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# 3021 Orchard Park Road Site

BCP Site No. C915289
3021-3041 Orchard Park Road
Orchard Park, New York

# Periodic Review Report

## (March 16, 2017 to December 31, 2018)

Date: December 2018

Prepared for: 3021-3041 Orchard Park Road, LLC

Job Number: 0010-001-001

Service to
Our Community,
Our Professions, &
Our Clients

# PERIODIC REVIEW REPORT

## (March 16, 2017 to December 31, 2018)

**3021 ORCHARD PARK ROAD SITE**
**BCP SITE NO. C915289**
**ORCHARD PARK, NEW YORK**

December 2018 0010-001-001

Prepared for:

## 3021-3041 Orchard Park Road, LLC

Prepared By:

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# 3021 Orchard Park Road Site
# BCP Site No. C915289

## List of Acronyms

| | |
|---|---|
| **ACMs** | *Asbestos Containing Materials* |
| **AIRS** | *Aromatic Information Retrieval System* |
| **ASD** | *Active Subslab Depressurization* |
| **AST** | *Aboveground Storage Tank* |
| **ASTM** | *American Society for Testing and Materials* |
| **BCA** | *Brownfield Cleanup Agreement* |
| **BCP** | *Brownfield Cleanup Program* |
| **BTEX** | *Benzene, toluene, ethylbenzene, and xylenes* |
| **C/D** | *Construction and Demolition* |
| **CAMP** | *Community Air Monitoring Plan* |
| **CBS** | *Chemical Bulk Storage* |
| **CERCLA** | *Comprehensive Environmental Response, Compensation, and Liability Act* |
| **CERCLIS** | *Comprehensive Environmental Response, Compensation, and Liability Information System* |
| **CESQG** | *Conditionally Exempt Small Quantity Generator* |
| **CFR** | *Code of Federal regulation* |
| **CO2** | *Carbon Dioxide* |
| **COC** | *Certificate of Completion* |
| **CORRACTS** | *Corrective Action* |
| **CP** | *Commissioner Policy* |
| **CPG** | *Certified Professional Geologist* |
| **CREC** | *Controlled Recognized Environmental Condition* |
| **cVOC** | *Chlorinated Volatile Organic Compound* |
| **DER** | *Division of Environmental Remediation* |
| **DNAPL** | *Dense Non-Aqueous Phase Liquid* |
| **EC** | *Engineering Control* |
| **ECHO** | *Enforcement and Compliance History Information* |
| **ECL** | *Environmental Conservation Law* |
| **EDR** | *Environmental Data Resources, Inc.* |
| **ELAP** | *Environmental Laboratory Approval Program* |
| **ERNS** | *Emergency Response & Notification System* |
| **ESA** | *Environmental Site Assessment* |
| **ETPH** | *Extractable Total Petroleum Hydrocarbons* |
| **FBGS** | *Feet below ground surface* |
| **FIFRA** | *Federal Insecticide, Fungicide, & Rodenticide Act* |
| **FINDS** | *Facility Index System/Facility Registry System* |
| **FOIA** | *Freedom of Information Act* |
| **FOIL** | *Freedom of Information Letter* |
| **FOP** | *Field Operating Procedure* |
| **FTTS** | *FIFRA/TSCA Tracking System* |
| **FWS** | *Fish and Wildlife Service* |
| **GIS** | *Geographic Information Systems* |
| **HASP** | *Health and Safety Plan* |
| **HREC** | *Historical Recognized Environmental Condition* |
| **HSWDS** | *Hazardous Waste Disposal Site* |
| **HVAC** | *Heating Ventilation and Air Conditioning* |
| **IC** | *Institutional Control* |
| **ICIS** | *Integrated Compliance Information System* |
| **IRM** | *Interim Remedial Measure* |
| **LBP** | *Lead-Based Paint* |
| **LNAPL** | *Light Non-Aqueous Phase Liquid* |
| **LQG** | *Large Quantity Generator* |
| **LTANK** | *Leaking Tank* |
| **LUST** | *Leaking Underground Storage Tank* |
| **MOSF** | *Major Oil Storage Facility* |
| **MSDS** | *Material Safety Data Sheets* |
| **MTBE** | *Methyl Tertiary Butyl Ether* |
| **NA** | *Not Available/Applicable* |
| **NPDES** | *National Pollutant Discharge Elimination System* |
| **NPL** | *National Priorities List* |
| **NRCS** | *Natural Resource Conservation Service* |
| **NYCRR** | *New York Codes, Rules, and Regulations* |
| **NYSDEC** | *New York State Department of Environmental Conservation* |
| **NYSDOH** | *New York State Department of Health* |
| **NYSDOL** | *New York State Department of Labor* |
| **O&M** | *Operations and Maintenance* |
| **OM&M** | *Operation, Maintenance, and Monitoring* |
| **OPRA** | *Open Public Records Act* |
| **ORION** | *Orion Environmental Solutions, LLC* |
| **OSHA** | *Occupational Safety and Health Administration* |
| **PAH** | *Polycyclic aromatic hydrocarbons* |
| **PBS** | *Petroleum Bulk Storage* |
| **PCBs** | *Polychlorinated Biphenyls* |
| **pCi/**L | *picocuries per Liter* |
| **PE** | *Professional Engineer* |
| **PERC** | *Tetrachloroethylene (perchloroethylene)* |
| **PG** | *Professional Geologist* |
| **PID** | *photoionization detector* |
| **PPB** | *parts per billion* |
| **PPM** | *parts per million* |
| **PRP** | *Potentially Responsible Party* |
| **PRR** | *Periodic Review Report* |
| **PVEC** | *Potential Vapor Encroachment Condition* |

## List of Acronyms

| | |
|---|---|
| **QA/QC** | *Quality Assurance/Quality Control* |
| **QAPP** | *Quality Assurance Project Plan* |
| **RAO** | *Remedial Action Objective* |
| **RAWP** | *Remedial Action Work Plan* |
| **RCRA** | *Resource Conservation and Recovery Act* |
| **RSO** | *Remedial System Optimization* |
| **SAC** | *State Assistance Contract* |
| **SACM** | *Suspect Asbestos Containing Material* |
| **SCG** | *Standards, Criteria, and Guidelines* |
| **SCO** | *Soil Cleanup Objective* |
| **SEMS** | *Superfund Enterprise Management System (FKA CERCLIS)* |
| **SFMP** | *Soil Fill Management Plan* |
| **SHPO** | *State Historic Preservation Office/Officer* |
| **SHWS** | *State Hazardous Waste Site* |
| **SMP** | *Site Management Plan* |
| **SOP** | *Standard Operating Procedure* |
| **SOW** | *Statement of Work* |
| **SPCC** | *Spill Prevention Control and Countermeasure* |
| **SPDES** | *State Pollution Discharge Elimination System* |
| **SQG** | *Small Quantity Generator* |
| **SSD** | *Sub-slab Depressurization* |
| **SVE** | *Soil Vapor Extraction* |
| **SVI** | *Soil Vapor Intrusion* |
| **SVOC** | *Semi volatile Organic Compound* |
| **SWF/LF** | *Solid Waste Facility/Landfill* |
| **SWRCY** | *Registered Recycling Facility List* |
| **TAL** | *Target Analyte List* |
| **TCE** | *Trichloroethylene* |
| **TCL** | *Target Compound List* |
| **TCLP** | *Toxicity Characteristic Leachate Procedure* |
| **TRIS** | *Toxic Chemical Release Inventory System* |
| **TSCA** | *Toxic Substance Control Act* |
| **TSDF** | *Treatment, Storage and Disposal Facility* |
| **USDA** | *United States Department of Agriculture* |
| **USEPA** | *United States Environmental Protection Agency* |
| **USGS** | *United States Geological Survey* |
| **UST** | *Underground Storage Tank* |
| **VCP** | *Voluntary Cleanup Program* |
| **VEC** | *Vapor Encroachment Condition* |
| **VOC** | *Volatile Organic Compound* |

# 1.0 INTRODUCTION

Orion Environmental Solutions, LLC (Orion) has prepared this Periodic Review Report (PRR) to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C915289, located at 3021-3041 Orchard Park Road, in the Town of Orchard Park, Erie County, New York (see Figure 1).

This PRR has been prepared in accordance with the NYSDEC DER-10 *Technical Guidance for Site Investigation and Remediation* (May 2010; Ref. 1) and the NYSDEC's Institutional and Engineering Controls (IC/EC) Certification Form has been prepared for the Site. This PRR and the associated IC/EC Form (see Appendix A) have been completed for the post-remedial period from March 16, 2017 to December 31, 2018.

## 1.1 Site Background

3021-3041 Orchard Park Road, LLC and CCS Oncology, P.C. entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in October 2014, to investigate and remediate an approximate 4.19-acre portion of a larger 5.06-acre parcel located in the Town of Orchard Park, County of Erie, New York. BCP site activities were performed in accordance with Brownfield Cleanup Agreement (BCA) Index #C915289-10-14, Site #C915289, which was executed on October 30, 2014. The BCP property, which is inclusive of the asphalted parking/driveway areas and on-site building and excludes the vegetated (grassed) areas along the outer perimeter of the Site, was remediated to restricted residential use.

On April 2, 2018, CCS Oncology, P.C. filed for Chapter 11 reorganizational bankruptcy, subsequently closing on April 27, 2018. 3021-3041 Orchard Park Road, LLC continues to maintain the Site in accordance with the BCA. Currently, the Site is being used as a consolidated multi-disciplinary medical facility, including: breast surgeons, gynecologic surgeons, vascular surgeons, primary physicians, diagnostic imaging, and diagnostic information services.

The Site is located in the County of Erie, New York and is identified as Section 152.12 Block 02 and Lot 1.1 on the Orchard Park Tax Map #152.12 per Erie County Tax Map records. The BCP Site is bounded by Michael Road to the north, commercial property to the south (Rite Aid Pharmacy), commercial property (Walgreens

Pharmacy) to the east, and Orchard Park Road to the west (see Figures 1 and 2). Historically, the Site was improved as a commercial multi-unit shopping plaza and associated parking. The existing building formerly contained seven units identified by address as follows:

- 3025 – Former Tops Grocery Store and Antique Mall
- 3027 – Existing Family Dollar
- 3031 – Former CVS Pharmacy
- 3035 – Former Hair Salon and Dry Cleaner
- 3037 – Former Paint Shop
- 3039 – Former Dry Cleaner/Insty-Prints Printing Center
- 3041 – Former Credit Union

## 1.2 Remedial History

The 3021 Orchard Park Road Site is located in a moderately developed commercial area of Orchard Park, New York. The Site is improved with a single-story, multi-unit commercial building and large parking lot. According to the Phase I Environmental Site Assessment (ESA) (Ref. 2), the commercial plaza historically housed a dry-cleaning tenant in the 3035 and 3039 Orchard Park Road tenant units between 1979 and 2008.

Previous investigations completed on the Site included a Limited and Focused Subsurface Soil and Groundwater Investigation (Ref. 3) and a Supplemental Phase II Environmental Investigation (Ref. 4). The LCS investigation was based on information reported in the Phase I ESA of a recognized environmental condition (REC) that the subject property was historically used as a dry cleaner. The LCS investigation included the completion of a subsurface soil and groundwater investigation in accessible exterior areas of the Site to assess potential environmental impact related to the past operation of a dry-cleaning facility. The investigation identified photoionization detector (PID) measurements above background concentrations (e.g., 0.0 parts per million, ppm) at 53 of the 63 soil samples collected, solvent-type odors, and chlorinated volatile organic compounds (cVOCs), commonly associated with dry cleaning facilities, in two temporary monitoring wells in exceedance of NYSDEC Class

"GA" Ambient Water Quality Standards (AWQSs). No analytes were detected in soil at concentrations in exceedance of NYSDEC Part 375 Soil Cleanup Objectives.

Based on the findings of the LCS report, further investigation was recommended to delineate the extent of cVOCs found at the site. Turnkey's investigation included six interior soil borings, three soil vapor samples (subslab, indoor, and outdoor), and five exterior borings/temporary monitoring wells. Results from this investigation generally indicated the following conditions: tetrachloroethene (PCE) was detected at a concentration above the Part 375 Protection of Groundwater Soil Cleanup Objective (SCO) at two boring locations; PCE was categorized as "IR" (identify sources and reduce exposures) in soil vapor; and, benzene, cis-1,2-dichloroethene (cis-1,2-DCE), PCE, trichloroethene (TCE), and vinyl chloride (VC) were detected above the AWQSs in one temporary well, while cis-1,2-DCE and VC were detected at concentrations above the AWQSs at another temporary well.

A BCP Remedial Investigation (RI) was performed from November 2014 to January 2015 to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the Remedial Investigation/Interim Remedial Measures/Alternatives Analysis (RI/IRM/AA) Report (Ref. 5). In general, the RI determined that cVOCs were the contaminants of concern (COCs) in Site soil and/or groundwater.

The RI/IRM/AA Report recommended remediation of potentially cVOC-impacted soil/fill from the vault area, Porte Cochere footers, and storm sewer spoils, as well as removal of sediment from and replacement of an on-site catch basin followed by direct injection of groundwater treatment amendments in the vault area and maintenance and repair, as necessary, of the existing asphalt covered driveways/parking lots and concrete pads as the final remedial measure under a Track 4 Cleanup approach. Additional requirements included development and adherence to a Site Management Plan (SMP) (Ref. 6) and filing of an Environmental Easement to restrict use of the property to restricted residential, commercial, and industrial applications and to place other limitations on post-redevelopment activities.

## 1.3 Compliance

At the time of the Site inspection, the Site was fully compliant with the NYSDEC-approved SMP dated September 2014.

## 2.0 SITE REMEDIATION OVERVIEW

An overview of the remediation and redevelopment activities undertaken on the Site covered by this PRR are presented below. The remediated property is subject to a comprehensive, site-wide SMP which identifies requirements for monitoring and maintenance of engineering and institutional controls and procedures for post-remedial excavation and related activities.

The 3021 Orchard Park Road Site was redeveloped under the BCP as a consolidated multi-disciplinary medical facility. The following IRM activities were performed to remediate the Site:

- Excavation and off-site disposal of 1,246.29 tons of potentially cVOC-impacted soil/fill from the vault area of the Site.
- Excavation and off-site disposal of 420.60 tons of non-impacted soil/fill generated from building interior utility trenching, Porte Cochere footer excavations, new roof storm drain installation, and excavation of nine topsoil/grass covered islands throughout the parking lot area.
- Removal of sediment from, followed by decontamination and disposal of, an on- site catch basin. A new concrete catch basin was installed.
- Targeted in-situ groundwater treatment in the vault area of the Site included 23 injection points from approximately 4 to 14 feet below ground surface.
- Non-PCB containing (less than 3 ppm) transformer removal and disposal.
- Asbestos abatement of floor tile, floor mastic, and carpet mastic.

The remedial program was successful in achieving the remedial objectives for the Site. An Environmental Easement restricting end use of the Site and enforcing adherence to the SMP was filed and approved in November 2015. The Final Engineering Report (FER) (Ref. 7) was approved in December 2015. Concurrently, a Certificate of Completion (COC) was issued for the Site by the NYSDEC in December 2015.

## 3.0 REMEDY PERFORMANCE

A post-remedial site inspection involving a walk-over of the Site covered by this PRR was performed on November 19, 2018 to visually observe and document the use of the Site for restricted residential, commercial, and/or industrial use, confirm absence of site groundwater use, inspect the cover system integrity, and verify conformance with other requirements under the SMP. The site inspection completed during the current reporting period indicates that the controls are in-place and functioning as intended in accordance with the SMP.

The completed IC/EC Certification form and site photographs are included in Appendices A and B, respectively.

# 4.0 SITE MANAGEMENT PLAN

A site-wide SMP was prepared for the Site and approved by the Department in November 2015. Key components of the SMP are described below.

## 4.1 Institutional & Engineering Control (IC/EC) Plan

Since remaining contaminated soil and groundwater exists beneath the site, Institutional Controls and Engineering Controls (IC/ECs) are required to protect human health and the environment. The Engineering and Institutional Control Plan describes the procedures for the implementation and management of all IC/ECs at the Site. At the time of the site inspection, the Site covered by this PRR was fully compliant with all engineering and institutional control requirements.

### *4.1.1 Institutional Controls (ICs)*

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

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

submitted annually, or an alternate period of time that NYSDEC by an expert that the NYSDEC finds acceptable.

### *4.1.2 Engineering Controls (ECs)*

Engineering controls at the Site include:

- Cover System – Exposure to remaining contamination in soil/fill at the site is prevented by a final cover system placed over the site. The cover system is comprised of a minimum of 24 inches of clean soil for interior green space islands, asphalt pavement, and concrete sidewalks and building slabs/foundations. The cover system must be maintained in compliance with the SMP.
- Vapor Barrier - A polyethylene vapor barrier must be installed (if new construction) and remain in-place beneath existing building concrete floor slabs (i.e., vault room).

## 4.2 Post-Remedial Groundwater Monitoring

As a requirement of the SMP, post-remedial groundwater sampling of monitoring wells MW-4A and MW-6 is to be performed biannually (twice per year) for the first two years then annually thereafter (until such time as the NYSDEC agrees that monitoring can be terminated) to assess the performance of the IRM remedy. Modification to the frequency or sampling requirements will require approval from the NYSDEC. In accordance with the SMP, groundwater samples from each well are to be analyzed for Target Compound List (TCL) VOCs (Method 8260) and field parameters (i.e., pH, conductivity, temperature, turbidity, dissolved oxygen, and oxidation-reduction potential). Groundwater from well MW-6 are also to be analyzed for attenuation parameters to evaluate effectiveness of the in-situ treatment and include dissolved iron, dissolved manganese, sulfate, nitrate-nitrite, and dissolved gases methane, ethane, and ethene.

The following semi-annual, post-remedial, and SMP-required groundwater monitoring events have been performed at the Site.

- June 6, 2017
- November 17, 2017
- July 6, 2018
- November 19, 2018

In accordance with the SMP and during each sampling event of the current monitoring period, wells MW- 4A and MW-6 were sampled with SpeedBag HydraSleeves. A summary of pre- and post-remedial groundwater monitoring data is presented in Table 1. Appendix C includes the field forms (C1), concentration vs. time plots (C2), and analytical data packages (C3 and C4) for both 2018 sampling events.

