans-1,3-Dichloropropene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Hexachlorobutadiene	ND	ug/L	0.50
Isopropylbenzene	ND	ug/L	0.50
p-Isopropyltoluene	ND	ug/L	0.50
Methyl t-Butyl Ether	ND	ug/L	0.50
Methylene Chloride	ND	ug/L	0.50
n-Propylbenzene	ND	ug/L	0.50

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QUALITY CONTROL DATA

Workorder: 3137967 AER521|R2010180

Styrene	ND	ug/L	0.50
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50
Tetrachloroethene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
1,2,3-Trichlorobenzene	ND	ug/L	0.50
1,2,4-Trichlorobenzene	ND	ug/L	0.50
1,1,1-Trichloroethane	ND	ug/L	0.50
1,1,2-Trichloroethane	ND	ug/L	0.50
Trichloroethene	ND	ug/L	0.50
Trichlorofluoromethane	ND	ug/L	0.50
1,2,3-Trichloropropane	ND	ug/L	0.50
1,2,4-Trimethylbenzene	ND	ug/L	0.50
1,3,5-Trimethylbenzene	ND	ug/L	0.50
o-Xylene	ND	ug/L	0.25
mp-Xylene	ND	ug/L	0.25
1,2-Dichlorobenzene-d4 (S)	91.9	%	70 - 130
4-Bromofluorobenzene (S)	83	%	70 - 130

LABORATORY CONTROL SAMPLE: 3227277

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2-Dichlorobenzene-d4 (S)	107	%			70 - 130
4-Bromofluorobenzene (S)	103	%			70 - 130

LABORATORY CONTROL SAMPLE: 3227278

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Benzene	107	ug/L	5	5.4	70 - 130
Bromobenzene	108	ug/L	5	5.4	70 - 130
Bromochloromethane	104	ug/L	5	5.2	70 - 130
Bromomethane	86	ug/L	5	4.3	70 - 130
n-Butylbenzene	79.5	ug/L	5	4.0	70 - 130
tert-Butylbenzene	83.1	ug/L	5	4.2	70 - 130
sec-Butylbenzene	88.8	ug/L	5	4.4	70 - 130
Carbon Tetrachloride	102	ug/L	5	5.1	70 - 130
Chlorobenzene	111	ug/L	5	5.6	70 - 130
Chloroethane	108	ug/L	5	5.4	70 - 130
Chloromethane	90	ug/L	5	4.5	70 - 130
o-Chlorotoluene	103	ug/L	5	5.2	70 - 130
p-Chlorotoluene	99.9	ug/L	5	5.0	70 - 130

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QUALITY CONTROL DATA

Workorder: 3137967 AER521|R2010180

1,2-Dibromo-3-chloropropane	88.8	ug/L	5	4.4	70 - 130
Dibromomethane	104	ug/L	5	5.2	70 - 130
1,2-Dichlorobenzene	105	ug/L	5	5.2	70 - 130
1,3-Dichlorobenzene	96.8	ug/L	5	4.8	70 - 130
1,4-Dichlorobenzene	96.9	ug/L	5	4.8	70 - 130
Dichlorodifluoromethane	103	ug/L	5	5.2	70 - 130
1,1-Dichloroethane	107	ug/L	5	5.3	70 - 130
1,2-Dichloroethane	108	ug/L	5	5.4	70 - 130
1,1-Dichloroethene	111	ug/L	5	5.6	70 - 130
cis-1,2-Dichloroethene	105	ug/L	5	5.3	70 - 130
trans-1,2-Dichloroethene	104	ug/L	5	5.2	70 - 130
1,3-Dichloropropane	113	ug/L	5	5.6	70 - 130
2,2-Dichloropropane	118	ug/L	5	5.9	70 - 130
1,2-Dichloropropane	105	ug/L	5	5.2	70 - 130
1,1-Dichloropropene	112	ug/L	5	5.6	70 - 130
cis-1,3-Dichloropropene	109	ug/L	5	5.4	70 - 130
trans-1,3-Dichloropropene	102	ug/L	5	5.1	70 - 130
Ethylbenzene	95.6	ug/L	5	4.8	70 - 130
Hexachlorobutadiene	87.6	ug/L	5	4.4	70 - 130
Isopropylbenzene	85.4	ug/L	5	4.3	70 - 130
p-Isopropyltoluene	85.6	ug/L	5	4.3	70 - 130
Methyl t-Butyl Ether	101	ug/L	5	5.0	70 - 130
Methylene Chloride	121	ug/L	5	6.1	70 - 130
n-Propylbenzene	93.5	ug/L	5	4.7	70 - 130
Styrene	85.5	ug/L	5	4.3	70 - 130
1,1,1,2-Tetrachloroethane	109	ug/L	5	5.4	70 - 130
1,1,2,2-Tetrachloroethane	103	ug/L	5	5.2	70 - 130
Tetrachloroethene	102	ug/L	5	5.1	70 - 130
Toluene	105	ug/L	5	5.3	70 - 130
1,2,3-Trichlorobenzene	84.5	ug/L	5	4.2	70 - 130
1,2,4-Trichlorobenzene	83.4	ug/L	5	4.2	70 - 130
1,1,1-Trichloroethane	105	ug/L	5	5.3	70 - 130
1,1,2-Trichloroethane	105	ug/L	5	5.3	70 - 130
Trichloroethene	103	ug/L	5	5.1	70 - 130
Trichlorofluoromethane	98.7	ug/L	5	4.9	70 - 130
1,2,3-Trichloropropane	107	ug/L	5	5.4	70 - 130
1,2,4-Trimethylbenzene	85.7	ug/L	5	4.3	70 - 130
1,3,5-Trimethylbenzene	89.2	ug/L	5	4.5	70 - 130
o-Xylene	85.2	ug/L	5	4.3	70 - 130
mp-Xylene	85.7	ug/L	10	8.6	70 - 130
1,2-Dichlorobenzene-d4 (S)	106	%			70 - 130
4-Bromofluorobenzene (S)	112	%			70 - 130

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

QUALITY CONTROL DATA

Workorder: 3137967 AER521|R2010180

MATRIX SPIKE: 3227582 DUPLICATE: 3227583 ORIGINAL: 3137631001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Benzene	0	ug/L	5	5.3495	5.00062	107	100	70 - 130	6.74	40
Carbon Tetrachloride	0	ug/L	5	6.23819	5.72006	125	114	70 - 130	8.67	40
Chlorobenzene	0	ug/L	5	5.17357	5.01503	103	100	70 - 130	3.11	40
1,2-Dichlorobenzene	0	ug/L	5	4.88394	4.77507	97.7	95.5	70 - 130	2.25	40
1,4-Dichlorobenzene	0	ug/L	5	4.87067	4.69902	97.4	94	70 - 130	3.59	40
1,2-Dichloroethane	0	ug/L	5	5.15449	5.29719	103	106	70 - 130	2.73	40
1,1-Dichloroethene	0	ug/L	5	5.91453	5.27059	118	105	70 - 130	11.5	40
cis-1,2-Dichloroethene	0	ug/L	5	5.46902	4.96994	109	99.4	70 - 130	9.56	40
trans-1,2-Dichloroethene	0	ug/L	5	5.49947	5.09105	110	102	70 - 130	7.71	40
1,2-Dichloropropane	0	ug/L	5	4.93414	4.78958	98.7	95.8	70 - 130	2.97	40
Ethylbenzene	0	ug/L	5	4.63581	4.59911	92.7	92	70 - 130	.79	40
Methylene Chloride	0	ug/L	5	5.80619	5.45198	116	109	70 - 130	6.29	40
Styrene	0	ug/L	5	4.02483	3.8175	80.5	76.4	70 - 130	5.29	40
Tetrachloroethene	0	ug/L	5	5.05647	4.68517	101	93.7	70 - 130	7.62	40
Toluene	0	ug/L	5	5.01872	4.9716	100	99.4	70 - 130	.94	40
1,2,4-Trichlorobenzene	0	ug/L	5	3.65372	3.70074	73.1	74	70 - 130	1.28	40
1,1,1-Trichloroethane	0	ug/L	5	5.20922	4.83185	104	96.6	70 - 130	7.52	40
1,1,2-Trichloroethane	0	ug/L	5	5.05903	4.96356	101	99.3	70 - 130	1.91	40
Trichloroethene	0	ug/L	5	5.42773	4.84542	109	96.9	70 - 130	11.3	40
1,2-Dichlorobenzene-d4 (S)	106	%				106	104	70 - 130		
4-Bromofluorobenzene (S)	105	%				105	108	70 - 130		

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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3137967 AER521|R2010180

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3137967001	WAL1-1020			EPA 524.2	VOMS/57030

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

ALS Environmental Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-3380 • FAX 585-288-8475

Project Number: R2010180
 Project Manager: Janice Jaeger
 QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Time			Lab ID	VOC 524.2
				Date	Time	Lab ID		
R2010180-001	WALL-1020	3	Drinking Water	10/28/20	1010	Middletown ALS	X	



-nydw + MRBE

G. 40mL AHCL
 DNN
 31 OCT 2020

Folder Comments:
 MRLU


1730 2433 1460

Special Instructions/Comments nysdec eqvis v4 et excel leads NPDES H - Test is On Hold P - Test is Authorized for Prep Only	Turnaround Requirements RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: 11/09/20	Report Requirements I. Results Only _____ <input checked="" type="checkbox"/> II. Results + QC Summaries III. Results + QC and Calibration Summaries _____ <input checked="" type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/1 <u>N</u> EDD <u>Y</u>	Invoice Information PO# 58R2010180 Bill to _____
--	--	---	--

Relinquished By: Abdul 10/30/2020 17:50 Received By: Fedex
 Airbill Number: John Graves
Duraw 31 OCT 2020 09:03

7967

R2010180

 **Ship To: Middletown ALS**
ALS Environmental - Middletown
301 Fulling Mill Rd.
Middletown, PA 17057

PC AKD Date 10/30/20
SMO _____ Date _____

Instructions:
Ice _____
Dry Ice _____
No Ice _____
Bill to Client Account _____

Shipping:
Overnight _____
2nd Day _____
Ground _____

Comments:

