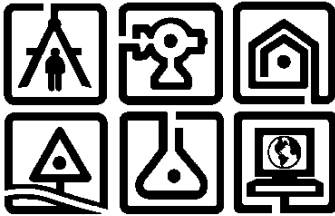


February 2022



Interim Remedial Measure Work Plan

Groundwater Treatment System

Allied Healthcare Products Site
46 New Street
Town of Stuyvesant
Columbia County, New York
BCP Site # C411020

ALLIED HEALTHCARE PRODUCTS, INC.
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EXECUTIVE SUMMARY

The objective of the proposed Interim Remedial Measure (IRM) is to treat volatile organic compounds (VOCs) at the site's water supply point of entry to prevent the discharge of VOCs to the on-site septic system and a potential exposure pathway. The IRM will pump groundwater from the existing on-site bedrock water supply well to a groundwater treatment (GWT) system. The GWT system generally consists of chlorine injection, degassing, granular activated carbon (lead/lag configuration), and pre- and post-sediment filters. Water pumped from the on-site bedrock water supply well will be treated with granulated activated carbon (GAC), a proven and accepted groundwater treatment process for removing VOCs from groundwater. Treated water will discharge to a 2,000-gallon storage tank that is used for both manufacturing processes and non-potable bathroom water (sinks for handwashing and toilets). The sanitary wastewater is discharged to the facility septic system. This effort will be completed in accordance with the IRM work plan (IRM WP), applicable policies and regulations, and subsequent approval from New York State Department of Environmental Conservation (NYSDEC).

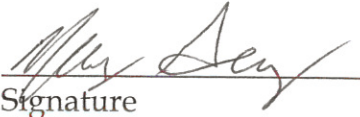
This IRM WP describes the GWT system, and the process for installing and implementing the system. It is anticipated the GWT system will be in operation within approximately (2) two months following receipt of work plan approval from NYSDEC.

CERTIFICATIONS

I, Nancy Garry, P.E., certify that I am a NYS registered professional engineer and that this Interim Remedial Measures Work Plan – Groundwater Treatment System was prepared in accordance with applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) dated May 3, 2010.

082523
NYS Professional Engineer #

2/15/2022
Date


Signature



**GROUNDWATER TREATMENT SYSTEM
INTERIM REMEDIAL MEASURE WORK PLAN
ALLIED HEALTHCARE PRODUCTS SITE
46 NEW STREET
TOWN OF STUYVESANT, NEW YORK**

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ACRONYMNS

AWQS	New York State Ambient Water Quality Standards and Guidance Values
BCP	Brownfield Cleanup Program
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
COC	Contaminants of Concern
CO ₂	Carbon Dioxide
DER-10	NYSDEC, DER, Technical Guidance for Site Investigation and Remediation
DUSRs	Data Usability Summary Reports
EPA	Environmental Protection Agency
EBCT	Empty Bed Contact Time
FER	Final Engineering Report
GAC	Granular Activated Carbon
GWT	Groundwater Treatment
gpm	gallons per minute
HASP	Health and Safety Plan
IRM	Interim Remedial Measure
IRM WP	Interim Remedial Measure Work Plan
ISMP	Interim Site Management Plan
NYCRR	New York Codes, Rules, and Regulations
NYSDOH	New York State Department of Health
NYSDEC	New York State Department of Environmental Conservation
NYS	New York State
MCL	Maximum Contaminant Level
PFAS	Perfluoroalkyl Substances
PLS	Professional Land Surveyor
ppb	parts per billion
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
RIWP	Remedial Investigation Work Plan
SCG	Standards, Criteria, and Guidance
SWPPP	Stormwater Pollution Prevention Plan
TAL	Target Analyte List
TCL	Target Compound List
TCE	Trichloroethene
VOC	Volatile Organic Compound

1.0 INTRODUCTION & PURPOSE

1.1 Introduction

C.T. Male Associates Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. (C.T. Male) has prepared this IRM WP in accordance with New York State Department of Environmental Conservation DER-10 – Technical Guidance for Site Investigation and Remediation, dated May 2010 (and errata sheet), in connection with the Allied Healthcare Products Site (the “Site”) located at 46 New Street, Town of Stuyvesant, Columbia County, New York. A Site location map is presented as Figure 1 and a Site layout map is presented as Figure 2. Comments to the January 2020 and September 2021 draft IRM WP were received from NYSDEC on June 3, 2020 and November 17, 2021 respectively and have been addressed in this document.

1.2 Purpose and Objective

The purpose of this IRM WP is to provide a plan for a non-emergency IRM. The objective of the IRM is to treat VOCs at the Site’s water supply point of entry, to prevent the discharge of VOCs to the on-site septic system and a potential exposure pathway.

The treatment system is to be installed within the southeast corner of the basement of Building C as shown on Figure 2.

2.0 REMEDIAL ACTION DESCRIPTION

2.1 Site Background and Physical Setting

The subject Site is located immediately west of the intersection of Woods Lane and Hudson Avenue, on the western side of the Kinderhook Creek. The Site buildings are serviced with water from an on-Site bedrock well. Potable water is sourced from an outside vendor. Sanitary wastes are currently discharged to an on-Site septic system.

The Site was first developed in the 1820s with a cotton mill which was later expanded in 1888 and operated until 1925. According to historical records, a portion of the Site was leased to the Collins Bag Company during this time. From 1925 to 1926, the Site was briefly used for the manufacture of electric steel casings and corrosion resistant alloys. The Site was used minimally, if at all, from 1926 until 1940. From 1940 to 1946 it was used for manufacturing nickel alkali storage batteries.

Circa 1948 the Site was purchased by Thomas A. Edison Inc. for the manufacturing of medical gases (oxygen, nitrogen and nitrous oxide), including anesthetics (cyclopropane), Baralyme (carbon dioxide [CO₂] absorbent powder) and trimethylene chlorobromide (a product to ease labor pains during childbirth), as well as the machines for administering these products. In 1959 Thomas A. Edison Inc. merged with McGraw Electric to become McGraw-Edison. In 1965, McGraw-Edison sold its medical gas division and the Site to Chemetron Medical Products. Chemetron Medical Products phased out the production of oxygen, nitrogen and nitrous oxide, cyclopropane and trimethylene chlorobromide such that by 1967 it was only producing Baralyme. In 1977, Chemetron Medical Products was purchased by Allegheny International who eventually changed its entity name to Allied Healthcare Products, Inc. in 1980.

Currently there are two main buildings and several smaller outbuildings within the Site. The 4-story stone building and tower with a 4-story brick addition is commonly referred to as Building A/B and is unheated and used primarily for warehousing purposes. The second 4 story brick building is referred to as Building C and used primarily for manufacturing on the upper floors and storage within the basement. The three smaller and isolated out buildings are currently vacant and unused, and referred to as the Lunch Building, Liquid Pump Building and the Pump House.

Water for the Site is currently supplied by an on-Site bedrock well drilled in 2000. Prior to 2000, water for the Site was taken from the Kinderhook Creek. Bedrock was encountered at a depth of 13 feet below ground surface (bgs) and 40 feet of steel casing was installed. Shale bedrock was encountered to a depth of 125 feet and limestone to a depth of 405 feet. The well yield, when installed, was approximately 2 gallons per minute (gpm). In 2007, the well yielded 1.2 gpm which prompted it to be hydrofractured which increased the yield to 4 gpm. See Figure 2 for the location of the well.

Water from the well is piped to the lowest level (basement) of the Building C. The well water first enters an aeration tank to remove methane from the water. A centrifugal pump pulls water from the aeration tank and pumps it through a 30-gallon pressure tank to the three above ground storage tanks. Water from the storage tanks is then distributed throughout the building for non-potable use.

Sanitary wastes are handled via an on-Site septic tank and leach field (see Figure 2). The former manufacturing of Baralyme and current production of Litholyme/Carbolime do not generate liquid wastes. Water used in the process is consumed during production. Any excess water is captured in product solution tanks which are periodically rinsed out. The residual solution is captured and transferred to a 250-gallon polyethylene tote which is removed for proper disposal by a waste vendor.

Land use surrounding the Site includes mixed residential, agricultural and vacant woodland areas to the southwest and south, mixed residential and agricultural areas to the northwest, residential and vacant land to the north, and the Kinderhook Creek to the south beyond which is the Hamlet of Stuyvesant Falls. The Kinderhook Creek generally flows east to west past the Site. The southern property line runs along an approximate 100-foot cliff formed in the bedrock.

2.1.1 Geology and Hydrogeology

This section summarizes Site geology and hydrogeology as it relates to the groundwater treatment IRM.

The Site is in the Hudson-Mohawk Valley physiographic unit between the Hudson River to the west and the Taconic Mountains to the east. Bedrock beneath the Site is mapped as the Nassau formation which consists of folded beds of slate and shale with thin beds of quartzite. Based on well drilling records for the Site well, the Nassau formation extends to a depth of approximately 125 feet, below which is limestone to a depth of at

least 405 feet. The depth to bedrock as explored by others is approximately 2 to 16 feet below existing ground surface elevations.

Soils overlying the bedrock are classified by the Columbia County Soil Survey as Udorthents. This soil type is nearly level, excessively to moderately drained and composed of sand and gravel to fine, sandy loam and silt loam. Based on Site development dating back to the 1820s, much of the Site soils have likely been reworked and include the importation of soil fill and other non-soil materials. Soil thickness across the Site range from approximately 1 to 16 feet bgs.

Groundwater in soils above the bedrock is reported to be variable and where encountered, is present immediately above the bedrock surface. Based on the overall topography of the Site and surrounding land west of the Kinderhook Creek, groundwater flow in the overburden is inferred to be in a southerly direction.

2.2 Nature and Extent of VOCs

Analysis of the data collected to date as summarized in the Brownfield Cleanup Program (BCP) Application and Remedial Investigation Work Plan (RIWP) provides the context for developing the groundwater IRM. The analytical results for the water samples collected from the bedrock water supply well on various dates are presented on Tables 1A, 1B, 1C, 1D and the laboratory reports in Appendix A. Analytical results are summarized in the following section.

A remedial investigation (RI) of the Site is currently underway to characterize the nature and extent of contaminants of concern (COCs).

2.2.1 Recent Sampling and Analysis - Supply Well

Groundwater samples were collected from the water supply well in July 2019, January 2021, May 2021, and September 2021. The July 2019 sample was collected in the basement of Building C from a spigot just after the water system pressure tank. The well water was purged to waste for approximately five minutes at a moderate flow prior to the collection of a sample. The sample was analyzed for VOCs by Environmental Protection Agency (EPA) Method 8260. The analytical results were then validated by Environmental Data Services Inc. The analytical results indicated a detection of 1,2-dichloropropane at 5.7 parts per billion (ppb). The New York State Ambient Water Quality Standard (AWQS)

for this compound is 1 ppb. Acetone and trichloroethene (TCE) were also detected; however, at concentrations below their respective AWQS values.

Based on the above analytical result, C.T. Male collected an additional water sample from the bedrock supply well and three from the water system within Building C. The samples were collected on September 12, 2019 and analyzed for VOCs by EPA Method 8260, and the Target Analyte List (TAL) of metals by standard methods. The following samples were collected:

- Pre-Aerator: a raw water sample from the supply well.
- Post-Aerator: a sample collected after the equipment used to remove methane and before entering the water storage tanks.
- Pre-Production: indicated by plant personnel to be the water from the water storage tanks used in product production. A production wastewater sample could not be collected as all water used in production is consumed in the process.
- Sink: A water sample collected from a bathroom sink.

September 2019 Results

As shown on Table 1B the analyte 1,2-dichloropropane was detected in each of the samples collected on September 12, 2019. The highest concentration of 1,2-dichloropropane was detected in the Pre-Aerator sample which is representative of the on-Site bedrock supply well water. Methylene chloride, TCE and acetone were also in three of the four samples (Pre-Aerator, Post Aerator and Sink) at various concentrations. Methylene Chloride and TCE were not detected in the Pre-Production sample. The concentrations of 1,2-dichloropropane in each of the four samples, ranged from 37 – 250 ppb, which is greater than the AWQS value. Acetone exceeded its AWQS value in the Pre-Aerator, Post-Aerator and Sink samples. Concentrations of methylene chloride were above the AWQS value in the Pre-Aerator and Post-Aerator samples. Groundwater samples collected from the on-Site water supply well in 2004 detected 1,2-dichloropropane at a concentration of 33 ppb.

The September 12, 2019 samples were also analyzed for TAL metals. As shown in Table 1B, Iron and sodium was detected at concentrations above their respective AWGS values. The iron concentrations are considered to be naturally occurring. The sodium level may

be related to the application of de-icing agents within the Site and on adjacent public roadways.

January 2021 Sampling Results

Culligan Water collected a groundwater sample from the water supply well on January 22, 2021. The sample was collected in the basement of Building C from a spigot just after the pressure tank. The well water was purged to waste for approximately five minutes at a moderate flow prior to the collection of a sample.

The sample was analyzed for major cations, anions, water chemistry parameters, total organic carbon, metals, and bacteria. The analytical results exhibited exceedances to New York State Department of Health (NYSDOH) drinking water standards, Subpart 5-1 public water supplies, for total dissolved solids (772 mg/l), turbidity (20 NTU), pH (8.7), aluminum (0.52 mg/l), and iron (0.73 mg/l). The laboratory report from Culligan is contained in Appendix A and presented in Table 1C.

May 2021 Sampling Results

As part of the geophysical logging of the water supply well in May 2021, groundwater samples were collected from three discrete sampling zones within the water column utilizing packer assemblies. Zone 1 was between the depth interval of 210 and 230 feet bgs, Zone 2 was between the static water level (92 feet bgs) and 210 feet bgs, and Zone 3 was between 230 feet bgs to the total depth of the well (405 feet bgs). Further details of geophysical logging will be presented in the Remedial Investigation Report. The samples were analyzed for the full list of Target Compound List (TCL)/TAL parameters and 1,4 dioxane. Results are presented in Table 1 with the full analytical laboratory report in Appendix A. The analytical results are summarized as follows.

Up to six VOCs were detected in each of the three samples collected (1,2 dichloropropane, toluene, acetone, methylene chloride, tetrachloroethene and TCE). 1,2 dichloropropane and toluene were the only compounds detected above AWQS values. The highest detection of 1,2 dichloropropane was 71 ppb in the Zone 3 sample. The highest concentration of toluene was 95 ppb in the Zone 2 sample. 1,4 dioxane was not detected above the method detection limit (0.0303 ppb) in the three zone samples.

Up to 14 SVOCs were detected in each of the three zone samples. Phenol was the only compound detected in the samples above AWQS values with the highest concentration (12 ppb) in the Zone 2 sample.

There were no pesticides, herbicides or PCBs detected in the samples.

Various metals were detected in each of the three samples. Only iron and sodium were detected above AWQS values in each of the three samples.

September 2021 Sampling Results – Supply Well – PFAS

A water sample was collected from the supply well on September 1, 2021 and analyzed for Perfluoroalkyl Substances (PFAS). The laboratory report for this sample indicates none of the PFAS were detected above the reporting limit of 1.84 nanograms per liter (ng/L) or parts per trillion (see Table 1D and Appendix A).

Summary of Analytical Results

Groundwater samples collected from the supply well since 2019 by C.T. Male and others have detected 1,2 dichloropropane at concentrations ranging between 5.7 ppb to 250 ppb. The concentrations of 1,2 dichloropropane in the samples identified as “Pre-Aerator” (9/2019) and zones “Z-1”, “Z-2” and “Z-3” (5/2021) are considered to be representative raw water samples from the supply well. The other samples collected from the current water system well do not likely represent raw groundwater as they were collected from points in the water system after the pre-aerator. The highest concentration of 1,2 dichloropropane (71 ppb) was collected in zone Z-3 which was from the packer isolation interval of 230 to 405 feet bgs. The concentration of Pre-Aerator sample was 250 ppb. Other VOCs (toluene, acetone, methylene chloride, tetrachloroethene and TCE) have been sporadically detected in the water samples collected on various dates. The concentrations of acetone, methylene chloride, iron, sodium and phenol have been detected above AWQS values. PFAS, pesticides, herbicides, PCBs and 1,4 dioxane have not been detected in the groundwater samples.

3.0 IRM APPROACH AND CONCEPTUAL DESIGN

The non-emergency IRM described in this document will extract and treat groundwater in the bedrock beneath the Site when the supply is in operation for manufacturing and non-potable use by the facility.

The existing bedrock water supply well will be used as the extraction well. The proposed GWT system process flow diagram is shown on Figure 3. The GWT treatment system components are shown on Figure 4.

3.1 Groundwater Supply Well

The Site bedrock supply well will be used as the extraction well. Following the completion of the geophysical logging of the well, the submersible pump was replaced with a new pump. The pump is a Goulds Model 5GSO7422, 5GPM, $\frac{3}{4}$ HP stainless steel unit which was reset in the well at a depth of 300 feet bgs. The pump specifications and pump curve are presented in Appendix B. The well currently produces approximately 2 gpm and is operated intermittently throughout the day to maintain adequate storage in the water storage tanks in the basement of Building C.

The facility utilizes approximately 1,000 gallons of well water per day. All water used for product manufacturing is consumed by the process. Less than 50 gallons of sanitary wastewater per day are transferred to the septic system.

The static water level in the well is approximately 92 feet bgs. The well pump is set at approximately 300 feet below grade which equates to approximately 300 gallons of water storage above the pump during non-pumping conditions. The pumping rate is intermittent at a rate of approximately 2 gpm. Pumping of the well during IRM GWT will be controlled using a float switch in the treated water holding tank within the basement of Building C.

3.2 Groundwater Treatment System

Culligan Water will be responsible for the installation, scheduled inspection, scheduled and non-scheduled maintenance of GWT system. In the event a new contractor takes over the responsibility of the GWT system, NYSDEC will be informed in advance of the change. C.T. Male will oversee the installation of the treatment system, prepare a Construction Completion Report (CCR) to be signed by a New York State (NYS)

Professional Engineer and certify the installation was completed in accordance with the approved IRM Work Plan. C.T. Male will prepare Site reports as described in Sections 5 and 6.

The IRM treatment system generally consists of:

- Chlorination of the incoming water to control slime bacteria.
- Cartridge filtration pretreatment for solids.
- Degassing of the incoming water to remove methane.
- Cartridge filtration for solids after degassing, prior to GAC treatment.
- GAC treatment to remove contaminants.
- Post GAC treatment filtration.
- 2,000-gallon storage tank.
- Two 20 gpm variable speed pumps.

The primary train will consist of three sets of two GAC vessels in a lead-lag/series configuration (see Figure 4). One set GAC vessels will be a standby set for additional treatment as needed based on operations. Each train will be isolated with shut-off valves. This configuration allows for rapid switch of the treatment trains when a GAC change out is required.

Each GAC vessel contains approximately 2 cubic feet of GAC (4 cubic feet per lead/lag configuration). The GAC utilized will be virgin Calgon F400 (or equivalent) activated carbon. The GAC vessels are sized to maintain an acceptable hydraulic loading rate with potential seasonal fluctuations in well pumping rates, while still maintaining an empty bed contact time (EBCT) of 7 minutes for VOCs. The volume of the GAC needed is based upon the GAC's empty bed contact time for the contaminant(s) and flow rate of the system. Based upon the 7-minute EBCT requirement (standard requirement for VOCs) and a maximum flow rate of 8 gpm using a flow restrictor, the volume of carbon needed is approximately 7.5 cubic feet. Actual system flow rates are anticipated to be approximately 2 gpm on an intermittent basis. The groundwater treatment system has the capacity of 12 cubic feet with three sets of two GAC vessels in operation with an extra 4 cubic feet if needed.

The GWT system operates through pressurized flow from the water supply well pump and pressure tank system within the existing water system. When the tank float switch calls for water it will open a solenoid valve positioned after the GAC treatment trains. As

water begins to flow through the system pressure within the pressure tank will drop and ultimately signal a pressure switch to start the submersible pump. The submersible pump will continue to operate until the float switch in the holding tank signals the solenoid valve to close and pressure is increased in the pressure tank to the point the pressure switch signals the submersible pump to stop pumping.

The storage capacity of the GWT is 2,000 gallons and the facility's total water daily consumption rate is 1,000 gallons. The total daily discharge to the septic system based on facility personnel is less than 50 gallons.

Treated groundwater effluent that is not consumed in product production (water used for sanitary purposes) will be discharged to the existing septic system in accordance with approval from NYSDEC as described in sections 4.1 and 4.2.

3.2.1 Treatment System Components

The GWT system components include the following:

- Existing bedrock water well.
- Chlorine storage tank (30 gallon) with feed pump.
- Pressure Tank (6 gallon).
- Pre-GAC Polypropylene sediment filters (10 micron size).
- Pre-GAC Polypropylene sediment filters (5 micron size).
- Degassing unit (30 inch by 40 inch).
- Pre-GAC Polypropylene sediment filters (Dual Gradient 10 – 5 micron size).
- Totalizing Flow Meter (total gallons).
- Primary train of three sets of two GAC vessels in lead/lag configuration (2 ft³ Calgon Cullar, with F400 carbon).
- Standby train of two vessels in lead/lag configuration (2 ft³ Calgon Cullar, with F400 carbon).
- Solenoid valve and flow restrictor (8 gpm).
- 2,000-gallon storage tank with level switch.
- Post-GAC polypropylene sediment filter (50 micron size).
- System will include various shut off valves, pressure gauges, sampling ports, drains and support piping and equipment as indicated on Figure 4.
- Influent, Midpoint and Effluent Water Sampling Ports.

- Plumbing piping and fittings used are composed of PEX products and are typically three-quarter inch diameter. All plumbing fittings are NSF 61 certified.

The GWT system process flow diagram is shown on Figure 3, and the system components are shown on Figure 4. The manufacturer's information and specification sheets for each system component are presented in Appendix B.

4.0 APPLICABLE REGULATIONS AND START UP

4.1 Applicable NYS Standards, Criteria, and Guidance (SCGs)

GWT system effluent used for toilets and sinks will be discharged to the on-Site septic system in accordance with approval from NYSDEC. The discharge from the GWT system will be monitored, and the results reported to NYSDEC in accordance with the discharge permit. The applicable NYS SCGs will be met through water treatment system effluent water quality monitoring and reporting to NYSDEC.

4.2 Applicable Permits and Approvals

The following permits and approvals are anticipated to be required to construct and operate the IRM.

New York State Permits and Approvals

- A State Pollutant Discharge Elimination System (SPDES) permit equivalent for the discharge of treated groundwater.

A NYSDEC Water Withdrawal Permit or equivalent will not be required as it is not anticipated that the IRM will exceed the groundwater withdrawal threshold volume of 100,000 gallons per day.

4.3 GWT System Startup

Prior to the startup of the GWT, C.T. Male will inspect the system to ensure it has been installed per the design requirements. Any necessary changes to the system will be evaluated, approved, and completed at that time.

At system startup a visual check of the pre- and post-filters, GAC vessels, chlorine storage, pressure tank, and degassing unit will be completed. GAC vessel and system pressures, flow controller, and flow restrictor will be monitored to ensure proper operation. The total gallons of water treated will be recorded at the flow meter. The solenoid valve and variable speed pumps will be operated at several speeds to ensure proper operation.

The initial sampling of the GWT system will be completed immediately after installation follow treatment of at least 200 gallons of well water. System samples will be collected for VOC analysis by EPA Method 8260, and Phenol via EPA Method 8270 from the water sampling point located prior to the primary train lead GAC vessels (influent), between the primary train lead and lag vessels (mid-point) and after the primary train lag GAC vessels (effluent). See Figure 4 for the location of the sampling points.

The GWT system will not be placed in permanent operation until the analytical results for the initial effluent system sample have been received, reviewed and confirmed to meet applicable standards and approved by the NYSDEC.

4.4 Laboratory Analyses

The frequency and parameters for samples collected from the GWT system will be defined in the NYSDEC SPDES permit equivalent. The results of the system monitoring samples will be reported to NYSDEC.

Analytical data will be presented in ASP Category B data deliverable packages that will undergo EPA Level IIA data validation by an independent third-party data validation firm. Results of the data validation will be presented in Data Usability Summary Reports (DUSRs).

4.5 Non-Scheduled System Shutdown

The GWT is designed to operate periodically or continuously based on the demand for water in the facility. The GWT system components rely on water pressure and flow to operate. The GWT system will not treat water during a power outage (i.e., as the water well pump will not be in operation). Treatment will resume as soon as the power is restored.

There may be other instances such as low or high pressure in the system or mechanical component issues that may cause the treatment system to not function as designed or potentially cease treating water.

Only qualified personnel will evaluate and complete maintenance or replacement of any components of the GWT system. The system shall be de-energized before any non-routine operation or maintenance is performed.

5.0 INSPECTION AND MAINTENANCE REQUIREMENTS

5.1 Scheduled Inspection and Maintenance

Following the installation of the GWT system, a quality control inspection of the system will be completed by the supplier of the system (Culligan) and C.T. Male to ensure the system components have been installed and are properly functioning.

Scheduled maintenance of the GWT system is as follows:

Pre and Post Filter Replacement:	At least every 3 months
GAC Vessel Replacement:	As needed depending on periodic analytical monitoring (see Section 4.4)
Solenoid Valve	Monthly
Pressure tank	Quarterly
Chlorine storage tank & feed pump	Monthly
Degassing unit	Monthly
Variable speed pumps	Monthly

Non-scheduled GWT system maintenance will be completed by qualified personnel on an as-needed basis.

5.2 GAC Change Out

Sampling at the midpoints of the lead/lag vessels in use will identify when breakthrough of the lead GAC vessel has occurred and establishes the need for replace the lead vessel.

The change out of the GAC vessels will be initiated when a VOC or Phenol is detected above its maximum contaminant level (MCL) in the midpoint samples. The GAC vessel will then be scheduled for change out as follows:

- Remove the Lead GAC vessel.
- Remove a Lag GAC vessel and place it in the Lead GAC position.

- Install the replacement GAC vessel, with new carbon, in the Lag position.
- Spent GAC media will be removed from the vessel by the supplier (Culligan) for subsequent shipment to Calgon for processing and regeneration following applicable regulations including 6 NYCRR Part 360 (solid waste) and 6 NYCRR Part 370 (hazardous waste/RCRA).

5.3 Sediment Filter Change Out

The pre- and post-polypropylene sediment cartridge filters will be replaced by Culligan or facility personnel every three months or sooner as determined through normal system operation. The frequency of filter changes may be modified over time as operational data is developed for the system.

5.4 System Data Records

Culligan or any subsequent contractor and C.T. Male will keep records of work and modifications made to the GWT system.

6.0 ONGOING MONITORING AND REPORTING

The sampling activities conducted as part of this IRM Work Plan will be performed in accordance with this plan.

The operation of the GWT IRM will be monitored by evaluating hydrogeological conditions at the Site, and by collecting data associated with the GWT system.

6.1 Hydrogeological Conditions Monitoring

Data related to groundwater will be collected to assist in the evaluation of the IRM operation, including the following:

- Groundwater elevation monitoring based on monthly manual water level measurements during pumping and non-pumping periods.
- Water level variability and well capacity over the range of hydrologic conditions at the Site. Water levels will be collected on a seasonal basis to determine if seasonal recharge or lack thereof has a relation to contaminant concentrations in the well water.
- Whether well fouling may be an issue and to determine appropriate operation and maintenance methods if excessive fouling occurs.

6.2 Groundwater Treatment System Monitoring

Samples will be collected from the groundwater treatment system as described below and in Sections 4.3, 4.4 and 5.2.

6.2.1 Water Treatment System Sampling

6.2.1.1 General

Water samples will be collected from the GWT system, and the results will be reported to NYSDEC. Sampling will be conducted during system start up (section 4.3) and during system operation (section 5.1). The frequency and parameters for samples collected from the GWT system will be defined in the NYSDEC SPDES permit equivalent, IRM WP and Quality Assurance Project Plan (QAPP) for the RI.

6.2.1.2 Sample Frequency

After the completion of the initial system sampling for VOCs and Phenol (as presented in Section 4.3), the follow-up sampling of the influent, midpoint and effluent samples from the GWT system will be performed at the following frequency:

Year 1: Monthly for the first year of operation

Year 2: Quarterly (every 3 months with NYSDEC approval)

GWT influent, midpoint and effluent samples will be collected on a monthly basis for the first year of operation to determine when a breakthrough of the lead vessel will be expected in the future. Depending on the first year of analytical results, the sampling frequency may be modified (i.e., every 3 months) if the data supports a modification and with NYSDEC prior approval.

6.3 Data Validation

Analytical data will be presented in ASP Category B data deliverable packages that will undergo EPA Level IIA data validation by an independent third-party data validation firm. Results of the data validation will be presented in DUSRs.

6.4 Confirmatory Sampling Results Review

Review and submission of the analytical data and data usability summary reports will conform to the delivery schedule in this IRM WP.

6.5 Periodic Reporting

Weekly progress reports will be submitted to the NYSDEC Project Manager via email during IRM construction. The progress report will briefly summarize the IRM activities completed for the previous week. The progress report will be submitted at the beginning of the following week. The format will be in a bulleted style, generally highlighting the major items accomplished during the previous week.

Relevant updates during IRM operations will be included in the ongoing monthly project progress reports submitted to NYSDEC describing remedial investigation activities. Monthly progress reports will be submitted to NYSDEC for the first year of system

operation in accordance with the sampling frequency in section 6.2.1.2. After one-year of system operation, quarterly progress reports on the operation of the IRM will be submitted to the NYSDEC Project Manager, the NYSDOH Project Manager, and pertinent personnel representing the remedial parties. Both the monthly and quarterly progress reports will generally include the following information, where applicable unless specified otherwise in the SPDES permit equivalent:

- A tabulation of sample results received during the reporting period.
- A summary tabulation of all analytical results for system sampling events dating back to the initial sets of results from the water supply well, and information related to the operation and maintenance activities and other supporting documentation.
- A discussion of project progress and significant activities during the reporting period, including the status of requisite permits.
- A discussion of pending/planned significant project activities during the next quarter.
- A discussion of problems encountered during operation of the IRM and proposed or completed actions to correct the problems.
- Request for modifications to the IRM, and the status of previously requested modifications.

6.6 GWT IRM Performance Criteria and Evaluations

Groundwater treated by the GWT system will be used as manufacturing and non-potable water in production processes. Additional samples may be collected from the treatment system as needed to evaluate performance of the individual components of the system. Monitoring parameters may be adjusted depending on possible future permit conditions. Results of water quality sampling will be used to confirm that the treatment system is effectively treating VOCs and Phenol and to confirm compliance with the NYSDEC SPDES permit equivalency and monitoring requirements.

Data related to groundwater treatment will be collected to evaluate operation of the GWT system, including, but not limited to, the following:

- Recording the volume of groundwater being treated and mass removal, with calculation of removal efficiency.

- Confirming the requirements of the SPDES permit equivalent are met.
- Evaluating the results of performance monitoring and implementing maintenance/adjustment if the GWT system is not operating as designed.

6.7 System Shutdown and Removal

The system will be operated in compliance with the SPDES permit equivalent until an engineering evaluation demonstrates it is no longer needed.

7.0 TEMPORARY CONSTRUCTION FACILITIES

7.1 Site Security, Staging and Parking

7.1.1 Site Security

IRM construction activities will take place on Site (property owned by Allied Healthcare Products Inc.). Site security expected to be implemented during construction of the IRM will include a designated entrance for personnel involved in the construction of the IRM and locking or bolt down cap for the bedrock supply well.

7.1.2 Staging

Equipment and materials for the construction and operation of the IRM will be staged within designated areas within the Site boundaries. The staging area locations will be determined prior to beginning construction of the IRM.

7.1.3 Parking

It is expected that the existing parking area of the Site will be used by personnel involved in the construction and operation of the IRM.

7.2 Site Clearing and Grubbing

No clearing and/or grubbing of trees and vegetation will be necessary for the construction and operation of the IRM.

7.3 Handling of Excess and Imported Soil/Fill

The IRM installation and operational activities will not be ground intrusive activities. Therefore, there will be no generation of excess soils or import of other fill materials or soils.

7.4 IRM Derived Wastes

The IRM-derived wastes will be disposed of in accordance with applicable regulations.

7.5 Utilities

Necessary precautions will be taken to protect existing utilities located within the boundaries of the IRM.

Electricity is expected to be required during construction and operation of the IRM.

7.6 Surveying

Survey work performed in conjunction with the IRM will be certified by a NYS Professional Land Surveyor (PLS).

8.0 SITE CONTROLS DURING REMEDIAL ACTION

8.1 Stormwater Management

A NYSDEC Stormwater Pollution Prevention Plan (SWPPP) is not required as existing Site conditions will not be changed or altered in relation to the construction or operation of the IRM, since it will be conducted inside building structures.

8.2 Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) is not required for the installation or operation of the IRM. IRM construction activities will be completed within the existing Site Buildings.

8.3 Dust Control

Dust suppression is not necessary as no ground intrusive activities will be performed.