Similar to 2017 and as shown in Table 1, the 2018 groundwater monitoring results indicate nearly 100% removal of cVOC (trichloroethene and tetrachloroethene) and daughter compound-impacts (i.e., cis-1,2-dichloroethene, 1,1-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride) compared to pre-IRM concentrations. Concentration versus time plots presented in Appendix C2 clearly demonstrate this near-complete removal and that cVOC concentrations are consistently well below their respective AWQSs. This dramatic improvement to groundwater quality is expected to be permanent.

Should it be required, the next annual groundwater event is tentatively scheduled for July 2019.

## 4.3 Intrusive Activities

An Excavation Work Plan (EWP) was included in the NYSDEC-approved SMP for the Site. The EWP provides guidelines for the management of soil and fill material during any future intrusive actives. Any intrusive work that will penetrate the cover or cap, or encounter or disturb the remaining contamination at the Site, including any modifications or repairs to the existing cover system and/or building foundation, must be performed in compliance with the EWP.

During the current reporting period (March 16, 2017 to December 31, 2018), no site improvements were conducted.

## 4.4 Annual Inspection & Certification Program

The Annual Inspection and Certification Program outlines requirements for certifying and attesting that the institutional controls and engineering controls employed on the Site are unchanged from the original design and/or previous certification. The Annual Certification includes a Site Inspection and completion of the NYSDEC-provided IC/EC Certification Form. The Site inspection is intended to verify that the IC/ECs:

- Are in place and effective.
- Are performing as designed.
- That nothing has occurred that would impair the ability of the controls to protect the public health and environment.
- That nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls.
- Access is available to the Site to evaluate continued maintenance of such controls.

Inspection of the Site was conducted by Bryan C. Hann, P.G. of Orion on November 19, 2018. Mr. Hann is a licensed and registered NY State Professional Geologist and meets the requirements of a Qualified Environmental Professional (QEP) per 6NYCRR Part 375.12. At the time of the inspection, the Site was being used as a medical and diagnostics facility (Vascular Associates of WNY and Quest Diagnostics) and Family Dollar, with asphalt surface parking, concrete sidewalks, and interior landscaped island areas. No observable indication of intrusive activities was noted during the Site inspection. The existing medical and shopping facilities utilize the local municipal water supply, and no observable use of groundwater was noted during the Site inspection.

The completed Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form is included in Appendix A. A photographic log of the November 2018 Site inspection is included in Appendix B.

## 4.5 Operation, Monitoring, & Maintenance Plan

The remedy for the Site does not rely on any mechanical systems such as sub-slab depressurization or soil vapor extraction, to protect public health and the environment. Therefore, an Operation and Maintenance Plan is not required.

## 5.0 CONCLUSIONS & RECOMMENDATIONS

Conclusions for this reporting period and recommendations for the next reporting period are as follows:

- At the time of the Site inspection, the Site was in compliance with the SMP. No intrusive activities were performed during the reporting period.
- Groundwater monitoring results indicate nearly 100% removal of previously identified cVOC impacts to groundwater.
- It is recommended that groundwater monitoring be discontinued and both monitoring wells MW-4A and MW-6 be decommissioned. Groundwater analytical results of the SMP-required four semi-annual, post-remedial monitoring events clearly demonstrate the dramatic improvement to groundwater quality (nearly 100%) is permanent.
- Annual Site inspections to verify the IC/ECs employed at the Site are unchanged from the original design and/or previous certifications should continue.

## 6.0 DECLARATION/LIMITATION

Orion Environmental Solutions, LLC personnel conducted the annual site inspection for BCP Site No. C915289, located in Orchard Park, New York, according to generally accepted practices. This report has been prepared for the exclusive use of and has complied with the scope of work provided to 3021-3041 Orchard Park Road, LLC. The contents of this report are limited to information available at the time of the Site inspection. The findings herein may be relied upon only at the discretion of 3021-3041 Orchard Park Road, LLC. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission from Orion Environmental Solutions, LLC.

## 7.0 REFERENCES

1. New York State Department of Environmental Conservation. DER-10; *Technical Guidance for Site Investigation and Remediation*. May 2010.

2. LCS Inc. ASTM E1527-05 All Appropriate Inquiries Phase I Environmental Site Assessment Report for the Property Identified as: Commercial Plaza, 3021-3041 Orchard Park Road, Orchard Park, New York. October 10, 2013.

3. LCS Inc. Limited and Focused Subsurface Soil and Groundwater Investigation Report for the Property Identified as: Commercial Plaza, 3021-3041 Orchard Park Road, Orchard Park, New York. May 14, 2014.

4. TurnKey Environmental Restoration, LLC. Supplemental Phase II Environmental Investigation Report, 3021-3041 Orchard Park Road, Orchard Park, New York. June 2014.

5. Benchmark Environmental Engineering & Science, PLLC and TurnKey Environmental Restoration, LLC. *Remedial Investigation/Alternatives Analysis Report, 3021 Orchard Park Road Site, Orchard Park, New York*. April 2015.

6. Benchmark Environmental Engineering & Science, PLLC and TurnKey Environmental Restoration, LLC. *Site Management Plan, 3021 Orchard Park Road Site, Orchard Park, NY (NYSDEC BCP Site #C915289)*. November 2015.

7. Benchmark Environmental Engineering & Science, PLLC and TurnKey Environmental Restoration, LLC. *Final Engineering Report, 3021 Orchard Park Road Site, Orchard Park, NY (NYSDEC BCP Site #C915268)*. November 2014.

# TABLES

ORION Environmental Solutions, LLC

**TABLE 1**

**PRE- & POST-INJECTION GROUNDWATER ANALYTICAL SUMMARY**

**Periodic Review Report**
**3021 Orchard Park Road Site (C915289)**
**Orchard Park, New York**

| Parameter [1] | CasNum | NY-AWQS | Units | Monitoring Location, Sample Date, Lab Data Package No. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MW-4A | | | | | | MW-6 | | | | | | |
| | | | | Pre-Injection | | Post-Injection | | | | Pre-Injection | Post-Injection | | | | | |
| | | | | 01/12/2015 L1500729 Qual | 03/25/2015 L1506003 Qual | 06/06/2017 L1718736 Qual | 11/17/2017 L1742548 Qual | 07/06/2018 L1825714 Qual | 11/19/2018 L1847434 Qual | 4/6/2015 L1506785-01 Qual | 10/01/2015 L1524744 Qual | 11/02/2015 L1528297 Qual | 06/06/2017 L1718736 Qual | 11/17/2017 L1742548 Qual | 07/06/2018 L1825714 Qual | 11/19/2018 L1847434 Qual |
| ***Field Measurements*** | | | | | | | | | | | | | | | | |
| Field pH | NA | **6.5 - 8.5** | S.U | 6.89 | 6.76 | 7.20 | - | 6.22 | 6.12 | 6.80 | 6.56 | 6.01 | 6.28 | - | 6.31 | 6.30 |
| Temperature | NA | - | DEG C | 10.3 | 10.4 | 14.5 | - | 21.2 | 14.5 | 18.2 | 16.9 | 20.7 | 17.7 | - | 23.7 | 13.0 |
| Specific Conductance | NA | - | umhos/cm | 1586 | 1463 | 5015 | - | 5902 | 6700 | 2220 | 3539 | 3335 | 4567 | - | 5227 | 5460 |
| Turbidity | NA | - | NTU | 610 | 122 | > 1000 | - | 626 | 69.7 | 33.5 | > 1000 | 165 | 23.7 | - | 11.5 | 22.1 |
| Dissolved Oxygen | NA | - | mg/L | 1.59 | 1.7 | 2.11 | - | 3.63 | 2.37 | 2.17 | 1.3 | 2.26 | 6.84 | - | NA | 4.53 |
| Redox Potential | NA | - | mV | +23 | +9 | -18 | - | +52 | +87 | +50 | -68 | -112 | -114 | - | -39 | +10 |
| ***Volatile Organics by GC/MS - Westborough Lab*** | | | | | | | | | | | | | | | | |
| Acetone | 67-64-1 | **0.05** | mg/L | 0.0026 J | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 2.6 J | 0.3 J | 0.0077 | 0.045 | 0.052 | 0.018 | 0.018 |
| Benzene | 71-43-2 | **0.001** | mg/L | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.00016 U | 0.016 U | 0.00018 J | 0.0027 | 0.0012 | 0.0003 J | 0.00065 |
| Bromomethane | 74-83-9 | **0.005** | mg/L | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0007 U | 0.42 | 0.0007 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U |
| 2-Butanone | 78-93-3 | **0.05** | mg/L | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.0005 U | 0.19 J | 0.011 | 0.019 | 0.012 | 0.0021 J | 0.0023 J |
| Carbon Disulfide | 75-15-0 | **-** | mg/L | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.5 U | 0.005 U | 0.0038 J | 0.005 U | 0.005 U | 0.005 U |
| Choroethane | 75-00-3 | **0.005** | mg/L | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.25 U | 0.0025 U | 0.0038 | 0.0011 J | 0.0025 U | 0.0025 U |
| Cyclohexane | 110-82-7 | **-** | mg/L | 0.01 U | 0.01 U | 0.01 U | 0.00044 J | 0.01 U | 0.01 U | 0.01 U | 1 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| 2-Hexanone | 591-78-6 | **0.05** | mg/L | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.005 U | 0.5 U | 0.005 U | 0.0046 J | 0.005 U | 0.0042 J | 0.005 U |
| Methylene Chloride | 75-09-2 | **0.005** | mg/L | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.07 U | 0.0016 J | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U |
| Methyl Cyclohexane | 108-87-2 | **-** | mg/L | 0.01 U | 0.01 U | 0.01 U | 0.00058 J | 0.01 U | 0.01 U | 0.01 U | 1 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U | 0.01 U |
| Toluene | 108-88-3 | **0.005** | mg/L | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0007 U | 0.07 U | 0.00072 J | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U |
| Xylene, Total | 1330-20-7 | **0.005** | mg/L | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0007 U | 0.07 U | 0.00199 J | 0.0024 J | 0.0030 J | 0.00089 J | 0.00174 J |
| cis-1,2-Dichloroethene | 156-59-2 | **0.005** | mg/L | 0.022 | 0.024 | 0.0025 U | 0.0044 | 0.0025 U | 0.0025 U | 5.8 | 0.29 | 0.18 | 0.0011 J | 0.00076 J | 0.0025 U | 0.0008 J |
| 1,1-Dichloroethene | 75-35-4 | **0.005** | mg/L | 0.0025 U | 0.0025 U | 0.0025 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.00014 U | 0.014 U | 0.00043 J | 0.0025 U | 0.0005 U | 0.0005 U | 0.0005 U |
| Tetrachloroethene | 127-18-4 | **0.005** | mg/L | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.97 | 0.019 J | 0.0021 | 0.00021 J | 0.0005 U | 0.0005 U | 0.0002 J |
| trans-1,2-Dichloroethene | 156-60-5 | **0.005** | mg/L | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U | 0.0007 U | 0.07 U | 0.0074 | 0.0025 U | 0.0025 U | 0.0025 U | 0.0025 U |
| Trichloroethene | 79-01-6 | **0.005** | mg/L | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U | 1.5 | 0.044 J | 0.013 | 0.00069 | 0.00048 J | 0.00021 J | 0.0005 U |
| Vinyl chloride | 75-01-4 | **0.002** | mg/L | 0.001 U | 0.001 U | 0.001 U | 0.001 U | 0.001 U | 0.001 U | 0.001 U | 0.047 J | 0.051 | 0.001 U | 0.001 U | 0.001 U | 0.001 U |
| ***Total cVOCs*** | ***NA*** | ***NA*** | ***mg/L*** | ***0.022*** | ***0.024*** | ***0.000*** | ***0.0044*** | ***0.00*** | ***0.00*** | ***8.27*** | ***0.40*** | ***0.25393*** | ***0.002*** | ***0.00124*** | ***0.00021*** | ***0.00100*** |
| ***General Chemistry - Westborough Lab*** | | | | | | | | | | | | | | | | |
| Chemical Oxygen Demand (COD | 10004 | **--** | mg/L | - | - | - | - | - | - | - | 18,000 | 960 | - | - | - | - |
| Total Organic Carbon (TOC) | 7440-44-0 | **--** | mg/L | - | - | - | - | - | - | - | 770 | 260 | - | - | - | - |
| ***Anions by Ion Chromatography - Westborough Lab*** | | | | | | | | | | | | | | | | |
| Nitrogen, Nitrate | 14797-55-8 | **10** | mg/L | - | - | - | - | - | - | - | 0.015 J | 0.019 U | 0.064 J | 0.1 U | 0.061 J | 0.1 U |
| Sulfate | 14808-79-8 | **250** | mg/L | - | - | - | - | - | - | - | 4.52 | 0.448 J | 10 U | 1 U | 5 U | 1 U |
| ***Dissolved Gases by GC - Mansfield Lab*** | | | | | | | | | | | | | | | | |
| Carbon Dioxide | 124-38-9 | **--** | mg/L | - | - | - | - | - | - | - | 213 | 202 | - | - | - | - |
| Ethane | 74-84-0 | **--** | mg/L | - | - | - | - | - | - | - | 0.011 | 0.00876 | 0.00226 | 0.00116 | 0.0012 | 0.000614 |
| Ethene | 74-85-1 | **--** | mg/L | - | - | - | - | - | - | - | 0.00928 | 0.0362 | 0.0005 U | 0.0005 U | 0.0005 U | 0.0005 U |
| Methane | 74-82-8 | **--** | mg/L | - | - | - | - | - | - | - | 0.2 | 0.178 | 20.2 D | 13.4 D | 13.9 D | 10.8 D |

ORION Environmental Solutions, LLC

# TABLE 1

## PRE- & POST-INJECTION GROUNDWATER ANALYTICAL SUMMARY

**Periodic Review Report**
**3021 Orchard Park Road Site (C915289)**
**Orchard Park, New York**

| Parameter [1] | CasNum | NY-AWQS | Units | Monitoring Location, Sample Date, Lab Data Package No. | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | MW-4A | | | | | | MW-6 | | | | | | | |
| | | | | Pre-Injection | | Post-Injection | | | | Pre-Injection | Post-Injection | | | | | | |
| | | | | 01/12/2015 L1500729 | 03/25/2015 L1506003 | 06/06/2017 L1718736 | 11/17/2017 L1742548 | 07/06/2018 L1825714 | 11/19/2018 L1847434 | 4/6/2015 L1506785-01 | 10/01/2015 L1524744 | 11/02/2015 L1528297 | 06/06/2017 L1718736 | 11/17/2017 L1742548 | 07/06/2018 L1825714 | 11/19/2018 L1847434 |
| | | | | Qual | Qual | Qual | Qual | Qual | Qual | Qual | Qual | Qual | Qual | Qual | Qual | Qual |
| ***Total Metals - Westborough Lab*** | | | | | | | | | | | | | | | | | |
| Aluminum, Total | 7429-90-5 | -- | mg/L | 7.84 | - | - | - | - | - | 0.44 | - | - | - | - | - | - |
| Antimony, Total | 7440-36-0 | **0.003** | mg/L | 0.00074 U | - | - | - | - | - | 0.0103 J | - | - | - | - | - | - |
| Arsenic, Total | 7440-38-2 | **0.025** | mg/L | 0.00344 | - | - | - | - | - | 0.005 U | - | - | - | - | - | - |
| Barium, Total | 7440-39-3 | **1** | mg/L | 0.1501 | - | - | - | - | - | 0.055 | - | - | - | - | - | - |
| Cadmium, Total | 7440-43-9 | **0.005** | mg/L | 0.00015 J | - | - | - | - | - | 0.005 U | - | - | - | - | - | - |
| Calcium, Total | 7440-70-2 | -- | mg/L | 291 | - | - | - | - | - | 240 | - | - | - | - | - | - |
| Chromium, Total | 7440-47-3 | **0.05** | mg/L | 0.01221 | - | - | - | - | - | 0.01 U | - | - | - | - | - | - |
| Cobalt, Total | 7440-48-4 | -- | mg/L | 0.00678 | - | - | - | - | - | 0.02 U | - | - | - | - | - | - |
| Copper, Total | 7440-50-8 | **0.2** | mg/L | 0.01189 U | - | - | - | - | - | 0.01 U | - | - | - | - | - | - |
| Iron, Total | 7439-89-6 | **0.3** | mg/L | 14.2 | - | - | - | - | - | 1.3 | 23 | 23.7 | - | - | - | - |
| Lead, Total | 7439-92-1 | **0.025** | mg/L | 0.00488 U | - | - | - | - | - | 0.01 U | - | - | - | - | - | - |
| Magnesium, Total | 7439-95-4 | **35** | mg/L | 105 | - | - | - | - | - | 73 | - | - | - | - | - | - |
| Manganese, Total | 7439-96-5 | **0.3** | mg/L | 0.3566 | - | - | - | - | - | 0.199 | 2 | 2.265 | - | - | - | - |
| Nickel, Total | 7440-02-0 | **0.1** | mg/L | 0.01989 | - | - | - | - | - | 0.0053 J | - | - | - | - | - | - |
| Potassium, Total | 7440-09-7 | -- | mg/L | 5.62 | - | - | - | - | - | 12 | - | - | - | - | - | - |
| Sodium, Total | 7440-23-5 | **20** | mg/L | 62.9 | - | - | - | - | - | 120 | - | - | - | - | - | - |
| Vanadium, Total | 7440-62-2 | -- | mg/L | 0.01465 | - | - | - | - | - | 0.0012 J | - | - | - | - | - | - |
| Zinc, Total | 7440-66-6 | **2** | mg/L | 0.04199 | - | - | - | - | - | 0.05 U | - | - | - | - | - | - |
| ***Dissolved Metals - Westborough Lab*** | | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | **0.3** | mg/L | 1.31 | - | - | - | - | - | - | 8.7 | 17 | 0.685 | 2.46 | 0.05 | 33.4 |
| Manganese, Dissolved | 7439-96-5 | **0.3** | mg/L | 0.1459 | - | - | - | - | - | - | 1.58 | 2.232 | 3.267 | 2.802 | 1.928 | 1.519 |

**Notes:**
1. Only compounds detected with reporting limits that exceed the corresponding regulatory standard in at least one sample are included on the summary sheets.
2. NYS Ambient Water Quality Class GA Groundwater Quality Standards/Guidance Values; NYSDEC June 1998 Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1

**Qualifier Key:**
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
UJ = The analyte was not detected. The associated reported quantitation limit is an estimate and may be inaccurate or imprecise.