ALS Group USA, Corp.
www.alsglobal.com
An ALS Limited Company



301 Fulling Mill Road
 Middletown, PA 17057
 P: (717) 944-5541
 F: (717) 944-1430

Condition of Sample Receipt Form

Client: ALS Roch Work Order #: 7967 Initials: DN Date: 31 Oct

- | | | | |
|--|---------------------------------------|--------------------------------------|-------------------------------------|
| 1. Were airbills / tracking numbers present and recorded?..... | NONE | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| Tracking number: <u>5CC 6CC</u> | | | |
| 2. Are Custody Seals on shipping containers intact?..... | <input checked="" type="radio"/> NONE | <input type="radio"/> YES | <input type="radio"/> NO |
| 3. Are Custody Seals on sample containers intact?..... | NONE | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 4. Is there a COC (Chain-of-Custody) present?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5. Are the COC and bottle labels complete, legible and in agreement?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5a. Does the COC contain sample locations?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5b. Does the COC contain date and time of sample collection for all samples?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5c. Does the COC contain sample collectors name?..... | | <input checked="" type="radio"/> YES | <input checked="" type="radio"/> NO |
| 5d. Does the COC note the type(s) of preservation for all bottles?..... | | <input checked="" type="radio"/> YES | <input checked="" type="radio"/> NO |
| 5e. Does the COC note the number of bottles submitted for each sample?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 5f. Does the COC note the type of sample, composite or grab?..... | | <input checked="" type="radio"/> YES | <input checked="" type="radio"/> NO |
| 5g. Does the COC note the matrix of the sample(s)?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 6. Are all aqueous samples requiring preservation preserved correctly? ¹ | <input checked="" type="radio"/> N/A | <input type="radio"/> YES | <input type="radio"/> NO |
| 7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 8. Are all samples within holding times for the requested analyses?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?..... | <input checked="" type="radio"/> N/A | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 11. Were the samples received on ice?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 12. Were sample temperatures measured at 0.0-6.0°C?..... | | <input checked="" type="radio"/> YES | <input type="radio"/> NO |
| 13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below..... | | <input checked="" type="radio"/> YES | <input checked="" type="radio"/> NO |
| 13a. Are the samples required for SDWA compliance reporting?..... | N/A | <input type="radio"/> YES | <input checked="" type="radio"/> NO |
| 13b. Did the client provide a SDWA PWS ID#?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |
| 13c. Are all aqueous unpreserved SDWA samples pH 5-9?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |
| 13d. Did the client provide the SDWA sample location ID/Description?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |
| 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?..... | N/A | <input type="radio"/> YES | <input type="radio"/> NO |

Cooler #: _____

Temperature (°C): 3 _____

Thermometer ID: 294 _____

Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

Appendix G

Residential Water Supply
Emerging Contaminants
Sampling



ON-SITE GEOLOGICAL SERVICES, D.P.C.

72 Railroad Avenue
Wellsville, New York 14895

Phone: (585) 593-1824
Fax: (585) 593-7471

February 10, 2021 via email

Ms. Megan Kuczka
Environmental Program Specialist-1
Division of Environmental Remediation, Region 9
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

Re: Private Water Supply Emerging Contaminants Sampling Results, Wellsville-Andover Landfill Site No 902004

Dear Ms. Kuczka:

The purpose of this letter is to report results of the private water supply emerging contaminants sampling conducted between October 21, 2020 and November 14, 2020 associated with the closed Wellsville-Andover Landfill (Site). This sampling is required as directed by New York State Department of Environmental Conservation (NYSDEC) letter entitled *Request for Water Supply Sampling Wellsville-Andover Landfill, Wellsville Allegany County, Site No.: 902004*, dated February 14, 2020. The February 14, 2020 letter states that the NYSDEC is requesting testing for per- and polyfluoroalkyl substances (PFAS) at six private water supplies adjacent to the Site. The requested water supply locations are listed in the table below.

LOCATION-ID	LOCATION ADDRESS	PRIMARY OWNER	MAILING ADDRESS
WAL-01	3987 Snyder Rd, Wellsville, NY	Carl, John	3987 Snyder Rd, Wellsville, NY 14895
WAL-02	3899 Snyder Rd, Wellsville, NY	Rosini, Phillip	72 Havenshire Rd, Rochester, NY 14625
WAL-03	3793 Snyder Rd, Wellsville, NY	York, Mandy	3793 Snyder Rd, Wellsville, NY 14895
WAL-11	3947 Duffy Hollow Rd, Wellsville, NY	Tuberdyck, Raymond	6393 Dale Rd, Newfane, NY 14108
WAL-19	3914 Snyder Rd, Wellsville, NY	Ladue, Daniel & Barbara	3914 Snyder Rd, Wellsville, NY 14895
WAL-21	Duffy Hollow Rd, Andover, NY	Pen Hill Hunt Club	40 Frank St, Fairport, NY 14450

A work plan entitled: *Work Plan to Conduct Private Water Supply Sampling, Wellsville-Andover Landfill Site No 902004*, prepared by On-Site Geological Services, D.P.C. (On-Site) was submitted to NYSDEC on April

29, 2020 (Work Plan). The work plan was approved by NYSDEC in a letter dated May 27, 2020. The associated sampling and analysis was conducted in general accordance with the work plan.

Private Water Supply Sampling Requests

On June 1, 2020 On-Site mailed letters to the primary owners listed on the table above requesting permission to collect private water supply samples. The primary owners of WAL-01, WAL-02, WAL-11 and WAL-19 each approved sampling of their associated water supplies. Of note, the WAL-02 primary owner listed above informed On-Site that he is the only owner contact as the former co-owner is deceased. On June 15, 2020 On-Site received a telephone call from a representative of WAL-21, who indicated that there is no associated water supply at the Pen Hill Hunt Club, therefore there is no sampling to conduct at this location. Attempts to contact WAL-03 primary owner by telephone, and also a second sampling request letter was mailed on September 14, 2020, resulted with On-Site receiving a telephone call from the primary owner on September 18, 2020 declining sampling. Therefore sampling requests resulted with sampling approved at locations: WAL-01; WAL-02; WAL-11; and WAL-19.

Sample Collection

Sampling was conducted by On-Site in general accordance with the Work Plan at the date and time agreed with the primary owner as follows.

- On October 21, 2020, two direct grab water samples were collected at WAL-19, as this location is equipped with a granular activated carbon filter system. A pre-filter sample was collected from the sampling port prior to the carbon units. A post-filter sample was collected from the kitchen sink cold water tap.
- On October 28, 2020, WAL-01 direct grab water sample was collected from the kitchen sink cold water tap with faucet filter removed.
- On November 1, 2020, WAL-11 direct grab water sample was collected from the kitchen sink cold water tap with aerator removed.
- On November 14, 2020, WAL-02 direct grab water sample was collected from the kitchen sink cold water tap with aerator removed.

Sampling was conducted using direct grab technique, which entails filling the laboratory provided sample bottles directly from the sampling location. As such sampling equipment was not utilized, eliminating the potential for cross-contamination from sampling equipment. Field sampling forms are enclosed in Attachment 1.

Laboratory Analytical Results

Laboratory analysis was performed by ALS Environmental for PFAS by EPA Method 537 and 1,4-Dioxane by EPA Method 522. The laboratory results are presented in tabular form in Attachment 2 - Table 1 and the laboratory analytical reports are enclosed in Attachment 3. Laboratory analysis indicates PFAS are not detected in the five private water supply samples. Laboratory results of 1,4-Dioxane are non-detect at sampling locations WAL-01, WAL-02 and WAL-19 Post Filter. 1,4-Dioxane was reported at concentrations of 0.0212 J $\mu\text{g/L}$ and 0.0500 $\mu\text{g/L}$ at WAL-11 and WAL-19 Pre Filter, respectively. These two low-level 1,4-Dioxane detections are significantly below the New York State Maximum Contaminant Level (MCL) of 1 $\mu\text{g/L}$.

Data Validation & Data Usability

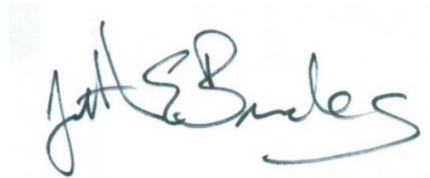
Analytical results were validated and reviewed for usability in accordance with USEPA Region II Standard Operating Procedures (SOPs) for organic data review and NYSDEC's *Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS)*, and analytical methodologies. Data validation resulted with no additional data qualification required and the analytical results are 100% usable. Details are enclosed in Attachment 4 - Data Usability Summary Report (DUSR).

Conclusion

Sampling and analysis of private water supply samples as required by NYSDEC February 14, 2020 is complete. The sampling results indicate that PFAS are not detected and 1,4-Dioxane is not detected above MCL. Letters will be completed to provide water supply specific sample results to the corresponding primary owners and an EQUIS data submittal will be provided to NYSDEC.

If you have any questions regarding the enclosed information, please call me at 585-808-5998.

Sincerely,



Jonathan E. Brandes, P.G.
Senior Geologist

Attachments

cc: William Whitfield, Village of Wellsville Director of Public Works

Attachment 1

Field Sampling Forms

On-Site Geological Services, D.P.C. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/28/20

Sampling Location: WAL-1 Sample ID: WAL1-1020 Arrival Time: 0958

Weather Conditions

Temp. 40 ° F () Sunny () Partly Cloudy (X) Cloudy (X) Light Rain () Hvy. Rain () Snow

Wind Conditions: light

Sample Information

Sample Type: (X) Grab () Composite Sample Location: Kitchen Sink CWT

Location Description/Condition: Kitchen Sink spigot w/ filter removed

Sample Collection Equipment/Method: direct grab Sample Description (clarity/color): clear, no color

Sample Odor: no Other Observations/Comments: _____

Analysis Requested: VOCS, Metals, EC Sample Time: 1010 Number of Containers: 8

Comment:

Sampling Completion: Time 1016 Date 10/28/20 Samplers J. Brandes

On-Site Geological Services, D.P.C. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 11/14/20

Sampling Location: WAL-2 Sample ID: WAL2-1120 Arrival Time: 1300

Weather Conditions

Temp. 50 ° F Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: light

Sample Information

Sample Type: Grab () Composite

Sample Location: Kitchen Sink CWT

Location Description/Condition: good

Sample Collection Equipment/Method: direct Sample Description (clarity/color): clear, no color

Sample Odor: none Other Observations/Comments: _____

Analysis Requested: EC, Metals Sample Time: 1310 Number of Containers: 5

Comment:

owner indicates water was run @ kitchen sink for approx. 40 min. prior to my arrival.