8.4 Construction Observation and Certification

C.T. Male will provide full-time observation during construction of the IRM (construction observer). Work activities will conform to applicable local, state or federal codes and regulations, and will be performed in accordance with the NYSDEC approved work plan and any NYSDEC approved modifications.

Periodic observation of the construction of the IRM will be made by a C.T. Male registered Professional Engineer to provide the required certification for the CCR. The engineer will work with the construction observer to document that the project is implemented in accordance with this IRM WP. The construction observer and project engineer will provide engineering review of IRM related contractor submittals and field changes for the IRM construction work.

9.0 HEALTH AND SAFETY PLAN (HASP)

C.T. Male will follow health and safety procedures in accordance with the existing Site-specific health and safety plan (HASP) that was developed for RI activities. Prior to implementing the field work, the existing Site-specific HASP will be amended as needed for any IRM tasks that are not addressed in the existing plan.

The contractor(s) for the Site IRM will be required to provide a Site-specific HASP certified by a Certified Industrial Hygienist or equivalent. The contractor's employees will be required to have read and understood their company's Site-specific HASP prior to beginning work.

A copy of the health and safety plans will be available at the Site during the performance of IRM to which they are applicable.

10.0 IRM ACTION SCHEDULE

10.1 IRM Action Schedule

Project construction work on Site for the IRM will be completed within 60 days of approval from NYSDEC. NYSDEC will be provided with written notice a minimum of five business days prior to the initiation of IRM site work.

10.2 Citizen Participation

Per 6 NYCRR Part 375-2.10(f), the IRM WP will be placed in the document repositories once it has been approved by the NYSDEC.

11.0 INSTITUTIONAL CONTROLS AND INTERIM SITE MANAGEMENT PLAN (ISMP)

An ISMP may be prepared based on the final remedy of the Site. Following completion of the RI, institutional controls may be implemented, as appropriate.

12.0 IRM CONSTRUCTION COMPLETION REPORT

The IRM will be documented in a CCR. In addition, a Final Engineering Report (FER) will be prepared per NYSDEC regulations for the Department's issuance of the Certificate of Completion.

**TABLES 1A, 1B, 1C and 1D
GROUNDWATER ANALYTICAL RESULTS**

TABLE 1A: WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS SUMMARY
ALLIED HEALTHCARE PRODUCTS SITE
TOWN OF STUYVESANT, COLUMBIA COUNTY

SAMPLE ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX:			DW-1	SUPPLY WELL				ALLIED SUPPLY WELL-Z1				ALLIED SUPPLY WELL-Z2				ALLIED SUPPLY WELL-Z3				TRIP BLANK			
				L1931049-01				L2127871-04				L2127871-03				L2127871-02				L2127871-01			
			10/28/2004	7/15/2019				5/25/2021				5/25/2021				5/25/2021				5/25/2021			
			WATER	WATER				WATER				WATER				WATER				WATER			
			NY-AWQS ⁽¹⁾																				
ANALYTE	CAS	(ug/l)		Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS BY GC/MS																							
1,2-Dichloropropane	78-87-5	1	33	5.7	1	0.14		0.26	J	1	0.14	0.28	J	1	0.14	71	1	0.14		ND		1	0.14
Acetone	67-64-1	50	9.5	13	5	1.5		5.4		5	1.5	5.9		5	1.5	40		5	1.5	2.3	J	5	1.5
Methylene chloride	75-09-2	5	0.97	ND		2.5	0.7	ND		2.5	0.7	ND		2.5	0.7	2.7		2.5	0.7	ND		2.5	0.7
Tetrachloroethene	127-18-4	5	ND	ND	-	-	-	0.76		0.5	0.18	1.8		0.5	0.18	0.48	J	0.5	0.18	ND		0.5	0.18
Toluene	108-88-3	5	ND	ND	-	-	-	35		2.5	0.7	95		2.5	0.7	22		2.5	0.7	ND		2.5	0.7
Trichloroethene	79-01-6	5	ND	0.26	J	0.5	0.18	ND		0.5	0.18	ND		0.5	0.18	1.6		0.5	0.18	ND		0.5	0.18
Total VOCs								41.42	-	-	-	102.98	-	-	-	137.78	-	-	-	2.3	-	-	-
VOLATILE ORGANICS BY GC/MS-TIC																							
3-Chloropropene	000107-05-1	NS	NA	NA	-	-	-	-		-	-	-		-	-	4.35	NJ	0	0	NA	-	-	-
Cyclopropane	000075-19-4	NS	NA	NA	-	-	-	1.23	NJ	0	0	-		-	-	6.09	NJ	0	0	NA	-	-	-
Propane, 1,3-dibromo-	000109-64-8	NS	NA	NA	-	-	-	-		-	-	-		-	-	3.75	NJ	0	0	NA	-	-	-
Propane, 1-bromo-3-chloro-	000109-70-6	NS	NA	NA	-	-	-	-		-	-	-		-	-	33.5	NJ	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	3.76	J	0	0	3.07	J	0	0	-	-	-	-	NA	-	-	-
Total TIC Compounds		NS	NA	NA	-	-	-	4.99	J	0	0	3.07	J	0	0	47.7	J	0	0	NA	-	-	-
1,4 DIOXANE BY 8270D-SIM																							
1,4-Dioxane	123-91-1	1	NA	NA	-	-	-	ND		0.134	0.0303	0.152		0.134	0.0303	ND		0.134	0.0303	NA	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS																							
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	NS	ND	NA	-	-	-	ND		5	0.48	2.5	J	5	0.48	ND		5	0.48	NA	-	-	-
Acetophenone	98-86-2	NS	ND	NA	-	-	-	ND		5	0.53	1.1	J	5	0.53	ND		5	0.53	NA	-	-	-
Bis(2-chloroisopropyl)ether	108-60-1	5	ND	NA	-	-	-	ND		2	0.53	ND		2	0.53	4.9		2	0.53	NA	-	-	-
Bis(2-ethylhexyl)phthalate	117-81-7	5	3	NA	-	-	-	ND		3	1.5	1.6	J	3	1.5	3		3	1.5	NA	-	-	-
1-Chloropropane	540-54-5	NS	2	NA	-	-	-	ND				ND				ND				NA	-	-	-
Di-n-butylphthalate	84-74-2	50	ND	NA	-	-	-	0.6	J	5	0.39	0.55	J	5	0.39	ND		5	0.39	NA	-	-	-
Diethyl phthalate	84-66-2	50	ND	NA	-	-	-	1.2	J	5	0.38	0.76	J	5	0.38	ND		5	0.38	NA	-	-	-
Phenol	108-95-2	1	ND	NA	-	-	-	3.3	J	5	0.57	12		5	0.57	2.8	J	5	0.57	NA	-	-	-
Total SVOCs		NS	5	NA	-	-	-	5.1	-	-	-	18.51	-	-	-	10.7	-	-	-	NA	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-SIM																							
2-Methylnaphthalene	91-57-6	NS	NA	NA	-	-	-	0.04	J	0.1	0.02	0.35		0.1	0.02	0.02	J	0.1	0.02	NA	-	-	-
Acenaphthene	83-32-9	20	NA	NA	-	-	-	0.02	J	0.1	0.01	0.04	J	0.1	0.01	ND		0.1	0.01	NA	-	-	-
Acenaphthylene	208-96-8	NS	NA	NA	-	-	-	0.02	J	0.1	0.01	0.03	J	0.1	0.01	0.05	J	0.1	0.01	NA	-	-	-
Fluoranthene	206-44-0	50	NA	NA	-	-	-	ND		0.1	0.02	0.03	J	0.1	0.02	ND		0.1	0.02	NA	-	-	-
Fluorene	86-73-7	50	NA	NA	-	-	-	0.02	J	0.1	0.01	0.03	J	0.1	0.01	ND		0.1	0.01	NA	-	-	-
Naphthalene	91-20-3	10	NA	NA	-	-	-	0.07	J	0.1	0.05	0.24		0.1	0.05	0.1	J	0.1	0.05	NA	-	-	-
Phenanthrene	85-01-8	50	NA	NA	-	-	-	0.07	J	0.1	0.02	0.12		0.1	0.02	0.03	J	0.1	0.02	NA	-	-	-
Total SVOCs		NS	NA	NA	-	-	-	0.24	-	-	-	0.84	-	-	-	0.2	-	-	-	NA	-	-	-
SEMIVOLATILE ORGANICS BY GC/MS-TIC																							
Cyclic Octaatomic Sulfur	010544-50-0	NS	NA	NA	-	-	-	11.8	NJ	0	0	23.8	NJ	0	0	32.1	NJ	0	0	NA	-	-	-
Sulfur	013798-23-7	NS	NA	NA	-	-	-	2.84	NJ	0	0	6	NJ	0	0	7.78	NJ	0	0	NA	-	-	-
Toluene	000108-88-3	NS	NA	NA	-	-	-	9.53	NJ	0	0	-		-	-	5.85	NJ	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	2.29	J	0	0	68.7	J	0	0	6.04	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	2	J	0	0	20.5	J	0	0	3.93	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	10.8	J	0	0	3.6	J	0	0	4.65	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	2.14	J	0	0	2.07	J	0	0	4.94	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	7.13	J	0	0	2.87	J	0	0	4.54	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	5.31	J	0	0	13.6	J	0	0	10.8	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	-		-	-	3.6	J	0	0	-	-	-	-	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	2.62	J	0	0	2.87	J	0	0	5.13	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	10.3	J	0	0	25.7	J	0	0	39.2	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	126	J	0	0	4.25	J	0	0	5.78	J	0	0	NA	-	-	-
Unknown		NS	NA	NA	-	-	-	2.87	J	0	0	8.07	J	0	0	7.49	J	0	0	NA	-	-	-
Unknown Alkane		NS	NA	NA	-	-	-	-		-	-	-		-	-	5.16	J	0	0	NA	-	-	-
Unknown Alkane		NS	NA	NA	-	-	-	-		-	-	-		-	-	28.1	J	0	0	NA	-	-	-
Unknown Organic Acid		NS	NA	NA	-	-	-	2.07	J	0	0	2.04	JB	0	0	-	-	-	-	NA	-	-	-
Unknown Organic Acid		NS	NA	NA	-	-	-	12.4	J	0	0	26.8	J	0	0	-	-	-	-	NA	-	-	-
Total TIC Compounds		NS	NA	NA	-	-	-	210	J	0	0	214	J	0	0	171	J	0	0	NA	-	-	-

TABLE 1A: WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS SUMMARY
ALLIED HEALTHCARE PRODUCTS SITE
TOWN OF STUYVESANT, COLUMBIA COUNTY

SAMPLE ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX:			DW-1	SUPPLY WELL				ALLIED SUPPLY WELL-Z1				ALLIED SUPPLY WELL-Z2				ALLIED SUPPLY WELL-Z3				TRIP BLANK			
				L1931049-01				L2127871-04				L2127871-03				L2127871-02				L2127871-01			
			10/28/2004	7/15/2019				5/25/2021				5/25/2021				5/25/2021				5/25/2021			
			WATER	WATER				WATER				WATER				WATER				WATER			
		NY-AWQS ⁽¹⁾																					
ANALYTE	CAS	(ug/l)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	
CHLORINATED HERBICIDES BY GC (None Detecetd Above the Laboratory's Method Detection Limits)																							
ORGANOCHLORINE PESTICIDES BY GC (None Detecetd Above the Laboratory's Method Detection Limits)																							
POLYCHLORINATED BIPHENYLS BY GC (None Detecetd Above the Laboratory's Method Detection Limits)																							
TOTAL METALS																							
Aluminum, Total	7429-90-5	NS	NA	NA	-	-	-	185	10	3.27	299	10	3.27	1,670	10	3.27	NA	-	-	-			
Antimony, Total	7440-36-0	3	NA	NA	-	-	-	1.5	J	4	0.42	ND	4	0.42	ND	4	0.42	NA	-	-	-		
Arsenic, Total	7440-38-2	25	ND	NA	-	-	-	1.25		0.5	0.16	1.44	0.5	0.16	1.93	0.5	0.16	NA	-	-	-		
Barium, Total	7440-39-3	1,000	393	NA	-	-	-	276.6		0.5	0.17	154.5	0.5	0.17	413.2	0.5	0.17	NA	-	-	-		
Beryllium, Total	7440-41-7	3	ND	NA	-	-	-	ND		0.5	0.1	ND	0.5	0.1	0.34	J	0.5	0.1	NA	-	-	-	
Cadmium, Total	7440-43-9	5	NA	NA	-	-	-	0.09	J	0.2	0.05	0.51	0.2	0.05	ND	0.2	0.05	NA	-	-	-		
Calcium, Total	7440-70-2	NS	NA	NA	-	-	-	9,850		100	39.4	7,220	100	39.4	4,940	100	39.4	NA	-	-	-		
Chromium, Total	7440-47-3	50	ND	NA	-	-	-	0.88	J	1	0.17	1.35	1	0.17	3.18	1	0.17	NA	-	-	-		
Cobalt, Total	7440-48-4	NS	NA	NA	-	-	-	0.34	J	0.5	0.16	0.38	J	0.5	0.16	1.91	0.5	0.16	NA	-	-	-	
Copper, Total	7440-50-8	200	132	NA	-	-	-	4.57		1	0.38	2.25	1	0.38	0.71	J	1	0.38	NA	-	-	-	
Iron, Total	7439-89-6	300	NA	NA	-	-	-	810		50	19.1	1,310	50	19.1	4,420	50	19.1	NA	-	-	-		
Lead, Total	7439-92-1	25	15.3	NA	-	-	-	3.61		1	0.34	5.04	1	0.34	3.89	1	0.34	NA	-	-	-		
Magnesium, Total	7439-95-4	35,000	NA	NA	-	-	-	1,990		70	24.2	925	70	24.2	1,270	70	24.2	NA	-	-	-		
Manganese, Total	7439-96-5	300	NA	NA	-	-	-	40.58		1	0.44	53.39	1	0.44	86.96	1	0.44	NA	-	-	-		
Nickel, Total	7440-02-0	100	ND	NA	-	-	-	2.89	2	0.55	8.27	2	0.55	5.03	2	0.55	NA	-	-	-			
Potassium, Total	7440-09-7	NS	NA	NA	-	-	-	4,360		100	30.9	3,670	100	30.9	3,560	100	30.9	NA	-	-	-		
Sodium, Total	7440-23-5	20,000	NA	NA	-	-	-	198,000		100	29.3	211,000	100	29.3	223,000	100	29.3	NA	-	-	-		
Vanadium, Total	7440-62-2	NS	NA	NA	-	-	-	ND		5	1.57	ND	5	1.57	2.25	J	5	1.57	NA	-	-	-	
Zinc, Total	7440-66-6	2,000	76.9	NA	-	-	-	449.1		10	3.41	814.8	10	3.41	83.79	10	3.41	NA	-	-	-		

(1) NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Results highlighted in yellow have exceeded their corresponding AWQS standard.

NS denotes No Standard
NA denotes Not Analyzed
ND denotes Non Detect
ug/l = ppb or parts per billion
mg/l = ppm or parts per million
mg/l = ppm or parts per million
J denotes an estimated value.
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.
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.

Conc = Concentration
Q = Qualifier
RL = Reporting Limit
MDL = Method Detection Limit
CAS = Chemical Abstract Service, registry number

TABLE 1B: SAMPLING ANALYTICAL RESULTS SUMMARY
ALLIED HEALTHCARE PRODUCTS SITE
TOWN OF STUYVESANT, COLUMBIA COUNTY

SAMPLE ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX:			PRE-AERATOR				POST-AERETOR				PRE-PRODUCTION				SINK			
			L1941701-02				L1941701-03				L1941701-04				L1941701-05			
			9/12/2019				9/12/2019				9/12/2019				9/12/2019			
			WATER				WATER				WATER				WATER			
			NY-AWQS ⁽¹⁾															
ANALYTE	CAS	(ug/l)	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
VOLATILE ORGANICS																		
1,2-Dichloropropane	78-87-5	1	250		5	0.68	240		2.5	0.34	37		1	0.14	120		2.5	0.34
Acetone	67-64-1	50	100		25	7.3	130		12	3.6	6.8		5	1.5	130		12	3.6
Methylene chloride	75-09-2	5	5.9	J	12	3.5	5.1	J	6.2	1.8	ND		2.5	0.7	2.8	J	6.2	1.8
Trichloroethene	79-01-6	5	3.7		2.5	0.88	2.2		1.2	0.44	ND		0.5	0.18	1.2		1.2	0.44
SEMI-VOLATILE ORGANICS																		
Bis (2-ethylhexyl) phthalate	117-81-7	5	NA				NA				NA				NA			
1-Chloropropane	540-54-5	NS	NA				NA				NA				NA			
METALS																		
Aluminum, Total	7429-90-5	NS	1.13		0.01	0.00327	0.635		0.01	0.00327	0.258		0.01	0.00327	0.282		0.01	0.00327
Arsenic, Total	7440-38-2	0.025	0.00063		0.0005	0.00016	0.00024	J	0.0005	0.00016	0.0004	J	0.0005	0.00016	0.0002	J	0.0005	0.00016
Barium, Total	7440-39-3	1	0.442		0.0005	0.00017	0.3291		0.0005	0.00017	0.3084		0.0005	0.00017	0.3241		0.0005	0.00017
Beryllium, Total	7440-41-7	0.003	0.00012	J	0.0005	0.0001	ND		0.0005	0.0001	ND		0.0005	0.0001	ND		0.0005	0.0001
Calcium, Total	7440-70-2	NS	1.83		0.1	0.0394	1.88		0.1	0.0394	2.56		0.1	0.0394	2.32		0.1	0.0394
Chromium, Total	7440-47-3	0.05	0.00129		0.001	0.00017	0.00049	J	0.001	0.00017	ND		0.001	0.00017	ND		0.001	0.00017
Cobalt, Total	7440-48-4	NS	0.00056		0.0005	0.00016	0.00028	J	0.0005	0.00016	ND		0.0005	0.00016	ND		0.0005	0.00016
Copper, Total	7440-50-8	0.2	0.00109		0.001	0.00038	0.00452		0.001	0.00038	0.01735		0.001	0.00038	0.01456		0.001	0.00038
Iron, Total	7439-89-6	0.3	1.49		0.05	0.0191	0.802		0.05	0.0191	0.447		0.05	0.0191	0.48		0.05	0.0191
Lead, Total	7439-92-1	0.025	0.00049	J	0.001	0.00034	0.00072	J	0.001	0.00034	0.00046	J	0.001	0.00034	0.0015		0.001	0.00034
Magnesium, Total	7439-95-4	35	0.694		0.07	0.0242	0.563		0.07	0.0242	0.577		0.07	0.0242	0.561		0.07	0.0242
Manganese, Total	7439-96-5	0.3	0.02092		0.001	0.00044	0.01013		0.001	0.00044	0.00645		0.001	0.00044	0.00718		0.001	0.00044
Nickel, Total	7440-02-0	0.1	0.00093	J	0.002	0.00055	0.00061	J	0.002	0.00055	ND		0.002	0.00055	ND		0.002	0.00055
Potassium, Total	7440-09-7	NS	3.62		0.1	0.0309	3.49		0.1	0.0309	3.62		0.1	0.0309	3.59		0.1	0.0309
Sodium, Total	7440-23-5	20	301		0.1	0.0293	271		0.1	0.0293	278		0.1	0.0293	279		0.1	0.0293
Vanadium, Total	7440-62-2	NS	0.00163	J	0.005	0.00157	ND		0.005	0.00157	ND		0.005	0.00157	ND		0.005	0.00157
Zinc, Total	7440-66-6	2	0.00377	J	0.01	0.00341	0.01043		0.01	0.00341	0.00726	J	0.01	0.00341	0.00825	J	0.01	0.00341

Notes:
(1) NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Results highlighted in yellow have exceeded their corresponding AWQS standard.

NS denotes No Standard
NA denotes Not Analyzed
ND denotes Non Detect
ug/l = ppb or parts per billion
mg/l = ppm or parts per million
mg/l = ppm or parts per million
J denotes an estimated value.
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.
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.

Conc = Concentration
Q = Qualifier
RL = Reporting Limit
MDL = Method Detection Limit
CAS = Chemical Abstract Service, registry number

9399 West Higgins Rd Ste 1100
Rosemont, IL, 60018Phone: 877-889-8195
Web: www.culligan.com

Report Date: 2/5/2021

CERTIFICATE OF ANALYSIS

Page 1 of 9

ANALYSIS NUMBER: 2100882Culligan Water Conditioning of The Green Mountains,
Vermont
154 Brentwood DriveCustomer: **Allied Healthcare Products**
46 New St.
Stuyvesant Falls NY, 12174

Control Number: 99099

Account Number: 10005018

Collected By: Everett Windover

Misc:

cc: windover@culligan4u.com

SAMPLE INFORMATION:

Analysis Type Requested: Standard A + TOC Analysis

Sampled: 1/22/2021 at 10:43 AM

Supply/Source: Private Well

Condition: Untreated Water

Received: 1/26/2021 at 1:00 PM

Sampling Point:

Application: Commercial

ANALYSIS INFORMATION:

Turbidity* (180.1 Rev. 2 1993): 19.60 NTU

Turbidity after filtration*: 9.53

Conductivity* (120.1): 1269.70 microS/cm

Est. TDS by Conductivity*: 772.23

Color (SM2120C, 21Ed): 65.48 color

Color after Acidification: 7.84 color

pH* (150.1): 8.7

Tannins*: <2.00 mg/L

Concentrations reported as mg/L (PPM) unless otherwise indicated

CATIONS (Method 200.7 Rev 4.4)

	As Element	As CaCO ₃
Calcium (Ca)	2.61	6.53
Magnesium (Mg)	0.79	3.25
Sodium (Na)	255.90	557.86
Potassium* (K)	4.68	5.99
Strontium* (Sr)	0.25	
Barium (Ba) [ppb]	302.81	
Iron (Fe)	0.73	
Manganese (Mn)	<0.02	
Copper (Cu)	<0.003	
Zinc (Zn)	<0.05	

ANIONS (Method 300.0)

	As Element	As CaCO ₃
Chloride (Cl)	171.41	241.69
Nitrate As N (NO ₃)	<0.20	0.29
Nitrite As N (NO ₂)	<0.10	0.00
Sulfate (SO ₄)	19.50	20.28
Fluoride (F)	1.43	3.68

ANIONS (Method SM3220)

Total Alkalinity	343.36	288.27
Bicarbonate*	335.45	275.07
Carbonate*	7.90	13.20

ANIONS (Method 200.7 Rev 4.4)Silica (SiO₂) 10.41

	Mg/L	GPG		Mg/L	GPG		Mg/L	GPG
Cations (CaCO ₃)	573.63	33.55	Anions (CaCO ₃)	554.21	32.41	Hardness* (CaCO ₃)	9.78	0.57

Additional Tests

Aluminum by ICP	514.61 ug/L	Arsenic by ICP (Screen)*	ND ug/L
Iron Related Bacteria*	9000 cfu/mL	Lead by ICP (Screen)*	ND ug/L
Slime Forming Bacteria*	440000 cfu/mL	Sulfate Reducing Bacteria*	Non-detected
TOC	0.44 mg/L		

Analysis Number: **2100882**

Consumer: _____

NA=Not Analyzed NM=Not Measured ND=Not Detected *=non-TNI accredited **=IL-IDPH accredited CFU/ml = Colony Forming Unit per Milliliter
This report can only be reproduced in its entirety. The results reported here are representative of the sample as received in the laboratory. Unless
noted holding times and temperature requirements for method 300 are not followed. pH results are out of hold time.

NELAP Certifications: IL-100213; PA-68-04623; NY-11756; TX-TX269-2007A	Maria Mozdzen
State Certifications: IL-IDPH-17598; CA-2958; MT-CERT0091; IA-369;	Analytical Lab Manager
VT-02199; WI-105-10119; CO-IL100213; MI-9988; MO-1060	

Analysis Number: **2100882**

Consumer:

FEDERAL SAFE DRINKING WATER ACT

All tested parameters exceeding the maximum concentration levels (MCL) established under the "Federal Safe Drinking Water Act"

	<u>Parameter</u>	<u>Found</u>	<u>MCL</u>
PRIMARY:			
	Turbidity	19.60 NTU	0.50 NTU
	Turbidity Filtered	9.53 NTU	0.50 NTU
SECONDARY:			
	Aluminum by ICP	514.61 ug/L	200.00 ug/L
	Color	65.48 color	15.00 color
	pH	8.7	8.50
	Est TDS By Conductivity	772.23 mg/L	500.00 mg/L
	Iron (Fe)	0.73 mg/L	0.30 mg/L

* MCL for Turbidity varies as follows:

1. Municipal Direct Filtration 0.5 NTU
2. Municipal Sand Filtration 1.0 NTU
3. Unfiltered Water Supply 5.0 NTU

TYPICAL POST RO DRINKING WATER UNITS

(Concentrations reported as mg/L (PPM) as the element)

Calcium (Ca)	0.05	Sulfate (SO4)	0.39
Iron (Fe)	0.01	Magnesium (Mg)	0.02
Manganese (Mn)	0.00	Sodium (Na)	5.12
Zinc (Zn)	0.00	Potassium (K)	0.14
Copper (Cu)	0.00	Chloride (Cl)	8.57
Nitrate As N (NO3)	0.02	Fluoride (F)	0.07
Nitrite As N (NO3)	0.00		

These values are typical of new modules on water with a pH of 7-9 at 70-74 F with 500-3000 mg/L total salts operating with 40-70 PSI pressure across the module. Local conditions may yield different results.

DI CALCULATION FACTORS

			GPG	mg/L
Sodium	97.25%	Weak Base Fact X	15.32	261.97
Alkalinity	52.01%	Carbonic Acid	16.86	288.27
Chloride	92.26%	Cation Fact Y	33.55	573.63
Carbonic Acid	51.39%	Silica	8.63	178.01
Monovalent Ions	43.14%	Carbon Dioxide	0.00	0.00
Silica	1.86%	Strong Base Fact Z	32.80	560.94

Method	Date	Method	Date
120.1	2/5/2021	150.1	2/5/2021
180.1 Rev. 2 1993	2/5/2021	200.7 R4.4	2/5/2021
300.0 R2.1	2/5/2021	BART	2/5/2021
SM 5550	2/5/2021	SM2120C, 21Ed	2/5/2021
SM2120C, 21Ed	2/5/2021	SM2320B, 18Ed	2/5/2021
SM5310C, 19Ed	2/5/2021		

pH – stands for “potential of hydrogen” and indicates the acidity or alkalinity level of water on a scale of 0 to 14 (neutral = pH 7.0). Levels below 7.0 are acidic and above 7.0 are alkaline. pH is logarithmic – 6.0 is 10 X more acidic and 5.0 is 100 X more acidic than 7.0.

Conductivity - the ability of water to conduct electrical current, used to estimate the total concentration of dissolved mineral ions.

TDS - Total Dissolved Solids – the total amount of minerals dissolved in the water as determined by the conductivity level.

Turbidity - cloudiness in water caused by the dispersion of light by extremely tiny particles. Measured on an arbitrary scale of Nephelometric Turbidity Units (NTUs). **Turbidity after filtration** is measured after passing water through and 11-micron filter paper.

Color - the amount of color in the water. Color can be caused by organic matter or oxidized metals and their combinations.

Color after Acidification - Acid added to the sample dissolves oxidized metals and the result after acidification is due to organics.

Hardness – The sum of calcium and magnesium ions and any metals. Calcium and magnesium are the cause of “hard water”.

Sodium – is naturally occurring. Sources can be sea water, underground deposits or the result of road salting in colder climates.

Iron – elemental metal responsible for orange, rust stains on laundry and fixtures and a metallic smell to water.

Manganese – elemental metal responsible for brown and black stains. Very soluble and often found in combination with iron.

Copper - causes blue/green staining in sinks and showers. Usually from copper pipe corrosion due to low pH and/or high TDS.

Zinc – may cause metallic taste and upset stomach, usually due to corrosion of galvanized plumbing materials.

Chloride – often found where sodium is present and is responsible for the “salty” taste associated with salt (sodium chloride).

Nitrate – sources of nitrate are human/animal wastes and fertilizers. Water supplies with high levels should also be tested for bacterial contamination and pesticides if in an agricultural area. Nitrate can be toxic to infants if ingested by causing “blue baby syndrome”.

Nitrite – may be present where nitrate is found and is more toxic at lower levels than nitrate.

Sulfate – a naturally occurring mineral in groundwater. At high levels it can cause a bitter taste and have a laxative effect.

Fluoride - often added to municipal water to inhibit tooth decay. Can also be present in well water at excessive levels.

Total Alkalinity - the sum of hydroxide (OH^-), carbonate (CO_3^{2-}), and bicarbonate (HCO_3^-) ions which buffer changes in pH level.

Bicarbonate – present in water from pH level 4.7 up to a pH level 8.3 in combination with carbon dioxide.

Carbonate – present where pH level is above 8.3. Typically, only present after the pH level has been increased chemically.

Silica - a naturally occurring dissolved mineral that can cause a glass etching, scale and water spots that are difficult to remove.

Cations – are ions with a positive (+) electrical charge. Cations are attracted to negatively charged cation ion-exchange resins.

Anions – are ions with a negative (-) electrical charge. Anions are attracted to positively charged anion ion-exchange resins.

TOC / Total Organic Carbon – the level of dissolved natural organic matter in water excluding carbon dioxide.

Hydrogen Sulfide / H_2S - a corrosive gas that smells like “rotten eggs”. Testing requires submitting water in a preserved sample bottle.

Arsenic – is a naturally occurring and toxic semi-metal element found in groundwater in some areas of the US and Canada.

Arsenic-Speciated – the specific amounts of Arsenite (Type III/Trivalent) and Arsenate (Type V/Pentavalent) concentrations.

Aluminum – occurs naturally in ground water leached from rock and soil. Can also be the result of municipal water treatment.

Lead – the source is often within the plumbing system. It is present in older brass valves and fixtures and lead solder joints.

Coliform Bacteria – a non-pathogenic, vegetative bacteria used as an “indicator” organism to determine a water’s overall potability.

E. Coli Bacteria – a pathogenic bacteria only found in the digestive systems of warm-blooded animals and humans. Sources include poorly constructed wells and cisterns, shallow wells, streams, springs, lakes, ponds and failed septic systems.

Slime Forming Bacteria – a nuisance bacteria that can cause odor and thick slime build-up, particularly when water is aerated.

Iron Related Bacteria – a nuisance bacteria that metabolizes iron causing red/brown film, stringy growths and many types of odor.

Sulfate Reducing Bacteria – anaerobic bacteria that reduces the sulfate ion to hydrogen-sulfide gas and causes “rotten egg” odor.

NUISANCE BACTERIA POPULATION LEVELS (reported in cfu/ml – colony forming units per milliliter)

Slime Forming Bacteria	Iron Related Bacteria	Sulfate Reducing Bacteria
1,750,000 - Aggressive	570,000 - Aggressive	2,200,000 – Aggressive
440,000 – Aggressive	140,000 - Aggressive	500,000 – Aggressive
67,000 – Aggressive	35,000 – Aggressive	115,000 – Aggressive
13,000 - Moderate	9,000 – Aggressive	27,000 – Aggressive
2,500 - Moderate	2,200 – Aggressive	6,000 – Aggressive
500 – Moderate	500 – Moderate	1,400 – Moderate
100 – Not Aggressive	150 – Moderate	325 – Moderate
0 – None Present	25 - Moderate	75 – Moderate
	8 – Not Aggressive	20 – Not Aggressive
	0 – None Present	5-Not Aggressive
		0 – None Present

UNITS OF CONCENTRATION IN THIS REPORT

ppm = parts per million. Used interchangeably with **mg/l** = milligrams per liter.

ppb = parts per billion. Used interchangeably with **ug/l** = micrograms per liter

GPG - "grains per gallon" as calcium carbonate equivalent. Divide **GPG** by 17.1 to convert **GPG** into **ppm** or **mg/l**.

NTU - Nephelometric Turbidity Units indicates the amount of a light source reflected by particles. A level of 5 NTU or less looks clear.

Color – result in Color Units determined by the amount of light absorbed by the water sample. A level above 10 C.U. will appear tinted.