**Color Code:**
= chlorinated VOCs (cVOCs) are highlighted in BLUE
= concentration exceeds the NYSDEC Class GA AWQS/GV.

# FIGURES

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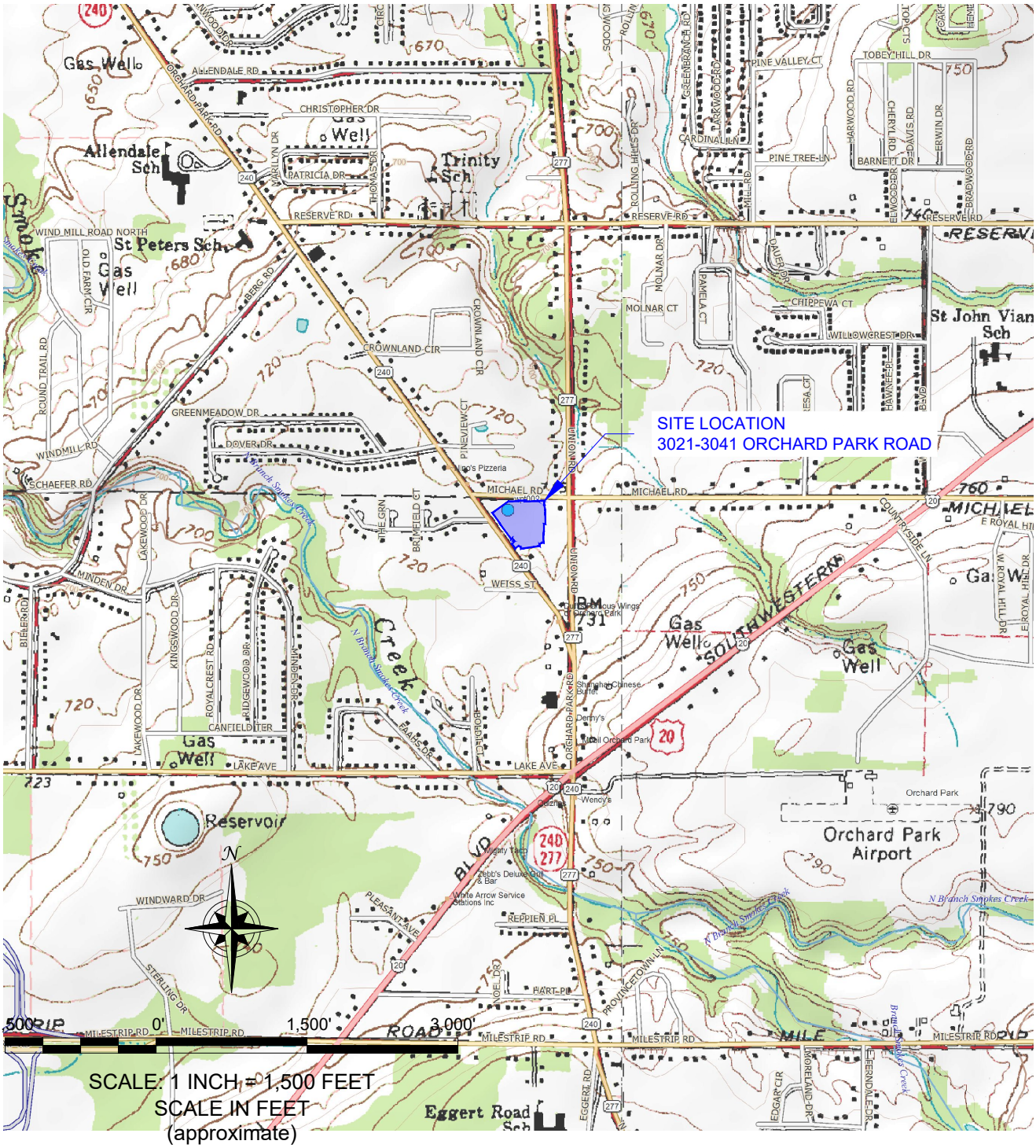
# FIGURE 1





ORION
Environmental Solutions, LLC
4535 Southwestern Boulevard, Suite 210, Hamburg, NY 14075


PROJECT NO.: 0010-001-001

DATE: DECEMBER 2018

DRAFTED BY: BCH

## SITE LOCATION & VICINITY MAP

2018 PERIODIC REVIEW REPORT

3021 ORCHARD PARK ROAD SITE
ORCHARD PARK, NEW YORK

PREPARED FOR

3021-3041 ORCHARD PARK ROAD, LLC

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DATE: DECEMBER 2018
DRAFTED BY: BCH


FIGURE 2

# SITE PLAN

2018 PERIODIC REVIEW REPORT

3021 ORCHARD PARK ROAD SITE
ORCHARD PARK, NEW YORK

PREPARED FOR
3021-3041 ORCHARD PARK ROAD, LLC

ORION Environmental Solutions, LLC
4535 Southwestern Boulevard, Suite 210, Hamburg, NY 14075

JOB NO.: 0010-001-001

# APPENDIX A

## INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORM

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

**Site Details** **Box 1**

**Site No.** C915289

**Site Name 3021 Orchard Park Road Site**

Site Address: 3021 Orchard Park Road Zip Code: 14127
City/Town: Orchard Park
County: Erie
Site Acreage: 4.2

Reporting Period: March 16, 2017 to ~~March 16~~ December 31, 2018

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

**Box 2**

| | YES | NO |
|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial | ☒ | ☐ |
| 7. Are all ICs/ECs in place and functioning as designed? | ☒ | ☐ |

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

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

Signature of Owner, Remedial Party or Designated Representative Date

**Box 2A**

| | YES | NO |
|---|---|---|
| 8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid? | ☐ | ☒ |

**If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.**

| | | |
|---|---|---|
| 9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years) | ☒ | ☐ |

**If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.**

**SITE NO. C915289** **Box 3**

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| **portion of 152.12-2-1.1** | 3021-3041 Orchard Park Road LLC | Ground Water Use Restriction<br>Soil Management Plan<br>Landuse Restriction<br>Monitoring Plan<br>Site Management Plan<br>IC/EC Plan |

1. Prohibition of use of groundwater.
2. Land use restriction for Restricted Residential, Commercial or Industrial use.
3. Soil Management or Excavation Work Plan for any future intrusive work.
4. Soil vapor intrusion evaluation of any new buildings constructed on site.

**Box 4**

**Description of Engineering Controls**

| Parcel | Engineering Control |
|---|---|
| **portion of 152.12-2-1.1** | Cover System |

1. Monitoring and maintenance of the cover system.
2. Bi-annual and annual groundwater monitoring.

**Box 5**

**Periodic Review Report (PRR) Certification Statements**

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

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

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

| YES | NO |
|---|---|
| X | ☐ |

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

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

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

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

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

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

| YES | NO |
|---|---|
| X | ☐ |

**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. C915289**

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 Paul Hogan (print name) at 3021 Orchard Park Road, Orchard Park, NY 14127, (print business address)

am certifying as Owner (Owner or Remedial Party)

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

Paul F. Hogan
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

12/31/18
Date

## IC/EC CERTIFICATIONS

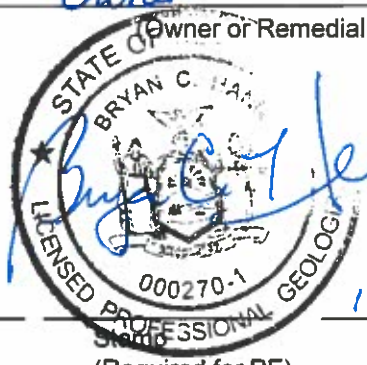
**Box 7**

**Professional Engineer Signature**

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

I Bryan C. Hann (print name) at Orion Environmental Solutions, LLC 4535 Southwestern Blvd, Ste 210, Hamburg, NY. 14075 (print business address)

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




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

State (Required for PE)

12/31/18
Date

# APPENDIX B

## PHOTOGRAPHIC LOG

## SITE PHOTOGRAPHS

**Photo 1:**


**Photo 2:**

**Photo 3:**

**Photo 4:**

Photo 1: Asphalt and hardscape final cover along front of Site (looking NE).

Photo 2: Asphalt and hardscape final cover along south side of Site (looking E).

Photo 3: Asphalt and hardscape final cover along front of Site (looking N).

Photo 4: Asphalt final cover entrance along Orchard Park Road (looking S).

## SITE PHOTOGRAPHS

**Photo 5:**

**Photo 6:**

**Photo 7:**

**Photo 8:**

Photo 5: Asphalt final cover along front of Site, Orchard Park Road at left (looking NW).

Photo 6: Asphalt and hardscape (at left) final cover in SE corner of Site (looking E).

Photo 7: Asphalt and hardscape final cover along southern portion of Site (looking N).

Photo 8: Asphalt and hardscape final cover with well MW-6 at center (looking N).

## SITE PHOTOGRAPHS

**Photo 9:**

**Photo 10:**

**Photo 11:**

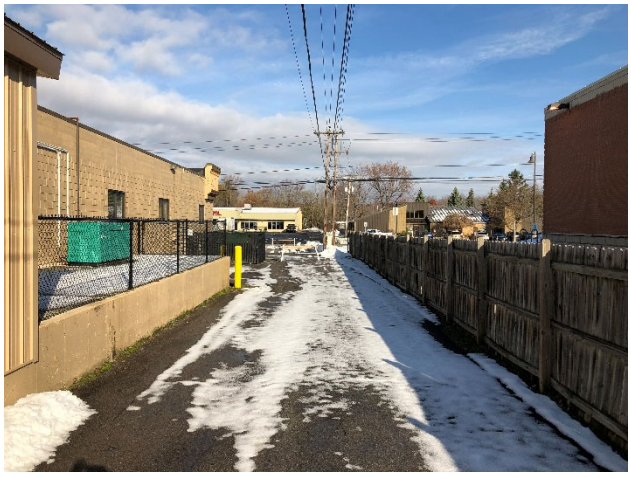


**Photo 12:**

Photo 9: Asphalt and hardscape final cover along eastern portion of Site (looking N).

Photo 10: Asphalt and hardscape final cover along eastern portion of Site (looking N).

Photo 11: Asphalt and hardscape final cover along eastern portion of Site (looking N).

Photo 12: Asphalt and hardscape final cover in northeastern corner of Site (looking N).

## SITE PHOTOGRAPHS

**Photo 13:**

**Photo 14:**

**Photo 15:**

**Photo 16:**

Photo 13: Asphalt and hardscape final cover along northern portion of Site (looking W).

Photo 14: Asphalt final cover at Michael Road entrance (looking W).

Photo 15: Asphalt and hardscape final cover along northern portion of on-site building (looking S).

Photo 16: Asphalt and hardscape final cover along front portion of Site, grass-covered island at right (looking E).

## SITE PHOTOGRAPHS

**Photo 17:**

**Photo 18:**


**Photo 19:**


**Photo 20:**

Photo 17: Grass-covered island, typical of five (looking E).

Photo 18: Asphalt and hardscape final cover along Orchard Park Road (looking SE).

Photo 19: Asphalt and hardscape final cover at main entrance (looking N).

Photo 20: Asphalt and hardscape final cover at well MW-4A (bottom) (looking N).

# APPENDIX C

## SEMI-ANNUAL GROUNDWATER MONITORING INFORMATION



ORION

# APPENDIX C1

## FIELD FORMS

ORION Environmental Solutions, LLC

# WATER SAMPLE COLLECTION LOG

## PROJECT INFORMATION

Project Name: 3021 OP Road GWM

Project No.: 0010-001-001

Client: 3021-3041 Orchard Park Road, LLC

Location: 3021 Orchard Park Road Site

## SAMPLE DESCRIPTION

I.D.: **MW-4A**

Matrix: ☐ SURFACE WATER ☐ STORM ☐ SEEP ☑ GROUNDWATER ☐ INFLUENT ☐ EFFLUENT

## SAMPLE INFORMATION

Date Collected: 7/6/18 (BCH)

Time Collected: 1220

Date Shipped to Lab: 7/6/18

Collected By: BCH

Sample Type: ☐ POINT ☑ GRAB ☐ COMPOSITE

Collection Method: ☐ DIRECT DIP ☐ SS / POLY. DIPPER ☐ PERISTALTIC PUMP ☐ POLY. DISP. BAILER ☐ ISCO SAMPLER ☑ HYRDASLEEVE SPEEDBAG

## SAMPLING INFORMATION

Depth to Water (fbTOR): 6.70

Depth to Bottom (fbTOR): 19.30

Screen Length (feet): 15.00

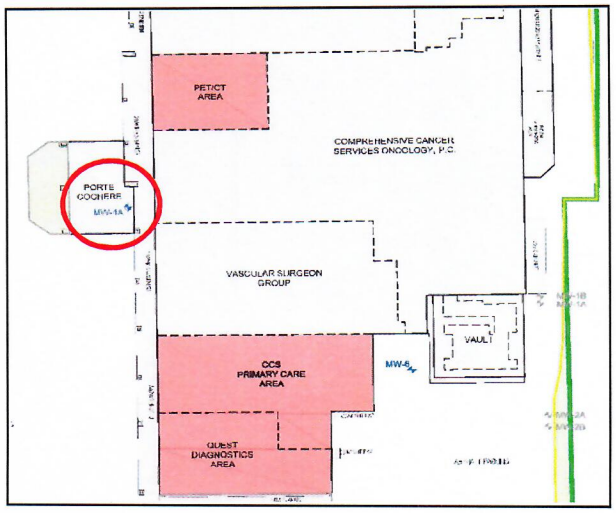
Submerged bag time (mins): 11:37 to 1217

Well ID - 2 in.

| Parameter | First | Last | Units |
|---|---|---|---|
| pH | 6.22 | | units |
| Temp. | 70.2 | | F ~~C~~ |
| Cond. | 5902 | | ~~uS~~ mS |
| Turbidity | 626 | | NTU |
| Eh / ORP | +52 | | mV |
| D.O. | ~~0.00~~ 3.63 | | ppm |
| Odor | none | | olfactory |
| Appearance | sl cloudy | | visual |
| | | | |
| | | | |

## LOCATION SKETCH

(not to scale, dimensions are approximate)




**SAMPLE DESCRIPTION (appearance, olfactory):**

sl. cloudy, no odor

**SAMPLE ANALYSIS (depth, laboratory analysis required):**

CP-51 plus TCL VOCs via Method 8260

**ADDITIONAL REMARKS:** HydraSleeve Sampler cycled 3-5 times

**PREPARED BY:** BCH **DATE:** 7/6/18

ORION Environmental Solutions, LLC

# WATER SAMPLE COLLECTION LOG

## PROJECT INFORMATION

Project Name: 3021 OP Road GWM
Project No.: 0010-001-001
Client: 3021-3041 Orchard Park Road, LLC
Location: 3021 Orchard Park Road Site

## SAMPLE DESCRIPTION

I.D.: **MW-6**

Matrix: ☐ SURFACE WATER ☐ STORM ☐ SEEP ☑ GROUNDWATER ☐ INFLUENT ☐ EFFLUENT

## SAMPLE INFORMATION

Date Collected: 7/6/18
Time Collected: 1240
Date Shipped to Lab: 7/6/18
Collected By: BCH

Sample Type: ☐ POINT ☑ GRAB ☐ COMPOSITE

Collection Method: ☐ DIRECT DIP ☐ SS / POLY. DIPPER ☐ PERISTALTIC PUMP ☐ POLY. DISP. BAILER ☐ ISCO SAMPLER ☑ HYRDASLEEVE SPEEDBAG

## SAMPLING INFORMATION

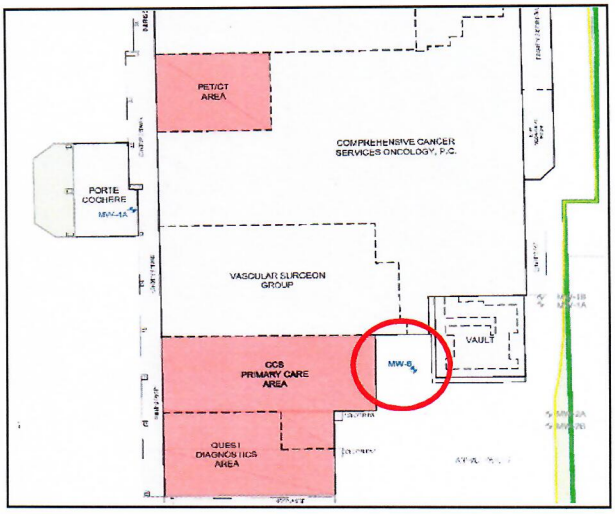
Depth to Water (fbTOR): 5.47
Depth to Bottom (fbTOR): 18.73
Screen Length (feet): 15.00
Submerged bag time (mins): 1153 – 1235
Well ID – 4 inch

| Parameter | First | Last | Units |
|---|---|---|---|
| pH | 6.31 | | units |
| Temp. | 74.7 | | °C F |
| Cond. | 5227 | | mS |
| Turbidity | 11.5 | | NTU |
| Eh / ORP | -39 | | mV |
| D.O. | * | | ppm |
| Odor | sulfur | | olfactory |
| Appearance | clear | | visual |
| | | | |
| | | | |

* insufficient volume to analyze DO

## LOCATION SKETCH

(not to scale, dimensions are approximate)




**SAMPLE DESCRIPTION (appearance, olfactory):**

**SAMPLE ANALYSIS (depth, laboratory analysis required):**

CP-51 plus TCL VOCs via Method 8260
Attenuation Parameters: dissolved iron, dissolved manganese, sulfate, nitrate-nitrite, and dissolved gases (methane, ethane, ethene)

**ADDITIONAL REMARKS:** HydraSleeve sampler cycled 3-5 times water in road box removed prior to J-plug removal

**PREPARED BY:** BCH **DATE:** 7/6/18

# NEW YORK CHAIN OF CUSTODY


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

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

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


Page 1 of 1

Date Rec'd in Lab

ALPHA Job #

## Client Information

Client: Orion Env. Sol LLC
Address: 4535 Southwestern Blvd Ste 210, Hamburg, NY 14075
Phone: 716-207-4475
Fax:
Email: bhann@orionesllc.com

## Project Information

Project Name: 3021 Orchard Park Rd
Project Location: 3021-3041 Orchard Park Rd, OP, NY
Project # 0010-001-001
(Use Project name as Project #) ☐
Project Manager: B. Hann
ALPHAQuote #:

## Turn-Around Time

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

## Deliverables

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

## Regulatory Requirement

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

## Billing Information

☐ Same as Client Info
PO #

## Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☒

**Other project specific requirements/comments:**

**Please specify Metals or TAL.**

## ANALYSIS

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | Sulfate | Diss Fe, Mn | NO3/NO2 | TCL VOCs + CP-51 | Diss Gases | Temp. | | | Total Bottle | Sample Specific Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-4A | 7/6/18 | 1220 | water | BCH | | | | 3 | | | | | | |
| | MW-6 | " | 1240 | " | " | 1 | 1 | 1 | 3 | 2 | | | | | |
| | Trip Blank | " | — | " | " | | | | 3 | | | | | | |
| | Temp Blank | " | — | " | " | | | | | | 1 | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Container Type
Preservative

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

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

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

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

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 7/6/18 15:10 | | 7/6/18 15:10 |
| | | | |
| | | | |
| | | | |

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

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

Eco-Rental Solutions

# Calibration Certificate

rev 8/9/11

Work Order No.: SE-057811
Date of Service: 6/28/2018 11:30:00 AM

Unit Under Test: Lamotte 2020WE Turbidity Meter

Asset No.: FA03027 Technician Matt Cribbin
Serial No: 8238-3216

Initials: MTC

| TEST | Specification | Result |
|---|---|---|
| Standard Calibration | Pass/Fail | Pass |
| | | |
| | | |

TEST STANDARDS USED:

| DESCRIPTION | LOT NO./EXPIRATION DATE | QUANTITY |
|---|---|---|
| Turbidity Free Water | Lot#6GE1000 Exp: N/A | 1 |
| 1.0 NTU AMCO Turbidity Standard | Lot No.18033451 exp.02/19 | 1 |
| 10 NTU AMCO Turbidity Standard | Lot No. 18023191 Exp.2/19 | 1 |

TEST EQUIPMENT USED:

| DESCRIPTION | ASSET NO. | SERIAL NO. | DATE OF LAST CAL | DATE CAL DUE |
|---|---|---|---|---|
| | | | | |
| | | | | |

Test Equipment and standards are traceable to National standards.