Sampling Completion: Time 1320 Date 11/14/20 Samplers J. Brudey

On-Site Geological Services, D.P.C. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 11/1/20

Sampling Location: WAL-11

Sample ID: WAL11-1120 JB Arrival Time: 1005

3947 Dolly Hollow Rd

Weather Conditions

Temp. 41 ° F () Sunny () Partly Cloudy () Cloudy (x) Light Rain () Hvy. Rain () Snow

Wind Conditions: light

Sample Information

Sample Type: (x) Grab () Composite

Sample Location: Kitchen Sink CWT

Location Description/Condition: Kitchen Sink remove aerator

Sample Collection Equipment/Method: direct grab Sample Description (clarity/color): clear, no color

Sample Odor: none Other Observations/Comments: _____

Analysis Requested: PFAS & 1,4-Dioxane Sample Time: 1015 Number of Containers: 4

Comment:

Sampling Completion: Time 1030 Date 11/1/20 Samplers J. Brandes

On-Site Geological Services, D.P.C. Residential Water Supply Sampling Field Form

Project: Wellsville/Andover Landfill

Date: 10/21/20

WAL19Post-1020
WAL19Inter-1020
WAL19Pre-1020

Sampling Location: WAL-19 Sample ID: _____ Arrival Time: 0900

Weather Conditions

Temp. 58 ° F () Sunny () Partly Cloudy () Cloudy () Light Rain () Hvy. Rain () Snow

Wind Conditions: Moderate

Sample Information

Sample Type: () Grab () Composite

Sample Location: Post = Kitchen Sink CWT
Inter = between carbon filters
Pre = before carbon filters

Location Description/Condition: _____

Sample Collection Equipment/Method: direct grab Sample Description (clarity/color): clear, no color

Sample Odor: no odor Other Observations/Comments: _____

Analysis Requested: VOCs for all 3 samples Sample Time: Post = 910 Number of Containers: Post = 7
Inter = 0935 Inter = 3
Pre = 0945 Pre = 7
Additionally EC for Post & Pre

Comment: _____

Sampling Completion: Time 0955 Date 10/21/20 Samplers J. Bradley

Attachment 2

Table 1 – Emerging Contaminants Analytical Results

Table 1

**Emerging Contaminants Analytical Results
Private Water Supplies
Wellsville-Andover Landfill**

Parameter	Private Water Supply Sampling Locations & Date Sampled				
	WAL-1 10/28/2020	WAL-2 11/14/2020	WAL-11 11/1/2020	WAL-19 Pre-Filter 10/21/2020	WAL-19 Post-Filter 10/21/2020

Per- and Polyfluoroalkyl Substances (PFAS) (ng/L)					
Perfluorobutanesulfonic Acid	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Perfluoroheptanoic Acid	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Perfluorohexanesulfonic Acid	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Perfluorononanoic Acid	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Perfluorooctanesulfonic Acid	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Perfluorooctanoic Acid	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U

1,4-Dioxane (µg/L)					
1,4-Dioxane	0.0400 U	0.0400 U	0.0212 J	0.0500	0.0400 U

U - Parameter not detected at specified detection limit

J - Estimated Value

Attachment 3

Laboratory Analytical Reports



November 13, 2020

Service Request No:R2009887

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: WAL - Emerging Contaminants Sampling

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory October 21, 2020
For your reference, these analyses have been assigned our service request number **R2009887**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | **FAX** +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Received: 10/21/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Two water samples were received for analysis at ALS Environmental on 10/21/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

Semivolatiles by GC/MS:

Method 522: The method requires the concentration of the LCS to vary from batch to batch with a control limit of 50-150% for 1,4-dioxane in the low level Laboratory Control Sample (LCS) and 70-130% for mid-high level LCS. Due to a limitation of the LIMS, only one set of limits can be used on the LCS report. Although the low level LCS included in this report is flagged, the recovery was acceptable.

Method 522, 11/02/2020: The Method Blank contained a low level of the following analytes above the Reporting Limit: 1,4-dioxane. All associated sample results less than ten times the level found in the Method Blank are flagged. The samples are scheduled for re-extraction.

Method 522: The method requires the concentration of the LCS to vary from batch to batch with a control limit of 50-150% for 1,4-dioxane in the low level Laboratory Control Sample (LCS) and 70-130% for mid-high level LCS. Due to a limitation of the LIMS, only one set of limits can be used on the LCS report. Although the low level LCS included in this report is flagged, the recovery was acceptable.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

Approved by _____

Date 11/13/2020



SAMPLE DETECTION SUMMARY

CLIENT ID: WAL19POST-1020 **Lab ID: R2009887-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
1,4-Dioxane	0.0228	BJ	0.0200	0.0400	ug/L	522

CLIENT ID: WAL19PRE-1020 **Lab ID: R2009887-002**

Analyte	Results	Flag	MDL	MRL	Units	Method
1,4-Dioxane	0.0528	B	0.0200	0.0400	ug/L	522
1,4-Dioxane	0.0500		0.0200	0.0400	ug/L	522



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling

Service Request:R2009887

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2009887-001	WAL19POST-1020	10/21/2020	0910
R2009887-002	WAL19PRE-1020	10/21/2020	0945



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**

72 Railroad Ave.
Wellsville, NY 14895

Project Manager **Jon Brandes**

CHAIN of CUSTODY

Project: **WAL - Emerging Contaminants Sampling**

Telephone No.
585-593-1824

Email: jonb@on-sitehs.com

Method of Shipment
**Delivered by
On-Site**

Special Detection
Limit/Reporting

Sample I.D.

Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	PFAS EPA 537 (Trizma, HDPE)	1,4 Dioxane 522 (Na2SO3+NaHSO4 Amber Glass)																																										
		Soil	Water	Air	Other	Yes	No																																														
WAL 19 Post - 1020	4	Y				X		10/21/20	0910	Z	Z																																										
WAL 19 Pre - 1020	4	Y				X		10/21/20	0945	Z	Z																																										

REMARKS

Sample Received Intact: Yes No

Temperature received: Ice No ice

Relinquished by (Sign & Print Name)
Jon Brandes

Date Time
10/21/20 1420

Received by (Sign & Print Name)
Scott Warsaw 10/21/20 1420

Lab Work No.

Relinquished by
Scott Warsaw

Date Time
10/21/20 1600

Received by

Relinquished by

Date Time

Received by laboratory
[Signature]
Date Time
10/28/2020 1600

R2009887 5
On-Site Technical Services, Inc.
WAL - Emerging Contaminants Sampling



Cooler Receipt and Preservation Check Form

R2009887

5

On-Site Technical Services, Inc.
WAL - Emerging Contaminants Sampling



Project/Client On-site Folder Number _____

Cooler received on 10/21/2020 by: @ COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	5a	Perchlorate samples have required headspace?	Y N <input checked="" type="checkbox"/> NA
2	Custody papers properly completed (ink, signed)?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	5b	Did VOA vials Alk, or Sulfide have sig* bubbles?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	7	Soil VOA received as:	Bulk Encore 5035set <input checked="" type="checkbox"/> NA

8. Temperature Readings Date: 10/21/2020 Time: 15:1602 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>7.1</u>	<u>7.5</u>	<u>6.4</u>				
Within 0-6°C?	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-02 by @ on 10/21/2020 at 1606
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 10/22/2020 Time: 2:25 by: dm

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized N/A Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4	<u>20344</u>	NaHSO ₄	<input checked="" type="checkbox"/>		<u>18789</u>					
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522	<input checked="" type="checkbox"/>		If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 072020-13M
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SLD	HGFB
ALS	LL3541

Labels secondary reviewed by: dm
PC Secondary Review: dm 10/26/20 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\times 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling/

Service Request: R2009887

Sample Name: WAL19POST-1020
Lab Code: R2009887-001
Sample Matrix: Drinking Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
522
537

Extracted/Digested By
AFELSER
MSESSIONS

Analyzed By
AFELSER
LDOMREIS

Sample Name: WAL19POST-1020
Lab Code: R2009887-001.R01
Sample Matrix: Drinking Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
522

Extracted/Digested By
AFELSER

Analyzed By
AFELSER

Sample Name: WAL19PRE-1020
Lab Code: R2009887-002
Sample Matrix: Drinking Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
522
537

Extracted/Digested By
AFELSER
MSESSIONS

Analyzed By
AFELSER
LDOMREIS

Sample Name: WAL19PRE-1020
Lab Code: R2009887-002.R01
Sample Matrix: Drinking Water

Date Collected: 10/21/20
Date Received: 10/21/20

Analysis Method
522

Extracted/Digested By
AFELSER

Analyzed By
AFELSER



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Semivolatile Organic Compounds by GC/MS

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: 10/21/20 09:10
Date Received: 10/21/20 16:00

Sample Name: WAL19POST-1020
Lab Code: R2009887-001

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0228 BJ	0.0400	0.0200	1	11/02/20 20:39	11/2/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	96	70 - 130	11/02/20 20:39	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: 10/21/20 09:10
Date Received: 10/21/20 16:00

Sample Name: WAL19POST-1020
Lab Code: R2009887-001

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0400 U	0.0400	0.0200	1	11/05/20 20:24	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	96	70 - 130	11/05/20 20:24	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: 10/21/20 09:45
Date Received: 10/21/20 16:00

Sample Name: WAL19PRE-1020
Lab Code: R2009887-002

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0528 B	0.0400	0.0200	1	11/02/20 21:31	11/2/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	96	70 - 130	11/02/20 21:31	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: 10/21/20 09:45
Date Received: 10/21/20 16:00

Sample Name: WAL19PRE-1020
Lab Code: R2009887-002

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0500	0.0400	0.0200	1	11/05/20 20:42	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	92	70 - 130	11/05/20 20:42	



QC Summary Forms

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Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887

SURROGATE RECOVERY SUMMARY

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Extraction Method: Method

Sample Name	Lab Code	1,4-Dioxane-d8
		70-130
WAL19POST-1020	R2009887-001	96
WAL19POST-1020 RE	R2009887-001	96
WAL19PRE-1020	R2009887-002	96
WAL19PRE-1020 RE	R2009887-002	92
Method Blank	RQ2013340-01	95
Method Blank	RQ2013545-01	95
Lab Control Sample	RQ2013340-02	97
Duplicate Lab Control Sample	RQ2013340-03	98
Lab Control Sample	RQ2013340-04	94
Lab Control Sample	RQ2013545-02	97
Duplicate Lab Control Sample	RQ2013545-03	98
Lab Control Sample	RQ2013545-09	98
WAL19POST-1020 MS	RQ2013340-05	99
WAL19POST-1020 DMS	RQ2013340-06	97