Quick Guide - Systems Solution Options																		
Parameter/Contaminant																	Application Notes	
	Reverse Osmosis - RO System	RO with Total Defense Cartridge	RO with Arsenic Cartridge	Water Softener	Salt-Free Conditioner	Iron Clear - Iron OX5	Cullar - Activated Carbon	Filter-Clear - Depth Filter	Neutralizing Filter - Cullneu	Anion Exchange - Whole House	Chemical Feed System	Chlorination	Catalytic Carbon	Carbon Block Filter	Non-Backwashing System	Ultra-Violet Light		No Reliable Treatment
Alkalinity - high	•	•	•						•	•						•		Anion exchange will lower pH
Alkalinity - low								•		•								Chemical Feed w/ Soda Ash
Aluminum	•	•	•	•												•		Difficult to regenerate off resin
Ammonia	•	•	•	•												•		as ammonia ion
Antimony	•	•	•													•		
Arsenic	•	•							•									RO only is for +5 only
Arsenic +3 /Trivalent/Arsenite			•						•									RO alone = +/- 60% removal
Arsenic +5/Pentavalent/Arsenate	•	•							•									AS cartridge recommended
Barium	•	•	•	•												•		
Beryllium	•	•	•	•												•		
Cadmium	•	•	•															
Calcium (Hardness)	•	•	•	•	•											•		Salt-Free does not remove
Chloride	•	•	•													•		
Chlorine	•	•	•				•					•	•	•				RO when used with carbon filter
Chloramine		•										•	•	•				
Chromium	•	•	•													•		
Coliform Bacteria										•	•				•			Chlorination - 20 minute rule
Color							•	•		•								Pilot testing recommended
Conductivity (TDS) - High	•	•	•													•		
Copper	•	•	•						•							•		May need to increase pH
E. Coli Bacteria										•	•				•			Chlorination - 20 minute rule
Fluoride	•	•	•													•		
Hardness (as CaCO3)				•	•											•		Combined Calcium & Magnesium
Hydrogen Sulfide (Gas/Odor)						•	•			•	•							Iron-OX5 not for H2S removal
Iron - Soluble/Ferrous/Clear Water				•		•	•									•		Iron will oxidize after sampling
Iron - Insoluble/Ferric/Rust					•			•										Cartridge filter option 10-micron
Iron Related Bacteria										•	•							UV not recommended
Lead - Point-of-Use	•	•	•									•						RO or Preferred Series Filters
Lead - Point-of-Entry												•						Pioneer Filter-4 gpm@15 psi loss
Magnesium (Hardness)				•	•											•		Salt-Free does not remove
Manganese				•												•		Iron filters will not remove
Mercury	•	•	•													•		
Nitrate	•	•	•						•							•		RO will reduce by 70% to 80%
Nitrite	•	•	•													•		Not removed by anion exchange
pH - Low								•		•								Chemical Feed w/Soda Ash
pH - High	•	•	•						•	•						•		Chemical Feed w/Citric Acid
PFOA / PFOS		•											•					Certified POU and POE systems
Potassium	•	•	•													•		
Phosphate	•	•	•													•		
Radium 226 & 228	•	•	•	•												•		
Selenium	•	•	•													•		
Silica	•	•	•													•		Whole House RO for POE
Silver	•	•	•													•		
Slime Forming Bacteria										•	•							UV not recommended
Sodium	•	•	•													•		
Suspended Solids							•			•								Cartridge filter < 10-microns
Strontium																•		Difficult to remove from water
Sulfate	•	•	•							•						•		Sulfate ion - Hydrogen Sulfide gas
Sulfate Reducing Bacteria										•	•							UV not recommended
Tannins (color present)						•			•									Pilot testing required
Thallium	•	•	•													•		
TOC - Total Organic Carbon							•					•	•	•	•			UV destruct -285 nm for pure water
Trihalomethanes / DBPs		•										•		•				Requires long contact times
Turbidity		•					•			•								5 NTU or less for private wells
Uranium	•	•	•						•							•		Anion exchange is more complex
Volatile Organic Compounds - VOCs		•										•	•					Preferred Series Filters-POU
Zinc	•	•	•	•												•		
Notes: The product recommendations listed are potential solutions and may not be available in all states.																		
Each water analysis is unique and must be reviewed to determine the best treatment approach.																		
These recommendations are not guaranteed solutions and dealer/client is solely responsible for selection and application.																		
Assistance with product selection is available from Technical Services, Regional Technical Advisors and Problem Water Specialist.																		



2100882

Control Number: 99099

At
to c t
3Bkt

SAMPLE ANALYSIS REQUEST
Culligan International Company Analytical Laboratory
 9399 W. Higgins Road Suite 1100
 Rosemont, IL 60018

SAMPLE SUBMITTED BY:

Account Number: 44075 5018
 Account Name: CULLIGAN WATER TECHNOLOGIES
 Phone Number: 802-598-4400
 E-MAIL: WINDOVER@CULLIGAN4U.COM
 Person Taking Sample: EVERETT WINDOVER
 Date Sample Taken: 2-22-21 Time Sample Taken: 10:43

CUSTOMER INFORMATION:

Customer Name: ALLIED HEALTH CARE PRODUCTS
 Address: 46 NEW ST.
 City: STUYVESANT FALLS State: NY Zip: 12174
 Customer reported concern: _____

SAMPLE INFORMATION:

Water Supply: Private ☒ Municipal _____
 Source: Surface _____ Well ☒ Unknown _____
 Condition: Treated _____ Untreated ☒ _____
 Sample Point: Faucet _____ Equipment _____ Other _____
 Application: Household _____ Commercial ☒ National Account _____
 Comments: _____

ANALYSIS REQUESTED:

Standard Analysis: _____ Scale Analysis: _____
 Standard w/TOC: ☒ Resin Analysis: _____
 Hemodialysis Basic: _____ Depth Filter Analysis: _____
 Hemodialysis Complete: _____ Arsenic Filter _____
 Bacteria: Iron ☒ Sulfate ☒ Slime ☒ VOC _____

Special Analysis: (List Analysis Requested): _____

For Questions contact Rick Cook at (847) 430-1284 or Maria Mozdzen at (847) 430-1219

LAB USE ONLY:

Sample received in acceptable condition: Yes _____ No _____ Received by: _____ Date: _____ Time: _____
 If not reason: _____
 Disposition of sample: _____

Litigation samples are not accepted by the laboratory

Customer: _____ Culligan International Company
 Please Sign: _____ By: _____
 Please print your name: _____ Its: _____



9399 West Higgins Rd Ste 1100
Rosemont, IL, 60018

Phone: 877-889-8195
Web: www.culligan.com

Report Date: 2/5/2021

CERTIFICATE OF ANALYSIS

Analysis Number: 2100882

Culligan Water Conditioning of The Green
Mountains, Vermont
154 Brentwood Drive

Customer: Allied Healthcare Products
46 New St.
Stuyvesant Falls NY, 12174

Control Number: 99099
Account Number: 10005018
Collected By: Everett Windover

Misc:
cc: windover@culligan4u.com

SAMPLE INFORMATION:

Analysis Type Requested: Standard A + TOC Analysis

Sampled: 1/22/2021 at 10:43 AM	Supply/Source: Private Well	Condition: Untreated Water
Received: 1/26/2021 at 1:00 PM	Sampling Point:	Application: Commercial

This Certificate of Analysis compares the actual test result to national standards as defined in the EPA 's Primary and Secondary Drinking Water Regulations .

Primary Standards: Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water.
MCLs are enforceable standards.

Secondary Standards: Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. Some states may choose to adopt that as enforceable standards.

ug/L (ppb): Unless otherwise indicated, results and standards are expressed as an amount in micrograms per liter or parts per billion.

mg/L (ppm): Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.

Minimum Detection Level (MDL): The lowest concentration level that the laboratory can detect a contaminant.

ND: The contaminant was not detected above the minimum detection level.

NA: The contaminant was not analyzed.

* - non-TNI accredited parameter

** - IL-IDPH accredited parameter

Status





















The contaminant was not detected in the sample above the minimum detection level.











The contaminant was detected below National Standard limit.



The contaminant was detected above National Standard limit.

<u>Status</u>	<u>Contaminant</u>	<u>Results</u>	<u>RDL</u>	<u>Units</u>	<u>Method</u>	<u>EPA Limit</u>	<u>Analysis Date/Time</u>	<u>Qual</u>
	Est TDS By Conductivity*	772.23		mg/L		500.00	1/28/2021 at 15:01	
	Conductivity*	1269.70		microS/cm	120.1		1/27/2021 at 12:35	
	pH*	8.7			150.1	6.50 to 8.50	1/27/2021 at 11:56	
	Turbidity*	19.60	0.100	NTU	180.1 Rev. 2 1993	0.50	1/27/2021 at 10:48	
	Turbidity Filtered*	9.53	0.100	NTU	180.1 Rev. 2 1993	0.50	1/27/2021 at 10:48	
	Aluminum by ICP	514.61	50.000	ug/L	200.7 R4.4	200.00	1/28/2021 at 14:58	
	Arsenic by ICP (Screen)*	<10.000	10.000	ug/L	200.7 R4.4	10.00	1/28/2021 at 14:58	
	Barium	302.81	10.000	ug/L	200.7 R4.4	2,000.00	1/28/2021 at 14:58	
	Calcium	2.61	0.100	mg/L	200.7 R4.4		1/28/2021 at 15:01	
	Copper (Cu)	<0.015	0.015	mg/L	200.7 R4.4	1.30	1/28/2021 at 14:58	
	Hardness (CaCO3)	9.78 0.57		mg/L GPG	200.7 R4.4		1/28/2021 at 15:01	
	Iron (Fe)	0.73	0.050	mg/L	200.7 R4.4	0.30	1/28/2021 at 14:58	
	Lead by ICP (Screen)*	<15.000	15.000	ug/L	200.7 R4.4	15.00	1/28/2021 at 14:58	
	Magnesium	0.79	0.100	mg/L	200.7 R4.4		1/28/2021 at 15:01	
	Manganese (Mn)	<0.020	0.020	mg/L	200.7 R4.4	0.05	1/28/2021 at 14:58	
	Potassium*	4.68	0.100	mg/L	200.7 R4.4		1/28/2021 at 14:58	
	Silica	10.41	0.050	mg/L	200.7 R4.4		1/28/2021 at 15:01	
	Sodium	255.90	0.100	mg/L	200.7 R4.4		1/28/2021 at 15:05	
	Strontium (Sr)*	0.25	0.050	mg/L	200.7 R4.4		1/28/2021 at 14:58	
	Zinc (Zn)	<0.050	0.050	mg/L	200.7 R4.4	5.00	1/28/2021 at 14:58	
	Chloride	171.41	0.500	mg/L	300.0 R2.1	250.00	1/28/2021 at 7:57	
	Fluoride	1.43	0.200	mg/L	300.0 R2.1	4.00	1/27/2021 at 11:28	
	Nitrate as N	<0.200	0.200	mg/L	300.0 R2.1	10.00	1/27/2021 at 11:28	
	Nitrite as N	<0.100	0.100	mg/L	300.0 R2.1	1.00	1/27/2021 at 11:28	
	Sulfate	19.50	0.850	mg/L	300.0 R2.1	250.00	1/27/2021 at 11:28	
	Iron Related Bacteria*	9000		cfu/mL	BART		2/5/2021 at 8:58	
	Slime Forming Bacteria*	440000		cfu/mL	BART		2/5/2021 at 8:58	

<u>Status</u>	<u>Contaminant</u>	<u>Results</u>	<u>RDL</u>	<u>Units</u>	<u>Method</u>	<u>EPA Limit</u>	<u>Analysis Date/Time</u>	<u>Qual</u>
	Sulfate Reducing Bacteria*	Non-detected		cfu/mL	BART		2/5/2021 at 8:58	
	Tannins*	<2.000	2.000	mg/L	SM 5550		1/27/2021 at 9:37	
	Color	65.48	5.000	color	SM2120C, 21Ed	15.00	1/27/2021 at 11:19	
	Color after Acidification*	7.84	5.000	color	SM2120C, 21Ed		1/27/2021 at 11:17	
	Bicarbonate*	335.45		mg/L	SM2320B, 18Ed		1/27/2021 at 11:56	
	Carbonate*	7.90		mg/L	SM2320B, 18Ed		1/27/2021 at 11:56	
	Total Alkalinity	343.36		mg/L	SM2320B, 18Ed		1/27/2021 at 11:56	
	TOC	0.44	0.100	mg/L	SM5310C, 19Ed		1/28/2021 at 9:06	

This report can only be reproduced in its entirety. The results reported here are representative of the sample as received in the laboratory. Unless noted holding times and temperature requirements for method 300 are not followed. pH results are out of hold time.

This analysis will not determine whether a water is safe for human consumption.

ANALYTE QUALIFIERS

- H1** Analysis conducted outside the EPA method holding time
- H2** Sample received outside EPA method temperature requirements
- P** Sample received outside the EPA method preservative requirement
- C** Sample received in an inappropriate sample container
- T** Insufficient sample received from client to perform the analysis per EPA method requirements
- B** Analyte was detected in an associated blank at a concentration greater than the MDL
- M** Microbiological analysis initiated more than 80 hours after sample collection. Analysis was completed upon client approval
- SH** The sampler's name and signature were not listed on the COC
- SF** Sample collection dates and times were not listed on the COC
- A** The sample was analyzed by serial dilution
- D** The precision between the sample and sample duplicate exceeded laboratory control limits
- I** This analyte exceeded secondary source verification criteria low/high for the initial calibration. This reported result should be considered an estimated value
- SS** This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value
- FS** The sample was filtered in the laboratory prior to analysis
- R** Results confirmed by second analysis
- SC** This report contains data that were produced by subcontracted laboratory certified for the fields of testing performed
- DM** Non-method digestion process is followed
- MM** Method modification- not from the acidified well mixed sample



TABLE 1D: SAMPLING ANALYTICAL RESULTS SUMMARY
ALLIED HEALTHCARE PRODUCTS SITE
TOWN OF STUYVESANT, COLUMBIA COUNTY

SAMPLE ID: LAB ID: COLLECTION DATE: SAMPLE MATRIX:	Supply Well 210901			
	L2147164-10			
	9/1/2021			
	WATER			
	(ng/l)		(ng/l)	(ng/l)
ANALYTE	Conc	Q	RL	MDL
Per- and Polyfluoroalkyl Substances				
6:2 Fluorotelomer sulfonate (6:2 FTS)	ND		1.84	1.230
8:2 Fluorotelomer sulfonate (8:2 FTS)	ND		1.84	1.120
n-Ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ND		1.84	0.742
n-Methyl perfluorooctanesulfonamidoacetic acid (MeFOSAA)	ND		1.84	0.598
Perfluorobutane sulfonate (PFBS)	ND		1.84	0.220
Perfluorobutanoic acid (PFBA)	ND		1.84	0.376
Perfluorodecane sulfonate (PFDS)	ND		1.84	0.904
Perfluorodecanoic acid (PFDA)	ND		1.84	0.280
Perfluorododecanoic acid (PFDoA / PFDoDA)	ND		1.84	0.343
Perfluoroheptane sulfonate (PFHpS)	ND		1.84	0.635
Perfluoroheptanoic acid (PFHpA)	ND		1.84	0.208
Perfluorohexane sulfonate (PFHxS)	ND		1.84	0.347
Perfluorohexanoic acid (PFHxA)	ND		1.84	0.303
Perfluorononanoic acid (PFNA)	ND		1.84	0.288
Perfluorooctanesulfonate (PFOS)	ND		1.84	0.465
Perfluorooctanoic acid (PFOA)	ND		1.84	0.218
Perfluoropentanoic acid (PFPeA)	ND		1.84	0.365
Perfluorotetradecanoic acid (PFTA / PFTeDA / PFTeA)	ND		1.84	0.229
Perfluorotridecanoic acid (PFTTrDA / PFTTriA)	ND		1.84	0.302
Perfluoroundecanoic acid (PFUnA / PFUnDA)	ND		1.84	0.240
PFOA/PFOS, total	ND		1.84	0.218

Notes:

ND denotes Non Detect

ng/l: nanograms per liter, or parts per trillion (ppt)

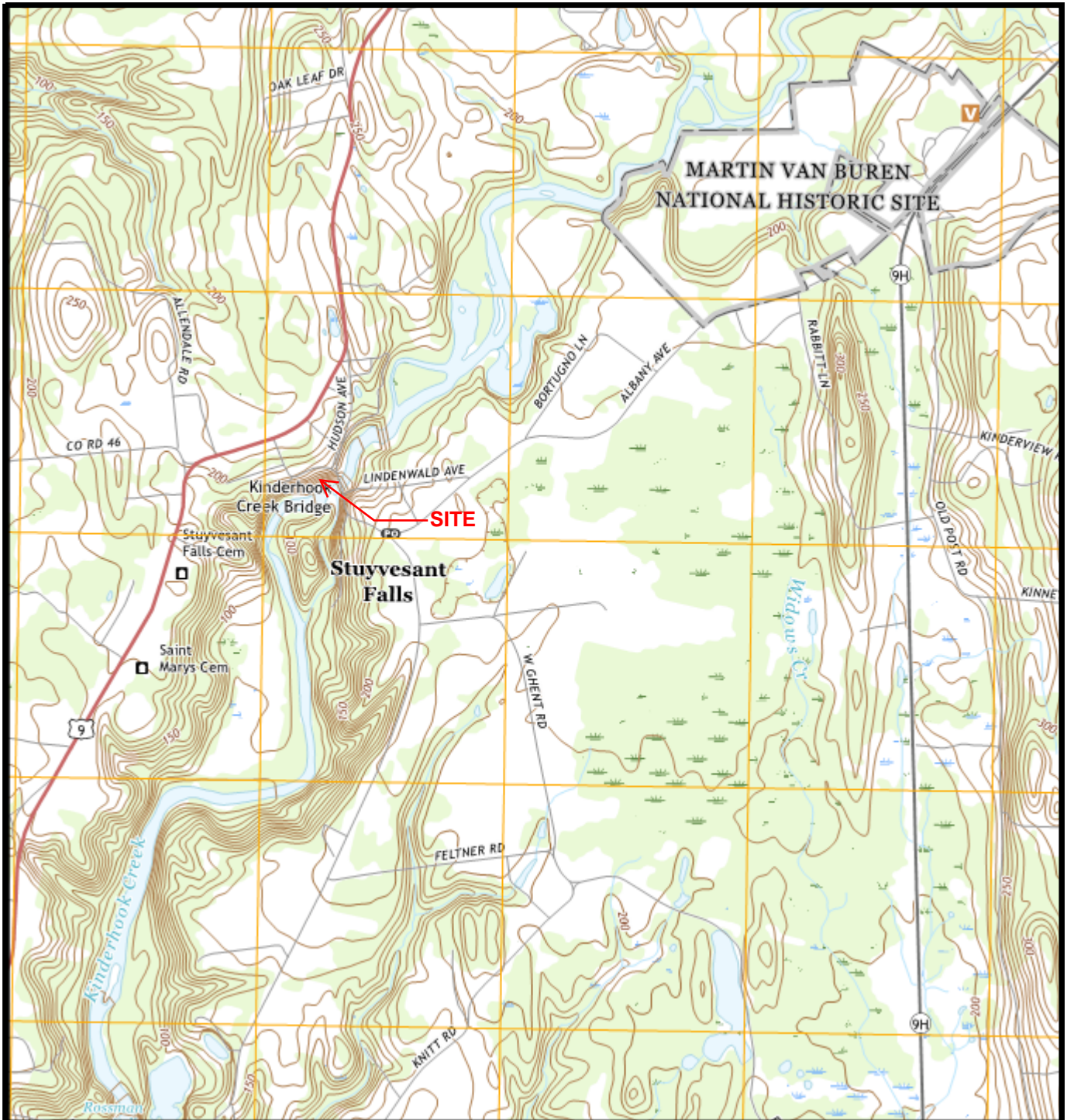
Conc = Concentration

Q = Qualifier

RL = Reporting Limit

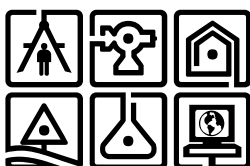
MDL = Method Detection Limit

FIGURE 1
SITE LOCATION MAP



MAP REFERENCE

United States Geological Survey
7.5 Minute Series Topographic Map
Quadrangle: Stottville, NY
Date: 2019



C.T. MALE ASSOCIATES

ENGINEERING, SURVEYING, ARCHITECTURE
LANDSCAPE ARCHITECTURE & GEOLOGY, D.P.C.

50 CENTURY HILL DRIVE
LATHAM, NY 12110

FIGURE 1 - SITE LOCATION MAP

TOWN OF STUYVESANT

COLUMBIA COUNTY, NY

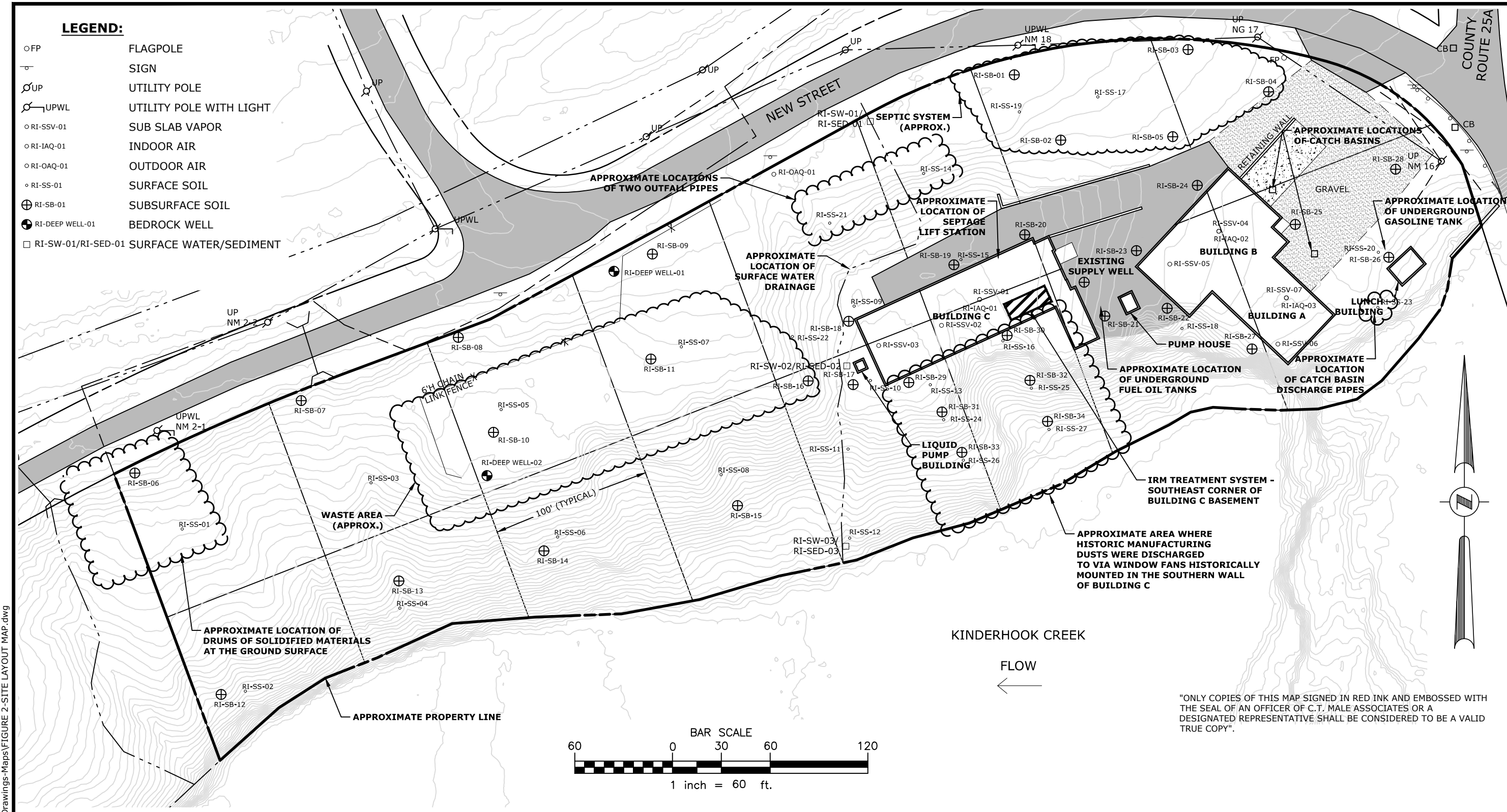
SCALE: 1:24,000

DRAFTER: AS

PROJECT No: 19.9379

The locations and features depicted on this map are approximate and do not represent an actual survey.

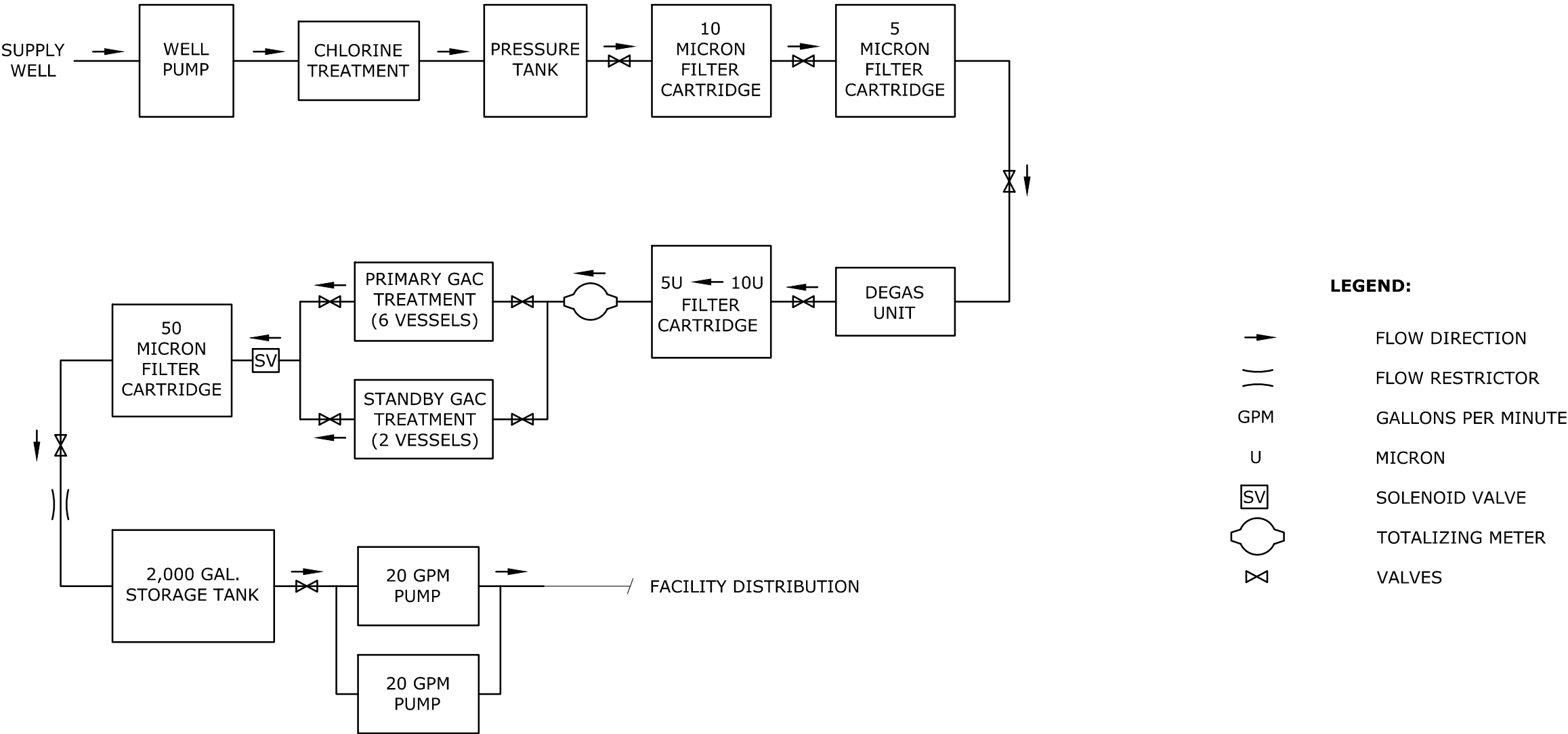
FIGURE 2
SITE LAYOUT MAP



CAD DWG. FILE NAME: K:\Projects\199379\Env\Drawings-Maps\FIGURE 2-SITE LAYOUT MAP.dwg

CAD DWG. FILE NAME: FIGURE 2-SITE LAYOUT

FIGURE 3
PROCESS FLOW DIAGRAM



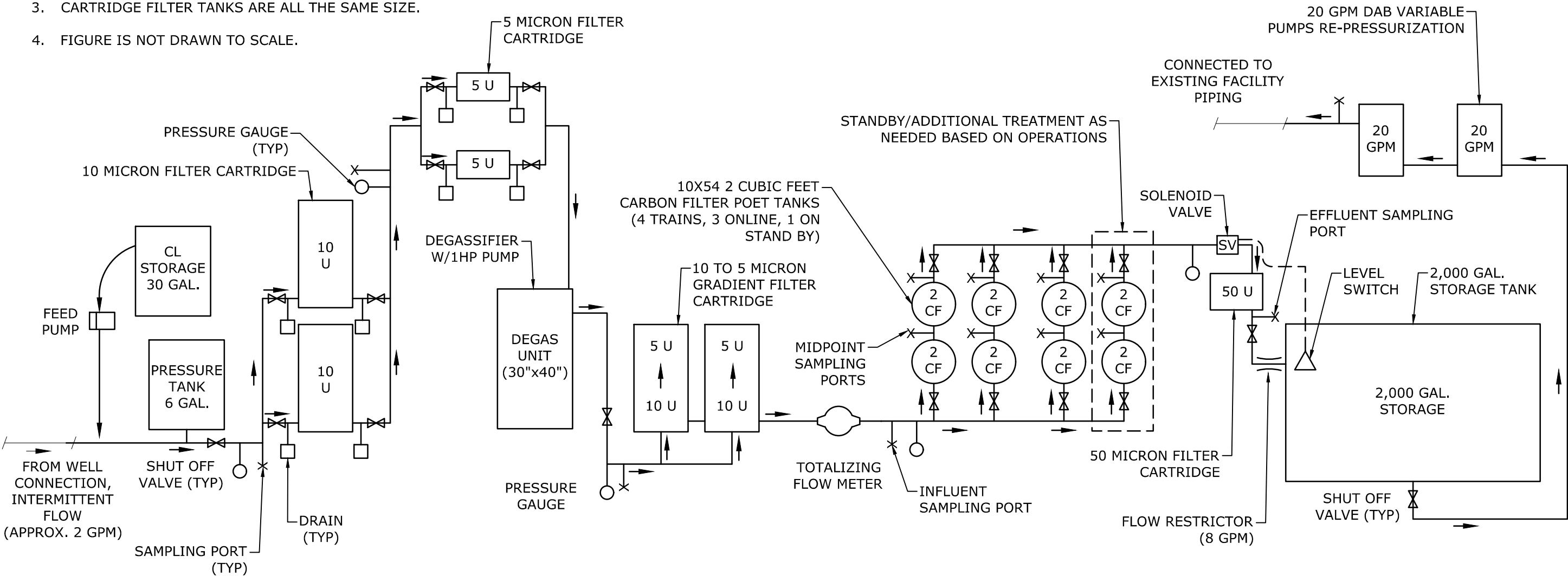
CAD DWG. FILE NAME: K:\Projects\199379\Env\Drawings-Maps\FIGURE 3 - 11X17.dwg

	DATE	REVISIONS RECORD/DESCRIPTION		DRAFTED	CHECK	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW. © 2021 C.T. MALE ASSOCIATES	FIGURE 3 PROCESS FLOW DIAGRAM GROUNDWATER TREATMENT SYSTEM				
		1						ALLIED HEALTHCARE PRODUCTS				
		2										
		3										
		4					DESIGNED : N.GARRY	C.T. MALE ASSOCIATES Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 PH 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY www.ctmale.com				
		5					DRAFTED : S.WUNSCH					
		6					CHECKED : K.MOLINE					
		7					PROJ. NO : 19.9379					
		8					SCALE : NONE					
		9					DATE : AUG. 25, 2021					
							TOWN OF STUYVENSANT			COLUMBIA COUNTY, NEW YORK		
							<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>SHEET 1 OF 1</div><div>DWG. NO: 21-0514</div></div></div>					

FIGURE 4
PROCESS SCHEMATIC,
IRM GROUNDWATER TREATMENT SYSTEM

FIGURE NOTES:

- 1. ALL CONNECTING PIPING IS TO BE 3/4" PEX TUBING.
- 2. SUPPORT PIPING AND EQUIPMENT AS NECESSARY.
- 3. CARTRIDGE FILTER TANKS ARE ALL THE SAME SIZE.
- 4. FIGURE IS NOT DRAWN TO SCALE.



	DATE	REVISIONS RECORD/DESCRIPTION	DRAFTED	CHECK	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.	FIGURE 4 IRM GROUNDWATER TREATMENT SYSTEMS	
							ALLIED HEALTHCARE PRODUCTS	
							TOWN OF STUYVENSANT	COLUMBIA COUNTY, NEW YORK
							C.T. MALE ASSOCIATES Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 PH 518.786.7400 COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY www.ctmale.com	
							SHEET 1 OF 1	
							DWG. NO: 21-0508	

APPENDIX A
WATER SUPPLY WELL - LABORATORY REPORTS



ANALYTICAL REPORT

Lab Number:	L1931049
Client:	C.T. Male Associates 50 Century Hill Drive Latham, NY 12210
ATTN:	Kirk Moline
Phone:	(518) 786-7400
Project Name:	ALLIED HEALTH
Project Number:	19.9379
Report Date:	07/22/19

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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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1931049-01	SUPPLY WELL	WATER	STUYVESANT FALLS, NY	07/15/19 10:00	07/15/19
L1931049-02	TRIP BLANK	WATER	STUYVESANT FALLS, NY	07/15/19 00:00	07/15/19

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

Case Narrative

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

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

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

Soil/sediments, 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.