Eco-Rental Solutions

# Calibration Certificate

rev 8/9/11

Work Order No.: SE-057803
Date of Service: 6/28/2018 9:50:00 AM

Unit Under Test: Myron 6P Ultrameter

Asset No.: FA00596 Technician Matt Cribbin
Serial No: 6218870

Initials: MC

| TEST | Specification | Result |
|---|---|---|
| Standard Calibration | Pass/Fail | Pass |
| | | |
| | | |

TEST STANDARDS USED:

| DESCRIPTION | LOT NO./EXPIRATION DATE | QUANTITY |
|---|---|---|
| pH 7.00 Standard Solution | Lot No. 8GE854 Exp. 05/20 | 1 |
| pH 10.00 Standard Solution | Lot No. 7GK699 Exp. Nov. 2019 | 1 |
| pH 4.00 Standard Solution | Lot No. 7GF303 Exp. 06/19 | 1 |
| ORP Standard Solution | Lot No.16J100375 exp. 10/03/21 | 1 |
| 7.00 mS Conductivity Standard Solution | Lot No. 7GL794 Exp.012/18 | 1 |

TEST EQUIPMENT USED:

| DESCRIPTION | ASSET NO. | SERIAL NO. | DATE OF LAST CAL | DATE CAL DUE |
|---|---|---|---|---|
| | | | | |
| | | | | |

Test Equipment and standards are traceable to National standards.

ORION
Environmental Solutions, LLC

# WATER SAMPLE COLLECTION LOG

## PROJECT INFORMATION

Project Name: 3021 OP Road GWM
Project No.: 0010-001-001
Client: 3021-3041 Orchard Park Road, LLC
Location: 3021 Orchard Park Road Site

## SAMPLE DESCRIPTION

I.D.: **MW-4A**

Matrix: ☐ SURFACE WATER ☐ STORM ☐ SEEP ☑ GROUNDWATER ☐ INFLUENT ☐ EFFLUENT

## SAMPLE INFORMATION

Date Collected: 11/19/18
Time Collected: 11:10 AM
Date Shipped to Lab: 11/19/18
Collected By: BCH

Sample Type: ☐ POINT ☑ GRAB ☐ COMPOSITE

Collection Method: ☐ DIRECT DIP ☐ SS / POLY. DIPPER ☐ PERISTALTIC PUMP ☐ POLY. DISP. BAILER ☐ ISCO SAMPLER ☑ HYRDASLEEVE SPEEDBAG

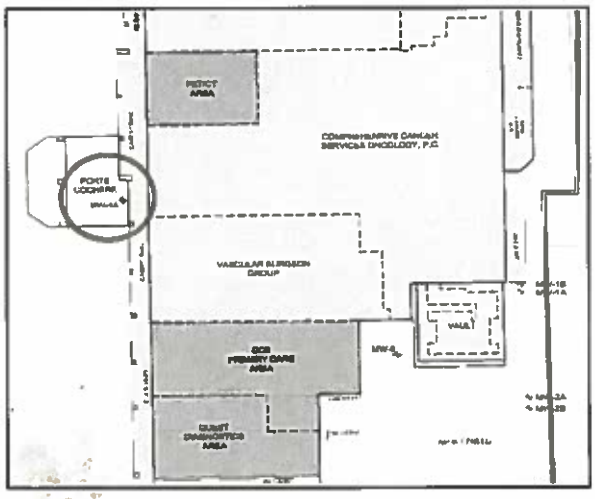
## SAMPLING INFORMATION

Depth to Water (fbTOR): 6.28
Depth to Bottom (fbTOR): 19.30
Screen Length (feet): 15.00
Submerged bag time (mins): 9:50 – 11:10

| Parameter | First | Last | Units |
|---|---|---|---|
| pH | 6.12 | | units |
| Temp. | 14.5 | | °C |
| Cond. | 6700 | | mS |
| Turbidity | 68.7 | | NTU |
| Eh / ORP | +87 | | mV |
| D.O. | 2.37 | | ppm |
| Odor | none | | olfactory |
| Appearance | sl. cloudy | | visual |
| | | | |
| | | | |

## LOCATION SKETCH

(not to scale, dimensions are approximate)




**SAMPLE DESCRIPTION (appearance, olfactory):**

sl. cloudy, no odor

**SAMPLE ANALYSIS (depth, laboratory analysis required):**

CP-51 plus TCL VOCs via Method 8260

**ADDITIONAL REMARKS:**

**PREPARED BY:** Bryan C. Hann **DATE:** 11/19/18

ORION
Environmental Solutions, LLC

# WATER SAMPLE COLLECTION LOG

## PROJECT INFORMATION

Project Name: 3021 OP Road GWM
Project No.: 0010-001-001
Client: 3021-3041 Orchard Park Road, LLC
Location: 3021 Orchard Park Road Site

## SAMPLE DESCRIPTION

I.D.: **MW-6**
Matrix: ☐ SURFACE WATER ☐ STORM ☐ SEEP ☑ GROUNDWATER ☐ INFLUENT ☐ EFFLUENT

## SAMPLE INFORMATION

Date Collected: 11/19/18
Time Collected: 11:26 Am
Date Shipped to Lab: 11/19/18
Collected By: BCH
Sample Type: ☐ POINT ☑ GRAB ☐ COMPOSITE
Collection Method: ☐ DIRECT DIP ☐ SS / POLY. DIPPER ☐ PERISTALTIC PUMP ☐ POLY. DISP. BAILER ☐ ISCO SAMPLER ☑ HYRDASLEEVE SPEEDBAG

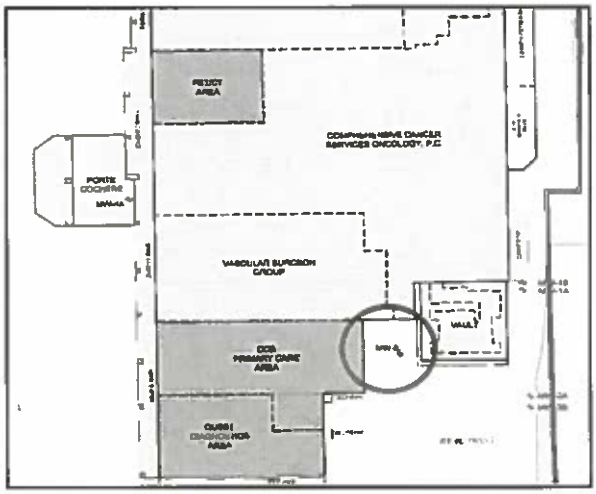
## SAMPLING INFORMATION

Depth to Water (fbTOR): 5.09
Depth to Bottom (fbTOR): 18.73
Screen Length (feet): 15.00
Submerged bag time (mins): 10:07 - 11:26

| Parameter | First | Last | Units |
|---|---|---|---|
| pH | 6.30 | | units |
| Temp. | 13.0 | | °C |
| Cond. | 5460 | | mS |
| Turbidity | 22.1 | | NTU |
| Eh / ORP | +10 | | mV |
| D.O. | 4.53 | | ppm |
| Odor | sl. sulfur | | olfactory |
| Appearance | clear | | visual |
| | | | |
| | | | |

## LOCATION SKETCH

(not to scale, dimensions are approximate)




**SAMPLE DESCRIPTION (appearance, olfactory):**

clear, sl. sulfur odor

**SAMPLE ANALYSIS (depth, laboratory analysis required):**

CP-51 plus TCL VOCs via Method 8260
Attenuation Parameters: dissolved iron, dissolved manganese, sulfate, nitrate-nitrite, and dissolved gases (methane, ethane, ethene)

**ADDITIONAL REMARKS:**

**PREPARED BY:** Bryan C. Hall **DATE:** 11/19/18

# NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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

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

Page 1 of 1

Date Rec'd in Lab:

ALPHA Job #:

## Client Information

Client: Orion Env. Solutions, LLC
Address: 4535 Southwestern Blvd. Ste. 210, Hamburg, NY
Phone: 716.202.4475
Fax:
Email: bhann@orionesllc.com

## Project Information

Project Name: 3021 Orchard Park Road
Project Location: 3021 - 3041 Orchard Park Rd, Orchard Park NY
Project #: 0010-001-001
(Use Project name as Project #) ☐
Project Manager: Bryan Hann
ALPHAQuote #:

## Turn-Around Time

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

## Deliverables

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

## Regulatory Requirement

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

## Billing Information

☐ Same as Client Info
PO #

## Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

**Other project specific requirements/comments:**

* Diss. Gases: methane, ethane, ethene
Diss Metals: Fe, Mn

**Please specify Metals or TAL.**

## ANALYSIS

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

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | TCL 8260 | Diss. Gas * | NO3/NO2 | SO4 | Diss. Metals * | | | | Total Bottle | Sample Specific Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-4A | 11/19/18 | 11:10 | GW | BCH | 3 | | | | | | | | | |
| | MW-6 | ↓ | 11:26 | ↓ | BCH | 3 | 2 | 1 | 1 | 1 | | | | | * see notes |
| | Trip Blank | ↓ | — | ↓ | BCH | 2 | | | | | | | | | |

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

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

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

Container Type
Preservative

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Bryan C. Hann | 11/19/18 14:55 | [illegible] | 11/19/18 14:55 |

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

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

Eco-Rental Solutions

# Calibration Certificate

rev 8/9/11

Work Order No.: SE-062145
Date of Service: 11/15/2018 12:00:00 AM

Unit Under Test: Myron 6P Ultrameter

Asset No.: FA01094 Technician: Brooke Derkowski Initials: BD
Serial No: 6223123

| TEST | Specification | Result |
|---|---|---|
| Standard Calibration | Pass/Fail | Pass |
| | | |
| | | |

TEST STANDARDS USED:

| DESCRIPTION | LOT NO./EXPIRATION DATE | QUANTITY |
|---|---|---|
| 7.00 mS Conductivity Standard Solution | Lot No. 8GG502 Exp. 7/19 | 1 |
| pH 7.00 Standard Solution | Lot No. 8GE854 Exp. 05/20 | 1 |
| pH 10.00 Standard Solution | Lot No. 8GE796 Exp. 5/20 | 1 |
| pH 4.00 Standard Solution | Lot No. 8GF041 Exp. 06/20 | 1 |
| ORP Standard Solution | Lot No.16J100375 exp. 10/03/21 | 1 |

TEST EQUIPMENT USED:

| DESCRIPTION | ASSET NO. | SERIAL NO. | DATE OF LAST CAL | DATE CAL DUE |
|---|---|---|---|---|
| | | | | |
| | | | | |

Test Equipment and standards are traceable to National standards.

AquaPhoenix SCIENTIFIC

# *Certificate Of Analysis*

| | |
|---|---|
| **Product** | Buffer Solution, pH 10.00 |
| **Code** | BU5010 |
| **Lot Number** | 8GE796 |
| **Specifications** | 10.00 +/- 0.01 @ 25C |
| **Lot Analysis** | 10.01 @25C |
| **Expiration** | May/20 |
| **NIST STD used** | SRM 191d |
| **Date of Manufacture** | 5/24/18 |

We certify that the above referenced lot of reagent was manufactured per ASTM Standards or Standards Methods, 23rd edition. All glassware complies with Class A tolerance requirements. Balances are calibrated using NIST traceable mass standards. Chemicals used in the product are lot traceable. A quality control testing report is kept for each manufactured lot.

Matthew Nelson

Matt Nelson
Research Chemist

5/24/18

860 Gitts Run Road - Hanover - PA - 717 632 1291
Fax: 717 633 1285 Email: sales@aquaphoenixsci.com

AquaPhoenix SCIENTIFIC

# *Certificate Of Analysis*

| | |
|---|---|
| **Product** | Buffer Solution, pH 4.00 |
| **Code** | BU5004 |
| **Lot Number** | 8GF041 |
| **Specifications** | 4.00 +/- 0.01 @ 25C |
| **Lot Analysis** | 4.01 @25C |
| **Expiration** | Jun/20 |
| **NIST STD used** | SRM 185i |
| **Date of Manufacture** | 6/5/18 |

We certify that the above referenced lot of reagent was manufactured per ASTM Standards or Standards Methods, 23rd edition. All glassware complies with Class A tolerance requirements. Balances are calibrated using NIST traceable mass standards. Chemicals used in the product are lot traceable. A quality control testing report is kept for each manufactured lot.

Matthew Nelson

Matt Nelson
Research Chemist

6/5/18

860 Gitts Run Road - Hanover - PA - 717 632 1291
Fax: 717 633 1285 Email: sales@aquaphoenixsci.com

AquaPhoenix SCIENTIFIC

# *Certificate Of Analysis*

| | |
|---|---|
| **Product** | Conductivity Standard, 7000 µS/cm |
| **Code** | CS7000 |
| **Lot Number** | 8GG502 |
| **Specifications** | 7000 +/- 70us/cm @25C |
| **Lot Analysis** | 7.01mS/cm @25C |
| **Expiration** | Jul/19 |
| **NIST STD used** | SRM 999b |
| **Date of Manufacture** | 7/16/18 |

We certify that the above referenced lot of reagent was manufactured per ASTM Standards or Standards Methods, 23rd edition. All glassware complies with Class A tolerance requirements. Balances are calibrated using NIST traceable mass standards. Chemicals used in the product are lot traceable. A quality control testing report is kept for each manufactured lot.

Matt Nelson
Research Chemist

7/16/18

860 Gitts Run Road - Hanover - PA - 717 632 1291
Fax: 717 633 1285 Email: sales@aquaphoenixsci.com

AquaPhoenix SCIENTIFIC

# *Certificate Of Analysis*

| | |
|---|---|
| **Product** | Buffer Solution, pH 7.00 |
| **Code** | BU5007 |
| **Lot Number** | 8GE854 |
| **Specifications** | 7.00 +/- 0.01 @ 25C |
| **Lot Analysis** | 7.00 @25C |
| **Expiration** | May/20 |
| **NIST STD used** | SRM 186g |
| **Date of Manufacture** | 5/30/18 |

We certify that the above referenced lot of reagent was manufactured per ASTM Standards or Standards Methods, 23rd edition. All glassware complies with Class A tolerance requirements. Balances are calibrated using NIST traceable mass standards. Chemicals used in the product are lot traceable. A quality control testing report is kept for each manufactured lot.

Matthew Nelson

Matt Nelson
Research Chemist

5/30/18

860 Gitts Run Road - Hanover - PA - 717 632 1291
Fax: 717 633 1285 Email: sales@aquaphoenixsci.com

Eco-Rental Solutions

# Calibration Certificate

rev 8/9/11

Work Order No.: SE-062152
Date of Service: 11/15/2018 12:00:00 AM

Unit Under Test: Lamotte 2020WE Turbidity Meter

Asset No.: FA03354 Technician: Brooke Derkowski Initials: BD
Serial No: 9105-1817

| TEST | Specification | Result |
|---|---|---|
| Standard Calibration | Pass/Fail | Pass |
| | | |
| | | |

TEST STANDARDS USED:

| DESCRIPTION | LOT NO./EXPIRATION DATE | QUANTITY |
|---|---|---|
| Turbidity Free Water | Lot#6GE1000 Exp: N/A | 1 |
| 10 NTU AMCO Turbidity Standard | Lot No. 18023191 Exp.2/19 | 1 |
| 1.0 NTU AMCO Turbidity Standard | Lot No.18033451 exp.02/19 | 1 |

TEST EQUIPMENT USED:

| DESCRIPTION | ASSET NO. | SERIAL NO. | DATE OF LAST CAL | DATE CAL DUE |
|---|---|---|---|---|
| | | | | |
| | | | | |

Test Equipment and standards are traceable to National standards.

Eco-Rental Solutions

# Calibration Certificate

rev 8/9/11

Work Order No.: SE-062151
Date of Service: 11/15/2018 03:52:00 PM

Unit Under Test: YSI ProODO, 20m

Asset No.: FA00356 Technician: Luke Spencer Initials: LJS
Serial No: 12G104093

| TEST | Specification | Result |
|---|---|---|
| Standard Calibration | Pass/Fail | PASS |
| | | |
| | | |

TEST STANDARDS USED:

| DESCRIPTION | LOT NO./EXPIRATION DATE | QUANTITY |
|---|---|---|
| Air Saturated Water | | 1 |
| Sodium Sulfite/ Zero DO Standard | Lot No. C473638, No exp date | 1 |

TEST EQUIPMENT USED:

| DESCRIPTION | ASSET NO. | SERIAL NO. | DATE OF LAST CAL | DATE CAL DUE |
|---|---|---|---|---|
| | | | | |
| | | | | |

Test Equipment and standards are traceable to National standards.