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: 10/21/20
Date Received: 10/21/20
Date Analyzed: 11/2/20
Date Extracted: 11/2/20

Duplicate Matrix Spike Summary

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Sample Name: WAL19POST-1020 **Units:** ug/L
Lab Code: R2009887-001 **Basis:** NA
Analysis Method: 522
Prep Method: Method

Analyte Name	Sample Result	Result	Matrix Spike RQ2013340-05		Duplicate Matrix Spike RQ2013340-06		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
1,4-Dioxane	0.0400 U	9.66	10.0	97	9.82	10.0	98	70-130	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013340-01

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0250 J	0.0400	0.0200	1	11/02/20 19:29	11/2/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	95	70 - 130	11/02/20 19:29	

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dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013545-01

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0400 U	0.0400	0.0200	1	11/05/20 19:11	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	95	70 - 130	11/05/20 19:11	

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Analyzed: 11/02/20

Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013340-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,4-Dioxane	522	0.0568	0.0400	142 *	70-130

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QA/QC Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Analyzed: 11/05/20

Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L
Basis:NA

Lab Control Sample
RQ2013545-09

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,4-Dioxane	522	0.0582	0.0400	146 *	70-130

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Analyzed: 11/02/20

Duplicate Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L
Basis:NA

Analyte Name	Lab Control Sample				Duplicate Lab Control Sample					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	522	9.47	10.0	95	9.79	10.0	98	70-130	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Analyzed: 11/05/20

Duplicate Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L
Basis:NA

Analyte Name	Lab Control Sample				Duplicate Lab Control Sample					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	522	9.77	10.0	98	9.69	10.0	97	70-130	<1	30



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 05, 2020

Analytical Report for Service Request No: R2009887

Janice Jaeger
ALS Environmental
1565 Jefferson Rd, Building 300
Suite 360
Rochester, NY 14623

RE: WAL - Emerging Contaminants Sampling

Dear Janice Jaeger,

Enclosed are the results of the sample(s) submitted to our laboratory October 21, 2020
For your reference, these analyses have been assigned our service request number **R2009887**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LCMSMS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Received: 10/21/2020

CASE NARRATIVE

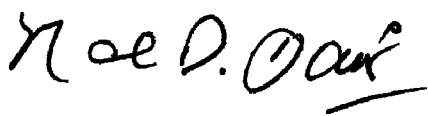
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

Two drinking water samples were received for analysis at ALS Environmental on 10/21/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organic LC:

No significant anomalies were noted with this analysis.

Approved by 

Date 11/05/2020



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Intra-Network Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Janice Jaeger

Project Name: ILI - Region 7 Gates Dump Site
Project Number: 452148.60007.03
Project Manager: Maryanne Kosciwicz
Company: Parsons Engineering Science
QAP: LAB QAP

PFAS
PFC/537M

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
R2009941-001	7-BRO-006-002-01	2	Water	10/21/20	0920	10/22/20	KELSO	IV
R2009941-002	7-BRO-006-002-02	1	Water	10/21/20	0925	10/22/20	KELSO	IV
R2009941-003	7-BRO-006-002-03	2	Water	10/21/20	0936	10/22/20	KELSO	IV
R2009941-005	7-BRO-006-002-05	2	Water	10/21/20	1045	10/22/20	KELSO	IV

Folder Comments:
need Tier 2 and Tier 4

Special Instructions/Comments NPDES pH Checked _____	Turnaround Requirements _____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: <u>11/06/20</u>	Report Requirements <input type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries <input type="checkbox"/> III. Results + QC and Calibration Summaries <input checked="" type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/J <input checked="" type="checkbox"/> EDD <input checked="" type="checkbox"/>	Invoice Information PO# 58R2009941 Bill to
---	--	--	--

Relinquished By: *[Signature]* 10/26/2020/1400

Received By: *[Signature]* 10/27/20
 39 of 50
 Page 9 of 20

Airbill Number: _____

PM MH

Cooler Receipt and Preservation Form

Client A18-Poon Service Request K20-D2009987
Received: 10/27/20 Opened: 10/27/20 By: BR Unloaded: 10/27/20 By: BR

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - Samples were received in: (circle) Cooler Box Envelope Other NA
 - Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>MH</u>	<u>3.0</u>	<u>1201</u>				<u>173624330360</u>	

- Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- Were samples received in good condition (unbroken) NA Y N
- Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? NA Y N
- Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- Were VOA vials received without headspace? Indicate in the table below. NA Y N
- Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Organic Compounds by HPLC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water
Sample Name: WAL19POST-1020
Lab Code: R2009887-001

Service Request: R2009887
Date Collected: 10/21/20 09:10
Date Received: 10/21/20 16:00
Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	10/29/20 01:49	10/28/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	10/29/20 01:49	10/28/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	10/29/20 01:49	10/28/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	10/29/20 01:49	10/28/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	10/29/20 01:49	10/28/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	10/29/20 01:49	10/28/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	93	70 - 130	10/29/20 01:49	
13C2-PFDA	91	70 - 130	10/29/20 01:49	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Collected: 10/21/20 09:45
Date Received: 10/21/20 16:00

Sample Name: WAL19PRE-1020
Lab Code: R2009887-002

Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	10/29/20 02:01	10/28/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	10/29/20 02:01	10/28/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	10/29/20 02:01	10/28/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	10/29/20 02:01	10/28/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	10/29/20 02:01	10/28/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	10/29/20 02:01	10/28/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	98	70 - 130	10/29/20 02:01	
13C2-PFDA	97	70 - 130	10/29/20 02:01	



QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Organic Compounds by HPLC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887

SURROGATE RECOVERY SUMMARY

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Extraction Method: Method

Sample Name	Lab Code	13C2-PFHxA	13C2-PFDA
		70-130	70-130
WAL19POST-1020	R2009887-001	93	91
WAL19PRE-1020	R2009887-002	98	97
Method Blank	KQ2016627-03	102	109
Lab Control Sample	KQ2016627-04	99	104

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water
Sample Name: Method Blank
Lab Code: KQ2016627-03

Service Request: R2009887
Date Collected: NA
Date Received: NA
Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA's)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	10/29/20 01:27	10/28/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	10/29/20 01:27	10/28/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	10/29/20 01:27	10/28/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	10/29/20 01:27	10/28/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	10/29/20 01:27	10/28/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	10/29/20 01:27	10/28/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	102	70 - 130	10/29/20 01:27	
13C2-PFDA	109	70 - 130	10/29/20 01:27	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: WAL - Emerging Contaminants Sampling
Sample Matrix: Drinking Water

Service Request: R2009887
Date Analyzed: 10/29/20
Date Extracted: 10/28/20

Lab Control Sample Summary

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Units: ng/L
Basis: NA
Analysis Lot: 701251

Lab Control Sample
KQ2016627-04

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Perfluorobutane sulfonic acid (PFBS)	1.77 J	2.00	88	50-150
Perfluoroheptanoic acid (PFHpA)	2.06	2.00	103	50-150
Perfluorohexane sulfonic acid (PFHxS)	1.98 J	2.00	99	50-150
Perfluorononanoic acid (PFNA)	2.20	2.00	110	50-150
Perfluorooctane sulfonic acid (PFOS)	2.17	2.00	108	50-150
Perfluorooctanoic acid (PFOA)	2.22	2.00	111	50-150



November 23, 2020

Service Request No:R2010181

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF-Emerging Contaminants Sample

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory October 29, 2020
For your reference, these analyses have been assigned our service request number **R2010181**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants
 Sample
Sample Matrix: Water

Service Request: R2010181
Date Received: 10/29/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 10/29/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

Semivolatiles by GC/MS:

Method 522: The method requires the concentration of the LCS to vary from batch to batch with a control limit of 50-150% for 1,4-dioxane in the low level Laboratory Control Sample (LCS) and 70-130% for mid-high level LCS. Due to a limitation of the LIMS, only one set of limits can be used on the LCS report. Although the low level LCS included in this report is flagged, the recovery was acceptable.

Method 522, 11/02/2020: The Method Blank contained a low level of the following analytes above the Reporting Limit: 1,4-dioxane. All associated sample results less than ten times the level found in the Method Blank are flagged. The samples are scheduled for re-extraction.

Method 522: The method requires the concentration of the LCS to vary from batch to batch with a control limit of 50-150% for 1,4-dioxane in the low level Laboratory Control Sample (LCS) and 70-130% for mid-high level LCS. Due to a limitation of the LIMS, only one set of limits can be used on the LCS report. Although the low level LCS included in this report is flagged, the recovery was acceptable.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

A handwritten signature in black ink, appearing to read "Samanta", is written over a horizontal line.

Approved by _____

Date 11/23/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: WAL1-1020 **Lab ID: R2010181-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
1,4-Dioxane	0.0208	BJ	0.0200	0.0400	ug/L	522



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample

Service Request:R2010181

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010181-001	WAL1-1020	10/28/2020	1010



Cooler Receipt and Preservation Check Form

R2010181

5

On-Site Technical Services, Inc.
Wellesville-Andover LF-Emerging Contaminants Ser

Project/Client On-Site Folder Number _____

Cooler received on 10-29-2020 by: RE/G

COURIER: ALS UPS PEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<input checked="" type="radio"/> Y <input type="radio"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="radio"/> Y <input type="radio"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="radio"/> Y <input type="radio"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="radio"/> Y <input type="radio"/> N

5a	Perchlorate samples have required headspace?	Y N <input checked="" type="radio"/> NA
5b	Did <u>VOA vials</u> <u>Alk</u> or Sulfide have sig* bubbles?	Y <input checked="" type="radio"/> N <input type="radio"/> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<input checked="" type="radio"/> NA

8. Temperature Readings Date: 10-29-2020 Time: 09:35 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>4.6</u>	<u>2.9</u>						
Within 0-6°C?	<input checked="" type="radio"/> Y <input type="radio"/> N	<input checked="" type="radio"/> Y <input type="radio"/> N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by RE on 10-29-20 at 09:53
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 10/29/2020 Time: 11:55 by: dlw

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4	<u>223419</u>	NaHSO ₄	<input checked="" type="checkbox"/>		<u>187819</u>					
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522	<input checked="" type="checkbox"/>		If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 072020-115ML

Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
<u>STB</u>	HGFB
ALS	LL3541

Labels secondary reviewed by: dlw
PC Secondary Review: dlw 10/30/20 *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

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REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\times 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample

Service Request: R2010181

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
522	Water	1,4-Dioxane

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample/

Service Request: R2010181

Sample Name: WAL1-1020
Lab Code: R2010181-001
Sample Matrix: Water

Date Collected: 10/28/20
Date Received: 10/29/20

Analysis Method
522
537

Extracted/Digested By
AFELSER
MSESSIONS

Analyzed By
AFELSER
LDMREIS

Sample Name: WAL1-1020
Lab Code: R2010181-001.R01
Sample Matrix: Water

Date Collected: 10/28/20
Date Received: 10/29/20

Analysis Method
522

Extracted/Digested By
AFELSER

Analyzed By
AFELSER



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water
Sample Name: WAL1-1020
Lab Code: R2010181-001

Service Request: R2010181
Date Collected: 10/28/20 10:10
Date Received: 10/29/20 09:30

Units: ug/L
Basis: As Received

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0208 BJ	0.0400	0.0200	1	11/03/20 01:15	11/2/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	107	70 - 130	11/03/20 01:15	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181
Date Collected: 10/28/20 10:10
Date Received: 10/29/20 09:30

Sample Name: WAL1-1020
Lab Code: R2010181-001

Units: ug/L
Basis: As Received

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0400 U	0.0400	0.0200	1	11/05/20 21:18	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	93	70 - 130	11/05/20 21:18	



QC Summary Forms

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Semivolatile Organic Compounds by GC/MS

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Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181

SURROGATE RECOVERY SUMMARY

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Extraction Method: Method

Sample Name	Lab Code	1,4-Dioxane-d8
		70-130
WAL1-1020	R2010181-001	107
WAL1-1020 RE	R2010181-001	93
Method Blank	RQ2013340-01	95
Method Blank	RQ2013545-01	95
Lab Control Sample	RQ2013340-02	97
Duplicate Lab Control Sample	RQ2013340-03	98
Lab Control Sample	RQ2013340-04	94
Lab Control Sample	RQ2013545-02	97
Duplicate Lab Control Sample	RQ2013545-03	98
Lab Control Sample	RQ2013545-09	98

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dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013340-01

Units: ug/L
Basis: As Received

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0250 J	0.0400	0.0200	1	11/02/20 19:29	11/2/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	95	70 - 130	11/02/20 19:29	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ2013545-01

Units: ug/L
Basis: As Received

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0400 U	0.0400	0.0200	1	11/05/20 19:11	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	95	70 - 130	11/05/20 19:11	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181

Date Analyzed: 11/02/20

Lab Control Sample Summary

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:As Received

Lab Control Sample

RQ2013340-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,4-Dioxane	522	0.0568	0.0400	142 *	70-130

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dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181

Date Analyzed: 11/05/20

Lab Control Sample Summary

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:As Received

Lab Control Sample

RQ2013545-09

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,4-Dioxane	522	0.0582	0.0400	146 *	70-130

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181

Date Analyzed: 11/02/20

Duplicate Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:As Received

Analyte Name	Analytical Method	Result	Lab Control Sample		Duplicate Lab Control Sample		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Spike Amount	% Rec				
1,4-Dioxane	522	9.47	10.0	95	9.79	10.0	98	70-130	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181

Date Analyzed: 11/05/20

Duplicate Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:As Received

Analyte Name	Analytical Method	Lab Control Sample RQ2013545-02			Duplicate Lab Control Sample RQ2013545-03			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,4-Dioxane	522	9.77	10.0	98	9.69	10.0	97	70-130	<1	30



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory
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ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 19, 2020

Analytical Report for Service Request No: R2010181

Janice Jaeger
ALS Environmental
1565 Jefferson Rd, Building 300
Suite 360
Rochester, NY 14623

RE: Wellsville-Andover LF-Emerging Contaminants Sample

Dear Janice Jaeger,

Enclosed are the results of the sample(s) submitted to our laboratory October 29, 2020
For your reference, these analyses have been assigned our service request number **R2010181**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms

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Case Narrative

Chain of Custody

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LCMSMS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants
Sample
Sample Matrix: Water

Service Request: R2010181
Date Received: 10/29/2020

CASE NARRATIVE

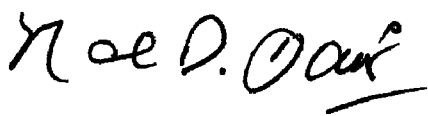
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 10/29/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

Organic LC:

Method 537, 11/13/2020: The upper control criterion was exceeded for 13C2-PFHxA in sample WAL1-1020 and for 13C2-PFDA in Method Blank KQ2017157-03. No target analytes were detected above the Method Reporting Limit (MRL) in the sample and blank. The error associated with an elevated recovery equated to a high bias. Insufficient preparation holding time remained to perform a re-extraction and re-analysis of the field sample. As per EPA 537, all results for this sample are suspect due to exceedance of the surrogate criteria. No further corrective action was feasible.

Approved by 

Date 11/19/2020



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Intra-Network Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Janice Jaeger

Project Name: Wellsville-Andover LF-Emerging Contaminants Sample
Project Number:
Project Manager: Jon Brandes
Company: On-Site Technical Services, Inc.
QAP: LAB QAP

PFAS-DW_LL 537

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
R2010181001	WAL1-1020	2	Water	10/28/20	1010	10/29/20	KELSO	IV

Folder Comments:
 MRL U

Special Instructions/Comments NPDES pH Checked _____	Turnaround Requirements ___ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: <u>11/13/20</u>	Report Requirements ___ I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries ___ III. Results + QC and Calibration Summaries <input checked="" type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/J <u>N</u> EDD <u>Y</u>	Invoice Information <hr/> PO# 58R2010181 <hr/> Bill to
---	---	--	--

Relinquished By: *[Signature]* 10/30/20 1235

Received By: *[Signature]* 10/31/20
 37047
 0945
 Page 9 of 19

Airbill Number: _____

PM MH

Cooler Receipt and Preservation Form

Client Alv-Rach Service Request K20 D2010181
Received: 10/31/20 Opened: 10/31/20 By: BR Unloaded: 10/31/20 By: BR

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
<u>MH</u>	<u>2.0</u>	<u>1201</u>				<u>173024331459</u>	

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Organic Compounds by HPLC/MS/MS

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1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water
Sample Name: WAL1-1020
Lab Code: R2010181-001

Service Request: R2010181
Date Collected: 10/28/20 10:10
Date Received: 10/29/20 09:30

Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	11/13/20 15:32	11/3/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	11/13/20 15:32	11/3/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	11/13/20 15:32	11/3/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	11/13/20 15:32	11/3/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	11/13/20 15:32	11/3/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	11/13/20 15:32	11/3/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	161	70 - 130	11/13/20 15:32	*
13C2-PFDA	120	70 - 130	11/13/20 15:32	



QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Organic Compounds by HPLC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181

SURROGATE RECOVERY SUMMARY

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Extraction Method: Method

Sample Name	Lab Code	13C2-PFHxA	13C2-PFDA
		70-130	70-130
WAL1-1020	R2010181-001	161*	120
Method Blank	KQ2017157-03	129	131*
Lab Control Sample	KQ2017157-01	121	107
Duplicate Lab Control Sample	KQ2017157-02	122	115

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2017157-03

Service Request: R2010181
Date Collected: NA
Date Received: NA
Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	11/13/20 14:59	11/3/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	11/13/20 14:59	11/3/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	11/13/20 14:59	11/3/20	
Perfluoroalkyl Carboxylic Acids (PFCA)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	11/13/20 14:59	11/3/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	11/13/20 14:59	11/3/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	11/13/20 14:59	11/3/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	129	70 - 130	11/13/20 14:59	
13C2-PFDA	131	70 - 130	11/13/20 14:59	*

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Water

Service Request: R2010181
Date Analyzed: 11/13/20
Date Extracted: 11/03/20

Duplicate Lab Control Sample Summary
Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Units: ng/L
Basis: NA
Analysis Lot: 703397

Analyte Name	Lab Control Sample KQ2017157-01			Duplicate Lab Control Sample KQ2017157-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Perfluorobutane sulfonic acid (PFBS)	20.4	20.0	102	19.9	20.0	99	70-130	3	30
Perfluoroheptanoic acid (PFHpA)	21.7	20.0	109	21.4	20.0	107	70-130	2	30
Perfluorohexane sulfonic acid (PFHxS)	21.8	20.0	109	20.6	20.0	103	70-130	6	30
Perfluorononanoic acid (PFNA)	18.7	20.0	94	20.6	20.0	103	70-130	10	30
Perfluorooctane sulfonic acid (PFOS)	20.5	20.0	103	21.0	20.0	105	70-130	2	30
Perfluorooctanoic acid (PFOA)	20.6	20.0	103	19.7	20.0	98	70-130	4	30



November 24, 2020

Service Request No:R2010314

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF-Emerging Contaminants Sample

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory November 03, 2020
For your reference, these analyses have been assigned our service request number **R2010314**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants
Sample
Sample Matrix: Drinking Water

Service Request: R2010314
Date Received: 11/03/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One water sample was received for analysis at ALS Environmental on 11/03/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

Semivolatiles by GC/MS:

Method 522: The method requires the concentration of the LCS to vary from batch to batch with a control limit of 50-150% for 1,4-dioxane in the low level Laboratory Control Sample (LCS) and 70-130% for mid-high level LCS. Due to a limitation of the LIMS, only one set of limits can be used on the LCS report. Although the low level LCS included in this report is flagged, the recovery was acceptable.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

A handwritten signature in black ink, appearing to read "Samantha", is written over a horizontal line.