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

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

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

Case Narrative (continued)

Report Submission

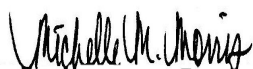
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1931049-02: The Trip Blank has a result for acetone present above the reporting limit. The sample was verified as being labeled correctly by the laboratory and the previous analysis showed there was no potential for carry over.

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: 07/22/19

ORGANICS

VOLATILES

Project Name: ALLIED HEALTH**Lab Number:** L1931049**Project Number:** 19.9379**Report Date:** 07/22/19**SAMPLE RESULTS**

Lab ID: L1931049-01
 Client ID: SUPPLY WELL
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 07/15/19 10:00
 Date Received: 07/15/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 07/18/19 12:00
 Analyst: PD

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	5.7		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	0.26	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ALLIED HEALTH**Lab Number:** L1931049**Project Number:** 19.9379**Report Date:** 07/22/19**SAMPLE RESULTS**

Lab ID: L1931049-01
Client ID: SUPPLY WELL
Sample Location: STUYVESANT FALLS, NY

Date Collected: 07/15/19 10:00
Date Received: 07/15/19
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	13		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	77		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	96		70-130

Project Name: ALLIED HEALTH**Lab Number:** L1931049**Project Number:** 19.9379**Report Date:** 07/22/19**SAMPLE RESULTS**

Lab ID: L1931049-02
 Client ID: TRIP BLANK
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 07/15/19 00:00
 Date Received: 07/15/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 07/18/19 12:29
 Analyst: PD

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: ALLIED HEALTH**Lab Number:** L1931049**Project Number:** 19.9379**Report Date:** 07/22/19**SAMPLE RESULTS****Lab ID:** L1931049-02**Date Collected:** 07/15/19 00:00**Client ID:** TRIP BLANK**Date Received:** 07/15/19**Sample Location:** STUYVESANT FALLS, 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	8.3		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	81		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	98		70-130

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 07/18/19 08:15
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1261556-5					
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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 07/18/19 08:15
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1261556-5					
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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 07/18/19 08:15
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1261556-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1931049

Report Date: 07/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1261556-3 WG1261556-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	98		98		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	90		95		70-130	5		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	110		100		75-130	10		20
Trichlorofluoromethane	100		97		62-150	3		20
1,2-Dichloroethane	93		92		70-130	1		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	98		99		67-130	1		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	86		92		70-130	7		20
Bromoform	94		98		54-136	4		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	100		110		70-130	10		20
Toluene	110		110		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	87		87		64-130	0		20
Bromomethane	86		92		39-139	7		20
Vinyl chloride	94		91		55-140	3		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1931049

Report Date: 07/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1261556-3 WG1261556-4								
Chloroethane	97		96		55-138	1		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	88		100		63-130	13		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	110		110		36-147	0		20
Acetone	110		100		58-148	10		20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	88		93		63-138	6		20
4-Methyl-2-pentanone	92		96		59-130	4		20
2-Hexanone	86		84		57-130	2		20
Bromochloromethane	110		110		70-130	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	95		99		41-144	4		20
Isopropylbenzene	110		100		70-130	10		20
1,2,3-Trichlorobenzene	98		98		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1931049

Report Date: 07/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1261556-3 WG1261556-4								
1,2,4-Trichlorobenzene	99		98		70-130	1		20
Methyl Acetate	88		90		70-130	2		20
Cyclohexane	94		93		70-130	1		20
1,4-Dioxane	128		136		56-162	6		20
Freon-113	100		100		70-130	0		20
Methyl cyclohexane	96		96		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		98		70-130
Toluene-d8	106		104		70-130
4-Bromofluorobenzene	99		97		70-130
Dibromofluoromethane	101		102		70-130

Project Name: ALLIED HEALTH
Project Number: 19.9379

Serial_No:07221915:27
Lab Number: L1931049
Report Date: 07/22/19

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(*)
L1931049-01A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1931049-01B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1931049-01C	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1931049-02A	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)
L1931049-02B	Vial HCl preserved	A	NA		4.2	Y	Absent		NYTCL-8260(14)

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

- 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.

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

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

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

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.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol 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.
- 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).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1931049
Report Date: 07/22/19

REFERENCES

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

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, 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, **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.

L1931049

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.)



ANALYTICAL REPORT

Lab Number:	L2127871
Client:	C.T. Male Associates 50 Century Hill Drive Latham, NY 12210
ATTN:	Kirk Moline
Phone:	(518) 786-7400
Project Name:	ALLIED HEALTHCARE PRODUCTS
Project Number:	19.9379
Report Date:	06/08/21

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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: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2127871-01	TRIP BLANK	WATER	STUYVESANT FALLS, NY	05/25/21 10:00	05/25/21
L2127871-02	ALLIED SUPPLY WELL-Z3	WATER	STUYVESANT FALLS, NY	05/25/21 17:20	05/25/21
L2127871-03	ALLIED SUPPLY WELL-Z2	WATER	STUYVESANT FALLS, NY	05/25/21 10:25	05/25/21
L2127871-04	ALLIED SUPPLY WELL-Z1	WATER	STUYVESANT FALLS, NY	05/25/21 12:30	05/25/21

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Case Narrative

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

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

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

Soil/sediments, 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.

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

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

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

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.

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

Authorized Signature:



Caitlin Walukevich

Title: Technical Director/Representative

Date: 06/08/21

ORGANICS

VOLATILES

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-01
 Client ID: TRIP BLANK
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:00
 Date Received: 05/25/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 06/02/21 16:05
 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: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-01
Client ID: TRIP BLANK
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:00
Date Received: 05/25/21
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	2.3	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
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

Tentatively Identified Compounds

No Tentatively Identified Compounds ND ug/l 1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	114		70-130

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/02/21 16:32
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.7		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	71		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	0.48	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	ND		ug/l	0.50	0.16	1
Toluene	22		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	1.6		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-02
 Client ID: ALLIED SUPPLY WELL-Z3
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
 Date Received: 05/25/21
 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	40		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

Tentatively Identified Compounds

Total TIC Compounds	47.7	J	ug/l	1
Cyclopropane	6.09	NJ	ug/l	1
Propane, 1,3-dibromo-	3.75	NJ	ug/l	1
Propane, 1-bromo-3-chloro-	33.5	NJ	ug/l	1
3-Chloropropene	4.35	NJ	ug/l	1

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-02

Date Collected: 05/25/21 17:20

Client ID: ALLIED SUPPLY WELL-Z3

Date Received: 05/25/21

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	98		70-130

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/02/21 16:59
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	0.28	J	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	1.8		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	95		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: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-03
 Client ID: ALLIED SUPPLY WELL-Z2
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
 Date Received: 05/25/21
 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	5.9		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

Tentatively Identified Compounds

Total TIC Compounds	3.07	J	ug/l	1
Unknown	3.07	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	100		70-130

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/02/21 17:26
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	0.26	J	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	0.76		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	35		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: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-04
 Client ID: ALLIED SUPPLY WELL-Z1
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
 Date Received: 05/25/21
 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	5.4		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

Tentatively Identified Compounds

Total TIC Compounds	4.99	J	ug/l	1
Cyclopropane	1.23	NJ	ug/l	1
Unknown	3.76	J	ug/l	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	102		70-130



Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/02/21 11:36
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1507501-5					
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: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/02/21 11:36
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1507501-5					
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

Tentatively Identified Compounds

Total TIC Compounds	1.10	J	ug/l
Unknown	1.10	J	ug/l

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 06/02/21 11:36
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1507501-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	109		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1507501-3 WG1507501-4								
Methylene chloride	100		120		70-130	18		20
1,1-Dichloroethane	110		120		70-130	9		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	92		100		63-132	8		20
1,2-Dichloropropane	110		130		70-130	17		20
Dibromochloromethane	100		110		63-130	10		20
1,1,2-Trichloroethane	110		120		70-130	9		20
Tetrachloroethene	100		110		70-130	10		20
Chlorobenzene	110		110		75-130	0		20
Trichlorofluoromethane	100		110		62-150	10		20
1,2-Dichloroethane	100		110		70-130	10		20
1,1,1-Trichloroethane	100		110		67-130	10		20
Bromodichloromethane	100		110		67-130	10		20
trans-1,3-Dichloropropene	99		100		70-130	1		20
cis-1,3-Dichloropropene	96		100		70-130	4		20
Bromoform	98		100		54-136	2		20
1,1,2,2-Tetrachloroethane	120		120		67-130	0		20
Benzene	110		120		70-130	9		20
Toluene	110		110		70-130	0		20
Ethylbenzene	100		110		70-130	10		20
Chloromethane	110		120		64-130	9		20
Bromomethane	89		97		39-139	9		20
Vinyl chloride	100		110		55-140	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1507501-3 WG1507501-4								
Chloroethane	85		98		55-138	14		20
1,1-Dichloroethene	110		120		61-145	9		20
trans-1,2-Dichloroethene	100		110		70-130	10		20
Trichloroethene	98		100		70-130	2		20
1,2-Dichlorobenzene	100		110		70-130	10		20
1,3-Dichlorobenzene	100		110		70-130	10		20
1,4-Dichlorobenzene	100		110		70-130	10		20
Methyl tert butyl ether	92		100		63-130	8		20
p/m-Xylene	105		110		70-130	5		20
o-Xylene	105		110		70-130	5		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Styrene	105		110		70-130	5		20
Dichlorodifluoromethane	90		95		36-147	5		20
Acetone	150	Q	150	Q	58-148	0		20
Carbon disulfide	110		120		51-130	9		20
2-Butanone	110		120		63-138	9		20
4-Methyl-2-pentanone	120		130		59-130	8		20
2-Hexanone	110		130		57-130	17		20
Bromochloromethane	110		120		70-130	9		20
1,2-Dibromoethane	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	94		100		41-144	6		20
Isopropylbenzene	98		100		70-130	2		20
1,2,3-Trichlorobenzene	95		100		70-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1507501-3 WG1507501-4								
1,2,4-Trichlorobenzene	100		110		70-130	10		20
Methyl Acetate	120		140	Q	70-130	15		20
Cyclohexane	120		130		70-130	8		20
1,4-Dioxane	104		120		56-162	14		20
Freon-113	110		120		70-130	9		20
Methyl cyclohexane	100		110		70-130	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	103		106		70-130
Toluene-d8	104		102		70-130
4-Bromofluorobenzene	103		101		70-130
Dibromofluoromethane	98		102		70-130

SEMIVOLATILES

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 06/01/21 17:14
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 05/31/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	4.9		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	3.0		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	2.8	J	ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS****Lab ID:** L2127871-02**Date Collected:** 05/25/21 17:20**Client ID:** ALLIED SUPPLY WELL-Z3**Date Received:** 05/25/21**Sample Location:** STUYVESANT FALLS, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Tentatively Identified Compounds

Total TIC Compounds	171	J	ug/l			1
Unknown	6.04	J	ug/l			1
Unknown	4.54	J	ug/l			1
Unknown	4.65	J	ug/l			1
Unknown	5.78	J	ug/l			1
Unknown	10.8	J	ug/l			1
Unknown Alkane	5.16	J	ug/l			1
Unknown	7.49	J	ug/l			1
Unknown Alkane	28.1	J	ug/l			1
Unknown	39.2	J	ug/l			1
Cyclic Octaatomic Sulfur	32.1	NJ	ug/l			1
Sulfur	7.78	NJ	ug/l			1
Unknown	4.94	J	ug/l			1
Unknown	5.13	J	ug/l			1
Unknown	3.93	J	ug/l			1
Toluene	5.85	NJ	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	66		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	68		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/02/21 19:04
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 06/01/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	134	30.3	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	50			15-110		

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/03/21 10:24
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 05/31/21 12:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.10	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	0.05	J	ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.02	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	59		21-120
Phenol-d6	54		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	65		15-120
2,4,6-Tribromophenol	60		10-120
4-Terphenyl-d14	67		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 06/01/21 16:23
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 05/31/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	1.6	J	ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	0.55	J	ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	0.76	J	ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	1.1	J	ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	12.		ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	2.5	J	ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS****Lab ID:** L2127871-03**Date Collected:** 05/25/21 10:25**Client ID:** ALLIED SUPPLY WELL-Z2**Date Received:** 05/25/21**Sample Location:** STUYVESANT FALLS, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Tentatively Identified Compounds

Total TIC Compounds	214	J	ug/l			1
Cyclic Octaatomic Sulfur	23.8	NJ	ug/l			1
Sulfur	6.00	NJ	ug/l			1
Unknown	25.7	J	ug/l			1
Unknown	2.87	J	ug/l			1
Unknown	3.60	J	ug/l			1
Unknown	13.6	J	ug/l			1
Unknown	8.07	J	ug/l			1
Unknown	2.07	J	ug/l			1
Unknown	3.60	J	ug/l			1
Unknown	20.5	J	ug/l			1
Unknown	68.7	J	ug/l			1
Unknown	4.25	J	ug/l			1
Unknown	2.87	J	ug/l			1
Unknown Organic Acid	26.8	J	ug/l			1
Unknown Organic Acid	2.04	JB	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		21-120
Phenol-d6	63		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	115		10-120
4-Terphenyl-d14	87		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/02/21 19:27
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 06/01/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	152.		ng/l	134	30.3	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	41			15-110		

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/04/21 17:55
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 05/31/21 12:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.04	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.24		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	0.03	J	ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.03	J	ug/l	0.10	0.01	1
Phenanthrene	0.12		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.35		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		21-120
Phenol-d6	64		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	66		10-120
4-Terphenyl-d14	78		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-04
 Client ID: ALLIED SUPPLY WELL-Z1
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
 Date Received: 05/25/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8270D
 Analytical Date: 06/01/21 16:48
 Analyst: JG

Extraction Method: EPA 3510C
 Extraction Date: 05/31/21 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	0.60	J	ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	1.2	J	ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	3.3	J	ug/l	5.0	0.57	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Carbazole	ND		ug/l	2.0	0.49	1
Atrazine	ND		ug/l	10	0.76	1
Benzaldehyde	ND		ug/l	5.0	0.53	1
Caprolactam	ND		ug/l	10	3.3	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84	1

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS****Lab ID:** L2127871-04**Date Collected:** 05/25/21 12:30**Client ID:** ALLIED SUPPLY WELL-Z1**Date Received:** 05/25/21**Sample Location:** STUYVESANT FALLS, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Tentatively Identified Compounds

Total TIC Compounds	210	J	ug/l			1
Toluene	9.53	NJ	ug/l			1
Unknown	5.31	J	ug/l			1
Unknown	10.3	J	ug/l			1
Unknown	2.29	J	ug/l			1
Sulfur	2.84	NJ	ug/l			1
Unknown Organic Acid	12.4	J	ug/l			1
Unknown Organic Acid	2.07	J	ug/l			1
Cyclic Octaatomic Sulfur	11.8	NJ	ug/l			1
Unknown	2.14	J	ug/l			1
Unknown	126	J	ug/l			1
Unknown	2.00	J	ug/l			1
Unknown	7.13	J	ug/l			1
Unknown	10.8	J	ug/l			1
Unknown	2.62	J	ug/l			1
Unknown	2.87	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	94		10-120
4-Terphenyl-d14	71		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/02/21 19:50
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 06/01/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	134	30.3	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	45			15-110		

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/04/21 18:14
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 05/31/21 12:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.02	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	ND		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.07	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	0.02	J	ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.02	J	ug/l	0.10	0.01	1
Phenanthrene	0.07	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.04	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		21-120
Phenol-d6	48		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	57		10-120
4-Terphenyl-d14	60		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D
 Analytical Date: 06/03/21 09:46
 Analyst: JG

Extraction Method: EPA 3510C
 Extraction Date: 05/31/21 07:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02-04 Batch: WG1505663-1					
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Isophorone	ND		ug/l	5.0	1.2
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	2.2	J	ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D
 Analytical Date: 06/03/21 09:46
 Analyst: JG

Extraction Method: EPA 3510C
 Extraction Date: 05/31/21 07:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02-04 Batch: WG1505663-1					
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Carbazole	ND		ug/l	2.0	0.49
Atrazine	ND		ug/l	10	0.76
Benzaldehyde	ND		ug/l	5.0	0.53
Caprolactam	ND		ug/l	10	3.3
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	0.84

Tentatively Identified Compounds

Total TIC Compounds	148	J	ug/l
Unknown	10.6	J	ug/l
Unknown	2.98	J	ug/l
Unknown	4.51	J	ug/l
Unknown Amide	62.5	J	ug/l
Unknown	2.58	J	ug/l
Unknown Organic Acid	5.53	J	ug/l
Unknown Thiophene	5.67	J	ug/l

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
 Analytical Date: 06/03/21 09:46
 Analyst: JG

Extraction Method: EPA 3510C
 Extraction Date: 05/31/21 07:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02-04 Batch: WG1505663-1					

Tentatively Identified Compounds

Unknown	4.22	J	ug/l
Unknown	5.67	J	ug/l
Unknown Organic Acid	11.3	J	ug/l
Unknown	5.42	J	ug/l
Unknown	6.07	J	ug/l
Unknown Organic Acid	9.42	J	ug/l
Unknown	5.02	J	ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		21-120
Phenol-d6	55		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	84		10-120
4-Terphenyl-d14	88		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 06/02/21 19:05
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 05/31/21 08:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 02-04 Batch: WG1505665-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
 Analytical Date: 06/02/21 19:05
 Analyst: DV

Extraction Method: EPA 3510C
 Extraction Date: 05/31/21 08:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 02-04 Batch: WG1505665-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		21-120
Phenol-d6	54		10-120
Nitrobenzene-d5	85		23-120
2-Fluorobiphenyl	80		15-120
2,4,6-Tribromophenol	38		10-120
4-Terphenyl-d14	83		41-149

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 06/02/21 17:05
Analyst: SMB

Extraction Method: EPA 3510C
Extraction Date: 06/01/21 15:00

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 02-04 Batch: WG1506131-1					
1,4-Dioxane	ND		ng/l	150	33.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-04 Batch: WG1505663-2 WG1505663-3								
Bis(2-chloroethyl)ether	56		64		40-140	13		30
3,3'-Dichlorobenzidine	61		74		40-140	19		30
2,4-Dinitrotoluene	72		78		48-143	8		30
2,6-Dinitrotoluene	73		76		40-140	4		30
4-Chlorophenyl phenyl ether	59		67		40-140	13		30
4-Bromophenyl phenyl ether	61		72		40-140	17		30
Bis(2-chloroisopropyl)ether	47		55		40-140	16		30
Bis(2-chloroethoxy)methane	58		64		40-140	10		30
Hexachlorocyclopentadiene	60		71		40-140	17		30
Isophorone	58		63		40-140	8		30
Nitrobenzene	62		71		40-140	14		30
NDPA/DPA	64		71		40-140	10		30
n-Nitrosodi-n-propylamine	60		66		29-132	10		30
Bis(2-ethylhexyl)phthalate	77		89		40-140	14		30
Butyl benzyl phthalate	82		95		40-140	15		30
Di-n-butylphthalate	69		81		40-140	16		30
Di-n-octylphthalate	83		95		40-140	13		30
Diethyl phthalate	66		74		40-140	11		30
Dimethyl phthalate	69		76		40-140	10		30
Biphenyl	62		73		40-140	16		30
4-Chloroaniline	50		58		40-140	15		30
2-Nitroaniline	77		83		52-143	8		30
3-Nitroaniline	66		68		25-145	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-04 Batch: WG1505663-2 WG1505663-3								
4-Nitroaniline	66		73		51-143	10		30
Dibenzofuran	61		68		40-140	11		30
1,2,4,5-Tetrachlorobenzene	61		70		2-134	14		30
Acetophenone	58		66		39-129	13		30
2,4,6-Trichlorophenol	73		66		30-130	10		30
p-Chloro-m-cresol	74		74		23-97	0		30
2-Chlorophenol	62		60		27-123	3		30
2,4-Dichlorophenol	70		57		30-130	20		30
2,4-Dimethylphenol	70		75		30-130	7		30
2-Nitrophenol	82		68		30-130	19		30
4-Nitrophenol	59		44		10-80	29		30
2,4-Dinitrophenol	91		82		20-130	10		30
4,6-Dinitro-o-cresol	81		88		20-164	8		30
Phenol	49		47		12-110	4		30
3-Methylphenol/4-Methylphenol	67		70		30-130	4		30
2,4,5-Trichlorophenol	71		44		30-130	47	Q	30
Carbazole	68		78		55-144	14		30
Atrazine	85		99		40-140	15		30
Benzaldehyde	57		66		40-140	15		30
Caprolactam	37		38		10-130	3		30
2,3,4,6-Tetrachlorophenol	66		45		40-140	38	Q	30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-04 Batch: WG1505663-2 WG1505663-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	64		101		21-120
Phenol-d6	56		114		10-120
Nitrobenzene-d5	70		164	Q	23-120
2-Fluorobiphenyl	74		168	Q	15-120
2,4,6-Tribromophenol	86		156	Q	10-120
4-Terphenyl-d14	81		191	Q	41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 02-04 Batch: WG1505665-2 WG1505665-3								
Acenaphthene	81		84		40-140	4		40
2-Chloronaphthalene	77		73		40-140	5		40
Fluoranthene	80		83		40-140	4		40
Hexachlorobutadiene	74		76		40-140	3		40
Naphthalene	75		78		40-140	4		40
Benzo(a)anthracene	84		86		40-140	2		40
Benzo(a)pyrene	89		92		40-140	3		40
Benzo(b)fluoranthene	86		89		40-140	3		40
Benzo(k)fluoranthene	84		91		40-140	8		40
Chrysene	86		90		40-140	5		40
Acenaphthylene	68		71		40-140	4		40
Anthracene	84		88		40-140	5		40
Benzo(ghi)perylene	89		91		40-140	2		40
Fluorene	78		80		40-140	3		40
Phenanthrene	82		86		40-140	5		40
Dibenzo(a,h)anthracene	89		91		40-140	2		40
Indeno(1,2,3-cd)pyrene	88		90		40-140	2		40
Pyrene	80		85		40-140	6		40
2-Methylnaphthalene	74		76		40-140	3		40
Pentachlorophenol	73		75		40-140	3		40
Hexachlorobenzene	79		83		40-140	5		40
Hexachloroethane	76		79		40-140	4		40

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Project Number:** 19.9379**Lab Number:** L2127871**Report Date:** 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 02-04 Batch: WG1505665-2 WG1505665-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	65		75		21-120
Phenol-d6	57		62		10-120
Nitrobenzene-d5	89		91		23-120
2-Fluorobiphenyl	76		77		15-120
2,4,6-Tribromophenol	59		66		10-120
4-Terphenyl-d14	80		83		41-149

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 02-04 Batch: WG1506131-2 WG1506131-3								
1,4-Dioxane	113		110		40-140	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	46		50		15-110

PCBS

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 05/31/21 13:17
Analyst: AWS

Extraction Method: EPA 3510C
Extraction Date: 05/30/21 20:10
Cleanup Method: EPA 3665A
Cleanup Date: 05/31/21
Cleanup Method: EPA 3660B
Cleanup Date: 05/31/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.071	0.061	1	A
Aroclor 1221	ND		ug/l	0.071	0.061	1	A
Aroclor 1232	ND		ug/l	0.071	0.061	1	A
Aroclor 1242	ND		ug/l	0.071	0.061	1	A
Aroclor 1248	ND		ug/l	0.071	0.061	1	A
Aroclor 1254	ND		ug/l	0.071	0.061	1	A
Aroclor 1260	ND		ug/l	0.071	0.061	1	A
Aroclor 1262	ND		ug/l	0.071	0.061	1	A
Aroclor 1268	ND		ug/l	0.071	0.061	1	A
PCBs, Total	ND		ug/l	0.071	0.061	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	120		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	118		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 05/31/21 13:25
Analyst: AWS

Extraction Method: EPA 3510C
Extraction Date: 05/30/21 20:10
Cleanup Method: EPA 3665A
Cleanup Date: 05/31/21
Cleanup Method: EPA 3660B
Cleanup Date: 05/31/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.071	0.061	1	A
Aroclor 1221	ND		ug/l	0.071	0.061	1	A
Aroclor 1232	ND		ug/l	0.071	0.061	1	A
Aroclor 1242	ND		ug/l	0.071	0.061	1	A
Aroclor 1248	ND		ug/l	0.071	0.061	1	A
Aroclor 1254	ND		ug/l	0.071	0.061	1	A
Aroclor 1260	ND		ug/l	0.071	0.061	1	A
Aroclor 1262	ND		ug/l	0.071	0.061	1	A
Aroclor 1268	ND		ug/l	0.071	0.061	1	A
PCBs, Total	ND		ug/l	0.071	0.061	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	83		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 05/31/21 13:33
Analyst: AWS

Extraction Method: EPA 3510C
Extraction Date: 05/30/21 20:10
Cleanup Method: EPA 3665A
Cleanup Date: 05/31/21
Cleanup Method: EPA 3660B
Cleanup Date: 05/31/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.071	0.061	1	A
Aroclor 1221	ND		ug/l	0.071	0.061	1	A
Aroclor 1232	ND		ug/l	0.071	0.061	1	A
Aroclor 1242	ND		ug/l	0.071	0.061	1	A
Aroclor 1248	ND		ug/l	0.071	0.061	1	A
Aroclor 1254	ND		ug/l	0.071	0.061	1	A
Aroclor 1260	ND		ug/l	0.071	0.061	1	A
Aroclor 1262	ND		ug/l	0.071	0.061	1	A
Aroclor 1268	ND		ug/l	0.071	0.061	1	A
PCBs, Total	ND		ug/l	0.071	0.061	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	72		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082A
 Analytical Date: 05/31/21 11:36
 Analyst: AWS

Extraction Method: EPA 3510C
 Extraction Date: 05/30/21 20:10
 Cleanup Method: EPA 3665A
 Cleanup Date: 05/31/21
 Cleanup Method: EPA 3660B
 Cleanup Date: 05/31/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 02-04 Batch: WG1505602-1						
Aroclor 1016	ND		ug/l	0.071	0.061	A
Aroclor 1221	ND		ug/l	0.071	0.061	A
Aroclor 1232	ND		ug/l	0.071	0.061	A
Aroclor 1242	ND		ug/l	0.071	0.061	A
Aroclor 1248	ND		ug/l	0.071	0.061	A
Aroclor 1254	ND		ug/l	0.071	0.061	A
Aroclor 1260	ND		ug/l	0.071	0.061	A
Aroclor 1262	ND		ug/l	0.071	0.061	A
Aroclor 1268	ND		ug/l	0.071	0.061	A
PCBs, Total	ND		ug/l	0.071	0.061	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	81		30-150	B

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Project Number:** 19.9379**Lab Number:** L2127871**Report Date:** 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 02-04 Batch: WG1505602-2 WG1505602-3									
Aroclor 1016	78		80		40-140	3		50	A
Aroclor 1260	77		78		40-140	1		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		85		30-150	A
Decachlorobiphenyl	75		82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		88		30-150	B
Decachlorobiphenyl	88		90		30-150	B

PESTICIDES

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 05/31/21 18:52
Analyst: AR

Extraction Method: EPA 3510C
Extraction Date: 05/30/21 17:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
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Organochlorine Pesticides by GC - Westborough Lab							
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Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	57		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8151A
Analytical Date: 05/29/21 19:47
Analyst: AR

Extraction Method: EPA 8151A
Extraction Date: 05/28/21 15:42

Methylation Date: 05/29/21 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	104		30-150	A
DCAA	101		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 05/31/21 19:02
Analyst: AR

Extraction Method: EPA 3510C
Extraction Date: 05/30/21 17:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
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Organochlorine Pesticides by GC - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	51		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8151A
Analytical Date: 05/29/21 20:05
Analyst: AR

Extraction Method: EPA 8151A
Extraction Date: 05/28/21 15:42

Methylation Date: 05/29/21 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
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Chlorinated Herbicides by GC - Westborough Lab

2,4-D	ND		ug/l	10.0	0.498	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	115		30-150	A
DCAA	108		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 05/31/21 19:13
Analyst: AR

Extraction Method: EPA 3510C
Extraction Date: 05/30/21 17:28

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
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Organochlorine Pesticides by GC - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8151A
Analytical Date: 05/29/21 20:23
Analyst: AR

Extraction Method: EPA 8151A
Extraction Date: 05/28/21 15:42

Methylation Date: 05/29/21 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	107		30-150	A
DCAA	100		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
 Analytical Date: 05/29/21 16:07
 Analyst: AR

Extraction Method: EPA 8151A
 Extraction Date: 05/28/21 15:38

Methylation Date: 05/29/21 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 02-04 Batch: WG1505122-1						
2,4-D	ND		ug/l	10.0	0.498	A
2,4,5-T	ND		ug/l	2.00	0.531	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	97		30-150	A
DCAA	90		30-150	B

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B
 Analytical Date: 05/31/21 15:53
 Analyst: AR

Extraction Method: EPA 3510C
 Extraction Date: 05/30/21 17:28

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 02-04 Batch: WG1505588-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
4,4'-DDT	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A
Chlordane	ND		ug/l	0.143	0.033	A

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
 Analytical Date: 05/31/21 15:53
 Analyst: AR

Extraction Method: EPA 3510C
 Extraction Date: 05/30/21 17:28

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 02-04 Batch: WG1505588-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	54		30-150	B

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Project Number:** 19.9379**Lab Number:** L2127871**Report Date:** 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 02-04 Batch: WG1505122-2 WG1505122-3									
2,4-D	106		106		30-150	0		25	A
2,4,5-T	100		99		30-150	1		25	A
2,4,5-TP (Silvex)	102		101		30-150	1		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	103		99		30-150	A
DCAA	113		109		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 02-04 Batch: WG1505588-2 WG1505588-3									
Delta-BHC	98		64		30-150	43	Q	20	A
Lindane	107		71		30-150	41	Q	20	A
Alpha-BHC	116		78		30-150	39	Q	20	A
Beta-BHC	106		70		30-150	41	Q	20	A
Heptachlor	109		73		30-150	40	Q	20	A
Aldrin	108		69		30-150	44	Q	20	A
Heptachlor epoxide	111		70		30-150	46	Q	20	A
Endrin	110		73		30-150	41	Q	20	A
Endrin aldehyde	101		67		30-150	41	Q	20	A
Endrin ketone	115		77		30-150	40	Q	20	A
Dieldrin	119		76		30-150	45	Q	20	A
4,4'-DDE	113		73		30-150	43	Q	20	A
4,4'-DDD	120		81		30-150	39	Q	20	A
4,4'-DDT	125		82		30-150	41	Q	20	A
Endosulfan I	118		75		30-150	45	Q	20	A
Endosulfan II	115		76		30-150	40	Q	20	A
Endosulfan sulfate	110		73		30-150	40	Q	20	A
Methoxychlor	129		86		30-150	40	Q	20	A
cis-Chlordane	107		68		30-150	45	Q	20	A
trans-Chlordane	107		68		30-150	45	Q	20	A

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 02-04 Batch: WG1505588-2 WG1505588-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	105		74		30-150	A
Decachlorobiphenyl	91		63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	103		70		30-150	B
Decachlorobiphenyl	87		59		30-150	B

METALS

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-02

Date Collected: 05/25/21 17:20

Client ID: ALLIED SUPPLY WELL-Z3

Date Received: 05/25/21

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1.67		mg/l	0.0100	0.00327	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Antimony, Total	ND		mg/l	0.00400	0.00042	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Arsenic, Total	0.00193		mg/l	0.00050	0.00016	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Barium, Total	0.4132		mg/l	0.00050	0.00017	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Beryllium, Total	0.00034	J	mg/l	0.00050	0.00010	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Calcium, Total	4.94		mg/l	0.100	0.0394	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Chromium, Total	0.00318		mg/l	0.00100	0.00017	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Cobalt, Total	0.00191		mg/l	0.00050	0.00016	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Copper, Total	0.00071	J	mg/l	0.00100	0.00038	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Iron, Total	4.42		mg/l	0.0500	0.0191	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Lead, Total	0.00389		mg/l	0.00100	0.00034	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Magnesium, Total	1.27		mg/l	0.0700	0.0242	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Manganese, Total	0.08696		mg/l	0.00100	0.00044	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Mercury, Total	ND		mg/l	0.00020	0.00009	1	05/27/21 14:15	06/04/21 20:19	EPA 7470A	1,7470A	NB
Nickel, Total	0.00503		mg/l	0.00200	0.00055	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Potassium, Total	3.56		mg/l	0.100	0.0309	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Silver, Total	ND		mg/l	0.00040	0.00016	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Sodium, Total	223.		mg/l	0.100	0.0293	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Thallium, Total	ND		mg/l	0.00100	0.00014	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Vanadium, Total	0.00225	J	mg/l	0.00500	0.00157	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD
Zinc, Total	0.08379		mg/l	0.01000	0.00341	1	05/27/21 13:18	06/08/21 11:23	EPA 3005A	1,6020B	CD



Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-03

Date Collected: 05/25/21 10:25

Client ID: ALLIED SUPPLY WELL-Z2

Date Received: 05/25/21

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.299		mg/l	0.0100	0.00327	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Antimony, Total	ND		mg/l	0.00400	0.00042	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Arsenic, Total	0.00144		mg/l	0.00050	0.00016	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Barium, Total	0.1545		mg/l	0.00050	0.00017	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Cadmium, Total	0.00051		mg/l	0.00020	0.00005	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Calcium, Total	7.22		mg/l	0.100	0.0394	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Chromium, Total	0.00135		mg/l	0.00100	0.00017	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Cobalt, Total	0.00038	J	mg/l	0.00050	0.00016	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Copper, Total	0.00225		mg/l	0.00100	0.00038	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Iron, Total	1.31		mg/l	0.0500	0.0191	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Lead, Total	0.00504		mg/l	0.00100	0.00034	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Magnesium, Total	0.925		mg/l	0.0700	0.0242	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Manganese, Total	0.05339		mg/l	0.00100	0.00044	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Mercury, Total	ND		mg/l	0.00020	0.00009	1	05/27/21 14:15	06/04/21 20:22	EPA 7470A	1,7470A	NB
Nickel, Total	0.00827		mg/l	0.00200	0.00055	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Potassium, Total	3.67		mg/l	0.100	0.0309	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Silver, Total	ND		mg/l	0.00040	0.00016	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Sodium, Total	211.		mg/l	0.100	0.0293	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Thallium, Total	ND		mg/l	0.00100	0.00014	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD
Zinc, Total	0.8148		mg/l	0.01000	0.00341	1	05/27/21 13:18	06/08/21 11:28	EPA 3005A	1,6020B	CD



Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**SAMPLE RESULTS**

Lab ID: L2127871-04

Date Collected: 05/25/21 12:30

Client ID: ALLIED SUPPLY WELL-Z1

Date Received: 05/25/21

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.185		mg/l	0.0100	0.00327	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Antimony, Total	0.00150	J	mg/l	0.00400	0.00042	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Arsenic, Total	0.00125		mg/l	0.00050	0.00016	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Barium, Total	0.2766		mg/l	0.00050	0.00017	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Cadmium, Total	0.00009	J	mg/l	0.00020	0.00005	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Calcium, Total	9.85		mg/l	0.100	0.0394	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Chromium, Total	0.00088	J	mg/l	0.00100	0.00017	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Cobalt, Total	0.00034	J	mg/l	0.00050	0.00016	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Copper, Total	0.00457		mg/l	0.00100	0.00038	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Iron, Total	0.810		mg/l	0.0500	0.0191	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Lead, Total	0.00361		mg/l	0.00100	0.00034	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Magnesium, Total	1.99		mg/l	0.0700	0.0242	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Manganese, Total	0.04058		mg/l	0.00100	0.00044	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Mercury, Total	ND		mg/l	0.00020	0.00009	1	05/27/21 14:15	06/04/21 20:26	EPA 7470A	1,7470A	NB
Nickel, Total	0.00289		mg/l	0.00200	0.00055	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Potassium, Total	4.36		mg/l	0.100	0.0309	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Silver, Total	ND		mg/l	0.00040	0.00016	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Sodium, Total	198.		mg/l	0.100	0.0293	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Thallium, Total	ND		mg/l	0.00100	0.00014	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD
Zinc, Total	0.4491		mg/l	0.01000	0.00341	1	05/27/21 13:18	06/08/21 11:33	EPA 3005A	1,6020B	CD



Project Name: ALLIED HEALTHCARE PRODUCTS

Lab Number: L2127871

Project Number: 19.9379

Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02-04 Batch: WG1504437-1										
Aluminum, Total	0.00332	J	mg/l	0.0100	0.00327	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Antimony, Total	ND		mg/l	0.00400	0.00042	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Barium, Total	ND		mg/l	0.00050	0.00017	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Calcium, Total	ND		mg/l	0.100	0.0394	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Chromium, Total	ND		mg/l	0.00100	0.00017	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Copper, Total	ND		mg/l	0.00100	0.00038	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Iron, Total	ND		mg/l	0.0500	0.0191	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Lead, Total	ND		mg/l	0.00100	0.00034	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Manganese, Total	ND		mg/l	0.00100	0.00044	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Nickel, Total	ND		mg/l	0.00200	0.00055	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Potassium, Total	ND		mg/l	0.100	0.0309	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Silver, Total	ND		mg/l	0.00040	0.00016	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Sodium, Total	ND		mg/l	0.100	0.0293	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Thallium, Total	ND		mg/l	0.00100	0.00014	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD
Zinc, Total	ND		mg/l	0.01000	0.00341	1	05/27/21 13:18	06/03/21 11:00	1,6020B	CD

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02-04 Batch: WG1504440-1										
Mercury, Total	ND		mg/l	0.00020	0.00009	1	05/27/21 14:15	06/03/21 09:38	1,7470A	OU



Project Name: ALLIED HEALTHCARE PRODUCTS

Lab Number: L2127871

Project Number: 19.9379

Report Date: 06/08/21

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-04 Batch: WG1504437-2								
Aluminum, Total	106		-		80-120	-		
Antimony, Total	96		-		80-120	-		
Arsenic, Total	106		-		80-120	-		
Barium, Total	104		-		80-120	-		
Beryllium, Total	107		-		80-120	-		
Cadmium, Total	108		-		80-120	-		
Calcium, Total	107		-		80-120	-		
Chromium, Total	105		-		80-120	-		
Cobalt, Total	106		-		80-120	-		
Copper, Total	107		-		80-120	-		
Iron, Total	105		-		80-120	-		
Lead, Total	103		-		80-120	-		
Magnesium, Total	109		-		80-120	-		
Manganese, Total	103		-		80-120	-		
Nickel, Total	103		-		80-120	-		
Potassium, Total	106		-		80-120	-		
Selenium, Total	104		-		80-120	-		
Silver, Total	108		-		80-120	-		
Sodium, Total	110		-		80-120	-		
Thallium, Total	101		-		80-120	-		
Vanadium, Total	104		-		80-120	-		

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Project Number:** 19.9379**Lab Number:** L2127871**Report Date:** 06/08/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-04 Batch: WG1504437-2					
Zinc, Total	114	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 02-04 Batch: WG1504440-2					
Mercury, Total	116	-	80-120	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-04			QC Batch ID: WG1504437-3			QC Sample: L2126877-01			Client ID: MS Sample			
Aluminum, Total	1.36	2	3.63	114		-	-		75-125	-		20
Antimony, Total	0.00056J	0.5	0.4806	96		-	-		75-125	-		20
Arsenic, Total	0.04788	0.12	0.1804	110		-	-		75-125	-		20
Barium, Total	11.70	2	14.76	153	Q	-	-		75-125	-		20
Beryllium, Total	0.00026J	0.05	0.05232	105		-	-		75-125	-		20
Cadmium, Total	0.00014J	0.051	0.05091	100		-	-		75-125	-		20
Calcium, Total	220.	10	253	330	Q	-	-		75-125	-		20
Chromium, Total	0.01117	0.2	0.2086	99		-	-		75-125	-		20
Cobalt, Total	0.00522	0.5	0.5008	99		-	-		75-125	-		20
Copper, Total	0.01193	0.25	0.2617	100		-	-		75-125	-		20
Iron, Total	277.	1	285	800	Q	-	-		75-125	-		20
Lead, Total	0.01498	0.51	0.5359	102		-	-		75-125	-		20
Magnesium, Total	87.8	10	106	182	Q	-	-		75-125	-		20
Manganese, Total	1.342	0.5	1.923	116		-	-		75-125	-		20
Nickel, Total	0.04485	0.5	0.5208	95		-	-		75-125	-		20
Potassium, Total	45.2	10	59.2	140	Q	-	-		75-125	-		20
Selenium, Total	ND	0.12	0.124	103		-	-		75-125	-		20
Silver, Total	ND	0.05	0.05032	101		-	-		75-125	-		20
Sodium, Total	413.	10	455	420	Q	-	-		75-125	-		20
Thallium, Total	ND	0.12	0.1226	102		-	-		75-125	-		20
Vanadium, Total	0.00639	0.5	0.5033	99		-	-		75-125	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS

Project Number: 19.9379

Lab Number: L2127871

Report Date: 06/08/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-04			QC Batch ID: WG1504437-3		QC Sample: L2126877-01		Client ID: MS Sample		
Zinc, Total	0.02609	0.5	0.5592	107	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 02-04			QC Batch ID: WG1504440-3		QC Sample: L2126877-01		Client ID: MS Sample		
Mercury, Total	ND	0.005	0.00542	108	-	-	75-125	-	20

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2127871
Report Date: 06/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-04 QC Batch ID: WG1504437-4 QC Sample: L2126877-01 Client ID: DUP Sample						
Aluminum, Total	1.36	1.82	mg/l	29	Q	20
Antimony, Total	0.00056J	0.00061J	mg/l	NC		20
Arsenic, Total	0.04788	0.05165	mg/l	8		20
Beryllium, Total	0.00026J	0.00028J	mg/l	NC		20
Cadmium, Total	0.00014J	0.00015J	mg/l	NC		20
Calcium, Total	220.	239	mg/l	8		20
Chromium, Total	0.01117	0.01369	mg/l	20		20
Cobalt, Total	0.00522	0.00568	mg/l	8		20
Copper, Total	0.01193	0.01335	mg/l	11		20
Iron, Total	277.	296	mg/l	7		20
Lead, Total	0.01498	0.01649	mg/l	10		20
Magnesium, Total	87.8	94.8	mg/l	8		20
Manganese, Total	1.342	1.434	mg/l	7		20
Nickel, Total	0.04485	0.04884	mg/l	9		20
Potassium, Total	45.2	49.1	mg/l	8		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Sodium, Total	413.	444	mg/l	7		20
Thallium, Total	ND	ND	mg/l	NC		20

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2127871
Report Date: 06/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-04 QC Batch ID: WG1504437-4 QC Sample: L2126877-01 Client ID: DUP Sample					
Vanadium, Total	0.00639	0.00756	mg/l	17	20
Zinc, Total	0.02609	0.03141	mg/l	19	20
Total Metals - Mansfield Lab Associated sample(s): 02-04 QC Batch ID: WG1504437-4 QC Sample: L2126877-01 Client ID: DUP Sample					
Barium, Total	11.70	12.24	mg/l	5	20
Total Metals - Mansfield Lab Associated sample(s): 02-04 QC Batch ID: WG1504440-4 QC Sample: L2126877-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS & MISCELLANEOUS

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-02
Client ID: ALLIED SUPPLY WELL-Z3
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 17:20
Date Received: 05/25/21
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										
Cyanide, Total	ND		mg/l	0.005	0.001	1	06/03/21 23:10	06/04/21 11:36	1,9010C/9012B	CR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/26/21 08:00	05/26/21 08:31	1,7196A	KP



Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-03
Client ID: ALLIED SUPPLY WELL-Z2
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 10:25
Date Received: 05/25/21
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										
Cyanide, Total	ND		mg/l	0.005	0.001	1	06/03/21 23:10	06/04/21 11:37	1,9010C/9012B	CR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/26/21 08:00	05/26/21 08:31	1,7196A	KP



Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

SAMPLE RESULTS

Lab ID: L2127871-04
Client ID: ALLIED SUPPLY WELL-Z1
Sample Location: STUYVESANT FALLS, NY

Date Collected: 05/25/21 12:30
Date Received: 05/25/21
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										
Cyanide, Total	ND		mg/l	0.005	0.001	1	06/03/21 23:10	06/04/21 11:38	1,9010C/9012B	CR
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/26/21 08:00	05/26/21 08:32	1,7196A	KP



Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

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): 02-04 Batch: WG1503821-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/26/21 08:00	05/26/21 08:30	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG1507387-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	06/03/21 23:10	06/04/21 11:17	1,9010C/9012B	CR

Lab Control Sample Analysis**Batch Quality Control****Project Name:** ALLIED HEALTHCARE PRODUCTS**Project Number:** 19.9379**Lab Number:** L2127871**Report Date:** 06/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG1503821-2								
Chromium, Hexavalent	110		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG1507387-2 WG1507387-3								
Cyanide, Total	110		105		85-115	5		20

Matrix Spike Analysis Batch Quality Control

Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

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): 02-04 QC Batch ID: WG1503821-4 QC Sample: L2127871-04 Client ID: ALLIED SUPPLY WELL-Z1												
Chromium, Hexavalent	ND	0.1	0.112	112		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG1507387-4 WG1507387-5 QC Sample: L2127430-01 Client ID: MS Sample												
Cyanide, Total	0.002J	0.2	0.181	90		0.194	97		80-120	7		20

Project Name: ALLIED HEALTHCARE PRODUCTS**Project Number:** 19.9379**Lab Duplicate Analysis***Batch Quality Control***Lab Number:** L2127871**Report Date:** 06/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG1503821-3 QC Sample: L2127871-03 Client ID: ALLIED SUPPLY WELL-Z2						
Chromium, Hexavalent	ND	ND	mg/l	NC		20

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2127871-01A	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)
L2127871-01B	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)
L2127871-02A	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260-R2(14)
L2127871-02B	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260-R2(14)
L2127871-02C	Vial HCl preserved	A	NA		4.1	Y	Absent		NYTCL-8260-R2(14)
L2127871-02D	Plastic 250ml HNO3 preserved	A	<2	<2	4.1	Y	Absent		BA-6020T(180),FE-6020T(180),TL-6020T(180),SE-6020T(180),CR-6020T(180),NI-6020T(180),K-6020T(180),CA-6020T(180),NA-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),MN-6020T(180),BE-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),CD-6020T(180),AG-6020T(180),AL-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L2127871-02E	Plastic 250ml NaOH preserved	A	>12	>12	4.1	Y	Absent		TCN-9010(14)
L2127871-02F	Amber 120ml unpreserved	A	7	7	4.1	Y	Absent		HEXCR-7196(1)
L2127871-02G	Amber 120ml unpreserved	A	7	7	4.1	Y	Absent		NYTCL-8081(7)
L2127871-02H	Amber 120ml unpreserved	A	7	7	4.1	Y	Absent		NYTCL-8082-LVI(365)
L2127871-02I	Amber 120ml unpreserved	A	7	7	4.1	Y	Absent		NYTCL-8082-LVI(365)
L2127871-02J	Amber 250ml unpreserved	A	7	7	4.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2127871-02K	Amber 250ml unpreserved	A	7	7	4.1	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2127871-02L	Amber 250ml unpreserved	A	7	7	4.1	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2127871-02M	Amber 250ml unpreserved	A	7	7	4.1	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2127871-02N	Amber 1000ml unpreserved	A	7	7	4.1	Y	Absent		HERB-APA(7)
L2127871-02O	Amber 1000ml unpreserved	A	7	7	4.1	Y	Absent		HERB-APA(7)
L2127871-03A	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)

Project Name: ALLIED HEALTHCARE PRODUCTS**Lab Number:** L2127871**Project Number:** 19.9379**Report Date:** 06/08/21**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2127871-03B	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)
L2127871-03C	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)
L2127871-03D	Plastic 250ml HNO3 preserved	B	<2	<2	2.8	Y	Absent		BA-6020T(180),SE-6020T(180),TL-6020T(180),FE-6020T(180),K-6020T(180),CA-6020T(180),CR-6020T(180),NI-6020T(180),ZN-6020T(180),CU-6020T(180),NA-6020T(180),PB-6020T(180),MN-6020T(180),BE-6020T(180),SB-6020T(180),AS-6020T(180),V-6020T(180),AG-6020T(180),HG-T(28),AL-6020T(180),MG-6020T(180),CD-6020T(180),CO-6020T(180)
L2127871-03E	Plastic 250ml NaOH preserved	B	>12	>12	2.8	Y	Absent		TCN-9010(14)
L2127871-03F	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		HEXCR-7196(1)
L2127871-03G	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8081(7)
L2127871-03H	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8082-LVI(365)
L2127871-03I	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8082-LVI(365)
L2127871-03J	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2127871-03K	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2127871-03L	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2127871-03M	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2127871-03N	Amber 1000ml unpreserved	B	7	7	2.8	Y	Absent		HERB-APA(7)
L2127871-03O	Amber 1000ml unpreserved	B	7	7	2.8	Y	Absent		HERB-APA(7)
L2127871-04A	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)
L2127871-04B	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)
L2127871-04C	Vial HCl preserved	B	NA		2.8	Y	Absent		NYTCL-8260-R2(14)
L2127871-04D	Plastic 250ml HNO3 preserved	B	<2	<2	2.8	Y	Absent		BA-6020T(180),SE-6020T(180),TL-6020T(180),FE-6020T(180),K-6020T(180),NI-6020T(180),CR-6020T(180),CA-6020T(180),ZN-6020T(180),NA-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),SB-6020T(180),AS-6020T(180),V-6020T(180),AG-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),AL-6020T(180),CO-6020T(180)
L2127871-04E	Plastic 250ml NaOH preserved	B	>12	>12	2.8	Y	Absent		TCN-9010(14)
L2127871-04F	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		HEXCR-7196(1)

Project Name: ALLIED HEALTHCARE PRODUCTS
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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2127871-04G	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8081(7)
L2127871-04H	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8082-LVI(365)
L2127871-04I	Amber 120ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8082-LVI(365)
L2127871-04J	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2127871-04K	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2127871-04L	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2127871-04M	Amber 250ml unpreserved	B	7	7	2.8	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2127871-04N	Amber 1000ml unpreserved	B	7	7	2.8	Y	Absent		HERB-APA(7)
L2127871-04O	Amber 1000ml unpreserved	B	7	7	2.8	Y	Absent		HERB-APA(7)

Project Name: ALLIED HEALTHCARE PRODUCTS
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GLOSSARY

Acronyms

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

Report Format: DU Report with 'J' Qualifiers



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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.

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

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

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

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

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

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

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

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



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Data Qualifiers

- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLIED HEALTHCARE PRODUCTS
Project Number: 19.9379

Lab Number: L2127871
Report Date: 06/08/21

REFERENCES

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

LIMITATION OF LIABILITIES

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

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



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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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, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**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, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-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, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

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

 NEW YORK CHAIN OF CUSTODY Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193 Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page 1 of 1		Date Rec'd in Lab 5/26/21		ALPHA Job # 62127871	
		Project Information Project Name: <u>Allied Healthcare Products</u> Project Location: <u>Stuyvesant Falls, NY</u> Project # <u>19,9379</u> (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQuIS (1 File) <input checked="" type="checkbox"/> EQuIS (4 File) <input type="checkbox"/> Other		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #			
Client Information Client: <u>C.T. Male Associates</u> Address: <u>50 Century Hill Dr.</u> <u>Latham, NY 12110</u> Phone: <u>518-786-7400</u> Fax: Email: <u>K.moline@ctmale.com</u>		Project Manager: <u>Kirk Moline</u> ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:			
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments:						ANALYSIS		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)	
Please specify Metals or TAL.						TCL VOCs + 10 TICs TCL SVOCs + 20 TICs PCBS Pesticides/Herbicides TAL Metals + Hg + Hex + Chromium Cyanide 1,4-Dioxane		Sample Specific Comments	
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials	
27871-01		Trip Blank		5/25/21 1000		RW		DK	
-02		Allied Supply Well-Z#3		1720		GW		DK	
-03		Allied Supply Well-Z2		1025		GW		DK	
-04		Allied Supply Well-Z#1		1230		GW		DK	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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		V A A A P P A B A A A C E A	
Relinquished By:		Date/Time		Received By:		Date/Time		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.)	
[Signature]		5/25/21-1845		[Signature]		5/25/21 22:10 5/26/21 00:30			
Form No: 01-25 HC (rev. 30-Sept-2013)									



ANALYTICAL REPORT

Lab Number:	L1941701
Client:	C.T. Male Associates 50 Century Hill Drive Latham, NY 12210
ATTN:	Kirk Moline
Phone:	(518) 786-7400
Project Name:	ALLIED HEALTH
Project Number:	19.9379
Report Date:	09/19/19

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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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1941701-01	TRIP BLANK	WATER	STUYVESANT FALLS, NY	09/12/19 00:00	09/12/19
L1941701-02	PRE-AERATOR	WATER	STUYVESANT FALLS, NY	09/12/19 09:20	09/12/19
L1941701-03	POST-AERATOR	WATER	STUYVESANT FALLS, NY	09/12/19 09:30	09/12/19
L1941701-04	PRE-PRODUCTION	WATER	STUYVESANT FALLS, NY	09/12/19 09:32	09/12/19
L1941701-05	SINK	WATER	STUYVESANT FALLS, NY	09/12/19 09:45	09/12/19

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Case Narrative

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

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

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

Soil/sediments, 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.

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

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

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

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.

Volatile Organics

L1941701-01: The Trip Blank has a result for acetone present above the reporting limit. The sample was verified as being labeled correctly by the laboratory and the previous analysis showed there was no potential for carry over.

L1941701-02 and -05: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

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

Authorized Signature:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 09/19/19

ORGANICS

VOLATILES

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-01
 Client ID: TRIP BLANK
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 00:00
 Date Received: 09/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 09/17/19 17:51
 Analyst: PK

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: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS****Lab ID:** L1941701-01**Date Collected:** 09/12/19 00:00**Client ID:** TRIP BLANK**Date Received:** 09/12/19**Sample Location:** STUYVESANT FALLS, 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	5.7		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	106		70-130
Toluene-d8	87		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	101		70-130

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-02 D
 Client ID: PRE-AERATOR
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:20
 Date Received: 09/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 09/18/19 12:14
 Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	5.9	J	ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	250		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	ND		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	ND		ug/l	12	3.5	5
Ethylbenzene	ND		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	ND		ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	ND		ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5
Trichloroethene	3.7		ug/l	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-02 D
 Client ID: PRE-AERATOR
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:20
 Date Received: 09/12/19
 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	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	ND		ug/l	12	3.5	5
o-Xylene	ND		ug/l	12	3.5	5
cis-1,2-Dichloroethene	ND		ug/l	12	3.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	100		ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Isopropylbenzene	ND		ug/l	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
Methyl Acetate	ND		ug/l	10	1.2	5
Cyclohexane	ND		ug/l	50	1.4	5
1,4-Dioxane	ND		ug/l	1200	300	5
Freon-113	ND		ug/l	12	3.5	5
Methyl cyclohexane	ND		ug/l	50	2.0	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	97		70-130

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-03 D
 Client ID: POST-AERETOR
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:30
 Date Received: 09/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 09/18/19 12:39
 Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	5.1	J	ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	240		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	ND		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	ND		ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	ND		ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Trichloroethene	2.2		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-03 D
 Client ID: POST-AERETOR
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:30
 Date Received: 09/12/19
 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	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	130		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl Acetate	ND		ug/l	5.0	0.58	2.5
Cyclohexane	ND		ug/l	25	0.68	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
Freon-113	ND		ug/l	6.2	1.8	2.5
Methyl cyclohexane	ND		ug/l	25	0.99	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	97		70-130

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-04
 Client ID: PRE-PRODUCTION
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:32
 Date Received: 09/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 09/18/19 13:29
 Analyst: PK

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	37		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: ALLIED HEALTH

Lab Number: L1941701

Project Number: 19.9379

Report Date: 09/19/19

SAMPLE RESULTS

Lab ID: L1941701-04
 Client ID: PRE-PRODUCTION
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:32
 Date Received: 09/12/19
 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	6.8		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	100		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	89		70-130
Dibromofluoromethane	100		70-130

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-05 D
 Client ID: SINK
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:45
 Date Received: 09/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 09/18/19 13:04
 Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.8	J	ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	120		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	ND		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	ND		ug/l	1.2	0.40	2.5
Toluene	ND		ug/l	6.2	1.8	2.5
Ethylbenzene	ND		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	ND		ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Trichloroethene	1.2		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**SAMPLE RESULTS**

Lab ID: L1941701-05 D
 Client ID: SINK
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/12/19 09:45
 Date Received: 09/12/19
 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	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	ND		ug/l	6.2	1.8	2.5
o-Xylene	ND		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	130		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	ND		ug/l	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl Acetate	ND		ug/l	5.0	0.58	2.5
Cyclohexane	ND		ug/l	25	0.68	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
Freon-113	ND		ug/l	6.2	1.8	2.5
Methyl cyclohexane	ND		ug/l	25	0.99	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	97		70-130

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/17/19 09:25
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1285257-5					
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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/17/19 09:25
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1285257-5					
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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/17/19 09:25
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1285257-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	100		70-130

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/18/19 08:30
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-05 Batch: WG1285576-5					
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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 09/18/19 08:30
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-05 Batch: WG1285576-5					
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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/18/19 08:30
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-05 Batch: WG1285576-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	101		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

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: WG1285257-3 WG1285257-4								
Methylene chloride	85		81		70-130	5		20
1,1-Dichloroethane	95		93		70-130	2		20
Chloroform	84		84		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	88		88		70-130	0		20
Dibromochloromethane	96		93		63-130	3		20
1,1,2-Trichloroethane	76		74		70-130	3		20
Tetrachloroethene	89		86		70-130	3		20
Chlorobenzene	87		86		75-130	1		20
Trichlorofluoromethane	80		78		62-150	3		20
1,2-Dichloroethane	98		97		70-130	1		20
1,1,1-Trichloroethane	95		94		67-130	1		20
Bromodichloromethane	83		84		67-130	1		20
trans-1,3-Dichloropropene	79		78		70-130	1		20
cis-1,3-Dichloropropene	88		86		70-130	2		20
Bromoform	84		86		54-136	2		20
1,1,2,2-Tetrachloroethane	75		74		67-130	1		20
Benzene	79		77		70-130	3		20
Toluene	82		82		70-130	0		20
Ethylbenzene	85		83		70-130	2		20
Chloromethane	92		88		64-130	4		20
Bromomethane	52		50		39-139	4		20
Vinyl chloride	90		88		55-140	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

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: WG1285257-3 WG1285257-4								
Chloroethane	93		88		55-138	6		20
1,1-Dichloroethene	86		84		61-145	2		20
trans-1,2-Dichloroethene	92		87		70-130	6		20
Trichloroethene	88		86		70-130	2		20
1,2-Dichlorobenzene	94		92		70-130	2		20
1,3-Dichlorobenzene	92		91		70-130	1		20
1,4-Dichlorobenzene	92		93		70-130	1		20
Methyl tert butyl ether	88		86		63-130	2		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	93		89		70-130	4		20
Styrene	90		90		70-130	0		20
Dichlorodifluoromethane	78		74		36-147	5		20
Acetone	100		100		58-148	0		20
Carbon disulfide	68		66		51-130	3		20
2-Butanone	110		110		63-138	0		20
4-Methyl-2-pentanone	92		91		59-130	1		20
2-Hexanone	100		100		57-130	0		20
Bromochloromethane	110		110		70-130	0		20
1,2-Dibromoethane	88		87		70-130	1		20
1,2-Dibromo-3-chloropropane	99		94		41-144	5		20
Isopropylbenzene	84		84		70-130	0		20
1,2,3-Trichlorobenzene	96		93		70-130	3		20

Lab Control Sample Analysis Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

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: WG1285257-3 WG1285257-4								
1,2,4-Trichlorobenzene	96		93		70-130	3		20
Methyl Acetate	110		110		70-130	0		20
Cyclohexane	95		92		70-130	3		20
1,4-Dioxane	90		88		56-162	2		20
Freon-113	85		81		70-130	5		20
Methyl cyclohexane	71		70		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		98		70-130
Toluene-d8	88		89		70-130
4-Bromofluorobenzene	83		85		70-130
Dibromofluoromethane	98		99		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-05 Batch: WG1285576-3 WG1285576-4								
Methylene chloride	97		96		70-130	1		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	100		94		70-130	6		20
Carbon tetrachloride	95		92		63-132	3		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	95		94		63-130	1		20
1,1,2-Trichloroethane	99		100		70-130	1		20
Tetrachloroethene	96		94		70-130	2		20
Chlorobenzene	93		92		75-130	1		20
Trichlorofluoromethane	96		92		62-150	4		20
1,2-Dichloroethane	94		96		70-130	2		20
1,1,1-Trichloroethane	92		90		67-130	2		20
Bromodichloromethane	96		94		67-130	2		20
trans-1,3-Dichloropropene	94		93		70-130	1		20
cis-1,3-Dichloropropene	92		92		70-130	0		20
Bromoform	94		99		54-136	5		20
1,1,2,2-Tetrachloroethane	96		99		67-130	3		20
Benzene	100		100		70-130	0		20
Toluene	96		94		70-130	2		20
Ethylbenzene	96		94		70-130	2		20
Chloromethane	130		120		64-130	8		20
Bromomethane	40		37	Q	39-139	8		20
Vinyl chloride	88		84		55-140	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-05 Batch: WG1285576-3 WG1285576-4								
Chloroethane	77		73		55-138	5		20
1,1-Dichloroethene	99		99		61-145	0		20
trans-1,2-Dichloroethene	97		96		70-130	1		20
Trichloroethene	97		96		70-130	1		20
1,2-Dichlorobenzene	95		96		70-130	1		20
1,3-Dichlorobenzene	98		99		70-130	1		20
1,4-Dichlorobenzene	97		95		70-130	2		20
Methyl tert butyl ether	81		81		63-130	0		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	95		95		70-130	0		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	140		130		36-147	7		20
Acetone	130		140		58-148	7		20
Carbon disulfide	120		110		51-130	9		20
2-Butanone	120		120		63-138	0		20
4-Methyl-2-pentanone	86		92		59-130	7		20
2-Hexanone	87		89		57-130	2		20
Bromochloromethane	96		95		70-130	1		20
1,2-Dibromoethane	91		90		70-130	1		20
1,2-Dibromo-3-chloropropane	84		91		41-144	8		20
Isopropylbenzene	87		87		70-130	0		20
1,2,3-Trichlorobenzene	89		92		70-130	3		20

Lab Control Sample Analysis Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-05 Batch: WG1285576-3 WG1285576-4								
1,2,4-Trichlorobenzene	91		90		70-130	1		20
Methyl Acetate	130		130		70-130	0		20
Cyclohexane	100		100		70-130	0		20
1,4-Dioxane	82		78		56-162	5		20
Freon-113	100		100		70-130	0		20
Methyl cyclohexane	90		88		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	103		102		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	81		82		70-130
Dibromofluoromethane	95		95		70-130

METALS

Project Name: ALLIED HEALTH

Lab Number: L1941701

Project Number: 19.9379

Report Date: 09/19/19

SAMPLE RESULTS

Lab ID: L1941701-02

Date Collected: 09/12/19 09:20

Client ID: PRE-AERATOR

Date Received: 09/12/19

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	1.13		mg/l	0.0100	0.00327	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00063		mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Barium, Total	0.4420		mg/l	0.00050	0.00017	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Beryllium, Total	0.00012	J	mg/l	0.00050	0.00010	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Calcium, Total	1.83		mg/l	0.100	0.0394	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Chromium, Total	0.00129		mg/l	0.00100	0.00017	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Cobalt, Total	0.00056		mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Copper, Total	0.00109		mg/l	0.00100	0.00038	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Iron, Total	1.49		mg/l	0.0500	0.0191	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Lead, Total	0.00049	J	mg/l	0.00100	0.00034	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Magnesium, Total	0.694		mg/l	0.0700	0.0242	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Manganese, Total	0.02092		mg/l	0.00100	0.00044	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Mercury, Total	ND		mg/l	0.00020	0.00009	1	09/17/19 14:15	09/17/19 18:01	EPA 7470A	1,7470A	GD
Nickel, Total	0.00093	J	mg/l	0.00200	0.00055	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Potassium, Total	3.62		mg/l	0.100	0.0309	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Sodium, Total	301.		mg/l	0.100	0.0293	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Vanadium, Total	0.00163	J	mg/l	0.00500	0.00157	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM
Zinc, Total	0.00377	J	mg/l	0.01000	0.00341	1	09/17/19 18:20	09/18/19 14:23	EPA 3005A	1,6020B	AM



Project Name: ALLIED HEALTH

Lab Number: L1941701

Project Number: 19.9379

Report Date: 09/19/19

SAMPLE RESULTS

Lab ID: L1941701-03

Date Collected: 09/12/19 09:30

Client ID: POST-AERETOR

Date Received: 09/12/19

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.635		mg/l	0.0100	0.00327	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00024	J	mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Barium, Total	0.3291		mg/l	0.00050	0.00017	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Calcium, Total	1.88		mg/l	0.100	0.0394	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Chromium, Total	0.00049	J	mg/l	0.00100	0.00017	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Cobalt, Total	0.00028	J	mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Copper, Total	0.00452		mg/l	0.00100	0.00038	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Iron, Total	0.802		mg/l	0.0500	0.0191	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Lead, Total	0.00072	J	mg/l	0.00100	0.00034	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Magnesium, Total	0.563		mg/l	0.0700	0.0242	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Manganese, Total	0.01013		mg/l	0.00100	0.00044	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Mercury, Total	ND		mg/l	0.00020	0.00009	1	09/17/19 14:15	09/17/19 18:03	EPA 7470A	1,7470A	GD
Nickel, Total	0.00061	J	mg/l	0.00200	0.00055	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Potassium, Total	3.49		mg/l	0.100	0.0309	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Sodium, Total	271.		mg/l	0.100	0.0293	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM
Zinc, Total	0.01043		mg/l	0.01000	0.00341	1	09/17/19 18:20	09/18/19 14:28	EPA 3005A	1,6020B	AM