# APPENDIX C2

## CONCENTRATION VS. TIME PLOTS



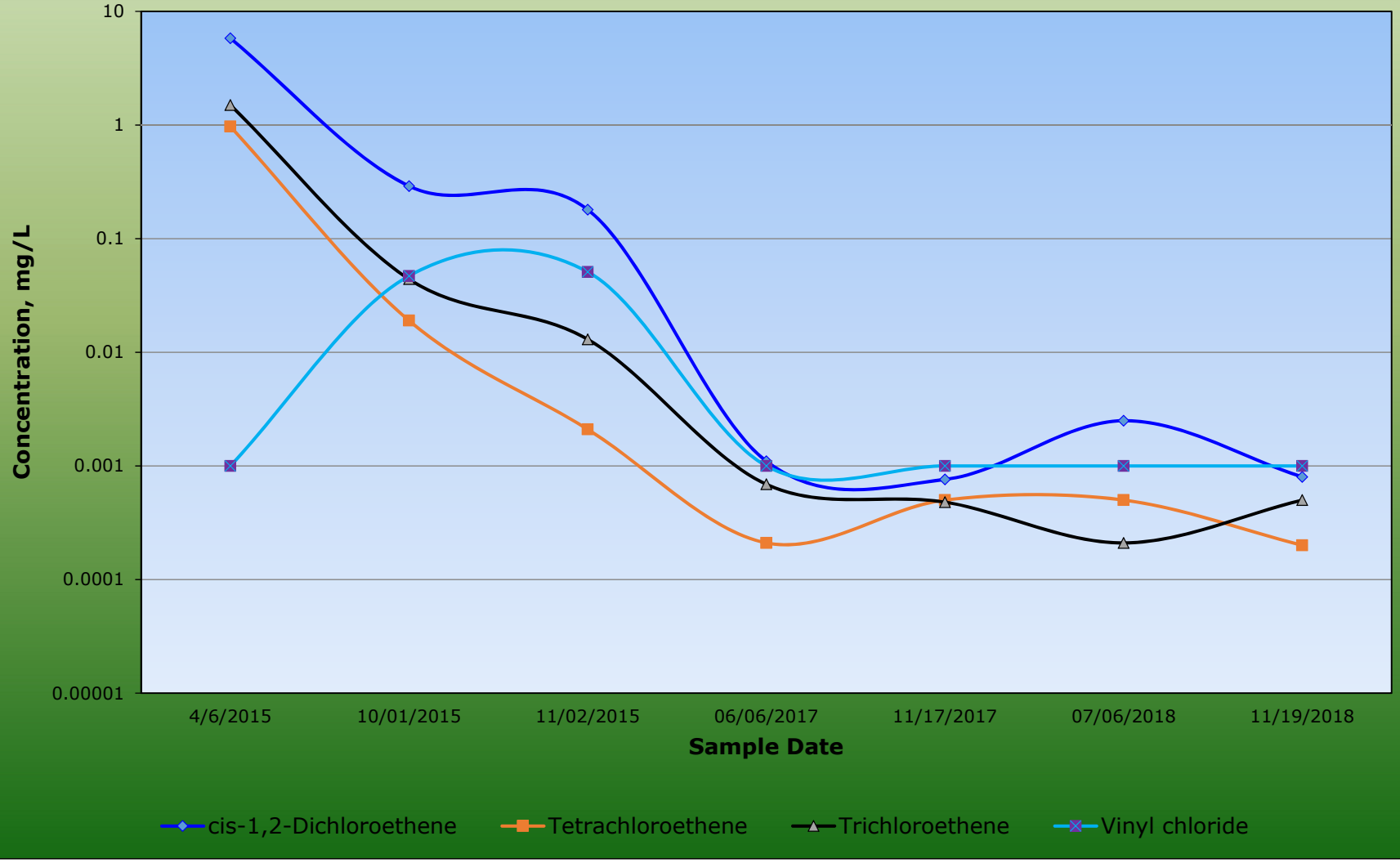
ORION

ORION
Environmental Solutions, LLC

**APPENDIX C2**

**TOTAL cVOC CONCENTRATION vs. TIME**

**Periodic Review Report**
**3021 Orchard Park Road Site (C915289)**

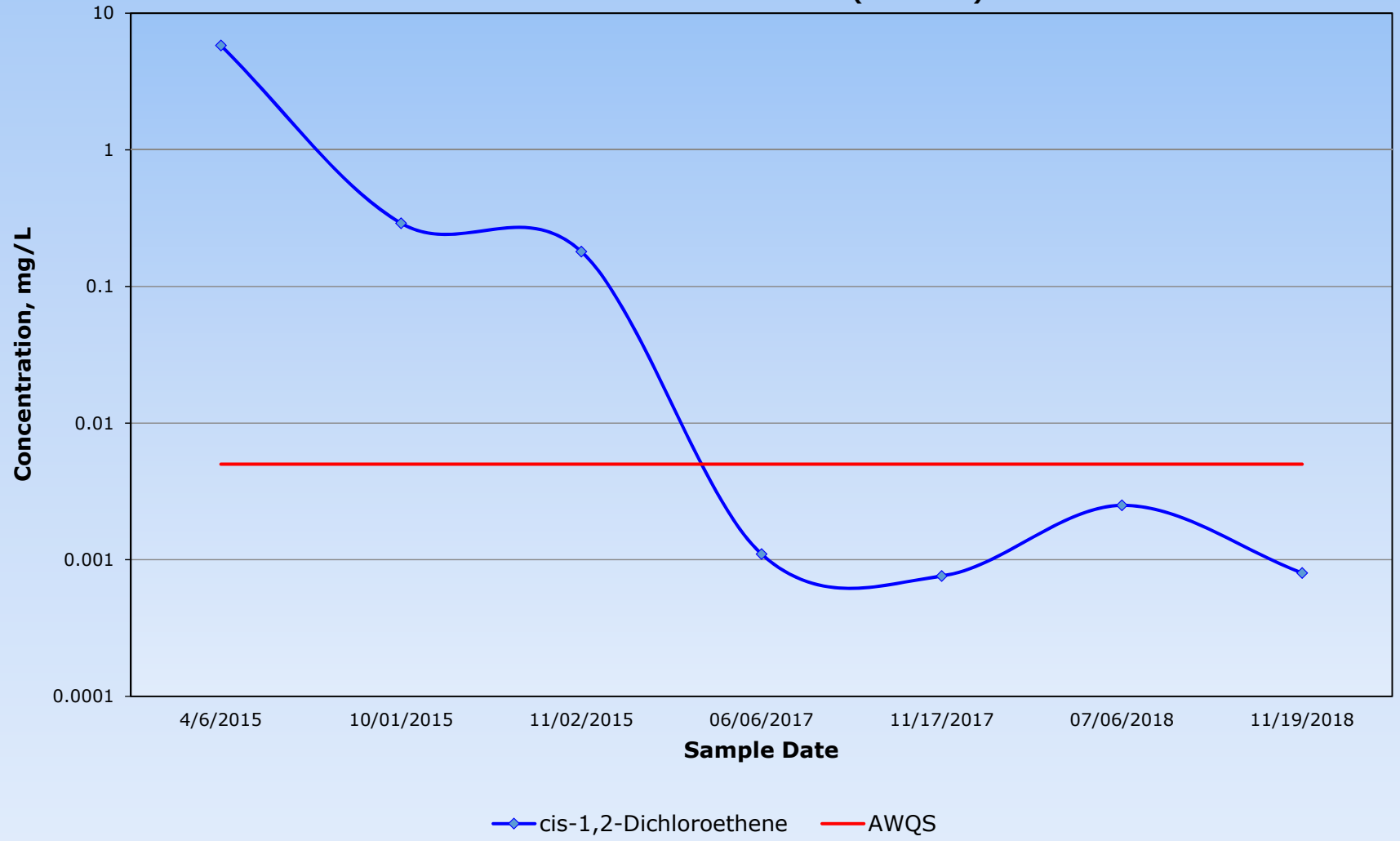


ORION
Environmental Solutions, LLC

**APPENDIX C2**

**cis-1,2-DICHLOROETHENE CONCENTRATION vs. TIME**

**Periodic Review Report**
**3021 Orchard Park Road Site (C915289)**

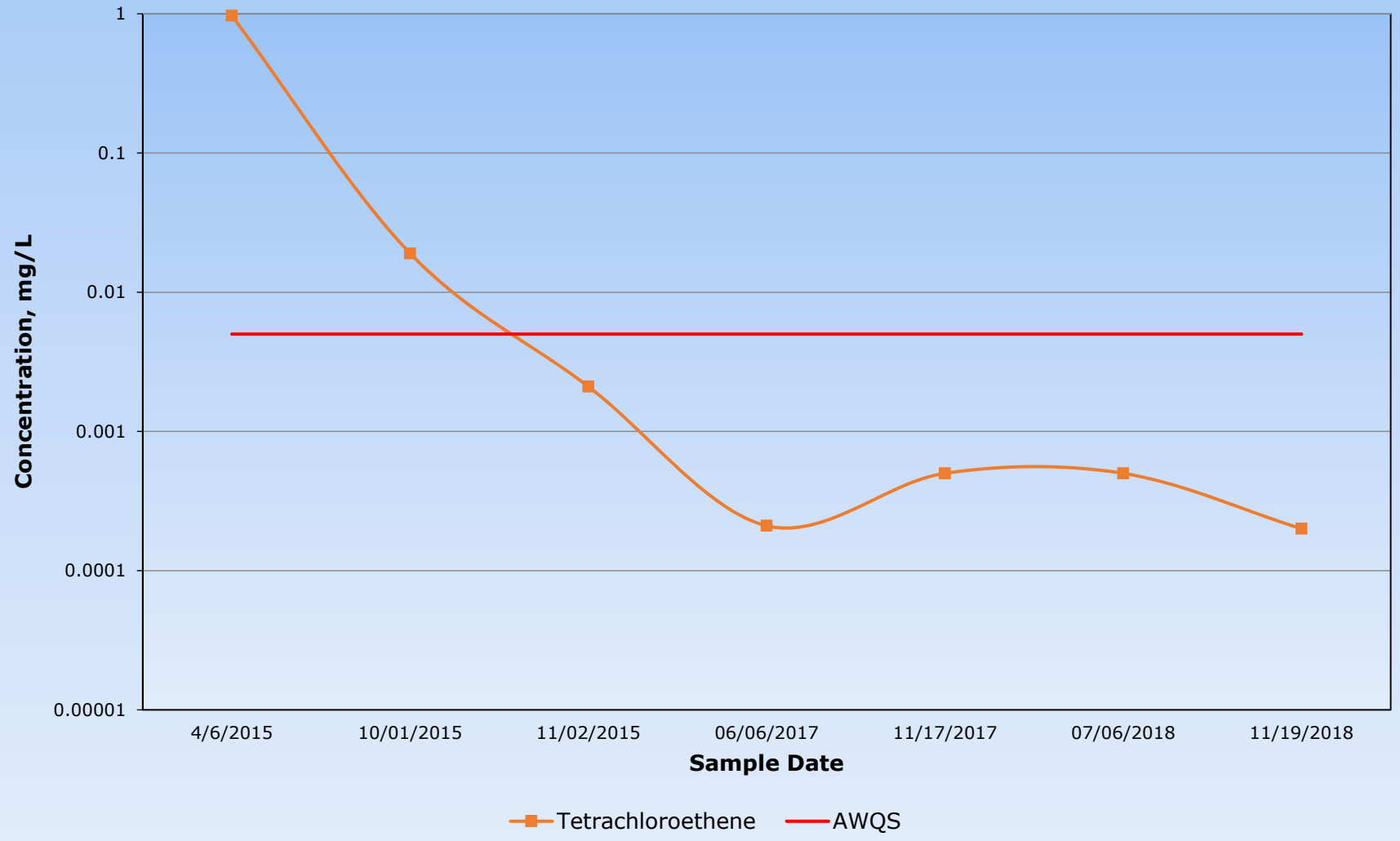


ORION
Environmental Solutions, LLC

**APPENDIX C2**

**TETRACHLOROETHENE (PCE) CONCENTRATION vs. TIME**

**Periodic Review Report**
**3021 Orchard Park Road Site (C915289)**

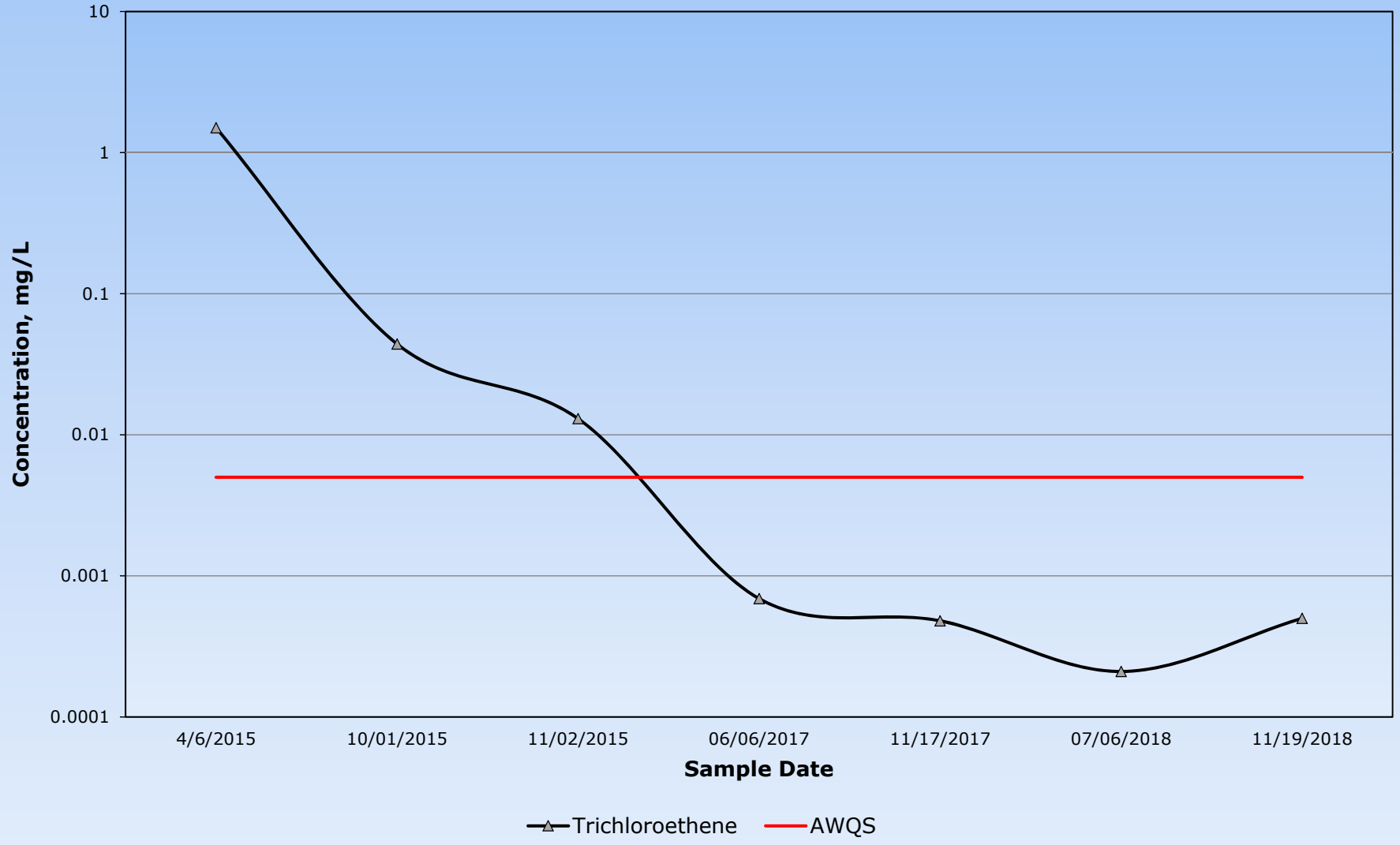


ORION
Environmental Solutions, LLC

**APPENDIX C2**

**TRICHLOROETHENE (TCE) CONCENTRATION vs. TIME**

**Periodic Review Report**
**3021 Orchard Park Road Site (C915289)**

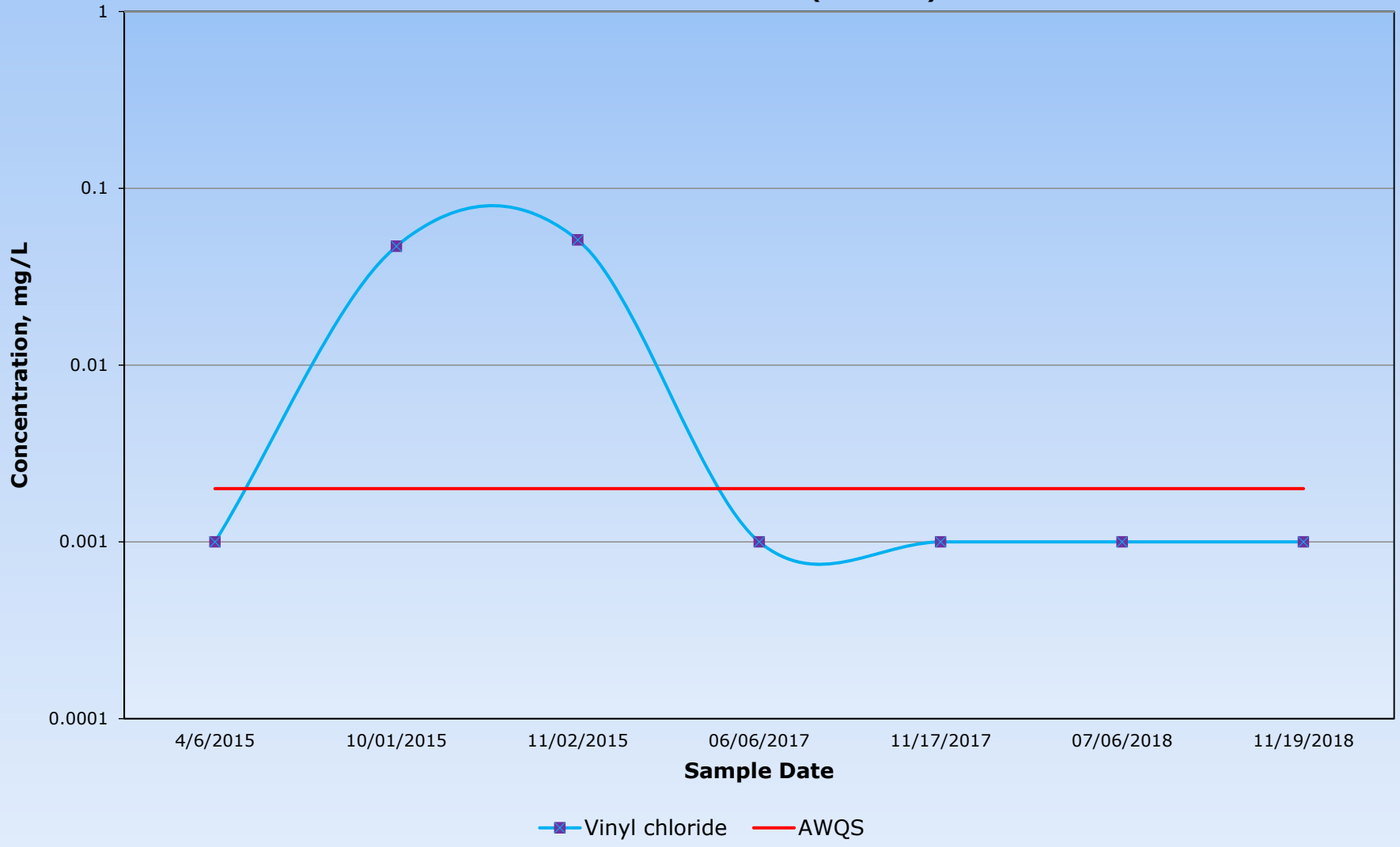


ORION
Environmental Solutions, LLC

**APPENDIX C2**

**VINYL CHLORIDE (VC) CONCENTRATION vs. TIME**

**Periodic Review Report**
**3021 Orchard Park Road Site (C915289)**



# APPENDIX C3

## LABORATORY ANALYTICAL DATA
## JULY 2018



ORION

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L1825714 |
| Client: | Orion Environmental Solutions, LLC<br>4535 Southwestern Blvd.<br>Suite 210<br>Hamburg, NY 14075 |
| ATTN: | Bryan Hann |
| Phone: | (716) 202-4475 |
| Project Name: | 3021 ORCHARD PARK RD. |
| Project Number: | 0010-001-001 |
| Report Date: | 07/17/18 |



Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

**Project Name:** 3021 ORCHARD PARK RD.
**Project Number:** 0010-001-001

**Lab Number:** L1825714
**Report Date:** 07/17/18

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L1825714-01 | MW-4A | WATER | 3021-3041 ORCHARD PARK RD., OP, NY | 07/06/18 12:20 | 07/06/18 |
| L1825714-02 | MW-6 | WATER | 3021-3041 ORCHARD PARK RD., OP, NY | 07/06/18 12:40 | 07/06/18 |
| L1825714-03 | TRIP BLANK | WATER | 3021-3041 ORCHARD PARK RD., OP, NY | 07/06/18 00:00 | 07/06/18 |

**Project Name:** 3021 ORCHARD PARK RD.
**Project Number:** 0010-001-001

**Lab Number:** L1825714
**Report Date:** 07/17/18

## Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

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

Please contact Client Services at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK RD. | **Lab Number:** | L1825714 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 07/17/18 |

**Case Narrative (continued)**

Report Submission

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

Dissolved Gases

L1825714-02 was collected in a pre-preserved vial; however, the pH of the sample was determined to be greater than two.

Anions by Ion Chromatography

L1825714-02: The sample has an elevated detection limit for Sulfate due to the dilution required by the sample matrix.

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

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 07/17/18

# ORGANICS

# VOLATILES

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-01
Client ID: MW-4A
Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY

Date Collected: 07/06/18 12:20
Date Received: 07/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/11/18 14:24
Analyst: MKS

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-01 Date Collected: 07/06/18 12:20

Client ID: MW-4A Date Received: 07/06/18

Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 | 1 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 90 | | 70-130 |
| Toluene-d8 | 99 | | 70-130 |
| 4-Bromofluorobenzene | 94 | | 70-130 |
| Dibromofluoromethane | 97 | | 70-130 |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-02 Date Collected: 07/06/18 12:40
Client ID: MW-6 Date Received: 07/06/18
Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/11/18 14:50
Analyst: MKS

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | 0.30 | J | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichloroethene | 0.21 | J | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-02 Date Collected: 07/06/18 12:40

Client ID: MW-6 Date Received: 07/06/18

Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | 0.89 | J | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | 18 | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | 2.1 | J | ug/l | 5.0 | 1.9 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | 4.2 | J | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 | 1 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 93 | | 70-130 |
| Toluene-d8 | 98 | | 70-130 |
| 4-Bromofluorobenzene | 94 | | 70-130 |
| Dibromofluoromethane | 98 | | 70-130 |

**Project Name:** 3021 ORCHARD PARK RD.
**Lab Number:** L1825714
**Project Number:** 0010-001-001
**Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-02
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY
Date Collected: 07/06/18 12:40
Date Received: 07/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 07/09/18 09:38
Analyst: JT

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Column |
|---|---|---|---|---|---|---|---|
| **Dissolved Gases by GC - Mansfield Lab** | | | | | | | |
| Methane | 17000 | E | ug/l | 5.00 | 1.00 | 1 | A |
| Ethene | ND | | ug/l | 0.500 | 0.500 | 1 | A |
| Ethane | 1.20 | | ug/l | 0.500 | 0.500 | 1 | A |

**Project Name:** 3021 ORCHARD PARK RD.
**Lab Number:** L1825714
**Project Number:** 0010-001-001
**Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-02 D
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY

Date Collected: 07/06/18 12:40
Date Received: 07/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 07/09/18 11:24
Analyst: JT

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Column |
|---|---|---|---|---|---|---|---|
| **Dissolved Gases by GC - Mansfield Lab** | | | | | | | |
| Methane | 13900 | | ug/l | 25.0 | 5.00 | 5 | A |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-03
Client ID: TRIP BLANK
Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY

Date Collected: 07/06/18 00:00
Date Received: 07/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/11/18 15:15
Analyst: MKS

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-03 Date Collected: 07/06/18 00:00

Client ID: TRIP BLANK Date Received: 07/06/18

Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | 2.2 | J | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 | 1 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 92 | | 70-130 |
| Toluene-d8 | 98 | | 70-130 |
| 4-Bromofluorobenzene | 93 | | 70-130 |
| Dibromofluoromethane | 97 | | 70-130 |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 117,-
Analytical Date: 07/09/18 09:02
Analyst: JT

| Parameter | Result | Qualifier | Units | RL | MDL | |
|---|---|---|---|---|---|---|
| Dissolved Gases by GC - Mansfield Lab for sample(s): 02 Batch: WG1133751-4 | | | | | | |
| Methane | 1.08 | J | ug/l | 5.00 | 1.00 | A |
| Ethene | ND | | ug/l | 0.500 | 0.500 | A |
| Ethane | ND | | ug/l | 0.500 | 0.500 | A |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/11/18 08:28
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1134673-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/11/18 08:28
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1134673-5 | | | | | |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| n-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| sec-Butylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| p-Isopropyltoluene | ND | | ug/l | 2.5 | 0.70 |
| n-Propylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3,5-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trimethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 |

**Project Name:** 3021 ORCHARD PARK RD. **Lab Number:** L1825714

**Project Number:** 0010-001-001 **Report Date:** 07/17/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/11/18 08:28
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1134673-5 | | | | | |
| Tentatively Identified Compounds | | | | | |
| Total TIC Compounds | 1.92 | J | ug/l | | |
| Dimethyl ether | 1.92 | NJ | ug/l | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | | 70-130 |
| Toluene-d8 | 99 | | 70-130 |
| 4-Bromofluorobenzene | 97 | | 70-130 |
| Dibromofluoromethane | 99 | | 70-130 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.

**Project Number:** 0010-001-001

**Lab Number:** L1825714

**Report Date:** 07/17/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits | Column |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Gases by GC - Mansfield Lab Associated sample(s): 02 Batch: WG1133751-3 | | | | | | | | | |
| Methane | 94 | | - | | 80-120 | - | | 25 | A |
| Ethene | 91 | | - | | 80-120 | - | | 25 | A |
| Ethane | 88 | | - | | 80-120 | - | | 25 | A |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.

**Project Number:** 0010-001-001

**Lab Number:** L1825714

**Report Date:** 07/17/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1134673-3 WG1134673-4 | | | | | | | | |
| Methylene chloride | 110 | | 100 | | 70-130 | 10 | | 20 |
| 1,1-Dichloroethane | 94 | | 91 | | 70-130 | 3 | | 20 |
| Chloroform | 93 | | 91 | | 70-130 | 2 | | 20 |
| Carbon tetrachloride | 85 | | 83 | | 63-132 | 2 | | 20 |
| 1,2-Dichloropropane | 95 | | 93 | | 70-130 | 2 | | 20 |
| Dibromochloromethane | 86 | | 85 | | 63-130 | 1 | | 20 |
| 1,1,2-Trichloroethane | 98 | | 98 | | 70-130 | 0 | | 20 |
| Tetrachloroethene | 92 | | 90 | | 70-130 | 2 | | 20 |
| Chlorobenzene | 97 | | 95 | | 75-130 | 2 | | 20 |
| Trichlorofluoromethane | 92 | | 88 | | 62-150 | 4 | | 20 |
| 1,2-Dichloroethane | 91 | | 90 | | 70-130 | 1 | | 20 |
| 1,1,1-Trichloroethane | 90 | | 87 | | 67-130 | 3 | | 20 |
| Bromodichloromethane | 92 | | 90 | | 67-130 | 2 | | 20 |
| trans-1,3-Dichloropropene | 91 | | 91 | | 70-130 | 0 | | 20 |
| cis-1,3-Dichloropropene | 93 | | 92 | | 70-130 | 1 | | 20 |
| Bromoform | 88 | | 87 | | 54-136 | 1 | | 20 |
| 1,1,2,2-Tetrachloroethane | 97 | | 95 | | 67-130 | 2 | | 20 |
| Benzene | 92 | | 90 | | 70-130 | 2 | | 20 |
| Toluene | 96 | | 93 | | 70-130 | 3 | | 20 |
| Ethylbenzene | 95 | | 92 | | 70-130 | 3 | | 20 |
| Chloromethane | 91 | | 89 | | 64-130 | 2 | | 20 |
| Bromomethane | 86 | | 82 | | 39-139 | 5 | | 20 |
| Vinyl chloride | 91 | | 88 | | 55-140 | 3 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.

**Project Number:** 0010-001-001

**Lab Number:** L1825714

**Report Date:** 07/17/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1134673-3 WG1134673-4 | | | | | | | | |
| Chloroethane | 90 | | 85 | | 55-138 | 6 | | 20 |
| 1,1-Dichloroethene | 92 | | 90 | | 61-145 | 2 | | 20 |
| trans-1,2-Dichloroethene | 95 | | 92 | | 70-130 | 3 | | 20 |
| Trichloroethene | 89 | | 85 | | 70-130 | 5 | | 20 |
| 1,2-Dichlorobenzene | 96 | | 94 | | 70-130 | 2 | | 20 |
| 1,3-Dichlorobenzene | 96 | | 93 | | 70-130 | 3 | | 20 |
| 1,4-Dichlorobenzene | 97 | | 93 | | 70-130 | 4 | | 20 |
| Methyl tert butyl ether | 86 | | 85 | | 63-130 | 1 | | 20 |
| p/m-Xylene | 95 | | 95 | | 70-130 | 0 | | 20 |
| o-Xylene | 95 | | 95 | | 70-130 | 0 | | 20 |
| cis-1,2-Dichloroethene | 93 | | 92 | | 70-130 | 1 | | 20 |
| Styrene | 100 | | 95 | | 70-130 | 5 | | 20 |
| Dichlorodifluoromethane | 87 | | 85 | | 36-147 | 2 | | 20 |
| Acetone | 92 | | 94 | | 58-148 | 2 | | 20 |
| Carbon disulfide | 94 | | 91 | | 51-130 | 3 | | 20 |
| 2-Butanone | 94 | | 92 | | 63-138 | 2 | | 20 |
| 4-Methyl-2-pentanone | 90 | | 90 | | 59-130 | 0 | | 20 |
| 2-Hexanone | 82 | | 84 | | 57-130 | 2 | | 20 |
| Bromochloromethane | 99 | | 95 | | 70-130 | 4 | | 20 |
| 1,2-Dibromoethane | 94 | | 93 | | 70-130 | 1 | | 20 |
| n-Butylbenzene | 95 | | 89 | | 53-136 | 7 | | 20 |
| sec-Butylbenzene | 94 | | 89 | | 70-130 | 5 | | 20 |
| 1,2-Dibromo-3-chloropropane | 84 | | 86 | | 41-144 | 2 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.

**Project Number:** 0010-001-001

**Lab Number:** L1825714

**Report Date:** 07/17/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1134673-3 WG1134673-4 | | | | | | | | |
| Isopropylbenzene | 95 | | 92 | | 70-130 | 3 | | 20 |
| p-Isopropyltoluene | 94 | | 88 | | 70-130 | 7 | | 20 |
| n-Propylbenzene | 97 | | 92 | | 69-130 | 5 | | 20 |
| 1,2,3-Trichlorobenzene | 97 | | 96 | | 70-130 | 1 | | 20 |
| 1,2,4-Trichlorobenzene | 94 | | 92 | | 70-130 | 2 | | 20 |
| 1,3,5-Trimethylbenzene | 95 | | 91 | | 64-130 | 4 | | 20 |
| 1,2,4-Trimethylbenzene | 97 | | 93 | | 70-130 | 4 | | 20 |
| Methyl Acetate | 88 | | 89 | | 70-130 | 1 | | 20 |
| Cyclohexane | 87 | | 84 | | 70-130 | 4 | | 20 |
| 1,4-Dioxane | 120 | | 120 | | 56-162 | 0 | | 20 |
| Freon-113 | 88 | | 86 | | 70-130 | 2 | | 20 |
| Methyl cyclohexane | 87 | | 83 | | 70-130 | 5 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | | 100 | | 70-130 |
| Toluene-d8 | 102 | | 101 | | 70-130 |
| 4-Bromofluorobenzene | 99 | | 98 | | 70-130 |
| Dibromofluoromethane | 101 | | 101 | | 70-130 |

# METALS

**Project Name:** 3021 ORCHARD PARK RD.
**Lab Number:** L1825714
**Project Number:** 0010-001-001
**Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-02
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY
Date Collected: 07/06/18 12:40
Date Received: 07/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Prep Method | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dissolved Metals - Mansfield Lab** | | | | | | | | | | | |
| Iron, Dissolved | 0.0500 | | mg/l | 0.0500 | 0.0191 | 1 | 07/13/18 11:55 | 07/16/18 10:58 | EPA 3005A | 1,6020B | AM |
| Manganese, Dissolved | 1.928 | | mg/l | 0.00100 | 0.00044 | 1 | 07/13/18 11:55 | 07/16/18 10:58 | EPA 3005A | 1,6020B | AM |

**Project Name:** 3021 ORCHARD PARK RD.
**Project Number:** 0010-001-001
**Lab Number:** L1825714
**Report Date:** 07/17/18

# Method Blank Analysis
# Batch Quality Control

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Dissolved Metals - Mansfield Lab for sample(s): 02 Batch: WG1135390-1 | | | | | | | | | | |
| Iron, Dissolved | 0.0206 | J | mg/l | 0.0500 | 0.0191 | 1 | 07/13/18 11:55 | 07/16/18 10:05 | 1,6020B | AM |
| Manganese, Dissolved | ND | | mg/l | 0.00100 | 0.00044 | 1 | 07/13/18 11:55 | 07/16/18 10:05 | 1,6020B | AM |

**Prep Information**

Digestion Method: EPA 3005A

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.

**Project Number:** 0010-001-001

**Lab Number:** L1825714

**Report Date:** 07/17/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Dissolved Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1135390-2 | | | | | | | | |
| Iron, Dissolved | 110 | | - | | 80-120 | - | | |
| Manganese, Dissolved | 100 | | - | | 80-120 | - | | |

# Matrix Spike Analysis
## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.
**Project Number:** 0010-001-001

**Lab Number:** L1825714
**Report Date:** 07/17/18

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dissolved Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1135390-3 WG1135390-4 QC Sample: L1825885-01 Client ID: MS Sample | | | | | | | | | | | | |
| Iron, Dissolved | ND | 1 | 1.10 | 110 | | 1.04 | 104 | | 75-125 | 6 | | 20 |
| Manganese, Dissolved | 0.03467 | 0.5 | 0.5520 | 103 | | 0.5392 | 101 | | 75-125 | 2 | | 20 |
| Dissolved Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1135390-7 WG1135390-8 QC Sample: L1826064-02 Client ID: MS Sample | | | | | | | | | | | | |
| Iron, Dissolved | 1.01 | 1 | 2.14 | 113 | | 1.99 | 98 | | 75-125 | 7 | | 20 |
| Manganese, Dissolved | 0.1092 | 0.5 | 0.6160 | 101 | | 0.6153 | 101 | | 75-125 | 0 | | 20 |

# INORGANICS
# &
# MISCELLANEOUS

**Project Name:** 3021 ORCHARD PARK RD.
**Lab Number:** L1825714
**Project Number:** 0010-001-001
**Report Date:** 07/17/18

## SAMPLE RESULTS

Lab ID: L1825714-02
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., OP, NY
Date Collected: 07/06/18 12:40
Date Received: 07/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry - Westborough Lab** | | | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | 0.061 | J | mg/l | 0.10 | 0.033 | 1 | - | 07/10/18 22:36 | 44,353.2 | MR |
| **Anions by Ion Chromatography - Westborough Lab** | | | | | | | | | | |
| Sulfate | ND | | mg/l | 5.00 | 0.800 | 5 | - | 07/12/18 22:33 | 44,300.0 | AU |

**Project Name:** 3021 ORCHARD PARK RD.
**Project Number:** 0010-001-001
**Lab Number:** L1825714
**Report Date:** 07/17/18

# Method Blank Analysis
## Batch Quality Control

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1134301-1 | | | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | ND | | mg/l | 0.10 | 0.033 | 1 | - | 07/10/18 19:13 | 44,353.2 | MR |
| Anions by Ion Chromatography - Westborough Lab for sample(s): 02 Batch: WG1135171-1 | | | | | | | | | | |
| Sulfate | ND | | mg/l | 1.00 | 0.160 | 1 | - | 07/12/18 17:33 | 44,300.0 | AU |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.