Approved by _____

Date 11/24/2020

SAMPLE DETECTION SUMMARY**CLIENT ID: WAL11-1120****Lab ID: R2010314-001**

Analyte	Results	Flag	MDL	MRL	Units	Method
1,4-Dioxane	0.0212	J	0.0200	0.0400	ug/L	522



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample

Service Request:R2010314

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010314-001	WAL11-1120	11/1/2020	1015



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: On-Site	CHAIN of CUSTODY		Page <u>1</u> of <u>1</u>
72 Railroad Ave. Wellsville, NY 14895	Project: WAL - Emerging Contaminants Sampling		Method of Shipment UPS
Project Manager: Jon Brandes	Telephone No.: 585-593-1824	Email: jonb@on-sitehs.com	Special Detection Limit/Reporting

Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	PFAS EPA 537 (Trizma, HDPE)	1,4 Dioxane 522 (Na2SO3+NaHSO4 Amber Glass)																										
			Soil	Water	Air	Other	Yes	No																														
WAL 37- 3720		4	X				X		11/1/20	1015	X	X																										

Sample Received Intact: Yes No	Temperature received: Ice No ice		
Relinq. by sampler (Sign & Print Name)	Date	Time	Received by (Sign & Print Name)
<i>Jon Brandes / Jonathan E Brandes</i>	11/2/20	1430	
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory
			<i>Signature</i>
			Date 11/3/2020 Time 1200

REMARKS





Cooler Receipt and Preservation Check Form

R2010314

5

On-Site Technical Services, Inc.
Wellesville-Andover LF-Emerging Contaminants Ser

Project/Client On-Site Folder Number _____

Cooler received on 11/3/2020 by ae

COURIER: ALS (UPS) FEDEX VELOCITY CLIENT



1	Were Custody seals on outside of cooler?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

5a	Perchlorate samples have required headspace?	Y N <u>NA</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y N <u>NA</u>
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>NA</u>

8. Temperature Readings Date: 11/3/2020 Time: 1236 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>3.5</u>						
Within 0-6°C?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by ae on 11/3/2020 at 1238
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 11/3/2020 Time: 1600 by: dm

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO
- 13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
>12		NaOH								
<2		HNO ₃								
<2		H ₂ SO ₄								
<4	<u>273419</u>	NaHSO ₄	<input checked="" type="checkbox"/>		<u>187819</u>	<u>0712</u>				
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522	<input checked="" type="checkbox"/>		If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 082410-15MC

Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: dm
PC Secondary Review: dm 11/4/20

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\times 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample/

Service Request: R2010314

Sample Name: WAL11-1120
Lab Code: R2010314-001
Sample Matrix: Drinking Water

Date Collected: 11/1/20
Date Received: 11/3/20

Analysis Method

522
537

Extracted/Digested By

AFELSER
MSESSIONS

Analyzed By

AFELSER
LDMREIS



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: WAL11-1120
Lab Code: R2010314-001

Service Request: R2010314
Date Collected: 11/01/20 10:15
Date Received: 11/03/20 12:00

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0212 J	0.0400	0.0200	1	11/05/20 21:55	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	93	70 - 130	11/05/20 21:55	



QC Summary Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
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Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010314

SURROGATE RECOVERY SUMMARY

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Extraction Method: Method

Sample Name	Lab Code	1,4-Dioxane-d8
		70-130
WAL11-1120	R2010314-001	93
Method Blank	RQ2013545-01	95
Lab Control Sample	RQ2013545-02	97
Duplicate Lab Control Sample	RQ2013545-03	98
Lab Control Sample	RQ2013545-09	98

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: Method Blank
Lab Code: RQ2013545-01

Service Request: R2010314
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0400 U	0.0400	0.0200	1	11/05/20 19:11	11/5/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	95	70 - 130	11/05/20 19:11	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010314

Date Analyzed: 11/05/20

Lab Control Sample Summary

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:NA

Lab Control Sample

RQ2013545-09

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,4-Dioxane	522	0.0582	0.0400	146 *	70-130

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010314

Date Analyzed: 11/05/20

Duplicate Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:NA

Analyte Name	Lab Control Sample				Duplicate Lab Control Sample					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	522	9.77	10.0	98	9.69	10.0	97	70-130	<1	30



Subcontracted Analytical Parameters

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ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

November 19, 2020

Analytical Report for Service Request No: R2010314

Janice Jaeger
ALS Environmental
1565 Jefferson Rd, Building 300
Suite 360
Rochester, NY 14623

RE: Wellsville-Andover LF-Emerging Contaminants Sample

Dear Janice Jaeger,

Enclosed are the results of the sample(s) submitted to our laboratory November 03, 2020
For your reference, these analyses have been assigned our service request number **R2010314**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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Chain of Custody

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LCMSMS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants
Sample
Sample Matrix: Drinking Water

Service Request: R2010314
Date Received: 11/03/2020

CASE NARRATIVE

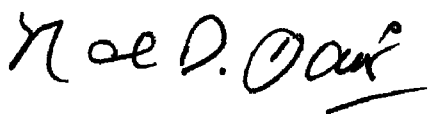
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One drinking water sample was received for analysis at ALS Environmental on 11/03/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

Organic LC:

No significant anomalies were noted with this analysis.

Approved by 

Date 11/19/2020



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Intra-Network Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Janice Jaeger

Project Name: Wellsville-Andover LF-Emerging Contaminants Sample
Project Number:
Project Manager: Jon Brandes
Company: On-Site Technical Services, Inc.
QAP: LAB QAP

 PFAS-DW_LL
537

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
R2010314-001	WAL11-1120	2	Water	11/1/20	1015	11/3/20	KELSO	IV

Folder Comments:
 MRL U

Special Instructions/Comments NPDES pH Checked _____	Turnaround Requirements _____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: 11/20/20	Report Requirements _____ I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries _____ III. Results + QC and Calibration Summaries <input checked="" type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/J <u> N </u> EDD <u> Y </u>	Invoice Information PO# 58R2010314 Bill to
---	--	--	--

Relinquished By: *[Signature]* 11/6/2020 1330

Received By: *[Signature]* 11/7/20 1005

Airbill Number: _____

Cooler Receipt and Preservation Form

PM NTT

Client: Alv-Rock Service Request K20 122010314
 Received: 117120 Opened: 117120 By: BR Unloaded: 117120 By: BR

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- Samples were received in: (circle) Cooler Box Envelope Other NA
- Were custody seals on coolers? NA Y N If yes, how many and where? 1
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N
- Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
		<u>1201</u>				<u>173024332710</u>	

- Packing material: Insert Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- Were samples received in good condition (unbroken)? NA Y N
- Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? NA Y N
- Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- Were VOA vials received without headspace? Indicate in the table below. NA Y N
- Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

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1317 South 13th Avenue, Kelso, WA 98626
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Sample Results

ALS Environmental—Kelso Laboratory
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Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Organic Compounds by HPLC/MS/MS

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Phone (360) 577-7222 Fax (360) 425-9096
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: WAL11-1120
Lab Code: R2010314-001

Service Request: R2010314
Date Collected: 11/01/20 10:15
Date Received: 11/03/20 12:00

Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	11/13/20 16:17	11/10/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	11/13/20 16:17	11/10/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	11/13/20 16:17	11/10/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	11/13/20 16:17	11/10/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	11/13/20 16:17	11/10/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	11/13/20 16:17	11/10/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	124	70 - 130	11/13/20 16:17	
13C2-PFDA	95	70 - 130	11/13/20 16:17	



QC Summary Forms

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Organic Compounds by HPLC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010314

SURROGATE RECOVERY SUMMARY

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Extraction Method: Method

Sample Name	Lab Code	13C2-PFHxA	13C2-PFDA
		70-130	70-130
WAL11-1120	R2010314-001	124	95
Method Blank	KQ2017651-03	112	107
Lab Control Sample	KQ2017651-01	95	86
Duplicate Lab Control Sample	KQ2017651-02	116	111

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: Method Blank
Lab Code: KQ2017651-03

Service Request: R2010314
Date Collected: NA
Date Received: NA
Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	11/13/20 15:43	11/10/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	11/13/20 15:43	11/10/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	11/13/20 15:43	11/10/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	11/13/20 15:43	11/10/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	11/13/20 15:43	11/10/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	11/13/20 15:43	11/10/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	112	70 - 130	11/13/20 15:43	
13C2-PFDA	107	70 - 130	11/13/20 15:43	

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010314
Date Analyzed: 11/13/20
Date Extracted: 11/10/20

Duplicate Lab Control Sample Summary

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Units: ng/L
Basis: NA
Analysis Lot: 703397

Analyte Name	Lab Control Sample KQ2017651-01			Duplicate Lab Control Sample KQ2017651-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Perfluorobutane sulfonic acid (PFBS)	18.7	20.0	93	17.9	20.0	89	70-130	4	30
Perfluoroheptanoic acid (PFHpA)	20.4	20.0	102	20.5	20.0	103	70-130	<1	30
Perfluorohexane sulfonic acid (PFHxS)	19.2	20.0	96	18.7	20.0	93	70-130	3	30
Perfluorononanoic acid (PFNA)	17.5	20.0	88	21.6	20.0	108	70-130	21	30
Perfluorooctane sulfonic acid (PFOS)	18.5	20.0	92	20.0	20.0	100	70-130	8	30
Perfluorooctanoic acid (PFOA)	18.2	20.0	91	19.7	20.0	98	70-130	8	30



December 21, 2020

Service Request No:R2010873

Mr. Jon Brandes
On-Site Technical Services, Inc.
72 Railroad Avenue
Wellsville, NY 14895

Laboratory Results for: Wellsville-Andover LF-Emerging Contaminants Sample

Dear Mr.Brandes,

Enclosed are the results of the sample(s) submitted to our laboratory November 17, 2020
For your reference, these analyses have been assigned our service request number **R2010873**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Janice Jaeger
Project Manager

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants
Sample
Sample Matrix: Drinking Water

Service Request: R2010873
Date Received: 11/17/2020

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

One drinking water sample was received for analysis at ALS Environmental on 11/17/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

No significant anomalies were noted with this analysis.

A handwritten signature in black ink, appearing to read 'Samantha', is written over a horizontal line.

Approved by _____

Date 12/21/2020



Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample

Service Request:R2010873

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R2010873-001	WAL2-1120	11/14/2020	1310



ALS-Environmental
1565 Jefferson Rd, Bldg 300, Suite 360
Rochester, NY 14623
585.288.5380

Client: **On-Site**
72 Railroad Ave.
Wellsville, NY 14895

Project Manager: **Jon Brandes**

CHAIN of CUSTODY

Project: **WAL - Emerging Contaminants Sampling**

Telephone No.
585-593-1824

Email: jonb@on-sitehs.com

Method of Shipment

UPS

Special Detection Limit/Reporting

Sample I.D.

Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	PFAS EPA 537 (Trizma, HDPE)	1,4 Dioxane 522 (Na2SO3+NaHSO4 Amber Glass)								
		Soil	Water	Air	Other	Yes	No												
WAL2-1120	4	X				X		11/14/20	1310	2	2								

R E M A R K S

Sample Received Intact: Yes No

Temperature received: Ice No ice

Relinquished by/ sampler (Sign & Print Name) *Jon Brandes / Jonathan E Brandes* Date Time *11/16/20 1200*

Received by (Sign & Print Name) *Gregory O. Esmerman* *ALS 11-17-20 09:45*

Lab Work No.