Project Name: ALLIED HEALTH

Lab Number: L1941701

Project Number: 19.9379

Report Date: 09/19/19

SAMPLE RESULTS

Lab ID: L1941701-04

Date Collected: 09/12/19 09:32

Client ID: PRE-PRODUCTION

Date Received: 09/12/19

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.258		mg/l	0.0100	0.00327	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00040	J	mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Barium, Total	0.3084		mg/l	0.00050	0.00017	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Calcium, Total	2.56		mg/l	0.100	0.0394	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Copper, Total	0.01735		mg/l	0.00100	0.00038	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Iron, Total	0.447		mg/l	0.0500	0.0191	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Lead, Total	0.00046	J	mg/l	0.00100	0.00034	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Magnesium, Total	0.577		mg/l	0.0700	0.0242	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Manganese, Total	0.00645		mg/l	0.00100	0.00044	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Mercury, Total	ND		mg/l	0.00020	0.00009	1	09/17/19 14:15	09/17/19 18:04	EPA 7470A	1,7470A	GD
Nickel, Total	ND		mg/l	0.00200	0.00055	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Potassium, Total	3.62		mg/l	0.100	0.0309	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Sodium, Total	278.		mg/l	0.100	0.0293	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM
Zinc, Total	0.00726	J	mg/l	0.01000	0.00341	1	09/17/19 18:20	09/18/19 15:15	EPA 3005A	1,6020B	AM



Project Name: ALLIED HEALTH

Lab Number: L1941701

Project Number: 19.9379

Report Date: 09/19/19

SAMPLE RESULTS

Lab ID: L1941701-05

Date Collected: 09/12/19 09:45

Client ID: SINK

Date Received: 09/12/19

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.282		mg/l	0.0100	0.00327	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00020	J	mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Barium, Total	0.3241		mg/l	0.00050	0.00017	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Calcium, Total	2.32		mg/l	0.100	0.0394	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Copper, Total	0.01456		mg/l	0.00100	0.00038	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Iron, Total	0.480		mg/l	0.0500	0.0191	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Lead, Total	0.00150		mg/l	0.00100	0.00034	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Magnesium, Total	0.561		mg/l	0.0700	0.0242	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Manganese, Total	0.00718		mg/l	0.00100	0.00044	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Mercury, Total	ND		mg/l	0.00020	0.00009	1	09/17/19 14:15	09/17/19 18:06	EPA 7470A	1,7470A	GD
Nickel, Total	ND		mg/l	0.00200	0.00055	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Potassium, Total	3.59		mg/l	0.100	0.0309	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Sodium, Total	279.		mg/l	0.100	0.0293	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM
Zinc, Total	0.00825	J	mg/l	0.01000	0.00341	1	09/17/19 18:20	09/18/19 15:19	EPA 3005A	1,6020B	AM



Project Name: ALLIED HEALTH

Lab Number: L1941701

Project Number: 19.9379

Report Date: 09/19/19

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02-05 Batch: WG1285100-1										
Mercury, Total	ND		mg/l	0.00020	0.00009	1	09/17/19 14:15	09/17/19 17:43	1,7470A	GD

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02-05 Batch: WG1285204-1										
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Barium, Total	ND		mg/l	0.00050	0.00017	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Calcium, Total	ND		mg/l	0.100	0.0394	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Iron, Total	ND		mg/l	0.0500	0.0191	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Manganese, Total	ND		mg/l	0.00100	0.00044	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Potassium, Total	ND		mg/l	0.100	0.0309	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Sodium, Total	ND		mg/l	0.100	0.0293	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM
Zinc, Total	ND		mg/l	0.01000	0.00341	1	09/17/19 18:20	09/18/19 13:43	1,6020B	AM



Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis
Batch Quality Control**Project Name:** ALLIED HEALTH**Project Number:** 19.9379**Lab Number:** L1941701**Report Date:** 09/19/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-05 Batch: WG1285100-2								
Mercury, Total	92		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-05 Batch: WG1285204-2					
Aluminum, Total	103	-	80-120	-	
Antimony, Total	83	-	80-120	-	
Arsenic, Total	107	-	80-120	-	
Barium, Total	106	-	80-120	-	
Beryllium, Total	109	-	80-120	-	
Cadmium, Total	113	-	80-120	-	
Calcium, Total	103	-	80-120	-	
Chromium, Total	105	-	80-120	-	
Cobalt, Total	105	-	80-120	-	
Copper, Total	98	-	80-120	-	
Iron, Total	106	-	80-120	-	
Lead, Total	111	-	80-120	-	
Magnesium, Total	103	-	80-120	-	
Manganese, Total	107	-	80-120	-	
Nickel, Total	102	-	80-120	-	
Potassium, Total	104	-	80-120	-	
Selenium, Total	111	-	80-120	-	
Silver, Total	105	-	80-120	-	
Sodium, Total	102	-	80-120	-	
Thallium, Total	111	-	80-120	-	
Vanadium, Total	110	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTH**Project Number:** 19.9379**Lab Number:** L1941701**Report Date:** 09/19/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-05 Batch: WG1285204-2					
Zinc, Total	109	-	80-120	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-05			QC Batch ID: WG1285100-3			QC Sample: L1941656-01			Client ID: MS Sample			
Mercury, Total	ND	0.005	0.00483	97		-	-		75-125	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-05			QC Batch ID: WG1285204-3		QC Sample: L1941226-01		Client ID: MS Sample		
Aluminum, Total	ND	2	1.50J	0	Q	-	75-125	-	20
Antimony, Total	ND	0.5	0.5446J	109		-	75-125	-	20
Arsenic, Total	0.1995	0.12	0.3641	0	Q	-	75-125	-	20
Barium, Total	2.539	2	4.478	97		-	75-125	-	20
Beryllium, Total	ND	0.05	0.05335J	0	Q	-	75-125	-	20
Cadmium, Total	ND	0.051	0.06022	118		-	75-125	-	20
Calcium, Total	5350	10	5280	0	Q	-	75-125	-	20
Chromium, Total	ND	0.2	0.09858J	0	Q	-	75-125	-	20
Cobalt, Total	ND	0.5	0.5059	101		-	75-125	-	20
Copper, Total	ND	0.25	0.1934J	77		-	75-125	-	20
Iron, Total	ND	1	ND	0	Q	-	75-125	-	20
Lead, Total	ND	0.51	0.5296	104		-	75-125	-	20
Magnesium, Total	994	10	993	0	Q	-	75-125	-	20
Manganese, Total	44.16	0.5	43.89	0	Q	-	75-125	-	20
Nickel, Total	ND	0.5	0.4587	92		-	75-125	-	20
Potassium, Total	260	10	271	110		-	75-125	-	20
Selenium, Total	ND	0.12	ND	0	Q	-	75-125	-	20
Silver, Total	ND	0.05	0.04928J	98		-	75-125	-	20
Sodium, Total	91200	10	90500	0	Q	-	75-125	-	20
Thallium, Total	ND	0.12	0.1176	98		-	75-125	-	20
Vanadium, Total	ND	0.5	0.4679J	94		-	75-125	-	20

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L1941701

Report Date: 09/19/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-05 QC Batch ID: WG1285204-3 QC Sample: L1941226-01 Client ID: MS Sample									
Zinc, Total	ND	0.5	ND	0	Q	-	-	75-125	- 20

Lab Duplicate Analysis
*Batch Quality Control***Project Name:** ALLIED HEALTH**Project Number:** 19.9379**Lab Number:** L1941701**Report Date:** 09/19/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02-05 QC Batch ID: WG1285100-4 QC Sample: L1941656-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

Project Name: ALLIED HEALTH**Lab Number:** L1941701**Project Number:** 19.9379**Report Date:** 09/19/19**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(*)
L1941701-01A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-01B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-02A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-02B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-02C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-02D	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1941701-03A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-03B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-03C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-03D	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1941701-04A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-04B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-04C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)

Project Name: ALLIED HEALTH
Project Number: 19.9379

Serial_No:09191916:25
Lab Number: L1941701
Report Date: 09/19/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1941701-04D	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)
L1941701-05A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-05B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-05C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L1941701-05D	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		BA-6020T(180),FE-6020T(180),SE-6020T(180),TL-6020T(180),CA-6020T(180),CR-6020T(180),K-6020T(180),NI-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),AS-6020T(180),SB-6020T(180),V-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),MG-6020T(180),CO-6020T(180)

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

- 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.

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

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

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

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.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L1941701
Report Date: 09/19/19

REFERENCES

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

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.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 15

Published Date: 8/15/2019 9:53:42 AM

Page 1 of 1

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), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**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, SM4500NO2-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 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 9/12/19		ALPHA Job # L1941701				
		Project Information Project Name: <u>Allied Health</u> Project Location: <u>Stuyvesant Falls, NY</u> Project # <u>19.9379</u> (Use Project name as Project #) <input type="checkbox"/>				Deliverables <input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other				Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #		
		Client Information Client: <u>C.T. Male Associates</u> Address: <u>50 Century Hill Drive</u> <u>Latham, NY 12110</u> Phone: <u>(518) 786-7400</u> Fax: Email: <u>K.moline@ctmale.com</u>				Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge				Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:		
Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		ANALYSIS <div style="display: flex;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TCL VOCs by EPA 8260</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TAL Metals</div> </div>				Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)		Total Bottles				
These samples have been previously analyzed by Alpha <input type="checkbox"/>		Other project specific requirements/comments:				Please specify Metals or TAL.						
ALPHA Lab ID (Lab Use Only)						Sample ID			Collection Date Time		Sample Matrix Sampler's Initials	
41701 - 01						Trip Blank			09/12/19 —		W —	
02						Pre-Aerator			0920		GW RH	
03		Post-Aerator		0930		GW RH						
04		Pre-Production		0935		GW RH						
05		Sink		0945		GW RH						
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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 V P Preservative B C		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.)				
Relinquished By: <u>[Signature]</u>		Date/Time: <u>09/12/19 11:00</u>		Received By: <u>[Signature]</u>		Date/Time: <u>9/12/19 11:00</u>						
Relinquished By: <u>[Signature]</u>		Date/Time: <u>9-12-19</u>		Received By: <u>[Signature]</u>		Date/Time: <u>9/12/19 12:45</u>						
Relinquished By: <u>[Signature]</u>		Date/Time: <u>9/12/19 16:50</u>		Received By: <u>[Signature]</u>		Date/Time: <u>9/12/19 16:50</u>						



9399 West Higgins Rd Ste 1100
Rosemont, IL, 60018

Phone: 877-889-8195
Web: www.culligan.com

Report Date: 2/5/2021

CERTIFICATE OF ANALYSIS

Page 1 of 9

ANALYSIS NUMBER: 2100882

Culligan Water Conditioning of The Green Mountains,
Vermont
154 Brentwood Drive

Customer: **Allied Healthcare Products**
46 New St.
Stuyvesant Falls NY, 12174

Control Number: 99099

Account Number: 10005018

Collected By: Everett Windover

Misc:

cc: windover@culligan4u.com

SAMPLE INFORMATION:

Analysis Type Requested: Standard A + TOC Analysis

Sampled: 1/22/2021 at 10:43 AM

Supply/Source: Private Well

Condition: Untreated Water

Received: 1/26/2021 at 1:00 PM

Sampling Point:

Application: Commercial

ANALYSIS INFORMATION:

Turbidity* (180.1 Rev. 2 1993):	19.60 NTU	Turbidity after filtration*:	9.53
Conductivity* (120.1):	1269.70 microS/cm	Est. TDS by Conductivity*:	772.23
Color (SM2120C, 21Ed):	65.48 color	Color after Acidification:	7.84 color
pH* (150.1):	8.7	Tannins*:	<2.00 mg/L

Concentrations reported as mg/L (PPM) unless otherwise indicated

CATIONS (Method 200.7 Rev 4.4)

	As Element	As CaCO ₃
Calcium (Ca)	2.61	6.53
Magnesium (Mg)	0.79	3.25
Sodium (Na)	255.90	557.86
Potassium* (K)	4.68	5.99
Strontium* (Sr)	0.25	
Barium (Ba) [ppb]	302.81	
Iron (Fe)	0.73	
Manganese (Mn)	<0.02	
Copper (Cu)	<0.003	
Zinc (Zn)	<0.05	

ANIONS (Method 300.0)

	As Element	As CaCO ₃
Chloride (Cl)	171.41	241.69
Nitrate As N (NO ₃)	<0.20	0.29
Nitrite As N (NO ₂)	<0.10	0.00
Sulfate (SO ₄)	19.50	20.28
Fluoride (F)	1.43	3.68

ANIONS (Method SM3220)

Total Alkalinity	343.36	288.27
Bicarbonate*	335.45	275.07
Carbonate*	7.90	13.20

ANIONS (Method 200.7 Rev 4.4)

Silica (SiO ₂)	10.41
----------------------------	-------

Cations (CaCO ₃)	Mg/L	GPG	Anions (CaCO ₃)	Mg/L	GPG	Hardness* (CaCO ₃)	Mg/L	GPG
	573.63	33.55		554.21	32.41		9.78	0.57

Additional Tests

Aluminum by ICP	514.61 ug/L	Arsenic by ICP (Screen)*	ND ug/L
Iron Related Bacteria*	9000 cfu/mL	Lead by ICP (Screen)*	ND ug/L
Slime Forming Bacteria*	440000 cfu/mL	Sulfate Reducing Bacteria*	Non-detected
TOC	0.44 mg/L		

Analysis Number: **2100882**

Consumer: _____

NA=Not Analyzed NM=Not Measured ND=Not Detected *=non-TNI accredited **=IL-IDPH accredited CFU/ml = Colony Forming Unit per Milliliter
This report can only be reproduced in its entirety. The results reported here are representative of the sample as received in the laboratory. Unless
noted holding times and temperature requirements for method 300 are not followed. pH results are out of hold time.

NELAP Certifications: IL-100213; PA-68-04623; NY-11756; TX-TX269-2007A	Maria Mozdzen
State Certifications: IL-IDPH-17598; CA-2958; MT-CERT0091; IA-369;	Analytical Lab Manager
VT-02199; WI-105-10119; CO-IL100213; MI-9988; MO-1060	

Analysis Number: **2100882**

Consumer: _____

FEDERAL SAFE DRINKING WATER ACT

All tested parameters exceeding the maximum concentration levels (MCL) established under the "Federal Safe Drinking Water Act"

	<u>Parameter</u>	<u>Found</u>	<u>MCL</u>
PRIMARY:			
	Turbidity	19.60 NTU	0.50 NTU
	Turbidity Filtered	9.53 NTU	0.50 NTU
SECONDARY:			
	Aluminum by ICP	514.61 ug/L	200.00 ug/L
	Color	65.48 color	15.00 color
	pH	8.7	8.50
	Est TDS By Conductivity	772.23 mg/L	500.00 mg/L
	Iron (Fe)	0.73 mg/L	0.30 mg/L

* MCL for Turbidity varies as follows:

1. Municipal Direct Filtration 0.5 NTU
2. Municipal Sand Filtration 1.0 NTU
3. Unfiltered Water Supply 5.0 NTU

TYPICAL POST RO DRINKING WATER UNITS

(Concentrations reported as mg/L (PPM) as the element)

Calcium (Ca)	0.05	Sulfate (SO4)	0.39
Iron (Fe)	0.01	Magnesium (Mg)	0.02
Manganese (Mn)	0.00	Sodium (Na)	5.12
Zinc (Zn)	0.00	Potassium (K)	0.14
Copper (Cu)	0.00	Chloride (Cl)	8.57
Nitrate As N (NO3)	0.02	Fluoride (F)	0.07
Nitrite As N (NO3)	0.00		

These values are typical of new modules on water with a pH of 7-9 at 70-74 F with 500-3000 mg/L total salts operating with 40-70 PSI pressure across the module. Local conditions may yield different results.

DI CALCULATION FACTORS

			GPG	mg/L
Sodium	97.25%	Weak Base Fact X	15.32	261.97
Alkalinity	52.01%	Carbonic Acid	16.86	288.27
Chloride	92.26%	Cation Fact Y	33.55	573.63
Carbonic Acid	51.39%	Silica	8.63	178.01
Monovalent Ions	43.14%	Carbon Dioxide	0.00	0.00
Silica	1.86%	Strong Base Fact Z	32.80	560.94

Method	Date	Method	Date
120.1	2/5/2021	150.1	2/5/2021
180.1 Rev. 2 1993	2/5/2021	200.7 R4.4	2/5/2021
300.0 R2.1	2/5/2021	BART	2/5/2021
SM 5550	2/5/2021	SM2120C, 21Ed	2/5/2021
SM2120C, 21Ed	2/5/2021	SM2320B, 18Ed	2/5/2021
SM5310C, 19Ed	2/5/2021		

pH – stands for “potential of hydrogen” and indicates the acidity or alkalinity level of water on a scale of 0 to 14 (neutral = pH 7.0). Levels below 7.0 are acidic and above 7.0 are alkaline. pH is logarithmic – 6.0 is 10 X more acidic and 5.0 is 100 X more acidic than 7.0.

Conductivity - the ability of water to conduct electrical current, used to estimate the total concentration of dissolved mineral ions.

TDS - Total Dissolved Solids – the total amount of minerals dissolved in the water as determined by the conductivity level.

Turbidity - cloudiness in water caused by the dispersion of light by extremely tiny particles. Measured on an arbitrary scale of Nephelometric Turbidity Units (NTUs). **Turbidity after filtration** is measured after passing water through and 11-micron filter paper.

Color - the amount of color in the water. Color can be caused by organic matter or oxidized metals and their combinations.

Color after Acidification - Acid added to the sample dissolves oxidized metals and the result after acidification is due to organics.

Hardness – The sum of calcium and magnesium ions and any metals. Calcium and magnesium are the cause of “hard water”.

Sodium – is naturally occurring. Sources can be sea water, underground deposits or the result of road salting in colder climates.

Iron – elemental metal responsible for orange, rust stains on laundry and fixtures and a metallic smell to water.

Manganese – elemental metal responsible for brown and black stains. Very soluble and often found in combination with iron.

Copper - causes blue/green staining in sinks and showers. Usually from copper pipe corrosion due to low pH and/or high TDS.

Zinc – may cause metallic taste and upset stomach, usually due to corrosion of galvanized plumbing materials.

Chloride – often found where sodium is present and is responsible for the “salty” taste associated with salt (sodium chloride).

Nitrate – sources of nitrate are human/animal wastes and fertilizers. Water supplies with high levels should also be tested for bacterial contamination and pesticides if in an agricultural area. Nitrate can be toxic to infants if ingested by causing “blue baby syndrome”.

Nitrite – may be present where nitrate is found and is more toxic at lower levels than nitrate.

Sulfate – a naturally occurring mineral in groundwater. At high levels it can cause a bitter taste and have a laxative effect.

Fluoride - often added to municipal water to inhibit tooth decay. Can also be present in well water at excessive levels.

Total Alkalinity - the sum of hydroxide (OH^-), carbonate (CO_3^{2-}), and bicarbonate (HCO_3^-) ions which buffer changes in pH level.

Bicarbonate – present in water from pH level 4.7 up to a pH level 8.3 in combination with carbon dioxide.

Carbonate – present where pH level is above 8.3. Typically, only present after the pH level has been increased chemically.

Silica - a naturally occurring dissolved mineral that can cause a glass etching, scale and water spots that are difficult to remove.

Cations – are ions with a positive (+) electrical charge. Cations are attracted to negatively charged cation ion-exchange resins.

Anions – are ions with a negative (-) electrical charge. Anions are attracted to positively charged anion ion-exchange resins.

TOC / Total Organic Carbon – the level of dissolved natural organic matter in water excluding carbon dioxide.

Hydrogen Sulfide / H_2S - a corrosive gas that smells like “rotten eggs”. Testing requires submitting water in a preserved sample bottle.

Arsenic – is a naturally occurring and toxic semi-metal element found in groundwater in some areas of the US and Canada.

Arsenic-Speciated – the specific amounts of Arsenite (Type III/Trivalent) and Arsenate (Type V/Pentavalent) concentrations.

Aluminum – occurs naturally in ground water leached from rock and soil. Can also be the result of municipal water treatment.

Lead – the source is often within the plumbing system. It is present in older brass valves and fixtures and lead solder joints.

Coliform Bacteria – a non-pathogenic, vegetative bacteria used as an “indicator” organism to determine a water’s overall potability.

E. Coli Bacteria – a pathogenic bacteria only found in the digestive systems of warm-blooded animals and humans. Sources include poorly constructed wells and cisterns, shallow wells, streams, springs, lakes, ponds and failed septic systems.

Slime Forming Bacteria – a nuisance bacteria that can cause odor and thick slime build-up, particularly when water is aerated.

Iron Related Bacteria – a nuisance bacteria that metabolizes iron causing red/brown film, stringy growths and many types of odor.

Sulfate Reducing Bacteria – anaerobic bacteria that reduces the sulfate ion to hydrogen-sulfide gas and causes “rotten egg” odor.

NUISANCE BACTERIA POPULATION LEVELS (reported in cfu/ml – colony forming units per milliliter)

Slime Forming Bacteria	Iron Related Bacteria	Sulfate Reducing Bacteria
1,750,000 - Aggressive	570,000 - Aggressive	2,200,000 – Aggressive
440,000 – Aggressive	140,000 - Aggressive	500,000 – Aggressive
67,000 – Aggressive	35,000 – Aggressive	115,000 – Aggressive
13,000 - Moderate	9,000 – Aggressive	27,000 – Aggressive
2,500 - Moderate	2,200 – Aggressive	6,000 – Aggressive
500 – Moderate	500 – Moderate	1,400 – Moderate
100 – Not Aggressive	150 – Moderate	325 – Moderate
0 – None Present	25 - Moderate	75 – Moderate
	8 – Not Aggressive	20 – Not Aggressive
	0 – None Present	5-Not Aggressive
		0 – None Present

UNITS OF CONCENTRATION IN THIS REPORT

ppm = parts per million. Used interchangeably with **mg/l** = milligrams per liter.

ppb = parts per billion. Used interchangeably with **ug/l** = micrograms per liter

GPG - "grains per gallon" as calcium carbonate equivalent. Divide **GPG** by 17.1 to convert **GPG** into **ppm** or **mg/l**.

NTU - Nephelometric Turbidity Units indicates the amount of a light source reflected by particles. A level of 5 NTU or less looks clear.

Color – result in Color Units determined by the amount of light absorbed by the water sample. A level above 10 C.U. will appear tinted.

[illegible]



2100882

Control Number: 99099

At
Toct
3Bct

SAMPLE ANALYSIS REQUEST
Culligan International Company Analytical Laboratory
 9399 W. Higgins Road Suite 1100
 Rosemont, IL 60018

SAMPLE SUBMITTED BY:

Account Number: 44075 5018
 Account Name: CULLIGAN WATER TECHNOLOGIES
 Phone Number: 802-598-4400
 E-MAIL: WINDOVER@CULLIGAN4U.COM
 Person Taking Sample: EVERETT WINDOVER
 Date Sample Taken: 2-22-21 Time Sample Taken: 10:43

CUSTOMER INFORMATION:

Customer Name: ALLIED HEALTH CARE PRODUCTS
 Address: 46 NEW ST.
 City: STUYVESANT FALLS State: NY Zip: 12174
 Customer reported concern: _____

SAMPLE INFORMATION:

Water Supply: Private ☒ Municipal _____
 Source: Surface _____ Well ☒ Unknown _____
 Condition: Treated _____ Untreated ☒ _____
 Sample Point: Faucet _____ Equipment _____ Other _____
 Application: Household _____ Commercial ☒ National Account _____
 Comments: _____

ANALYSIS REQUESTED:

Standard Analysis: _____ Scale Analysis: _____
 Standard w/TOC: ☒ Resin Analysis: _____
 Hemodialysis Basic: _____ Depth Filter Analysis: _____
 Hemodialysis Complete: _____ Arsenic Filter _____
 Bacteria: Iron ☒ Sulfate ☒ Slime ☒ VOC _____

Special Analysis: (List Analysis Requested): _____

For Questions contact Rick Cook at (847) 430-1284 or Maria Mozdzen at (847) 430-1219

LAB USE ONLY:

Sample received in acceptable condition: Yes _____ No _____ Received by: _____ Date: _____ Time: _____
 If not reason: _____
 Disposition of sample: _____

Litigation samples are not accepted by the laboratory

Customer: _____ Culligan International Company
 Please Sign: _____ By: _____
 Please print your name: _____ Its: _____



9399 West Higgins Rd Ste 1100
Rosemont, IL, 60018

Phone: 877-889-8195
Web: www.culligan.com

Report Date: 2/5/2021

CERTIFICATE OF ANALYSIS

Analysis Number: 2100882

Culligan Water Conditioning of The Green
Mountains, Vermont
154 Brentwood Drive

Customer: Allied Healthcare Products
46 New St.
Stuyvesant Falls NY, 12174

Control Number: 99099
Account Number: 10005018
Collected By: Everett Windover

Misc:
cc: windover@culligan4u.com

SAMPLE INFORMATION:

Analysis Type Requested: Standard A + TOC Analysis

Sampled: 1/22/2021 at 10:43 AM	Supply/Source: Private Well	Condition: Untreated Water
Received: 1/26/2021 at 1:00 PM	Sampling Point:	Application: Commercial

This Certificate of Analysis compares the actual test result to national standards as defined in the EPA 's Primary and Secondary Drinking Water Regulations .

Primary Standards: Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water.
MCLs are enforceable standards.

Secondary Standards: Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. Some states may choose to adopt that as enforceable standards.

ug/L (ppb): Unless otherwise indicated, results and standards are expressed as an amount in micrograms per liter or parts per billion.

mg/L (ppm): Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.

Minimum Detection Level (MDL): The lowest concentration level that the laboratory can detect a contaminant.

ND: The contaminant was not detected above the minimum detection level.

NA: The contaminant was not analyzed.

* - non-TNI accredited parameter

** - IL-IDPH accredited parameter

Status




























The contaminant was not detected in the sample above the minimum detection level.











The contaminant was detected below National Standard limit.



The contaminant was detected above National Standard limit.

<u>Status</u>	<u>Contaminant</u>	<u>Results</u>	<u>RDL</u>	<u>Units</u>	<u>Method</u>	<u>EPA Limit</u>	<u>Analysis Date/Time</u>	<u>Qual</u>
	Est TDS By Conductivity*	772.23		mg/L		500.00	1/28/2021 at 15:01	
	Conductivity*	1269.70		microS/cm	120.1		1/27/2021 at 12:35	
	pH*	8.7			150.1	6.50 to 8.50	1/27/2021 at 11:56	
	Turbidity*	19.60	0.100	NTU	180.1 Rev. 2 1993	0.50	1/27/2021 at 10:48	
	Turbidity Filtered*	9.53	0.100	NTU	180.1 Rev. 2 1993	0.50	1/27/2021 at 10:48	
	Aluminum by ICP	514.61	50.000	ug/L	200.7 R4.4	200.00	1/28/2021 at 14:58	
	Arsenic by ICP (Screen)*	<10.000	10.000	ug/L	200.7 R4.4	10.00	1/28/2021 at 14:58	
	Barium	302.81	10.000	ug/L	200.7 R4.4	2,000.00	1/28/2021 at 14:58	
	Calcium	2.61	0.100	mg/L	200.7 R4.4		1/28/2021 at 15:01	
	Copper (Cu)	<0.015	0.015	mg/L	200.7 R4.4	1.30	1/28/2021 at 14:58	
	Hardness (CaCO3)	9.78 0.57		mg/L GPG	200.7 R4.4		1/28/2021 at 15:01	
	Iron (Fe)	0.73	0.050	mg/L	200.7 R4.4	0.30	1/28/2021 at 14:58	
	Lead by ICP (Screen)*	<15.000	15.000	ug/L	200.7 R4.4	15.00	1/28/2021 at 14:58	
	Magnesium	0.79	0.100	mg/L	200.7 R4.4		1/28/2021 at 15:01	
	Manganese (Mn)	<0.020	0.020	mg/L	200.7 R4.4	0.05	1/28/2021 at 14:58	
	Potassium*	4.68	0.100	mg/L	200.7 R4.4		1/28/2021 at 14:58	
	Silica	10.41	0.050	mg/L	200.7 R4.4		1/28/2021 at 15:01	
	Sodium	255.90	0.100	mg/L	200.7 R4.4		1/28/2021 at 15:05	
	Strontium (Sr)*	0.25	0.050	mg/L	200.7 R4.4		1/28/2021 at 14:58	
	Zinc (Zn)	<0.050	0.050	mg/L	200.7 R4.4	5.00	1/28/2021 at 14:58	
	Chloride	171.41	0.500	mg/L	300.0 R2.1	250.00	1/28/2021 at 7:57	
	Fluoride	1.43	0.200	mg/L	300.0 R2.1	4.00	1/27/2021 at 11:28	
	Nitrate as N	<0.200	0.200	mg/L	300.0 R2.1	10.00	1/27/2021 at 11:28	
	Nitrite as N	<0.100	0.100	mg/L	300.0 R2.1	1.00	1/27/2021 at 11:28	
	Sulfate	19.50	0.850	mg/L	300.0 R2.1	250.00	1/27/2021 at 11:28	
	Iron Related Bacteria*	9000		cfu/mL	BART		2/5/2021 at 8:58	
	Slime Forming Bacteria*	440000		cfu/mL	BART		2/5/2021 at 8:58	

<u>Status</u>	<u>Contaminant</u>	<u>Results</u>	<u>RDL</u>	<u>Units</u>	<u>Method</u>	<u>EPA Limit</u>	<u>Analysis Date/Time</u>	<u>Qual</u>
	Sulfate Reducing Bacteria*	Non-detected		cfu/mL	BART		2/5/2021 at 8:58	
	Tannins*	<2.000	2.000	mg/L	SM 5550		1/27/2021 at 9:37	
	Color	65.48	5.000	color	SM2120C, 21Ed	15.00	1/27/2021 at 11:19	
	Color after Acidification*	7.84	5.000	color	SM2120C, 21Ed		1/27/2021 at 11:17	
	Bicarbonate*	335.45		mg/L	SM2320B, 18Ed		1/27/2021 at 11:56	
	Carbonate*	7.90		mg/L	SM2320B, 18Ed		1/27/2021 at 11:56	
	Total Alkalinity	343.36		mg/L	SM2320B, 18Ed		1/27/2021 at 11:56	
	TOC	0.44	0.100	mg/L	SM5310C, 19Ed		1/28/2021 at 9:06	

This report can only be reproduced in its entirety. The results reported here are representative of the sample as received in the laboratory. Unless noted holding times and temperature requirements for method 300 are not followed. pH results are out of hold time.

This analysis will not determine whether a water is safe for human consumption.

ANALYTE QUALIFIERS

- H1** Analysis conducted outside the EPA method holding time
- H2** Sample received outside EPA method temperature requirements
- P** Sample received outside the EPA method preservative requirements
- C** Sample received in an inappropriate sample container
- T** Insufficient sample received from client to perform the analysis per EPA method requirements
- B** Analyte was detected in an associated blank at a concentration greater than the MDL
- M** Microbiological analysis initiated more than 80 hours after sample collection. Analysis was completed upon client approval
- SH** The sampler's name and signature were not listed on the COC
- SF** Sample collection dates and times were not listed on the COC
- A** The sample was analyzed by serial dilution
- D** The precision between the sample and sample duplicate exceeded laboratory control limits
- I** This analyte exceeded secondary source verification criteria low/high for the initial calibration. This reported result should be considered an estimated value
- SS** This analyte did not meet the secondary source verification criteria for the initial calibration. The reported result should be considered an estimated value
- FS** The sample was filtered in the laboratory prior to analysis
- R** Results confirmed by second analysis
- SC** This report contains data that were produced by subcontracted laboratory certified for the fields of testing performed
- DM** Non-method digestion process is followed
- MM** Method modification- not from the acidified well mixed sample





ANALYTICAL REPORT

Lab Number:	L2147164
Client:	C.T. Male Associates 50 Century Hill Drive Latham, NY 12210
ATTN:	Kirk Moline
Phone:	(518) 786-7400
Project Name:	ALLIED HEALTH
Project Number:	19.9379
Report Date:	09/15/21

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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: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2147164-01	MW-09-210901	WATER	STUYVESANT FALLS, NY	09/01/21 10:10	09/01/21
L2147164-02	MW-06-210901	WATER	STUYVESANT FALLS, NY	09/01/21 10:35	09/01/21
L2147164-03	MW-11-210901	WATER	STUYVESANT FALLS, NY	09/01/21 10:40	09/01/21
L2147164-04	MW-18-210901	WATER	STUYVESANT FALLS, NY	09/01/21 12:55	09/01/21
L2147164-05	MW-01-210901	WATER	STUYVESANT FALLS, NY	09/01/21 13:00	09/01/21
L2147164-06	FD01-210901	WATER	STUYVESANT FALLS, NY	09/01/21 00:00	09/01/21
L2147164-07	EB01-210901	WATER	STUYVESANT FALLS, NY	09/01/21 14:20	09/01/21
L2147164-08	FTB-210901	WATER	STUYVESANT FALLS, NY	09/01/21 14:40	09/01/21
L2147164-09	LTB-210901	WATER	STUYVESANT FALLS, NY	09/01/21 00:00	09/01/21
L2147164-10	SUPPLY_WELL-210901	WATER	STUYVESANT FALLS, NY	09/01/21 14:15	09/01/21

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Case Narrative

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

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

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

Soil/sediments, 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.