**Project Number:** 0010-001-001

**Lab Number:** L1825714

**Report Date:** 07/17/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1134301-2 | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | 102 | | - | | 90-110 | - | | |
| Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02 Batch: WG1135171-2 | | | | | | | | |
| Sulfate | 103 | | - | | 90-110 | - | | |

# Matrix Spike Analysis
## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK RD.
**Project Number:** 0010-001-001

**Lab Number:** L1825714
**Report Date:** 07/17/18

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1134301-4 QC Sample: L1825776-02 Client ID: MS Sample | | | | | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | 5.4 | 4 | 8.9 | 88 | | - | - | | 80-120 | - | | 20 |
| Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1135171-3 QC Sample: L1825244-01 Client ID: MS Sample | | | | | | | | | | | | |
| Sulfate | 942. | 400 | 1350 | 102 | | - | - | | 90-110 | - | | 20 |

# Lab Duplicate Analysis

***Batch Quality Control***

**Project Name:** 3021 ORCHARD PARK RD.

**Project Number:** 0010-001-001

***Lab Number:*** L1825714

***Report Date:*** 07/17/18

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1134301-3 QC Sample: L1825776-02 Client ID: DUP Sample | | | | | | |
| Nitrogen, Nitrate/Nitrite | 5.4 | 5.4 | mg/l | 0 | | 20 |
| Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1135171-4 QC Sample: L1825244-01 Client ID: DUP Sample | | | | | | |
| Sulfate | 942. | 938 | mg/l | 0 | | 20 |

**Project Name:** 3021 ORCHARD PARK RD.
**Project Number:** 0010-001-001

**Lab Number:** L1825714
**Report Date:** 07/17/18

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L1825714-01A | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |
| L1825714-01B | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |
| L1825714-01C | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |
| L1825714-02A | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |
| L1825714-02B | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |
| L1825714-02C | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |
| L1825714-02D | 20ml Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | DISSGAS(14) |
| L1825714-02E | 20ml Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | DISSGAS(14) |
| L1825714-02F | Plastic 250ml H2SO4 preserved | A | <2 | <2 | 3.2 | Y | Absent | | NO3/NO2-353(28) |
| L1825714-02G | Plastic 250ml unpreserved | A | 7 | 7 | 3.2 | Y | Absent | | - |
| L1825714-02H | Plastic 60ml unpreserved | A | 7 | 7 | 3.2 | Y | Absent | | SO4-300(28) |
| L1825714-02X | Plastic 120ml HNO3 preserved Filtrates | A | <2 | <2 | 3.2 | Y | Absent | | MN-6020S(180),FE-6020S(180) |
| L1825714-03A | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |
| L1825714-03B | Vial HCl preserved | A | N/A | N/A | 3.2 | Y | Absent | | NYTCL-8260-R2(14) |



*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK RD. | **Lab Number:** | L1825714 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 07/17/18 |

## GLOSSARY

### *Acronyms*

| | |
|---|---|
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EPA | - Environmental Protection Agency. |
| LCS | - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LCSD | - Laboratory Control Sample Duplicate: Refer to LCS. |
| LFB | - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| MDL | - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| MS | - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. |
| MSD | - Matrix Spike Sample Duplicate: Refer to MS. |
| NA | - Not Applicable. |
| NC | - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit. |
| NDPA/DPA | - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STLP | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |

### *Footnotes*

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

### *Terms*

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

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

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

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

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

### *Data Qualifiers*

| | |
|---|---|
| **A** | - Spectra identified as "Aldol Condensation Product". |
| **B** | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related |

*Report Format:* DU Report with 'J' Qualifiers

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK RD. | **Lab Number:** | L1825714 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 07/17/18 |

***Data Qualifiers***

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

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

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

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

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

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

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

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

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

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

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

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

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

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

*Report Format:* DU Report with 'J' Qualifiers

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK RD. | **Lab Number:** | L1825714 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 07/17/18 |

## REFERENCES


1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

117 Technical Guidance for the Natural Attenuation Indicators: Methane, Ethane, and Ethene, EPA-NE, Revision 1, February 21, 2002 and Sample Preparation & Calculations for Dissolved Gas Analysis in Water Samples using a GC Headspace Equilibration Technique, EPA RSKSOP-175, Revision 2, May 2004.


## LIMITATION OF LIABILITIES

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

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

# Certification Information

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

**Westborough Facility**
**EPA 624:** m/p-xylene, o-xylene
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**EPA 300:** DW: Bromide
**EPA 6860:** SCM: Perchlorate
**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation
**SM4500**: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
**EPA 624**: Volatile Halocarbons & Aromatics,
**EPA 608**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

**Mansfield Facility:**

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

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

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

# NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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

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

Page 1 of 1

Date Rec'd in Lab: 7/6/18

ALPHA Job #: L1825714

**Client Information**
Client: Orion Env. Sol. LLC
Address: 4535 Southwestern Blvd Ste 210, Hamburg, NY 14075
Phone: 716-207-4475
Fax:
Email: bhann@orionesllc.com

**Project Information**
Project Name: 3021 Orchard Park Rd
Project Location: 3021-3041 Orchard Park Rd OP, NY
Project #: 0010-021-001
(Use Project name as Project #) ☐
Project Manager: B. Hann
ALPHAQuote #:

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

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

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

**Billing Information**
☐ Same as Client Info
PO #

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

These samples have been previously analyzed by Alpha ☒

**Other project specific requirements/comments:**

**Please specify Metals or TAL.**

**ANALYSIS**

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

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | Sulfate | Diss Fe, Mn | NO3/NO2 | TCL VOCs + CP-51 | Diss. Gases | Temp | | | Total Bottle | Sample Specific Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25714-01 | MW-4A | 7/6/18 | 1220 | water | BCH | | | | 3 | | | | | | |
| -02 | MW-6 | " | 1240 | " | " | 1 | 1 | 1 | 3 | 2 | | | | | |
| -03 | Trip Blank | " | — | " | " | | | | 3 | | | | | | |
| -04 | Temp Blank | " | — | " | " | | | | | | 1 | | | | |

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

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

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

| Container Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Preservative | | | | | | | | | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| | 7/6/18 15:10 | Jack Sherry and | 7/6/18 15:10 |
| Jack Sherry and | 7/6/18 16:20 | | 7/7/18 0045 |

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

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

# APPENDIX C4

## LABORATORY ANALYTICAL DATA
## NOVEMBER 2018



ORION

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L1847434 |
| Client: | Orion Environmental Solutions, LLC<br>4535 Southwestern Blvd.<br>Suite 210<br>Hamburg, NY 14075 |
| ATTN: | Bryan Hann |
| Phone: | (716) 202-4475 |
| Project Name: | 3021 ORCHARD PARK ROAD |
| Project Number: | 0010-001-001 |
| Report Date: | 11/30/18 |



Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001

**Lab Number:** L1847434
**Report Date:** 11/30/18

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L1847434-01 | MW-4A | WATER | 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY | 11/19/18 11:10 | 11/19/18 |
| L1847434-02 | MW-6 | WATER | 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY | 11/19/18 11:26 | 11/19/18 |
| L1847434-03 | TRIP BLANK | WATER | 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY | 11/19/18 00:00 | 11/19/18 |

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK ROAD | **Lab Number:** | L1847434 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 11/30/18 |

## Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

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

Please contact Client Services at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK ROAD | **Lab Number:** | L1847434 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 11/30/18 |

**Case Narrative (continued)**

Report Submission

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

Dissolved Gases

L1847434-02 was collected in a pre-preserved vial; however, the pH of the sample was determined to be greater than two

L1847434-02: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

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

Authorized Signature: Lisa Westerlind

Title: Technical Director/Representative Date: 11/30/18

# ORGANICS

# VOLATILES

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-01 Date Collected: 11/19/18 11:10
Client ID: MW-4A Date Received: 11/19/18
Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/29/18 10:37
Analyst: NLK

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-01 Date Collected: 11/19/18 11:10

Client ID: MW-4A Date Received: 11/19/18

Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 | 1 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | | 70-130 |
| Toluene-d8 | 96 | | 70-130 |
| 4-Bromofluorobenzene | 93 | | 70-130 |
| Dibromofluoromethane | 97 | | 70-130 |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-02 Date Collected: 11/19/18 11:26
Client ID: MW-6 Date Received: 11/19/18
Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/28/18 11:42
Analyst: AD

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | 0.20 | J | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | 0.65 | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-02 Date Collected: 11/19/18 11:26

Client ID: MW-6 Date Received: 11/19/18

Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | 0.96 | J | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | 0.78 | J | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | 0.80 | J | ug/l | 2.5 | 0.70 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | 18 | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | 2.3 | J | ug/l | 5.0 | 1.9 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 | 1 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | | 70-130 |
| Toluene-d8 | 99 | | 70-130 |
| 4-Bromofluorobenzene | 96 | | 70-130 |
| Dibromofluoromethane | 99 | | 70-130 |

**Project Name:** 3021 ORCHARD PARK ROAD
**Lab Number:** L1847434
**Project Number:** 0010-001-001
**Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-02
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY
Date Collected: 11/19/18 11:26
Date Received: 11/19/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 11/21/18 14:04
Analyst: AW

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Column |
|---|---|---|---|---|---|---|---|
| **Dissolved Gases by GC - Mansfield Lab** | | | | | | | |
| Methane | 13400 | E | ug/l | 1.00 | 1.00 | 1 | A |
| Ethene | ND | | ug/l | 0.500 | 0.500 | 1 | A |
| Ethane | 0.614 | | ug/l | 0.500 | 0.500 | 1 | A |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

**SAMPLE RESULTS**

Lab ID: L1847434-02 D
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY

Date Collected: 11/19/18 11:26
Date Received: 11/19/18
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 117,-
Analytical Date: 11/21/18 14:46
Analyst: AW

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Column |
|---|---|---|---|---|---|---|---|
| **Dissolved Gases by GC - Mansfield Lab** | | | | | | | |
| Methane | 10800 | | ug/l | 5.00 | 5.00 | 5 | A |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-03 Date Collected: 11/19/18 00:00
Client ID: TRIP BLANK Date Received: 11/19/18
Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 11/28/18 12:04
Analyst: AD

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 | 1 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 | 1 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 | 1 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 | 1 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 | 1 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 | 1 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 | 1 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 | 1 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 | 1 |
| Benzene | ND | | ug/l | 0.50 | 0.16 | 1 |
| Toluene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 | 1 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 | 1 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 | 1 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-03 Date Collected: 11/19/18 00:00

Client ID: TRIP BLANK Date Received: 11/19/18

Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY Field Prep: Not Specified

Sample Depth:

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Organics by GC/MS - Westborough Lab** | | | | | | |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 | 1 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 | 1 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Styrene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 | 1 |
| Acetone | ND | | ug/l | 5.0 | 1.5 | 1 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 | 1 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 | 1 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 | 1 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 | 1 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 | 1 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 | 1 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. | 1 |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 | 1 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | | 70-130 |
| Toluene-d8 | 103 | | 70-130 |
| 4-Bromofluorobenzene | 99 | | 70-130 |
| Dibromofluoromethane | 98 | | 70-130 |

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001
**Lab Number:** L1847434
**Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 117,-
Analytical Date: 11/21/18 08:37
Analyst: AW

| Parameter | Result | Qualifier | Units | RL | MDL | |
|---|---|---|---|---|---|---|
| Dissolved Gases by GC - Mansfield Lab for sample(s): 02 Batch: WG1181756-3 | | | | | | |
| Methane | ND | | ug/l | 1.00 | 1.00 | A |
| Ethene | ND | | ug/l | 0.500 | 0.500 | A |
| Ethane | ND | | ug/l | 0.500 | 0.500 | A |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/28/18 08:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-03 Batch: WG1183415-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/28/18 08:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-03 Batch: WG1183415-5 | | | | | |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 |

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001
**Lab Number:** L1847434
**Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/28/18 08:26
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-03 Batch: WG1183415-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 108 | | 70-130 |
| Toluene-d8 | 102 | | 70-130 |
| 4-Bromofluorobenzene | 103 | | 70-130 |
| Dibromofluoromethane | 95 | | 70-130 |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/29/18 10:09
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1183948-5 | | | | | |
| Methylene chloride | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Chloroform | ND | | ug/l | 2.5 | 0.70 |
| Carbon tetrachloride | ND | | ug/l | 0.50 | 0.13 |
| 1,2-Dichloropropane | ND | | ug/l | 1.0 | 0.14 |
| Dibromochloromethane | ND | | ug/l | 0.50 | 0.15 |
| 1,1,2-Trichloroethane | ND | | ug/l | 1.5 | 0.50 |
| Tetrachloroethene | ND | | ug/l | 0.50 | 0.18 |
| Chlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Trichlorofluoromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dichloroethane | ND | | ug/l | 0.50 | 0.13 |
| 1,1,1-Trichloroethane | ND | | ug/l | 2.5 | 0.70 |
| Bromodichloromethane | ND | | ug/l | 0.50 | 0.19 |
| trans-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.16 |
| cis-1,3-Dichloropropene | ND | | ug/l | 0.50 | 0.14 |
| Bromoform | ND | | ug/l | 2.0 | 0.65 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/l | 0.50 | 0.17 |
| Benzene | ND | | ug/l | 0.50 | 0.16 |
| Toluene | ND | | ug/l | 2.5 | 0.70 |
| Ethylbenzene | ND | | ug/l | 2.5 | 0.70 |
| Chloromethane | ND | | ug/l | 2.5 | 0.70 |
| Bromomethane | ND | | ug/l | 2.5 | 0.70 |
| Vinyl chloride | ND | | ug/l | 1.0 | 0.07 |
| Chloroethane | ND | | ug/l | 2.5 | 0.70 |
| 1,1-Dichloroethene | ND | | ug/l | 0.50 | 0.17 |
| trans-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Trichloroethene | ND | | ug/l | 0.50 | 0.18 |
| 1,2-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,3-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |

**Project Name:** 3021 ORCHARD PARK ROAD **Lab Number:** L1847434

**Project Number:** 0010-001-001 **Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/29/18 10:09
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1183948-5 | | | | | |
| 1,4-Dichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl tert butyl ether | ND | | ug/l | 2.5 | 0.70 |
| p/m-Xylene | ND | | ug/l | 2.5 | 0.70 |
| o-Xylene | ND | | ug/l | 2.5 | 0.70 |
| cis-1,2-Dichloroethene | ND | | ug/l | 2.5 | 0.70 |
| Styrene | ND | | ug/l | 2.5 | 0.70 |
| Dichlorodifluoromethane | ND | | ug/l | 5.0 | 1.0 |
| Acetone | ND | | ug/l | 5.0 | 1.5 |
| Carbon disulfide | ND | | ug/l | 5.0 | 1.0 |
| 2-Butanone | ND | | ug/l | 5.0 | 1.9 |
| 4-Methyl-2-pentanone | ND | | ug/l | 5.0 | 1.0 |
| 2-Hexanone | ND | | ug/l | 5.0 | 1.0 |
| Bromochloromethane | ND | | ug/l | 2.5 | 0.70 |
| 1,2-Dibromoethane | ND | | ug/l | 2.0 | 0.65 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/l | 2.5 | 0.70 |
| Isopropylbenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,3-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| 1,2,4-Trichlorobenzene | ND | | ug/l | 2.5 | 0.70 |
| Methyl Acetate | ND | | ug/l | 2.0 | 0.23 |
| Cyclohexane | ND | | ug/l | 10 | 0.27 |
| 1,4-Dioxane | ND | | ug/l | 250 | 61. |
| Freon-113 | ND | | ug/l | 2.5 | 0.70 |
| Methyl cyclohexane | ND | | ug/l | 10 | 0.40 |

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001
**Lab Number:** L1847434
**Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 11/29/18 10:09
Analyst: PD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1183948-5 | | | | | |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 95 | | 70-130 |
| Toluene-d8 | 98 | | 70-130 |
| 4-Bromofluorobenzene | 93 | | 70-130 |
| Dibromofluoromethane | 97 | | 70-130 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

**Lab Number:** L1847434

**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits | Column |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Gases by GC - Mansfield Lab Associated sample(s): 02 Batch: WG1181756-2 | | | | | | | | | |
| Methane | 100 | | - | | 80-120 | - | | 25 | A |
| Ethene | 109 | | - | | 80-120 | - | | 25 | A |
| Ethane | 109 | | - | | 80-120 | - | | 25 | A |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001

**Lab Number:** L1847434
**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03 Batch: WG1183415-3 WG1183415-4 | | | | | | | | |
| Methylene chloride | 96 | | 98 | | 70-130 | 2 | | 20 |
| 1,1-Dichloroethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| Chloroform | 97 | | 96 | | 70-130 | 1 | | 20 |
| Carbon tetrachloride | 88 | | 86 | | 63-132 | 2 | | 20 |
| 1,2-Dichloropropane | 100 | | 100 | | 70-130 | 0 | | 20 |
| Dibromochloromethane | 94 | | 92 | | 63-130 | 2 | | 20 |
| 1,1,2-Trichloroethane | 100 | | 98 | | 70-130 | 2 | | 20 |
| Tetrachloroethene | 89 | | 83 | | 70-130 | 7 | | 20 |
| Chlorobenzene | 97 | | 93 | | 75-130 | 4 | | 20 |
| Trichlorofluoromethane | 93 | | 95 | | 62-150 | 2 | | 20 |
| 1,2-Dichloroethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,1,1-Trichloroethane | 90 | | 86 | | 67-130 | 5 | | 20 |
| Bromodichloromethane | 95 | | 96 | | 67-130 | 1 | | 20 |
| trans-1,3-Dichloropropene | 92 | | 88 | | 70-130 | 4 | | 20 |
| cis-1,3-Dichloropropene | 91 | | 91 | | 70-130 | 0 | | 20 |
| Bromoform | 92 | | 94 | | 54-136 | 2 | | 20 |
| 1,1,2,2-Tetrachloroethane | 110 | | 100 | | 67-130 | 10 | | 20 |
| Benzene | 95 | | 95 | | 70-130 | 0 | | 20 |
| Toluene | 98 | | 95 | | 70-130 | 3 | | 20 |
| Ethylbenzene | 100 | | 96 | | 70-130 | 4 | | 20 |
| Chloromethane | 98 | | 97 | | 64-130 | 1 | | 20 |
| Bromomethane | 80 | | 84 | | 39-139 | 5 | | 20 |
| Vinyl chloride | 100 | | 100 | | 55-140 | 0 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