Relinquished by Date Time

Received by

Relinquished by Date Time

Received by

Relinquished by Date Time

Received by laboratory Date Time

R2010873 5
On-Site Technical Services, Inc.
Wellsville-Andover LF-Emerging Contaminants Ser



Cooler Receipt and Preservation Check Form

Project/Client ON-site

Folder Number

Cooler received on 11-17-2020 by: HE

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<input checked="" type="radio"/> Y	<input type="radio"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="radio"/> Y	<input type="radio"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="radio"/> Y	<input type="radio"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="radio"/> Y	<input type="radio"/> N

5a	Perchlorate samples have required headspace?	Y	N	<input checked="" type="radio"/> NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y	N	<input checked="" type="radio"/> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT		
7	Soil VOA received as:	Bulk	Encore	5035set <input checked="" type="radio"/> NA

8. Temperature Readings Date: 11-17-2020 Time: 10:30 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>5.3</u>							
Within 0-6°C?	<input checked="" type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> Y	<input type="radio"/> N
If <0°C, were samples frozen?	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> Y	<input type="radio"/> N	<input type="radio"/> Y	<input type="radio"/> N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule
& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by HE on 11/17/20 at 10:33
5035 samples placed in storage location: _____ by _____ on _____ at _____ within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 11/17/2020 Time: 1526 by: AD

- 9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- 10. Did all bottle labels and tags agree with custody papers? YES NO
- 11. Were correct containers used for the tests indicated? YES NO
- 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
- 13. Air Samples: Cassettes / Tubes Intact Y/N with MS Y/N Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4	<u>20349</u>	NaHSO ₄	<input checked="" type="checkbox"/>		<u>Client. Unte bottled</u>					
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, <u>522</u>	<input checked="" type="checkbox"/>		If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃			<u>187819</u>	<u>7/21</u>				
		ZnAcetate								
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 072020-13MC
Explain all Discrepancies/ Other Comments:

HPROD	BULK
HTR	FLDT
<input checked="" type="radio"/> SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: @
PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



Miscellaneous Forms

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1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed ($\times 100\%$ Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:</p> <p>LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: On-Site Technical Services, Inc.

Service Request: R2010873

Project: Wellsville-Andover LF-Emerging Contaminants Sample/

Sample Name: WAL2-1120

Date Collected: 11/14/20

Lab Code: R2010873-001

Date Received: 11/17/20

Sample Matrix: Drinking Water

Analysis Method

Extracted/Digested By

Analyzed By

522

AFELSER

AFELSER

537

MSESSIONS

BDAVIS



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	



Sample Results

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: WAL2-1120
Lab Code: R2010873-001

Service Request: R2010873
Date Collected: 11/14/20 13:10
Date Received: 11/17/20 09:45

Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0400 U	0.0400	0.0200	1	11/25/20 13:14	11/24/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	90	70 - 130	11/25/20 13:14	



QC Summary Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



Semivolatile Organic Compounds by GC/MS

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Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010873

SURROGATE RECOVERY SUMMARY

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Extraction Method: Method

Sample Name	Lab Code	1,4-Dioxane-d8
		70-130
WAL2-1120	R2010873-001	90
Method Blank	RQ2014544-01	81
Lab Control Sample	RQ2014544-02	77
Duplicate Lab Control Sample	RQ2014544-03	79
Lab Control Sample	RQ2014544-04	76

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: Method Blank
Lab Code: RQ2014544-01

Service Request: R2010873
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Analysis Method: 522
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.0400 U	0.0400	0.0200	1	11/25/20 11:44	11/24/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	81	70 - 130	11/25/20 11:44	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010873

Date Analyzed: 11/25/20

Lab Control Sample Summary

1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:NA

Lab Control Sample

RQ2014544-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,4-Dioxane	522	0.0410	0.0400	103	70-130

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010873

Date Analyzed: 11/25/20

Duplicate Lab Control Sample Summary
1,4-Dioxane by Solid Phase Extraction and GC/MS With Selected Ion Monitoring

Units:ug/L

Basis:NA

Analyte Name	Lab Control Sample				Duplicate Lab Control Sample					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	522	7.61	10.0	76	7.71	10.0	77	70-130	1	30



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

December 21, 2020

Analytical Report for Service Request No: R2010873

Janice Jaeger
ALS Environmental
1565 Jefferson Rd, Building 300
Suite 360
Rochester, NY 14623

RE: Wellsville-Andover LF-Emerging Contaminants Sample

Dear Janice Jaeger,

Enclosed are the results of the sample(s) submitted to our laboratory November 17, 2020
For your reference, these analyses have been assigned our service request number **R2010873**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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Acronyms

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Chain of Custody

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Raw Data

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants
Sample
Sample Matrix: Drinking Water

Service Request: R2010873
Date Received: 11/17/2020

CASE NARRATIVE

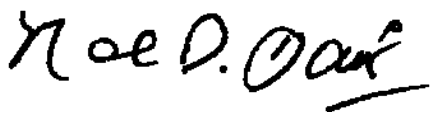
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level II requested by the client.

Sample Receipt:

One drinking water sample was received for analysis at ALS Environmental on 11/17/2020. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The sample was stored at minimum in accordance with the analytical method requirements.

Organic LC:

Method 537, 12/11/2020: Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Approved by 

Date 12/21/2020



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Intra-Network Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Janice Jaeger

Project Name: Wellsville-Andover LF-Emerging Contaminants Sample
Project Number:
Project Manager: Jon Brandes
Company: On-Site Technical Services, Inc.
QAP: LAB QAP

PFAS-DW_LL
537

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
R2010873-001	WAL2-1120	2	Drinking Water	11/14/20	1310	11/17/20	KELSO	IV

Folder Comments:
MRL U need Tier 2 and 4

Special Instructions/Comments <i>excel, nysdec eqvis v4 edds</i> NPDES pH Checked _____	Turnaround Requirements _____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD	Report Requirements _____ I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries _____ III. Results + QC and Calibration Summaries <input checked="" type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/J <u> N </u> EDD <u> Y </u>	Invoice Information PO# 58R2010873 Bill to
	Requested FAX Date: _____ Requested Report Date: <u>12/04/20</u>		

Relinquished By: *[Signature]* 11/20/20 Received By: *[Signature]* 11/21/20 Airbill Number: 1130

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Page 1

PM MH

Cooler Receipt and Preservation Form

Client A18-Roch Service Request K20 D2010873
Received: 112120 Opened: 112120 By: BR Unloaded: 112120 By: BR

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 - 3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
<u>NA</u>	<u>4.4</u>	<u>1202</u>				<u>173024336016</u>	

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: WAL2-1120
Lab Code: R2010873-001

Service Request: R2010873
Date Collected: 11/14/20 13:10
Date Received: 11/17/20 09:45

Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	12/11/20 01:43	11/25/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	12/11/20 01:43	11/25/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	12/11/20 01:43	11/25/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	12/11/20 01:43	11/25/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	12/11/20 01:43	11/25/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	12/11/20 01:43	11/25/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	94	70 - 130	12/11/20 01:43	
13C2-PFDA	78	70 - 130	12/11/20 01:43	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water
Sample Name: Method Blank
Lab Code: KQ2018832-03

Service Request: R2010873
Date Collected: NA
Date Received: NA
Units: ng/L
Basis: NA

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkyl Sulfonic Acids (PFSA)						
Perfluorobutane sulfonic acid (PFBS)	2.00 U	2.00	1	12/11/20 13:00	11/25/20	
Perfluorohexane sulfonic acid (PFHxS)	2.00 U	2.00	1	12/11/20 13:00	11/25/20	
Perfluorooctane sulfonic acid (PFOS)	2.00 U	2.00	1	12/11/20 13:00	11/25/20	
Perfluoroalkyl Carboxylic Acids (PFCAs)						
Perfluoroheptanoic acid (PFHpA)	2.00 U	2.00	1	12/11/20 13:00	11/25/20	
Perfluorooctanoic acid (PFOA)	2.00 U	2.00	1	12/11/20 13:00	11/25/20	
Perfluorononanoic acid (PFNA)	2.00 U	2.00	1	12/11/20 13:00	11/25/20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C2-PFHxA	89	70 - 130	12/11/20 13:00	
13C2-PFDA	79	70 - 130	12/11/20 13:00	

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010873

SURROGATE RECOVERY SUMMARY

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Extraction Method: Method

Sample Name	Lab Code	13C2-PFHxA	13C2-PFDA
		70-130	70-130
WAL2-1120	R2010873-001	94	78
Method Blank	KQ2018832-03	89	79
Lab Control Sample	KQ2018832-01	104	98
Duplicate Lab Control Sample	KQ2018832-02	90	89

Client: On-Site Technical Services, Inc.
Project: Wellsville-Andover LF-Emerging Contaminants Sample
Sample Matrix: Drinking Water

Service Request: R2010873
Date Analyzed: 12/11/20
Date Extracted: 11/25/20

Duplicate Lab Control Sample Summary

Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS

Analysis Method: 537
Prep Method: Method

Units: ng/L
Basis: NA
Analysis Lot: 706635

Analyte Name	Lab Control Sample KQ2018832-01			Duplicate Lab Control Sample KQ2018832-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Perfluorobutane sulfonic acid (PFBS)	1.88 J	2.00	94	1.82 J	2.00	91	70-130	3	30
Perfluoroheptanoic acid (PFHpA)	2.28	2.00	114	2.21	2.00	110	70-130	3	30
Perfluorohexane sulfonic acid (PFHxS)	1.90 J	2.00	95	1.98 J	2.00	99	70-130	4	30
Perfluorononanoic acid (PFNA)	2.25	2.00	112	2.06	2.00	103	70-130	9	30
Perfluorooctane sulfonic acid (PFOS)	1.97 J	2.00	99	2.01	2.00	101	70-130	2	30
Perfluorooctanoic acid (PFOA)	2.09	2.00	105	2.01	2.00	101	70-130	4	30

Attachment 4

Data Usability Summary Report

DATA USABILITY SUMMARY REPORT FOR WELLSVILLE - ANDOVER LANDFILL OCTOBER/NOVEMBER 2020 EMERGING CONTAMINANTS SAMPLING

Five drinking water samples were collected from the Wellsville - Andover Landfill site on October 21, 2020 through November 14, 2020. Analytical results from these samples were validated and reviewed by On-Site Geological Services, D.P.C. (On-Site) for usability with respect to the USEPA Region II Standard Operating Procedures (SOPs) for organic data review, NYSDEC's *Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS)*, and analytical methodologies. The analytical laboratory for this project was ALS Environmental (ALS) in Rochester, New York and Kelso, Washington.