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

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

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Case Narrative (continued)

Report Submission

September 15, 2021: This final report includes the results of all requested analyses.

September 09, 2021: This is a preliminary report.

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

Volatile Organics

L2147164-03D: The pH of the sample was greater than two; however, the sample was analyzed within the method required holding time.

L2147164-04D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics

L2147164-03: The sample has elevated detection limits due to limited sample volume available for analysis.

The WG1543241-1 Method Blank, associated with L2147164-01, -02, -03, -03D, and -04 through -07, has TICs detected. The results are qualified with a "B" for any associated samples that have detections of the same TICs.

Semivolatile Organics by SIM

L2147164-03: The sample has elevated detection limits due to limited sample volume available for analysis.

Perfluorinated Alkyl Acids by Isotope Dilution

L2147164-04 and WG1543969-5/-6: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

L2147164-05: The sample was centrifuged and decanted prior to extraction due to sample matrix.

L2147164-10: The MeOH fraction of the extraction is reported for Perfluorooctanesulfonamide (FOSA) due to

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Case Narrative (continued)

better extraction efficiency of the M8FOSA Surrogate (Extracted Internal Standard).

Total Metals

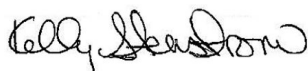
L2147164-01: The sample has an elevated detection limit for mercury due to the prep dilution required by the sample matrix.

The WG1542042-3/-4 MS/MSD recoveries for sodium (0%/0%), performed on L2147164-04, do not apply because the sample concentration is greater than four times the spike amount added.

The WG1542042-4 MSD recovery, performed on L2147164-04, is outside the acceptance criteria for zinc (132%). A post digestion spike was performed and yielded an unacceptable recovery of 154%. The serial dilution recovery was acceptable; therefore, the matrix test passed for 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:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 09/15/21

Project Name: ALLIED HEALTH**Lab Number:** L2147164**Project Number:** 19.9379**Report Date:** 09/15/21**SAMPLE RESULTS**

Lab ID: L2147164-10
 Client ID: SUPPLY_WELL-210901
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/01/21 14:15
 Date Received: 09/01/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 09/10/21 01:48
 Analyst: RS

Extraction Method: ALPHA 23528
 Extraction Date: 09/08/21 15:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.84	0.376	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.84	0.365	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.84	0.220	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.84	0.303	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.84	0.208	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.84	0.347	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.84	0.218	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.84	1.23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.84	0.635	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.84	0.288	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.84	0.465	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.84	0.280	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.84	1.12	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.84	0.598	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.84	0.240	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.84	0.904	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.84	0.742	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.84	0.343	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.84	0.302	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.84	0.229	1
PFOA/PFOS, Total	ND		ng/l	1.84	0.218	1

Project Name: ALLIED HEALTH

Lab Number: L2147164

Project Number: 19.9379

Report Date: 09/15/21

SAMPLE RESULTS

Lab ID: L2147164-10

Date Collected: 09/01/21 14:15

Client ID: SUPPLY_WELL-210901

Date Received: 09/01/21

Sample Location: STUYVESANT FALLS, NY

Field Prep: Not Specified

Sample Depth:

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

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	92		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	117		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	114		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	90		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	115		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	101		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	80		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	100		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	100		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	90		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	58		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	62		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	87		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	86		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	90		22-136

Project Name: ALLIED HEALTH**Lab Number:** L2147164**Project Number:** 19.9379**Report Date:** 09/15/21**SAMPLE RESULTS**

Lab ID: L2147164-10
 Client ID: SUPPLY_WELL-210901
 Sample Location: STUYVESANT FALLS, NY

Date Collected: 09/01/21 14:15
 Date Received: 09/01/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 09/13/21 12:24
 Analyst: RS

Extraction Method: ALPHA 23528
 Extraction Date: 09/08/21 15:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.84	0.535	1
Surrogate (Extracted Internal Standard)	% Recovery		Qualifier	Acceptance Criteria		
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	68			10-112		

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 09/09/21 19:26
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 09/08/21 15:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02,04-10 Batch: WG1543969-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
PFOA/PFOS, Total	ND		ng/l	2.00	0.236

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 09/09/21 19:26
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 09/08/21 15:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02,04-10 Batch: WG1543969-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	104		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	127		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	112		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	105		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	104		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	99		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	106		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	109		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	104		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	82		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	85		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	109		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	46		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	88		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	109		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	102		22-136

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 09/13/21 12:09
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 09/08/21 15:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02,04-10 Batch: WG1543969-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	76		10-112

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L2147164

Report Date: 09/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,04-10 Batch: WG1543969-2								
Perfluorobutanoic Acid (PFBA)	106		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	107		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	106		-		65-157	-		30
Perfluorohexanoic Acid (PFHxA)	108		-		69-168	-		30
Perfluoroheptanoic Acid (PFHpA)	106		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	104		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	107		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	117		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	111		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	108		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	111		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	107		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	133		-		56-173	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	122		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	109		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	111		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	108		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	107		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	109		-		67-153	-		30
Perfluorotridecanoic Acid (PFTTrDA)	122		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	109		-		59-182	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L2147164

Report Date: 09/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,04-10 Batch: WG1543969-2

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	105				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	124				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	115				70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	95				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	116				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	104				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	107				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	105				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	109				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	101				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	84				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	80				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	104				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	44				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	86				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	105				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	105				22-136

Lab Control Sample Analysis Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L2147164

Report Date: 09/15/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,04-10 Batch: WG1543969-2								
Perfluorooctanesulfonamide (FOSA)	120		-		46-170	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	76				10-112

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L2147164

Report Date: 09/15/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,04-10 QC Batch ID: WG1543969-3 WG1543969-4 QC Sample: L2146879-05 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	5.00	37.7	47.5	113		47.8	115		67-148	1		30
Perfluoropentanoic Acid (PFPeA)	1.19J	37.7	44.5	115		44.2	115		63-161	1		30
Perfluorobutanesulfonic Acid (PFBS)	0.726J	33.5	37.7	110		38.2	113		65-157	1		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	35.3	47.5	135		49.7	142		37-219	5		30
Perfluorohexanoic Acid (PFHxA)	0.722J	37.7	44.7	117		44.2	117		69-168	1		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	35.4	35.2	99		37.0	106		52-156	5		30
Perfluoroheptanoic Acid (PFHpA)	0.552J	37.7	42.4	111		43.2	114		58-159	2		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	34.5	39.1	113		39.4	116		69-177	1		30
Perfluorooctanoic Acid (PFOA)	1.00J	37.7	43.9	114		44.8	117		63-159	2		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	35.9	45.5	127		46.1	130		49-187	1		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	35.9	46.6	130		49.1	138		61-179	5		30
Perfluorononanoic Acid (PFNA)	0.420J	37.7	42.9	113		42.6	113		68-171	1		30
Perfluorooctanesulfonic Acid (PFOS)	0.873J	35	42.5	119		42.1	119		52-151	1		30
Perfluorodecanoic Acid (PFDA)	ND	37.7	43.2	115		41.3	111		63-171	4		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	36.2	46.7	129		46.3	129		56-173	1		30
Perfluorononanesulfonic Acid (PFNS)	ND	36.3	33.4	92		31.0	86		48-150	7		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	37.7	45.7	121		38.2	102		60-166	18		30
Perfluoroundecanoic Acid (PFUnA)	ND	37.7	42.3	112		37.0	99		60-153	13		30
Perfluorodecanesulfonic Acid (PFDS)	ND	36.4	33.1	91		30.3	84		38-156	9		30
Perfluorooctanesulfonamide (FOSA)	ND	37.7	46.2	123		41.2	110		46-170	11		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	37.7	38.9	103		34.7	93		45-170	11		30
Perfluorododecanoic Acid (PFDoA)	ND	37.7	46.4	123		37.8	101		67-153	20		30

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,04-10 QC Batch ID: WG1543969-3 WG1543969-4 QC Sample: L2146879-05 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTTrDA)	ND	37.7	49.2	130		42.6	114		48-158	14		30
Perfluorotetradecanoic Acid (PFTTA)	ND	37.7	46.1	122		39.1	105		59-182	16		30

Surrogate (Extracted Internal Standard)	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	72		63		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	114		109		12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	129		122		14-147
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55		51		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	51		47		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	69		66		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	78		74		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	80		80		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	86		82		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	109		105		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	64		67		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	76		74		22-136
Perfluoro[13C4]Butanoic Acid (MPFBA)	89		90		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	96		98		62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	22		16		10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		86		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		88		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	90		84		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	110		108		70-131

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTH
Project Number: 19.9379

Lab Number: L2147164
Report Date: 09/15/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,04-10 QC Batch ID: WG1543969-5 WG1543969-6 QC Sample: L2147164-04 Client ID: MW-18-210901												
Perfluorobutanoic Acid (PFBA)	4.50	37.2	45.2	109		45.8	111		67-148	1		30
Perfluoropentanoic Acid (PFPeA)	2.96	37.2	46.1	116		45.1	113		63-161	2		30
Perfluorobutanesulfonic Acid (PFBS)	1.22J	33.1	39.1	115		38.9	114		65-157	1		30
Perfluorohexanoic Acid (PFHxA)	1.70J	37.2	45.6	118		44.1	114		69-168	3		30
Perfluoroheptanoic Acid (PFHpA)	0.918J	37.2	43.9	115		42.6	112		58-159	3		30
Perfluorohexanesulfonic Acid (PFHxS)	0.369J	34	41.0	119		40.6	118		69-177	1		30
Perfluorooctanoic Acid (PFOA)	2.32	37.2	45.9	117		44.2	112		63-159	4		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	1.32J	35.4	44.9	123		43.0	118		49-187	4		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	35.4	43.3	122		45.2	128		61-179	4		30
Perfluorononanoic Acid (PFNA)	0.724J	37.2	42.7	113		42.8	113		68-171	0		30
Perfluorooctanesulfonic Acid (PFOS)	4.41	34.6	45.9	120		45.2	118		52-151	2		30
Perfluorodecanoic Acid (PFDA)	0.649J	37.2	42.3	112		40.2	106		63-171	5		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	35.8	48.1	135		52.8	148		56-173	9		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	37.2	42.4	114		44.1	118		60-166	4		30
Perfluoroundecanoic Acid (PFUnA)	0.522J	37.2	40.8	108		39.1	104		60-153	4		30
Perfluorodecanesulfonic Acid (PFDS)	ND	35.9	34.9	97		34.1	95		38-156	2		30
Perfluorooctanesulfonamide (FOSA)	ND	37.2	38.8F	104		41.0	110		46-170	6		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	37.2	38.2	103		45.5	122		45-170	17		30
Perfluorododecanoic Acid (PFDoA)	ND	37.2	43.9	118		38.5	103		67-153	13		30
Perfluorotridecanoic Acid (PFTrDA)	ND	37.2	46.8	126		45.3	122		48-158	3		30
Perfluorotetradecanoic Acid (PFTA)	ND	37.2	44.9	121		44.7	120		59-182	0		30

Matrix Spike Analysis

Batch Quality Control

Project Name: ALLIED HEALTH

Project Number: 19.9379

Lab Number: L2147164

Report Date: 09/15/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02,04-10 QC Batch ID: WG1543969-5 WG1543969-6 QC Sample: L2147164-04 Client ID: MW-18-210901												


Surrogate (Extracted Internal Standard)	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	106		106		10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	190	Q	210	Q	14-147
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66		58		27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	60		62		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	77		78		55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		82		62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	73		77		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	80		84		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102		104		71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	73		78		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	75		77		22-136
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		97		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	96		101		62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	25		28		10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		97		69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		94		62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	88		89		59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	103		107		70-131

Project Name: ALLIED HEALTH
Project Number: 19.9379

Serial_No:09152119:38
Lab Number: L2147164
Report Date: 09/15/21

PFAS PARAMETER SUMMARY

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

 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 <u>1</u> of <u>1</u>		Date Rec'd in Lab <u>9/2/21</u>		ALPHA Job # <u>L2147164</u>																																																																																																																																																																																																										
	Project Information Project Name: <u>Allied Health</u> Project Location: <u>Sturges Falls NY</u> Project # <u>19.9379</u> (Use Project name as Project #) <input type="checkbox"/> Project Manager: <u>Don Achtyl</u> ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:				Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input checked="" type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #																																																																																																																																																																																																										
Client Information Client: <u>C.T. Male Associates</u> Address: <u>50 Century Hill Dr.</u> <u>Latham, NY 12110</u> Phone: <u>518-786-7400</u> Fax: Email: <u>D.Achtyl@ctmale.com</u>				Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:																																																																																																																																																																																																											
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: <u>Also K. molina@ctmale.com</u> Please specify Metals or TAL.				ANALYSIS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>TCL VOC + 10 TICs</th> <th>NY TCL SVOC + 20 TICs</th> <th>1,4 Dioxane</th> <th>NY PFAS Isotope</th> <th>TCL Pest.</th> <th>TCL PCBs</th> <th>Total CN</th> <th>TAL Metals + Hg Max. Cr.</th> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table>		TCL VOC + 10 TICs	NY TCL SVOC + 20 TICs	1,4 Dioxane	NY PFAS Isotope	TCL Pest.	TCL PCBs	Total CN	TAL Metals + Hg Max. Cr.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)																																																																																																																																																																																											
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APPENDIX B
MANUFACTURER SPECIFICATION SHEETS AND
INFORMATION



SALES SPECIFICATION SHEET

FILTRASORB 600 AR+ 12X40

Granular Activated Carbon

Test	Specification		Calgon Carbon Test Method
	Min	Max	
IODINE NUMBER, mg/g	825	-	TM-4,ASTM D4607
MOISTURE (AS PACKAGED), wt%	-	2	TM-1,ASTM D2867
ABRASION NUMBER	75	-	TM-9,AWWA B604
WATER SOLUBLE ASH, wt%	-	1	TM-16
EFFECTIVE SIZE, mm	0.55	0.75	TM-47,ASTM D2862
ASH, wt%	-	10	ASTM D2866,TM-5
12 US MESH [1.70 mm], wt%	-	5	TM-8,ASTM D2862
< 40 US MESH [0.425 mm] (PAN), wt%	-	5	TM-8,ASTM D2862

Typical Properties:

This product complies with the requirements for activated carbon as defined by the Food Chemicals Codex (FCC) (Latest Edition) published by the U.S. Pharmacopeia.

Only products bearing the NSF Mark are Certified to NSF/ANSI 61 - Drinking Water System Components - Health Effects standard. Certified Products will bear the NSF Mark on packing or documentation shipped with the product.

Calgon Carbon Corporation's activated carbon products are continuously being improved and changes may have taken place since this publication went to press. (12124-03/28/2016)

JLP® PLASTIC METERS

NSF 372



The JLP® series is WQA/NSF 372 listed. This no lead meter is designed for aggressive water such as reverse osmosis and de-ionized. When long life, low maintenance and high accuracy are needed in a plastic totalizing or pulse out water meter, Carlon's JLP® plastic meters are what you want. The JLP series comes in four sizes, 1/2", 3/4", 1" and 1 1/2" and operates at flow rates from 1/4 GPM to 50 GPM and pressure up to 100 psi.

Carlon meters are designed in accordance with AWWA specifications and come with dry sealed registers and flow indicators.

Optional pulse outputs for signaling controllers or remote readers are also available (consult factory). See the charts on the back for available contacts.



1710 EATON DRIVE • GRAND HAVEN, MICHIGAN 49417
PHONE (616) 842-0420 • FAX (616) 842-1265
E-MAIL CARLON@CARLONMETER.COM • WEBSITE WWW.CARLONMETER.COM

METER SELECTION CHART

METER/PIPE SIZE	MODEL	*CONTINUOUS FLOW	FLOW RANGE	METER WEIGHT	LENGTH	HEIGHT	WIDTH	CONNECTION LENGTH[X2]
5/8" x 1/2"	062JLP/JLPRS	7 GPM	1/4 - 13 GPM	1.2 lb.	6 1/2"	4 1/4"	3 3/4"	1 3/4"
5/8" x 3/4"	750JLP/JLPRS	12 GPM	1/4 - 22 GPM	1.4 lbs.	7 1/2"	4 1/4"	3 3/4"	2"
3/4" x 1"	1000JLP/JLPRS	25 GPM	3/4 - 50 GPM	1.8 lbs.	10 3/4"	5"	4"	2 1/4"
1 1/2"	150JLP/JLPRS	50 GPM	2 - 100 GPM	4 lbs.	9 5/8"	5 5/8"	4 3/4"	2 1/2"

***Continuous Flow:** The size of meter selected should be based upon continuous flow, GPM, as opposed to pipe size. For example, if it is determined that continuous flow is 25 GPM, a 3/4" x 1" meter should be selected rather than a 3/4" x 3/4" meter.

ORDERING INFORMATION: Select the meter model number from the Meter Selection Chart above. For RS version follow with choice of contact pulse setting desired.

Example: 5/8" meter, 3/4" pipe size, 1 gallons per contact = JLPRS-1 GPC.

X = AVAILABLE CONTACT SETTINGS

(All contact settings are pre-set at the factory to your specification – call for available Metric contact settings.)

GPC = Gallons Per Contact • LPC = Liters Per Contact • CFPC = Cubic Feet Per Contact

METER SIZE	.1 GPC/ LPC/CFPC	.05 CFPC	.5 GPC/ LPC	1 GPC/ LPC/CFPC	5 GPC/ LPC/CFPC	10 GPC/ LPC/CFPC	50 GPC/ LPC	100 GPC/ LPC	500 GPC/ LPC	1000 GPC/ LPC
5/8" x 1/2"	X	X	X	X	X	X	X	X	X	X
5/8" x 3/4"	X	X	X	X	X	X	X	X	X	X
3/4" x 1"	N/A	X	X	X	X	X	X	X	X	X
1 1/2"	N/A	X	X	X	X	X	X	X	X	X

JLP® METER SPECIFICATIONS

Meter Housing:	Engineered reinforced plastic (nylon).
Connections:	Plastic threaded connections are provided with all JLP® Meter orders.
Reed Switch:	Dry contact type, normally open, 24V, 100mA maximum
Pressure Rating:	Maximum 100 psi.
Temperature Range:	35° - 122°F. Protect the meter from freezing.
PH Level Range:	6.5 – 8.0
Accuracy:	+/- 1.5% of maximum flow when operating between minimum and maximum flow range.
Register Options:	U.S. Gallons, Cubic Feet, and Metric.

Installation Instructions:

1. Flush the line thoroughly after all plumbing changes to prevent contaminants from entering the meter.
2. Install horizontally with the register facing up and inlet port facing the water supply line.
3. For outdoor installation, protect meter from direct exposure to the elements.
4. Protect meter from backflow of water opposite of indicated flow direction.

Helpful Hints:

1. Install a Carlon Slow-Closing Valve downstream of your water meter. This will eliminate possible meter damage from water hammer in your system.
2. Install a Carlon Strainer upstream of your water meter to protect the meter and any other in-line process equipment from becoming jammed by particulate matter in your system.

Warranty: Carlon Meter, Inc. warrants its products to be free of defect in material or workmanship for a period of twelve months from the date of purchase. Contact us to obtain a copy of our complete statement of warranty.



CARTRIDGE TANK® FILTRATION SYSTEM

The Red Filtration Series are high flow rate pleated filtration solutions for extended life and use, with filtration levels of 1 Absolute, 5, 20, 50, and 150 microns, along with an activated carbon (PAC) solution as well. The filters are designed with a large filtration layer, extending filtration level contamination and service life, while achieving high flow rates up to 150 GPM (568 LPM) and low pressure drop.

The filters will outperform competitive filtration solutions in all turbidity applications including silt, rust, and other particle filtration. The Red Series also provides lower shear

water velocity as the raw water passes through the filter, allowing for more contact time and interaction with the extensive surface area of the filters. This results in higher water quality and longer life of the filtration system.

A direct replacement for expensive stainless steel housings used in commercial RO pre-filtration, ProcessWater, CoolingTowers, and other Commercial and Industrial applications, and exclusively designed for the Cartridge Tank®, these filters have significant surface area, low pressure drop, and high flow rate capabilities. The filters are ideal as polishing or pre-filters in applications requiring fine filtration and high capacity. Utilizing 100% cellulose free media and cleanable from 5 micron and up, these are the commercial filtration solutions of the future!

Each filter comes with a unique handle designed top cap for lightweight and easy removal, a bag for proper disposal, and a double o-ring connection. All components and materials are manufactured from NSF 61 and FDA Certified materials.

Available in two filter configurations:

CT-COMM1A – 1 Micron Absolute Pleated PP

CT-COM05P-CUL – 5 Micron PP Pleated

Red Filtration Series

Features

- Durable and chemical resistant
- Polypropylene filter and cap construction
- Double EPDM O-ring seals
- Filter Belly Bands
- Unique filter handle design

Benefits

- Extended service life, contaminant removal, and dirt holding capacity
- Low pressure drop = high flow!
- Insures no bypass of contaminants and high chemical compatibility
- Prevent collapsing of filters under high flow or contaminant load applications
- Bacteria and chemical resistant
- Ease of filter removal from housing

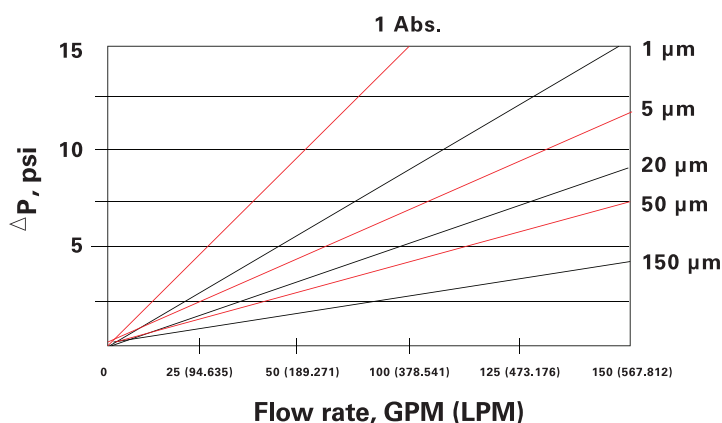
Applications

- Ideal for Residential, Food Service, Rental Fleets, Commercial and Industrial Applications
- Make-up Water, RO Pre-filtration, Cooling Towers, Chill Water Loops, Metal Finishing
- Process Water (turbidity, particulate, colloidal suspensions)
- Community Water, Livestock, or Poultry, Water Systems
- Replacement of bag filters with more surface area and capacity
- Other water-based fluid solutions



Filter Performance

Low Pressure Drop ONE™ filters are designed to minimize pressure drop by using 2" pipe fittings and large diameter center tubes. (see chart for pressure drop data using pleated cartridges) LPM).



Red Series Configuration

Item #: CT-1/4NPTLID



Top Cap option with pressure release Valve & Removal Handles

Item #: CT-4.5LID



4.5" Threaded top/bottom Commercial Cap threaded connection.

Item #: CT-RETAININGRING



Snap Ring with I.D. Tag connection.

Item #: CT-4.5DRAIN
CT-4.5ADAPTER



4.5" Bottom Drain Plumbing for Commercial Filters.

Better Filtration - There's No Competition

Activated carbon (PAC) filter for a service flow rate up to 15GPM (57 LPM) with a removal capacity up to 150,000 gallons, with a 90% chlorine reduction...improving taste, odor, sediment, and chlorine.

Maximum pressure differential of 40 psi.

Maximum flow rate of 1 Micron Absolute of 50 GPM (190 LPM).

Maximum flow rate of all other configurations of 150 GPM (568 LPM)

Easy Replacements - No Tools Means No Tools

PRESS THE RED PRESSURE RELIEF VALVE & PULL SNAP-RING



LIFT TOP CAP



Performance claims are based on independent lab results and manufacturer's internal test data. Actual performance is dependent on influent water quality, flow rates, system design and applications. Your results may vary. Micron ratings based on 85% or greater removal of a given particle size. Flush new cartridges until water runs clear prior to use. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Culligan

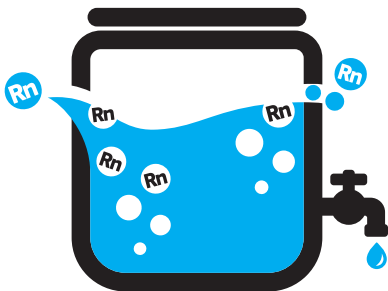
INTRODUCING

THE ALL NEW UNIQUELY BUILT RADON REMOVAL SYSTEM
DESIGN THAT IS RELIABLE, QUIET, AND BUILT TO LAST

ACCEL-AerAtor E99[®]

System Specifications:

- 💧 1" PLUMBING CONNECTIONS WITH
OPTIONAL 3/4" COMPRESSION NUT
- 💧 VOLTAGE: 120 VOLT
- 💧 BLOWER: 1 HP
- 💧 0.5 HP SUBMERSIBLE PUMP
- 💧 FLOW RATE: UP TO 20 GPM
- 💧 PRESSURE: UP TO 70 PSI
- 💧 EFFICIENCY: UP TO 99.99 % plus
- 💧 HIGH WATER ALARM SYSTEM
- 💧 INTIAL TANK FILL: 25 GPM
- 💧 DRAW DOWN: 8 GALLONS
- 💧 WATER METER



ACCEL
AerAtor E99



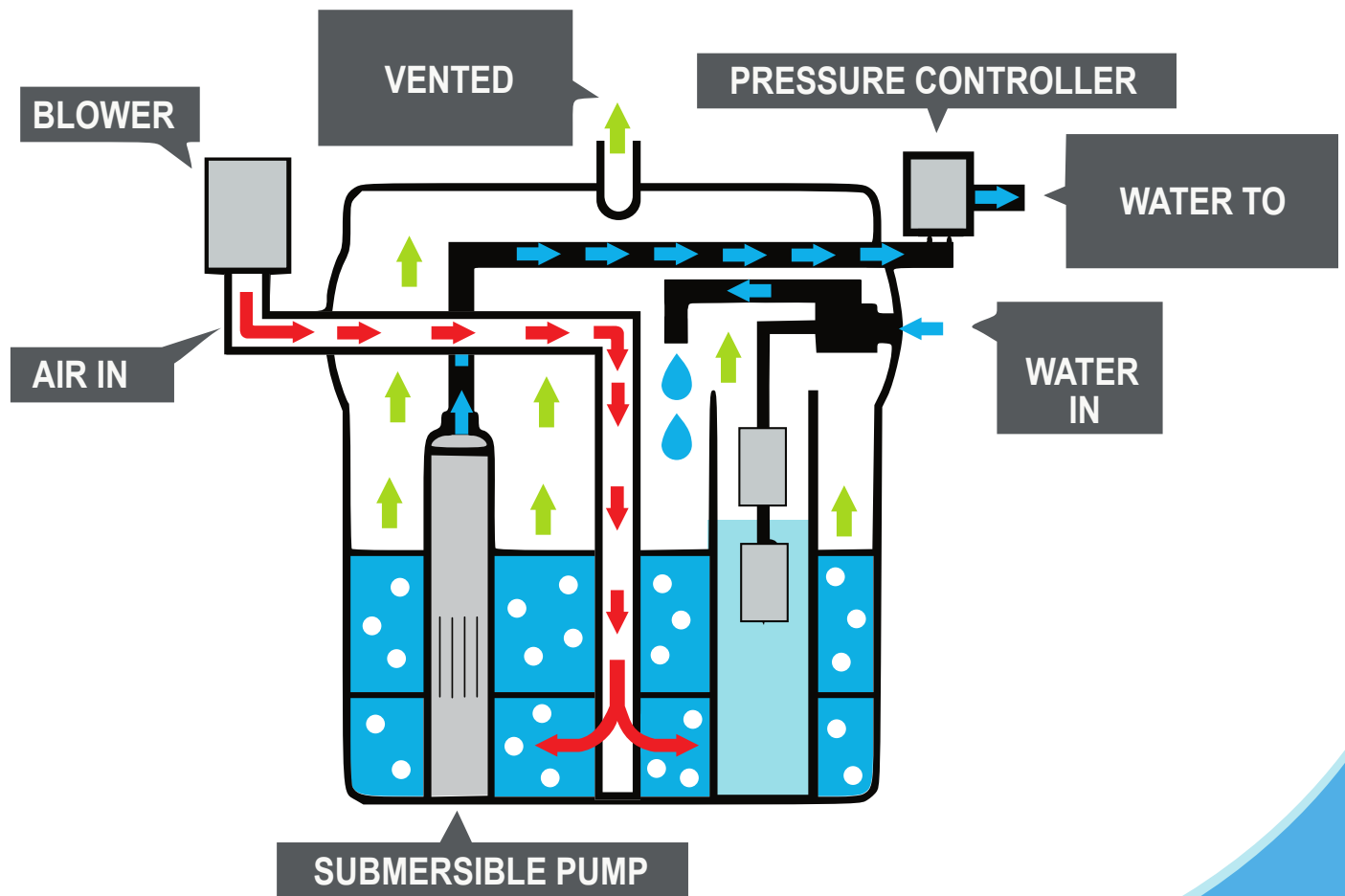
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MCIS.BIZ



Mastering Creation, Innovation and Simplification

ACCEL-AerAtor E99®



**BUILT
TO LAST
AND
DELIVER!**

- 💧 High Pressure Output
- 💧 Full Automatic Operation
- 💧 Dimensions: 24" W x 23"H, Overall Height with Blower 32"
- 💧 Easy Access Cleaning
- 💧 Only 1 Cord to Plug in
- 💧 3 Year Warranty on All Components
- 💧 Best of all - Affordably Priced!



WATER & WASTE MANAGEMENT
2016 EDITION

Whether you're looking for a below ground septic or cistern tank or an above ground water tank, you're sure to find it among our wide selection.

Our rotational molding process allows for a one-piece, seamless tank that is rugged and impact resistant. Our tanks are manufactured to strict quality guidelines to ensure years of high-performance use.

Quality, price, product line and leading edge technology make
NORWESCO
North America's largest manufacturer of rotationally molded tanks.

THE WORLD'S LEADING MANUFACTURER of polyethylene tanks, NORWESCO has been producing polyethylene septic tanks since 1980. With that kind of experience, NORWESCO offers you proven products that you can count on for years of dependable, trouble-free service. NORWESCO septic tanks are backed by a full three-year warranty and have been approved by state and local health departments from coast to coast. Where applicable, NORWESCO septic tanks have been approved by both IAPMO™ and CSA™.

Please consider the following features when you are looking to purchase a septic tank and you'll find that NORWESCO tanks will exceed your expectations when it comes to performance and longevity.

✓ EASE OF INSTALLATION

For septic system replacement and new home construction, NORWESCO's polyethylene septic tanks are designed for durability and quick, easy installation. Any NORWESCO septic tank can be transported to the job site in a pickup truck and carried by just two people. This enables you to install the tank on your schedule.

✓ ROTATIONALLY MOLDED, ONE-PIECE CONSTRUCTION

NORWESCO septic tanks are manufactured by means of the rotational molding process which produces a one-piece, seamless, watertight tank.

✓ SUPERIOR STRENGTH DESIGN

The rib design and rib placement provide superior structural integrity to the tank.

✓ EXCELLENT CHEMICAL RESISTANCE

Polyethylene is unaffected by soil chemicals and by the chemicals and gases present in sewage, so NORWESCO septic tanks will not rust or corrode and require no additional coatings as other tanks do. NORWESCO's strict quality guidelines ensure an environmentally safe septic tank.

✓ SINGLE OR DOUBLE COMPARTMENT

We offer tanks in both single and double compartment (2/3 - 1/3). Prior to installing any septic tank, you should check with your local health department for specific requirements that your county or state may enforce.