**Lab Number:** L1847434

**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03 Batch: WG1183415-3 WG1183415-4 | | | | | | | | |
| Chloroethane | 120 | | 120 | | 55-138 | 0 | | 20 |
| 1,1-Dichloroethene | 93 | | 91 | | 61-145 | 2 | | 20 |
| trans-1,2-Dichloroethene | 95 | | 91 | | 70-130 | 4 | | 20 |
| Trichloroethene | 92 | | 90 | | 70-130 | 2 | | 20 |
| 1,2-Dichlorobenzene | 96 | | 92 | | 70-130 | 4 | | 20 |
| 1,3-Dichlorobenzene | 99 | | 94 | | 70-130 | 5 | | 20 |
| 1,4-Dichlorobenzene | 98 | | 93 | | 70-130 | 5 | | 20 |
| Methyl tert butyl ether | 88 | | 89 | | 63-130 | 1 | | 20 |
| p/m-Xylene | 100 | | 95 | | 70-130 | 5 | | 20 |
| o-Xylene | 100 | | 95 | | 70-130 | 5 | | 20 |
| cis-1,2-Dichloroethene | 92 | | 90 | | 70-130 | 2 | | 20 |
| Styrene | 100 | | 100 | | 70-130 | 0 | | 20 |
| Dichlorodifluoromethane | 86 | | 84 | | 36-147 | 2 | | 20 |
| Acetone | 100 | | 90 | | 58-148 | 11 | | 20 |
| Carbon disulfide | 98 | | 97 | | 51-130 | 1 | | 20 |
| 2-Butanone | 92 | | 96 | | 63-138 | 4 | | 20 |
| 4-Methyl-2-pentanone | 92 | | 91 | | 59-130 | 1 | | 20 |
| 2-Hexanone | 94 | | 89 | | 57-130 | 5 | | 20 |
| Bromochloromethane | 92 | | 94 | | 70-130 | 2 | | 20 |
| 1,2-Dibromoethane | 94 | | 92 | | 70-130 | 2 | | 20 |
| 1,2-Dibromo-3-chloropropane | 85 | | 82 | | 41-144 | 4 | | 20 |
| Isopropylbenzene | 100 | | 98 | | 70-130 | 2 | | 20 |
| 1,2,3-Trichlorobenzene | 89 | | 86 | | 70-130 | 3 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

**Lab Number:** L1847434

**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-03 Batch: WG1183415-3 WG1183415-4 | | | | | | | | |
| 1,2,4-Trichlorobenzene | 90 | | 87 | | 70-130 | 3 | | 20 |
| Methyl Acetate | 96 | | 94 | | 70-130 | 2 | | 20 |
| Cyclohexane | 99 | | 97 | | 70-130 | 2 | | 20 |
| 1,4-Dioxane | 132 | | 128 | | 56-162 | 3 | | 20 |
| Freon-113 | 91 | | 92 | | 70-130 | 1 | | 20 |
| Methyl cyclohexane | 93 | | 90 | | 70-130 | 3 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 107 | | 108 | | 70-130 |
| Toluene-d8 | 104 | | 101 | | 70-130 |
| 4-Bromofluorobenzene | 98 | | 98 | | 70-130 |
| Dibromofluoromethane | 97 | | 96 | | 70-130 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001

**Lab Number:** L1847434
**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1183948-3 WG1183948-4 | | | | | | | | |
| Methylene chloride | 98 | | 98 | | 70-130 | 0 | | 20 |
| 1,1-Dichloroethane | 100 | | 97 | | 70-130 | 3 | | 20 |
| Chloroform | 100 | | 99 | | 70-130 | 1 | | 20 |
| Carbon tetrachloride | 97 | | 93 | | 63-132 | 4 | | 20 |
| 1,2-Dichloropropane | 98 | | 97 | | 70-130 | 1 | | 20 |
| Dibromochloromethane | 90 | | 92 | | 63-130 | 2 | | 20 |
| 1,1,2-Trichloroethane | 94 | | 96 | | 70-130 | 2 | | 20 |
| Tetrachloroethene | 93 | | 91 | | 70-130 | 2 | | 20 |
| Chlorobenzene | 96 | | 94 | | 75-130 | 2 | | 20 |
| Trichlorofluoromethane | 96 | | 93 | | 62-150 | 3 | | 20 |
| 1,2-Dichloroethane | 97 | | 98 | | 70-130 | 1 | | 20 |
| 1,1,1-Trichloroethane | 98 | | 96 | | 67-130 | 2 | | 20 |
| Bromodichloromethane | 94 | | 93 | | 67-130 | 1 | | 20 |
| trans-1,3-Dichloropropene | 87 | | 88 | | 70-130 | 1 | | 20 |
| cis-1,3-Dichloropropene | 95 | | 96 | | 70-130 | 1 | | 20 |
| Bromoform | 82 | | 85 | | 54-136 | 4 | | 20 |
| 1,1,2,2-Tetrachloroethane | 92 | | 94 | | 67-130 | 2 | | 20 |
| Benzene | 97 | | 94 | | 70-130 | 3 | | 20 |
| Toluene | 94 | | 93 | | 70-130 | 1 | | 20 |
| Ethylbenzene | 94 | | 93 | | 70-130 | 1 | | 20 |
| Chloromethane | 90 | | 84 | | 64-130 | 7 | | 20 |
| Bromomethane | 99 | | 94 | | 39-139 | 5 | | 20 |
| Vinyl chloride | 110 | | 100 | | 55-140 | 10 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

**Lab Number:** L1847434

**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1183948-3 WG1183948-4 | | | | | | | | |
| Chloroethane | 120 | | 110 | | 55-138 | 9 | | 20 |
| 1,1-Dichloroethene | 98 | | 95 | | 61-145 | 3 | | 20 |
| trans-1,2-Dichloroethene | 100 | | 98 | | 70-130 | 2 | | 20 |
| Trichloroethene | 98 | | 94 | | 70-130 | 4 | | 20 |
| 1,2-Dichlorobenzene | 94 | | 92 | | 70-130 | 2 | | 20 |
| 1,3-Dichlorobenzene | 95 | | 93 | | 70-130 | 2 | | 20 |
| 1,4-Dichlorobenzene | 95 | | 92 | | 70-130 | 3 | | 20 |
| Methyl tert butyl ether | 99 | | 100 | | 63-130 | 1 | | 20 |
| p/m-Xylene | 95 | | 95 | | 70-130 | 0 | | 20 |
| o-Xylene | 95 | | 90 | | 70-130 | 5 | | 20 |
| cis-1,2-Dichloroethene | 100 | | 100 | | 70-130 | 0 | | 20 |
| Styrene | 90 | | 85 | | 70-130 | 6 | | 20 |
| Dichlorodifluoromethane | 84 | | 81 | | 36-147 | 4 | | 20 |
| Acetone | 62 | | 69 | | 58-148 | 11 | | 20 |
| Carbon disulfide | 98 | | 94 | | 51-130 | 4 | | 20 |
| 2-Butanone | 82 | | 88 | | 63-138 | 7 | | 20 |
| 4-Methyl-2-pentanone | 80 | | 85 | | 59-130 | 6 | | 20 |
| 2-Hexanone | 78 | | 79 | | 57-130 | 1 | | 20 |
| Bromochloromethane | 100 | | 100 | | 70-130 | 0 | | 20 |
| 1,2-Dibromoethane | 89 | | 92 | | 70-130 | 3 | | 20 |
| 1,2-Dibromo-3-chloropropane | 84 | | 86 | | 41-144 | 2 | | 20 |
| Isopropylbenzene | 95 | | 90 | | 70-130 | 5 | | 20 |
| 1,2,3-Trichlorobenzene | 94 | | 91 | | 70-130 | 3 | | 20 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

**Lab Number:** L1847434

**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1183948-3 WG1183948-4 | | | | | | | | |
| 1,2,4-Trichlorobenzene | 92 | | 92 | | 70-130 | 0 | | 20 |
| Methyl Acetate | 88 | | 95 | | 70-130 | 8 | | 20 |
| Cyclohexane | 98 | | 94 | | 70-130 | 4 | | 20 |
| 1,4-Dioxane | 74 | | 90 | | 56-162 | 20 | | 20 |
| Freon-113 | 98 | | 94 | | 70-130 | 4 | | 20 |
| Methyl cyclohexane | 98 | | 94 | | 70-130 | 4 | | 20 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | | 96 | | 70-130 |
| Toluene-d8 | 96 | | 95 | | 70-130 |
| 4-Bromofluorobenzene | 95 | | 93 | | 70-130 |
| Dibromofluoromethane | 99 | | 100 | | 70-130 |

# METALS

**Project Name:** 3021 ORCHARD PARK ROAD
**Lab Number:** L1847434
**Project Number:** 0010-001-001
**Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-02
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY
Sample Depth:
Matrix: Water

Date Collected: 11/19/18 11:26
Date Received: 11/19/18
Field Prep: Not Specified

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Prep Method | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dissolved Metals - Mansfield Lab** | | | | | | | | | | | |
| Iron, Dissolved | 33.4 | | mg/l | 0.0750 | 0.0191 | 1 | 11/29/18 12:50 | 11/29/18 19:22 | EPA 3005A | 1,6020B | AM |
| Manganese, Dissolved | 1.519 | | mg/l | 0.00100 | 0.00044 | 1 | 11/29/18 12:50 | 11/29/18 19:22 | EPA 3005A | 1,6020B | AM |

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001
**Lab Number:** L1847434
**Report Date:** 11/30/18

# Method Blank Analysis
# Batch Quality Control

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Dissolved Metals - Mansfield Lab for sample(s): 02 Batch: WG1183809-1 | | | | | | | | | | |
| Iron, Dissolved | 0.0239 | J | mg/l | 0.0750 | 0.0191 | 1 | 11/29/18 12:50 | 11/29/18 18:49 | 1,6020B | AM |
| Manganese, Dissolved | ND | | mg/l | 0.00100 | 0.00044 | 1 | 11/29/18 12:50 | 11/29/18 18:49 | 1,6020B | AM |

**Prep Information**

Digestion Method: EPA 3005A

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

**Lab Number:** L1847434

**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Dissolved Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1183809-2 | | | | | | | | |
| Iron, Dissolved | 118 | | - | | 80-120 | - | | |
| Manganese, Dissolved | 113 | | - | | 80-120 | - | | |

# Matrix Spike Analysis
## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001

**Lab Number:** L1847434
**Report Date:** 11/30/18

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dissolved Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1183809-3 QC Sample: L1847863-01 Client ID: MS Sample | | | | | | | | | | | | |
| Iron, Dissolved | 0.149 | 1 | 1.25 | 110 | | - | - | | 75-125 | - | | 20 |
| Manganese, Dissolved | 1.428 | 0.5 | 2.036 | 122 | | - | - | | 75-125 | - | | 20 |

# Lab Duplicate Analysis

***Batch Quality Control***

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

***Lab Number:*** L1847434

***Report Date:*** 11/30/18

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Dissolved Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1183809-4 QC Sample: L1847863-01 Client ID: DUP Sample | | | | | | |
| Iron, Dissolved | 0.149 | 0.177 | mg/l | 17 | | 20 |
| Manganese, Dissolved | 1.428 | 1.462 | mg/l | 2 | | 20 |

# INORGANICS
# &
# MISCELLANEOUS

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001
**Lab Number:** L1847434
**Report Date:** 11/30/18

## SAMPLE RESULTS

Lab ID: L1847434-02
Client ID: MW-6
Sample Location: 3021-3041 ORCHARD PARK RD., ORCHARD PARK, NY
Sample Depth:
Matrix: Water
Date Collected: 11/19/18 11:26
Date Received: 11/19/18
Field Prep: Not Specified

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry - Westborough Lab** | | | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | ND | | mg/l | 0.10 | 0.033 | 1 | - | 11/27/18 21:28 | 44,353.2 | MR |
| **Anions by Ion Chromatography - Westborough Lab** | | | | | | | | | | |
| Sulfate | ND | | mg/l | 1.00 | 0.160 | 1 | - | 11/26/18 21:39 | 44,300.0 | JR |

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001
**Lab Number:** L1847434
**Report Date:** 11/30/18

# Method Blank Analysis
## Batch Quality Control

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Anions by Ion Chromatography - Westborough Lab for sample(s): 02 Batch: WG1182718-1 | | | | | | | | | | |
| Sulfate | ND | | mg/l | 1.00 | 0.160 | 1 | - | 11/26/18 16:27 | 44,300.0 | JR |
| General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1183037-1 | | | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | ND | | mg/l | 0.10 | 0.033 | 1 | - | 11/27/18 21:17 | 44,353.2 | MR |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

**Lab Number:** L1847434

**Report Date:** 11/30/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02 Batch: WG1182718-2 | | | | | | | | |
| Sulfate | 100 | | - | | 90-110 | - | | |
| General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1183037-2 | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | 104 | | - | | 90-110 | - | | |

# Matrix Spike Analysis
## Batch Quality Control

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001

**Lab Number:** L1847434
**Report Date:** 11/30/18

| Parameter | Native Sample | MS Added | MS Found | MS %Recovery | Qual | MSD Found | MSD %Recovery | Qual | Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1182718-3 QC Sample: L1847312-01 Client ID: MS Sample | | | | | | | | | | | | |
| Sulfate | 196. | 400 | 612 | 104 | | - | - | | 90-110 | - | | 20 |
| General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1183037-4 QC Sample: L1847352-02 Client ID: MS Sample | | | | | | | | | | | | |
| Nitrogen, Nitrate/Nitrite | 5.5 | 4 | 9.7 | 105 | | - | - | | 80-120 | - | | 20 |

# Lab Duplicate Analysis

***Batch Quality Control***

**Project Name:** 3021 ORCHARD PARK ROAD

**Project Number:** 0010-001-001

***Lab Number:*** L1847434

***Report Date:*** 11/30/18

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1182718-4 QC Sample: L1847312-01 Client ID: DUP Sample | | | | | | |
| Sulfate | 196. | 194 | mg/l | 1 | | 20 |
| General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1183037-3 QC Sample: L1847352-02 Client ID: DUP Sample | | | | | | |
| Nitrogen, Nitrate/Nitrite | 5.5 | 5.5 | mg/l | 0 | | 20 |

**Project Name:** 3021 ORCHARD PARK ROAD
**Project Number:** 0010-001-001

**Lab Number:** L1847434
**Report Date:** 11/30/18

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L1847434-01A | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |
| L1847434-01B | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |
| L1847434-01C | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |
| L1847434-02A | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |
| L1847434-02B | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |
| L1847434-02C | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |
| L1847434-02D | Plastic 60ml unpreserved | A | 7 | 7 | 2.9 | Y | Absent | | SO4-300(28) |
| L1847434-02E | Plastic 250ml H2SO4 preserved | A | <2 | <2 | 2.9 | Y | Absent | | NO3/NO2-353(28) |
| L1847434-02F | 20ml Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | DISSGAS(14) |
| L1847434-02G | 20ml Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | DISSGAS(14) |
| L1847434-02H | Plastic 250ml unpreserved | A | 7 | 7 | 2.9 | Y | Absent | | - |
| L1847434-02Z | Plastic 120ml HNO3 preserved Filtrates | A | NA | | 2.9 | Y | Absent | | MN-6020S(180),FE-6020S(180) |
| L1847434-03A | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |
| L1847434-03B | Vial HCl preserved | A | NA | | 2.9 | Y | Absent | | NYTCL-8260-R2(14) |



*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK ROAD | **Lab Number:** | L1847434 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 11/30/18 |

## GLOSSARY

### *Acronyms*

| | |
|---|---|
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EMPC | - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration. |
| EPA | - Environmental Protection Agency. |
| LCS | - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LCSD | - Laboratory Control Sample Duplicate: Refer to LCS. |
| LFB | - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| MDL | - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| MS | - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. |
| MSD | - Matrix Spike Sample Duplicate: Refer to MS. |
| NA | - Not Applicable. |
| NC | - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit. |
| NDPA/DPA | - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STLP | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TEF | - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD. |
| TEQ | - Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |

### *Footnotes*

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

### *Terms*

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

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

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

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

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

*Report Format:* DU Report with 'J' Qualifiers

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK ROAD | **Lab Number:** | L1847434 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 11/30/18 |

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

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

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

*Report Format:* DU Report with 'J' Qualifiers

| | | | |
|---|---|---|---|
| **Project Name:** | 3021 ORCHARD PARK ROAD | **Lab Number:** | L1847434 |
| **Project Number:** | 0010-001-001 | **Report Date:** | 11/30/18 |

## REFERENCES


1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

117 Technical Guidance for the Natural Attenuation Indicators: Methane, Ethane, and Ethene, EPA-NE, Revision 1, February 21, 2002 and Sample Preparation & Calculations for Dissolved Gas Analysis in Water Samples using a GC Headspace Equilibration Technique, EPA RSKSOP-175, Revision 2, May 2004.


## LIMITATION OF LIABILITIES

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

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

# Certification Information

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

**Westborough Facility**
**EPA 624/624.1:** m/p-xylene, o-xylene
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

**EPA 6860:** SCM: Perchlorate

**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

**Mansfield Facility:**

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

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

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

# NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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

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

Page 1 of 1

Date Rec'd in Lab: 11/20/18

ALPHA Job #: L1847434

## Client Information

Client: Orion Env. Solutions, LLC
Address: 4535 Southwestern Blvd. Ste. 210, Hamburg, NY
Phone: 716.202.4475
Fax:
Email: bhann@orionesllc.com

## Project Information

Project Name: 3021 Orchard Park Road
Project Location: 3021-3041 Orchard Park Rd, Orchard Park NY
Project # 0010-001-001
(Use Project name as Project #) ☐
Project Manager: Bryan Hann
ALPHAQuote #:

## Turn-Around Time

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

## Deliverables

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

## Regulatory Requirement

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

## Billing Information

☐ Same as Client Info
PO #

## Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

**Other project specific requirements/comments:**

* Diss. Gases: methane, ethane, ethene
Diss Metals: Fe, Mn

**Please specify Metals or TAL.**

## ANALYSIS

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

| ALPHA Lab ID (Lab Use Only) | Sample ID | Collection Date | Collection Time | Sample Matrix | Sampler's Initials | TCL 8260 | Diss. Gas * | NO3/NO2 | SO4 | Diss. Metals * | | | | Sample Specific Comments | Total Bottle |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47434-01 | MW-4A | 11/19/18 | 11:10 | GW | BCH | 3 | | | | | | | | | |
| -02 | MW-6 | ↓ | 11:26 | ↓ | BCH | 3 | 2 | 1 | 1 | 1 | | | | * see notes | |
| -03 | Trip Blank | ↓ | — | ↓ | BCH | 2 | | | | | | | | | |

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

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

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

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Container Type | | | | | | | | | |
| Preservative | | | | | | | | | |

| Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|
| Bryan Hann | 11/19/18 14:55 | Jack Sherry GAL | 11/19/18 14:55 |
| Jack Sherry GAL | 11/19/18 16:15 | Dan Ma BAE | 11/20/18 0115 |

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

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