SAMPLING AND CHAIN-OF-CUSTODY (COC)

The samples were collected, shipped under a COC record, and received at ALS within one day of sampling at 2.9-7.5°C. All samples were received intact and in good condition at ALS.

LABORATORY DATA PACKAGES

The laboratory data packages' turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by On-Site, was 21-34 days for the project samples. The data packages received from ALS were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail within this data usability summary report (DUSR).

LABORATORY ANALYTICAL METHODS

The samples were collected from the Wellsville Andover Landfill site and analyzed for the 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS). Summaries of noncompliances with validation protocols of these laboratory analyses are presented within this DUSR. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) are discussed for each analytical method. The laboratory data were reviewed and may be qualified with the following validation flags:

- “U” - not detected at the value give,
- “UJ” - estimated and not detected at the value given,
- “J” - estimated at the value given,
- “J+” - estimated biased high at the value given,
- “J-” - estimated biased low at the value given,
- “N” - presumptive evidence at the value given, and
- “R” - unusable value.

The validated laboratory data were tabulated and are presented in the attached table with the “Valid Result” and “Valid Code” columns representing changes in laboratory data resulting from data validation. The following summarizes these changes:

1,4-Dioxane Analysis

The samples collected from the site were analyzed for 1,4-dioxane using the USEPA 522 analytical method. The reported results for these samples did not require qualification resulting from data validation. The reported 1,4-dioxane analytical results were 100% complete (i.e., usable) for the project data presented by ALS. PARCCS requirements were met.

PFAS Analysis

The samples collected from the site were analyzed for PFAS using the USEPA 537.1 analytical method. The reported results for these samples did not require qualification resulting from data validation. The reported PFAS analytical results were 100% complete (i.e., usable) for the project data presented by ALS. PARCCS requirements were met.

REVIEW AND VALIDATION OF 1,4-DIOXANE DATA

The following items were reviewed for compliancy in the 1,4-dioxane analysis:

- ◆ Custody documentation
- ◆ Holding times
- ◆ Surrogate recoveries
- ◆ Laboratory control sample (LCS) recoveries
- ◆ Laboratory method blank contamination
- ◆ GC/MS instrument performance
- ◆ Initial and continuing calibrations
- ◆ Internal standard area counts and retention times
- ◆ Sample result verification and identification
- ◆ Quantitation limits
- ◆ Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols.

Usability

All 1,4-dioxane sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, comparability, and sensitivity. The 1,4-dioxane data presented by ALS were 100% complete (i.e., usable) for the project samples. The validated laboratory data are tabulated and presented in the attached table.

It was noted that samples WAL19POST-1020, WAL19PRE-1020, and WAL1-1020 were reextracted and reanalyzed based upon laboratory method blank contamination during the original analysis of these samples. Therefore, results from the reanalysis were reported for these samples in the validated laboratory data table.

REVIEW AND VALIDATION OF PFAS DATA

The following items were reviewed for compliancy in the PFAS analysis:

- ◆ Custody documentation
- ◆ Holding times
- ◆ Surrogate recoveries
- ◆ Laboratory control sample (LCS) recoveries
- ◆ Laboratory method blank contamination
- ◆ Instrument performance
- ◆ Initial and continuing calibrations
- ◆ Internal standard area counts
- ◆ Sample result verification and identification
- ◆ Quantitation limits
- ◆ Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of surrogate recoveries as discussed below.

Surrogate Recoveries

All sample surrogate recoveries were considered acceptable and within QC limits with the exception of the high recovery for 13C2-PFHxA (QC limit 70-130%R) in sample WAL1-1020 (161%R). Validation qualification was not required for the affected sample.

Usability

All PFAS sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, comparability, and sensitivity. The PFAS data presented by ALS were 100% complete (i.e., usable). The validated laboratory data are tabulated and presented in the attached table.

Validated Laboratory Data
Wellsville - Andover Landfill

October/November 2020 Emerging Contaminants Sampling

Sample ID	Lab ID	Sample Date	Validation Date	Analysis Method	Units	Component	RL	MDL	Result	Code	Valid Result	Valid Code
WAL19POST-1020	R2009887-001	10/21/2020	1/31/2021	522	UG/L	1,4-Dioxane	0.04	0.02	0.04	U		
WAL19PRE-1020	R2009887-002	10/21/2020	1/31/2021	522	UG/L	1,4-Dioxane	0.04	0.02	0.05			
WAL19POST-1020	R2009887-001	10/21/2020	1/31/2021	537	ng/L	Perfluorobutanesulfonic Acid	2	1.22	2	U		
WAL19POST-1020	R2009887-001	10/21/2020	1/31/2021	537	ng/L	Perfluorohexanesulfonic Acid	2	0.964	2	U		
WAL19POST-1020	R2009887-001	10/21/2020	1/31/2021	537	ng/L	Perfluorooctanesulfonic Acid	2	1.2	2	U		
WAL19POST-1020	R2009887-001	10/21/2020	1/31/2021	537	ng/L	Perfluoroheptanoic Acid	2	1.36	2	U		
WAL19POST-1020	R2009887-001	10/21/2020	1/31/2021	537	ng/L	Perfluorooctanoic Acid	2	1.28	2	U		
WAL19POST-1020	R2009887-001	10/21/2020	1/31/2021	537	ng/L	Perfluorononanoic Acid	2	1.02	2	U		
WAL19PRE-1020	R2009887-002	10/21/2020	1/31/2021	537	ng/L	Perfluorobutanesulfonic Acid	2	1.22	2	U		
WAL19PRE-1020	R2009887-002	10/21/2020	1/31/2021	537	ng/L	Perfluorohexanesulfonic Acid	2	0.964	2	U		
WAL19PRE-1020	R2009887-002	10/21/2020	1/31/2021	537	ng/L	Perfluorooctanesulfonic Acid	2	1.2	2	U		
WAL19PRE-1020	R2009887-002	10/21/2020	1/31/2021	537	ng/L	Perfluoroheptanoic Acid	2	1.36	2	U		
WAL19PRE-1020	R2009887-002	10/21/2020	1/31/2021	537	ng/L	Perfluorooctanoic Acid	2	1.28	2	U		
WAL19PRE-1020	R2009887-002	10/21/2020	1/31/2021	537	ng/L	Perfluorononanoic Acid	2	1.02	2	U		

Validated Laboratory Data
Wellsville - Andover Landfill

October/November 2020 Emerging Contaminants Sampling

Sample ID	Lab ID	Sample Date	Validation Date	Analysis Method	Units	Component	RL	MDL	Result	Code	Valid Result	Valid Code
WAL1-1020	R2010181-001	10/28/2020	1/31/2021	522	UG/L	1,4-Dioxane	0.04	0.02	0.04	U		
WAL1-1020	R2010181-001	10/28/2020	1/31/2021	537	ng/L	Perfluorobutanesulfonic Acid	2	1.22	2	U		
WAL1-1020	R2010181-001	10/28/2020	1/31/2021	537	ng/L	Perfluorohexanesulfonic Acid	2	0.964	2	U		
WAL1-1020	R2010181-001	10/28/2020	1/31/2021	537	ng/L	Perfluorooctanesulfonic Acid	2	1.2	2	U		
WAL1-1020	R2010181-001	10/28/2020	1/31/2021	537	ng/L	Perfluoroheptanoic Acid	2	1.36	2	U		
WAL1-1020	R2010181-001	10/28/2020	1/31/2021	537	ng/L	Perfluorooctanoic Acid	2	1.28	2	U		
WAL1-1020	R2010181-001	10/28/2020	1/31/2021	537	ng/L	Perfluorononanoic Acid	2	1.02	2	U		

Sample ID	Lab ID	Sample Date	Validation Date	Analysis Method	Units	Component	RL	MDL	Result	Code	Valid Result	Valid Code
WAL11-1120	R2010314-001	11/1/2020	1/31/2021	522	UG/L	1,4-Dioxane	0.04	0.02	0.0212	J		
WAL11-1120	R2010314-001	11/1/2020	1/31/2021	537	ng/L	Perfluorobutanesulfonic Acid	2	1.22	2	U		
WAL11-1120	R2010314-001	11/1/2020	1/31/2021	537	ng/L	Perfluorohexanesulfonic Acid	2	0.964	2	U		
WAL11-1120	R2010314-001	11/1/2020	1/31/2021	537	ng/L	Perfluorooctanesulfonic Acid	2	1.2	2	U		
WAL11-1120	R2010314-001	11/1/2020	1/31/2021	537	ng/L	Perfluoroheptanoic Acid	2	1.36	2	U		
WAL11-1120	R2010314-001	11/1/2020	1/31/2021	537	ng/L	Perfluorooctanoic Acid	2	1.28	2	U		
WAL11-1120	R2010314-001	11/1/2020	1/31/2021	537	ng/L	Perfluorononanoic Acid	2	1.02	2	U		

Validated Laboratory Data
 Wellsville - Andover Landfill

October/November 2020 Emerging Contaminants Sampling

Sample ID	Lab ID	Sample Date	Validation Date	Analysis Method	Units	Component	RL	MDL	Result	Code	Valid Result	Valid Code
WAL2-1120	R2010873-001	11/14/2020	1/31/2021	522	UG/L	1,4-Dioxane	0.04	0.02	0.04	U		
WAL2-1120	R2010873-001	11/14/2020	1/31/2021	537	ng/L	Perfluorobutanesulfonic Acid	2	1.22	2	U		
WAL2-1120	R2010873-001	11/14/2020	1/31/2021	537	ng/L	Perfluorohexanesulfonic Acid	2	0.964	2	U		
WAL2-1120	R2010873-001	11/14/2020	1/31/2021	537	ng/L	Perfluorooctanesulfonic Acid	2	1.2	2	U		
WAL2-1120	R2010873-001	11/14/2020	1/31/2021	537	ng/L	Perfluoroheptanoic Acid	2	1.36	2	U		
WAL2-1120	R2010873-001	11/14/2020	1/31/2021	537	ng/L	Perfluorooctanoic Acid	2	1.28	2	U		
WAL2-1120	R2010873-001	11/14/2020	1/31/2021	537	ng/L	Perfluorononanoic Acid	2	1.02	2	U		