✓ READY FOR INSTALLATION

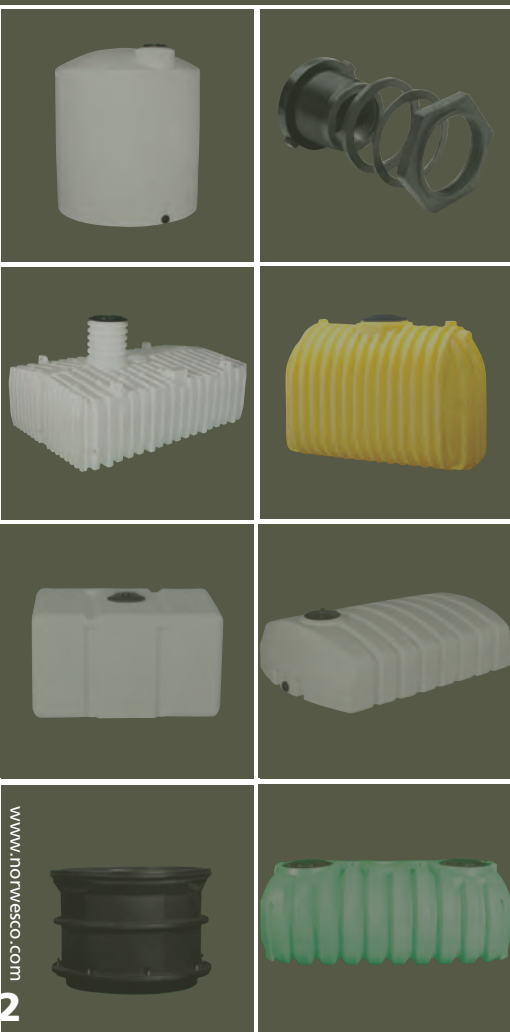
NORWESCO septic tanks (750 gallons and larger) are shipped to you ready for installation. Our pre-plumbed tanks include tee assemblies installed at the inlet and outlet. Tees are sized/cut according to each state code so the tank that you receive will be ready for installation.

✓ WATERTIGHT LID

NORWESCO septic tanks come outfitted with a watertight lid. This improved design is significantly stronger than other lid designs. When leaving our factory, the lid is attached to the tank with stainless steel screws and comes standard with a gasket between the lid and the tank. The gasket provides a watertight seal at the lid area.

✓ ACCESSORIES AVAILABLE

Manhole extensions and lid-riser combinations are available to bring tank access to grade and to meet code specifications.



Strength, Convenience, Value

NEW One Piece, Seamless Low Profile Septic & Cistern Tanks

NORWESCO Low Profile Septic Tanks are molded in one piece, requiring no additional assembly, reducing installation time and effort.

- Rotationally molded rugged, one-piece tank with no seams to leak.
- No assembly required, reducing installation time and effort.
- No special backfill or water filling required during installation.
- May be pumped dry during pump-outs.
- May be installed with 6" to 36" of cover.
- Suitable for use as a septic tank or pump tank and may also be used for non-potable water.
- Access openings and lids accept NORWESCO manhole extension, double-wall corrugated pipe and ribbed PVC pipe.
- Tanks are available with PVC tees and gaskets supplied loose or with installed PVC tees and septic adapters.
- For installation details, please visit www.norwesco.com.

LOW PROFILE SEPTIC TANKS

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	MANHOLE DIAMETER	COMPARTMENT AVAILABILITY
500	97"	48"	42"	1-20" (62408)	Single
750	92"	60"	51"	2-20" (63672)	Single or Double
1000	127"	60"	51"	2-20" (63672)	Single or Double
1250	157"	60"	51"	2-20" (63672)	Single or Double
1500	157"	69"	51"	2-20" (63672)	Single or Double

THE BRUISER SEPTIC TANKS

The Bruiser offers the same features as our standard septic tanks but it may be used as a septic tank as well as a holding tank, pump chamber or a potable water tank (single compartment only).

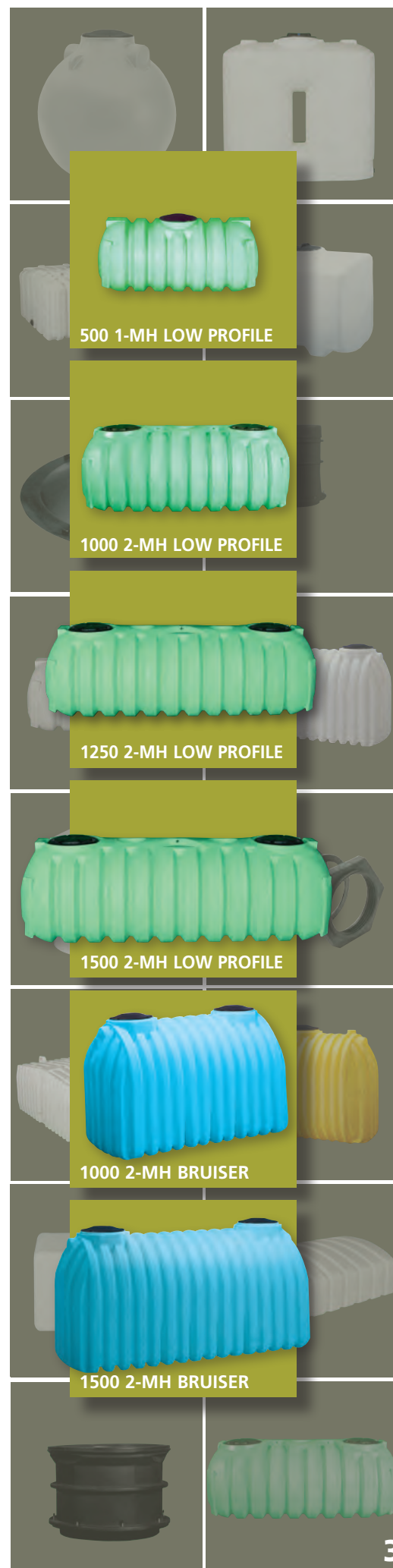
- No special backfill is needed. Native soil may be used.
- Use where delivery of special backfill mixtures and water is next to impossible.
- No need to fill with water during initial installation.
- Pre-plumbed according to state code.
- Accepts 4" effluent filters.
- Suitable for use as a potable water tank (single compartment only).
- For installation details, please visit www.norwesco.com.

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	HEIGHT TO INLET	HEIGHT TO OUTLET	MANHOLE DIAMETER	COMPARTMENT AVAILABILITY
1000	102"	60"	63"	51"	48"	2-20" (62408)	Single or Double
1250	116"	55"	70"	59"	56"	2-20" (62408)	Single or Double
1500	135"	55"	70"	59"	56"	2-20" (62408)	Single or Double

ACROSS THE UNITED STATES AND CANADA there are a number of health code requirements that our tanks must meet. These codes are regulated by the state, county or province where you are located. To aid you in determining which tank you need, please consult with your local health department.

PLEASE NOTE:

Part numbers vary depending upon state approvals. Please contact Norwesco Customer Service for part numbers/information. Tank availability may vary according to manufacturing location. Please contact Norwesco Customer Service or your Norwesco distributor for specific details. Tank dimensions and capacities may vary slightly and are subject to change without notice.



ACROSS THE UNITED STATES AND CANADA there are a number of health code requirements that our tanks must meet. These codes are regulated by the state, county or province where you are located. To aid you in determining which tank you need, please consult with your local health department.

LEGACY SEPTIC TANKS

NORWESCO Septic Tanks are for **Below Ground Use Only**. Using the tanks above ground may result in deformation of the tank. These tanks cannot be used as pump tanks and must be kept full at all times.

■ For installation details, please visit www.norwesco.com.

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	HEIGHT TO INLET	HEIGHT TO OUTLET	MANHOLE DIAMETER	COMPARTMENT AVAILABILITY
500	101"	51"	47"	36"	33"	1-20" (62408)	Single
750	96"	52"	62"	54"	51"	1-20" (62408)	Single
750	96"	48"	63"	52"	49"	2-20" (62408)	Single
1000	102"	60"	63"	51"	48"	2-20" (62408)	Single or Double
1250	116"	55"	70"	59"	56"	2-20" (62408)	Single or Double
1500	135"	55"	70"	59"	56"	2-20" (62408)	Single or Double

BELOW GROUND SPHERICAL PUMP TANKS

Our spheres are designed to be used as a holding tank or pump tank. Unlike our Legacy septic tanks, these tanks may remain in the ground when empty. These tanks are furnished with manhole covers and include a molded-in elevated pump stand on the bottom of the tank.

GALLON CAPACITY	DIAMETER	OVERALL HEIGHT	HEIGHT TO INLET	HEIGHT TO OUTLET	MANHOLE DIAMETER	PART NO.
200 Sphere	47"	56"	38"	38"	1-20" (62408)	43745
225 Sphere	48"	50"	39"	39"	1-20" (63672)	43551
300 Sphere	54"	54"	43"	40"	1-20" (62408)	41319
300 Sphere	51"	52"	43"	40"	1-20" (63672)	43552
500 Sphere	64"	67"	56"	53"	1-20" (62408)	40785
525 Sphere	64"	62"	48"	45"	1-20" (63672)	44831

POLYETHYLENE WATER STORAGE TANKS

Ideal for instances when drinking water must be hauled in or if a well does not meet consumption needs. NORWESCO tanks are manufactured using resins that meet FDA specifications to ensure safe storage of potable water. Where applicable, NORWESCO's Water Storage Tanks and Below Ground Cisterns have been certified under ANSI/SNF™ Standard 61. Cistern spheres may remain in the ground when empty. The ribbed tanks (600 gallon and larger) need to be kept ¼ full.

BELOW GROUND STORAGE TANKS

Typically used to store water – both potable and non-potable. They can also be used as a large capacity septic tank or sewage holding tank depending on local codes. The end ribs will accept fittings up to 4" in size. Integral columns in the tank provide excellent structural strength.

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	MANHOLE DIAMETER	PART NO.
2000	126"	98"	51"	1-20" (63672)	44593
2000*	126"	98"	51"	1-20" (62408)	42559
2500	159"	99"	51"	1-20" (63672)	44079
2600	155"	99"	51"	1-20" (63672)	43770
2650**	155"	99"	81"	1-20" (63672)	43771
3525	211"	102"	51"	1-20" (63672)	44390

* Only available out of Washougal, WA. **Tank includes molded on manhole extension.

PLEASE NOTE:

Part numbers vary depending upon state approvals. Please contact Norwesco Customer Service for part numbers/information. Tank availability may vary according to manufacturing location. Please contact Norwesco Customer Service or your Norwesco distributor for specific details. Tank dimensions and capacities may vary slightly and are subject to change without notice.

NEW LOW PROFILE CISTERN TANKS

Our new below-ground low profile cisterns have the same features as our low profile septic tanks.

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	MANHOLE DIAMETER	PART NO.
575 LP Cistern	97"	48"	42"	1-20" (62408)	44360
1175 LP Cistern	127"	60"	51"	2-20" (63672)	44405
1425 LP Cistern	157"	60"	51"	2-20" (63672)	44406
1450 LP Cistern	157"	60"	51"	2-20" (63672)	43549
1725 LP Cistern	157"	69"	51"	2-20" (63672)	44407
1750 LP Cistern	157"	69"	51"	2-20" (63672)	43550

LEGACY CISTERN TANKS

Our below-ground Legacy cisterns have the same features as our Legacy septic tanks.

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	MANHOLE DIAMETER	PART NO.
600 Cistern	101"	51"	47"	1-20" (62408)	41328
1200 Cistern	102"	60"	63"	2-20" (62408)	41329
1400 Cistern	116"	55"	70"	2-20" (62408)	41893
1700 Cistern	135"	55"	70"	2-20" (62408)	41330

BELOW GROUND SPHERICAL CISTERN TANKS

GALLON CAPACITY	DIAMETER	OVERALL HEIGHT	MANHOLE DIAMETER	PART NO.
225 Cistern Sphere	48"	50"	1-20" (63672)	44827
250 Cistern Sphere	47"	56"	1-20" (62408)	43746
300 Cistern Sphere	51"	52"	1-20" (63672)	44828
325 Cistern Sphere	54"	54"	1-20" (62408)	41321
525 Cistern Sphere	64"	62"	1-20" (63672)	44829
550 Cistern Sphere	64"	67"	1-20" (62408)	40856

■ For installation details, please visit www.norwesco.com

BELOW GROUND TANK ACCESSORIES

PART NO.	DESCRIPTION	LOW PROFILE Septic, Cistern	LEGACY Septic, Cistern, Bruiser, Spherical Pump	HOLDING 2000 (44593), 2500, 2600, 3525	HOLDING 2000 (42559)	HOLDING 2650
63514	Manhole extension (6"H x 20"D)		■		■	
62397	Manhole extension (15"H x 20"D)		■		■	
62396	Manhole extension (24"H x 20"D)		■		■	
63832	Manhole extension (6"H x 20"D)	■	■	■	■	
64159	Manhole extension (6"H x 20"D) with 20" safety lid	■	■	■	■	
63833	Manhole extension (15"H x 20"D)	■	■	■	■	
63834	Manhole extension (24"H x 20"D)	■	■	■	■	
62395	Lid and riser combination (25"H riser pipe x 12"D)		■		■	
63830	Lid riser (36"H x 6"D)	■	■	■	■	
63831	Lid riser, offset (23"H x 12"D)	■	■	■	■	
62408	20" Domed tank lid with gasket		■		■	
63672	20" Low profile lid with gasket	■		■		■
62942	Ethafoam gasket for extensions, risers or 62408 domed lid	■	■	■	■	
63839	Self-adhesive rubber gasket for 20" low profile lid (63672)	■		■		■
63870	Stainless steel self-tapping screw, #14 x 1¾", for 20" low profile extensions or risers (8 required)	■		■		
62406	Stainless steel self-tapping screw, #14 x 1¼", for 20" lids (4 needed for 62408 lid, 6 for 63672 lid, 4 for 63514, 62397 and 62396 extensions)	■	■	■	■	■
63564	Tamper proof screw kit for tanks installed in NM & WI (includes 8 stainless steel self-tapping childproof screws (¼" x 1¼") and 1 square recess bit) for 20" lids*	■	■	■	■	■
63491	4" Tuf-Tite PVC inlet/outlet tee					
63490	4" Inlet/outlet gasket					
61765	SDR35/Schedule 40 gasket kit (2 each)					

*One (1) Tamper proof screw kit needed for 62408 lid. Two (2) Tamper proof screw kits needed for 63672 lid.

PLEASE NOTE:

Tank and accessory availability may vary according to manufacturing location. Please contact Norwesco Customer Service or your Norwesco distributor for specific details. Tank dimensions and capacities may vary slightly and are subject to change without notice.



ABOVE GROUND FLAT BOTTOM UTILITY

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.
NEW 300 Low Profile*	95 "	56 "	19 "	—	8 "	44233
NEW 500 Low Profile*	130 "	52 "	23 "	—	8 "	44643

*Limited availability. For availability details please visit our website at www.norwesco.com.

ABOVE GROUND LOAF TANKS

GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.
50 Loaf α*	41 "	27 "	17 "	—	8 "	43610
100 Loaf α*	41 "	27 "	30 "	—	8 "	43611
200 Loaf*	48 "	36 "	29 "	—	8 "	43612
300 Loaf*	63 "	42 "	30 "	—	8 "	43613
500 Loaf*	92 "	48 "	31 "	—	8 "	43843

α May ship UPS.

*Limited availability. For availability details please visit our website at www.norwesco.com.

ABOVE GROUND HORIZONTAL TANKS

GALLON CAPACITY	LENGTH	DIAMETER	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.	BAND PART NO.
35 Horizontal α	29 "	20 "	23 "	¾ "	5 "	45223	60520
55 Horizontal α	34 "	23 "	26 "	¾ "	5 "	41873	61745
65 Horizontal α	43 "	23 "	26 "	¾ "	5 "	45191	61745
125 Horizontal	41 "	32 "	35 "	2 "	8 "	40298	61744
225 Horizontal	49 "	38 "	41 "	2 "	8 "	40299	60478
325 Horizontal	68 "	38 "	43 "	2 "	16 "	40217	60478
525 Horizontal∞*	71 "	49 "	54 "	2 "	16 "	40181	60057
3135 Elliptical Leg*	150 "	88 "W	80 "	3 "/2 "	16 "	40686	‡

Bands are optional, 2 per tank with the **exception of 3135 Elliptical Leg** which requires 4 support bands.

α May ship UPS

∞The 525 gallon tank requires full length support.

‡This tank requires full length support as well as 4 support bands. Band part number is 62097 (OH, GA) or 63620 (CA, UT, MN, OK, TX).

*Limited availability. For availability details, please visit our website at www.norwesco.com.

ABOVE GROUND PICKUP TANKS

GALLON CAPACITY	TOP WIDTH OR DIAMETER	BOTTOM WIDTH OR DIAMETER	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.
210 Pickup	60 "/51 "	48 "/39 "	29 "	2 "	8 "	40300
325 Pickup	62 "	49 "	33 "	2 "	8 "	40160
425 Pickup	65 "	49 "	39 "	2 "	8 "	40102

PLEASE NOTE:

Tank availability may vary according to manufacturing location. Please contact Norwesco Customer Service or your Norwesco distributor for specific details. Tank dimensions and capacities may vary slightly and are subject to change without notice.



200 LOAF



300 LOAF



500 LOAF



55 HORIZONTAL



125 HORIZONTAL



3135 ELLIPTICAL LEG



210 PICKUP

ABOVE GROUND SPECIALTY TANKS

The dimensions of Freestanding tanks allow them to fit through a conventional doorway. The design of the freestanding/self supporting tanks eliminate the need for a steel support frame.

	GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.
NEW	100 Slender*	38"	22"	45"	1¼"	8"	44800
	250 Freestanding*	62"	29"	44"	1¼"	16"	42337▲
	300 Freestanding*	62"	29"	48"	1¼"	16"	41869▲
	300 Freestanding*	66"	29"	50"	1¼"	16"	44330
NEW	400 Freestanding*	64"	30"	68"	1¼"	16"	44361▲
	400 Freestanding*	66"	29"	70"	1¼"	16"	43856
	400 Freestanding*	63"	30"	68"	1¼"	16"	41247▲
	500 Freestanding*	74"	31"	70"	1¼"	16"	43616
	750 Freestanding*	82"	35"	85"	2"	16"	44310
	1000 Freestanding*	92"	40"	89"	2"	16"	44045
NEW	400 Vertical Ribbed*	43"	33"	84"	—	16"	44654▲
NEW	600 Vertical Ribbed*	58"	35"	84"	—	16"	44655▲
	2400 Box*	150"	90"	53"	2"	16"	40912▲

*Limited availability. For availability details please visit our website at www.norwesco.com.

▲Water weight only.

ABOVE GROUND WATER HAULING TANKS

Above ground water hauling tanks can be used for transport or storage. They are an excellent choice when height limitations are a factor and are the perfect height for putting under your cottage or cabin.

	GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.
	1250*	130"	81"	38"	2"	16"	40756▲
	1275*	126"	84"	36"	2"	16"	43011▲
	1500*	130"	81"	44"	2"	16"	41392▲
	1600*	126"	84"	42"	2"	16"	43013▲

*Limited availability. For availability details please visit our website at www.norwesco.com.

▲Water weight only.

ABOVE GROUND PCO TANKS

PCO tanks are well suited for nursery, agricultural and lawn care applications. They feature self supporting legs and do not require any saddles or steel supports. Flat spots are molded into both ends to provide mounting areas for agitation equipment.

	GALLON CAPACITY	LENGTH	WIDTH	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.
	30 PCO □	25"	19"	23"	—	5"	41254
	50 PCO □	38"	19"	22"	—	8"	40664
	100 PCO □	38"	30"	28"	—	8"	40668
	150 PCO	48"	36"	28"	—	8"	40669
	200 PCO	48"	36"	37"	—	8"	41413
	300 PCO	69"	36"	37"	—	16"	41381

□ May ship UPS.

PLEASE NOTE:

Tank availability may vary according to manufacturing location. Please contact Norwesco Customer Service or your Norwesco distributor for specific details. Tank dimensions and capacities may vary slightly and are subject to change without notice.



NEW 100 SLENDER

400 FREESTANDING

NEW
600 VERTICAL RIBBED

2400 BOX

WATER HAULING

PCO

ABOVE GROUND VERTICAL STORAGE TANKS

Vertical storage tanks are most frequently used for bulk storage and mobile nursing applications. Our selection of above-ground vertical tanks feature tie down slots, built-in graduated gallonage indicators, offset fill-well and self-vented, slosh-proof lids. An installed bulkhead fitting is standard on the above-ground vertical tank. Fittings are available in a full range of sizes to help adapt the tank to suit specific applications. Please refer to pages 10 and 11 for accessory items.

GALLON CAPACITY	DIAMETER	OVERALL HEIGHT	OUTLET/DRAIN SPECIFICATION	FILL OPENING	PART NO.
25 Vertical □	18"	29"	¾"	5"	41867
50 Vertical □	18"	53"	¾"	5"	41865
65 Vertical □	23"	43"	1¼"	8"	45192
75 Vertical □	23"	49"	1¼"	8"	41863
100 Vertical □	28"	43"	1¼"	8"	41861
105 Vertical □	23"	63"	2"	8"	40803
120 Vertical*	38"	31"	1¼"	5"	40318
150 Vertical	30"	56"	1¼"	8"	41859
160 Vertical*	28"	69"	2"	8"	44536
165 Vertical	31"	56"	2"	16"	40281
200 Vertical	30"	72"	2"	8"	41856
210 Vertical	32"	67"	2"	16"	47401
220 Vertical*	42"	44"	1¼"	5"	40320
225 Vertical*	31"	77"	2"	8"	44538
250 Vertical	30"	89"	2"	8"	41854
300 Vertical	35"	79"	2"	16"	40213
500 Vertical*	48"	73"	2"	16"	40148
550 Vertical	67"	44"	2"	16"	40023
1000 Vertical*	64"	80"	2"	16"	40152
1100 Vertical	87"	53"	2"	16"	40070
1100 Vertical G*	87"	53"	2"	16"	42591
1550 Vertical	87"	67"	2"	16"	40235
1550 Vertical G*	87"	67"	2"	16"	42595
2100 Vertical*	87"	89"	2"	16"	40178
2500 Vertical	95"	91"	2"	16"	40051
3000 Vertical	95"	109"	2"	16"	40754
5000 Vertical	102"	152"	3"/2"	16"	40164
6100 Vertical*	119"	140"	3"/2"	16"	40659
6500 Vertical*	119"	150"	3"/2"	16"	40224
6500 Vertical*	120"	147"	3"/2"	16"	42315

*Limited availability. For availability details please visit our website at www.norwesco.com.

□May ship UPS. G=Gusset Top.



ABOVE GROUND WATER STORAGE TANKS - BLACK OR DARK GREEN

NORWESCO water tanks are manufactured using resins that meet FDA specifications to ensure safe storage of potable water. The black or green color limits light penetration, which reduces the growth of water-borne algae. These tanks are rated at 8 pounds per gallon, which means that they are for WATER STORAGE ONLY! They should not be used for chemicals, fertilizers or any other product. Where applicable, the tanks will carry the NSF approval. Please contact your distributor for more specific information regarding NSF approval.

GALLON CAPACITY	DIAMETER	OVERALL HEIGHT	FILL OPENING	BOTTOM FITTING	TOP FITTING	BLACK PART NO.	DK GREEN PART NO.	CA GREEN PART NO.
120	38"	31"	5"	2"	1½"	43858	43860	43862
165∞	31"	56"	16"	2"	—	43864	43866	43868
200∞	30"	72"	8"	2"	—	44107	—	44109
220	42"	44"	5"	2"	1½"	43870	43872	43874
305	46"	50"	16"	2"	1½"	40702	40863	41362
500	48"	73"	16"	2"	1½"	43101	43105	43103
550	67"	44"	16"	2"	1½"	40703	40864	41364
600	64"	50"	8"	2"	1½"	43800	43802	—
1000	64"	80"	16"	2"	1½"	40892	41686	43878
1000	72"	66"	16"	2"	1½"	44113	—	44115
1075	87"	51"	16"	2"	1½"	43804	43806	—
1100	87"	53"	16"	2"	1½"	40704	40865	41365
1350	71"	88"	16"	2"	1½"	40860	40858	—
1500	95"	58"	16"	2"	1½"	42038	—	42037
1525	93"	62"	16"	2"	1½"	43808	43810	—
1550	87"	67"	16"	2"	1½"	40627	40866	41368
2000	90"	84"	16"	2"	1½"	44129	44131	—
2100	87"	89"	16"	2"	1½"	44411	44413	44415
2450 NEW	96"	87"	16"	2"	1½"	44656	44658	—
2500	95"	91"	16"	2"	1½"	40631	40867	41370
2500	102"	79"	22"	2"	1½"	42040	44133	42039
2550	93"	95"	16"	2"	1½"	43812	43814	—
2950 NEW	96"	101"	16"	2"	1½"	44660	44662	—
3000	95"	109"	16"	2"	1½"	40635	40868	41372
3000	102"	93"	16"	2"	1½"	42042	42604	—
3000	102"	93"	22"	2"	1½"	43140	44135	42041
3450 NEW	96"	120"	16"	2"	1½"	44664	44666	—
4995 NEW	142"	88"	22"	2"	1½"	44247	44249	—
5000	102"	152"	16"	2"	1½"	40641	40870	41375
5000 Peanut Can	119"	112"	22"	2"	1½"	42044	—	42043
5000 Tuna Can	141"	86"	22"	2"	1½"	40943	—	41377
6500∞	119"	150"	16"	2"	—	43876	—	43880
6600	144"	101"	22"	2"	1½"	44117	—	44119
7750	144"	122"	22"	2"	1½"	44121	—	44123
10000∞	141"	160"	22"	2"	—	43132	41379	—
11000∞	144"	167"	22"	2"	—	44013	44023	—
12000∞ NEW	141"	193"	22"	3"/2"	—	44810	44812	—
15500∞ NEW	141"	244"	22"	3"/2"	—	44814	44816	—

Limited availability. For availability details please visit our website at www.norwesco.com.

∞Includes one bottom fitting only



HIGH DENSITY POLYETHYLENE LIDS

DESCRIPTION	ITEM CODE	PART NO.
22" Lid and ring with air vent		63679
22" Lid, ventless with ring		63863
Vent for 22" lid (63679)		64150
16" Lid and ring with blue snap-in vent	A	63485
16" Lid and ring with 3" center thread		63868
16" Lid, ventless with ring		60367
16" Lid, ventless	B	60365
16" Ring only		60012
Ethafoam gasket for 16" non-hinged lid		62941
Blue snap-in vent for 16" lid (63485)		63539
8" Lid with blue snap-in vent	C	63480
Blue snap-in vent for 8" lid (63480)		63482
5" Lid with ball check air vent	D	63484
5" Lid with 2" FPT (does not include vent cap)		63264
EPDM gasket for 5" lid (63264 or 63484)		60366

HINGED LID

This lid is manufactured from a co-polymer material for strength, durability and excellent chemical resistance. Our unique locking tab allows you to easily slip a padlock through it and secure your lid from theft or spills. The lid is interchangeable with a standard 16" lid and ring assembly if you choose to replace your existing lid.

- Easy open/close – opens a full 180 degrees.
- Comes complete with a baffle vent assembly, allowing for adequate venting when bottom filling your tank.

DESCRIPTION	ITEM CODE	PART NO.
22" Complete lid assembly (hinged lid with ring and vent)	E	63874
16" Complete lid assembly (hinged lid with ring and vent)	E	62532

HINGED LID REPAIR PARTS

DESCRIPTION	PART NO.
16" hinged lid with vent assembly, without ring	62826
16" hinged ventless lid, with ring	63390
Vent assembly	62827
Ring assembly	62828
Hinge assembly	62829
EPDM O-ring gasket for 16" hinged lid	62830
Neoprene O-ring for 16" hinged lid ring	62831

LID ACCESSORIES AND REPAIR KIT

DESCRIPTION	PART NO.
2" MPT vent cap with poly screen	63266
2" MPT vent cap, anti-vortex, without screen	63316
3" MPT vent cap with poly screen	63845
Stainless steel screw for 8" and 16" rings	60081
18" Lanyard for 8" lid and 16" non-hinged lid (tethers lid to tank)	62531
Strainer basket for 16" fill-opening (7" depth)	67374
Poly welding gun and rod	60221
Poly welding rod, natural 30'	61879
Poly welding rod, black 30'	64160

HINGED LID
Shown open
and closed

Strainer
Basket

Poly
Welding
Gun

Lanyard

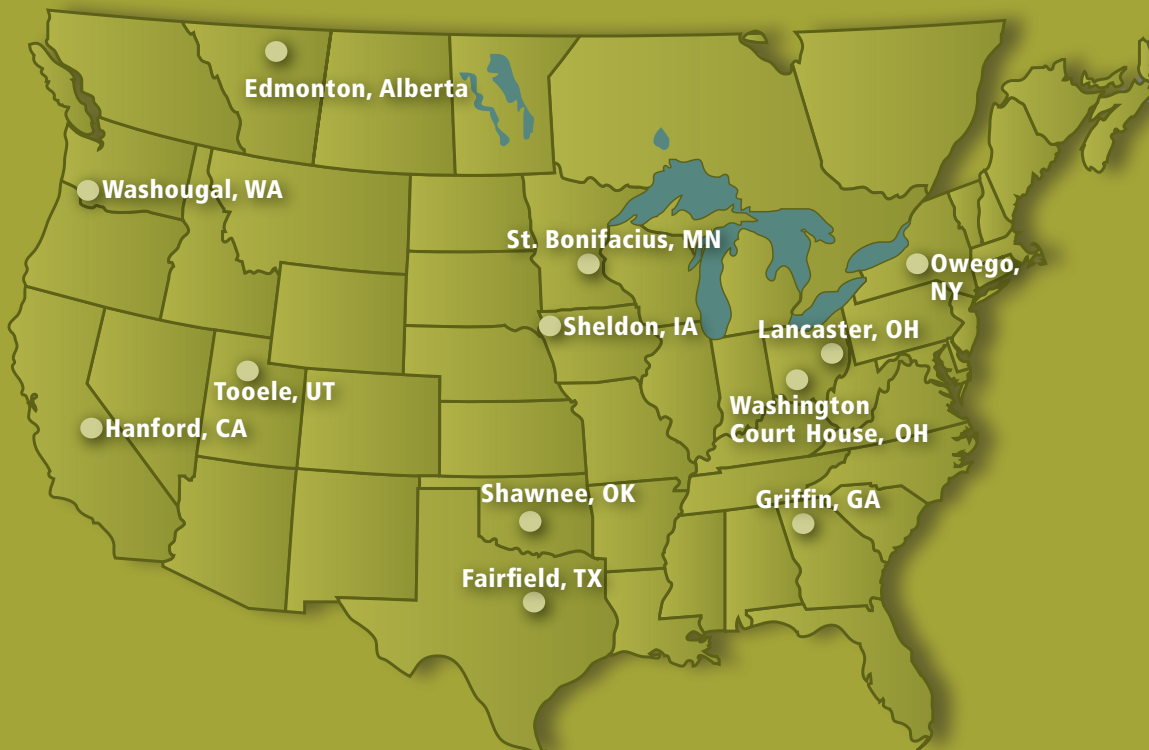
POLYPROPYLENE BULKHEAD FITTINGS / EPDM OR VITON GASKETS

Norwesco's polypropylene fittings come standard with an EPDM gasket. Viton gaskets are available as an option when EPDM may not be suitable for your application. The 2" stainless steel bulkhead fitting comes standard without a gasket.

DESCRIPTION	HOLE SIZE REQUIRED IN TANK FOR INSTALLATION	ITEM CODE	PART NO.
½" Heavy duty double threaded polypropylene fitting	17/16"	A	62834
¾" Double threaded polypropylene fitting	17/16"	A	60401
EPDM gasket for ½" and ¾" (62834 and 60401)			60402
Type B Viton gasket for ½" and ¾" (62834 and 60401)			60360
¾" Heavy duty double threaded polypropylene fitting	15/8"	A	62798
EPDM gasket ¾" (62798)			62799
Type B Viton gasket for ¾" (62798)			62800
1" Double threaded polypropylene fitting	2¼"	A	60427
1¼" Double threaded polypropylene fitting	2¼"	A	60403
1¼" Anti-vortex polypropylene fitting	2¼"	D	63065
EPDM gasket for 1" and 1¼" (60427, 60403 and 63065)			60404
Type B Viton gasket for 1" and 1¼" (60427, 60403 and 63065)			60361
Anti-vortex adapter for 1¼" (60403)			62398
1½" Standard duty double threaded polypropylene fitting	23/8"	A	63931
EPDM gasket for 1½" (63931)			63938
Type B Viton gasket for 1½" (63931)			63939
1½" Double threaded polypropylene fitting	23/8"	A	60124
Siphon tube, 1½" x 415/16" long			63682
Siphon tube, 1½" x 12" long			63279
2" Double threaded polypropylene fitting	3"	A	60405
2" Double threaded 316 stainless steel fitting, less gasket	3"		61767
EPDM gasket for 1½" and 2" (60124, 60405, 63481 and 61767)			60406
Type B Viton gasket for 1½" and 2" (60124, 60405, 63481 and 61767)			60523
2" Standard duty double threaded polypropylene fitting (maximum tank wall thickness = 3/8")	3"	E	63481
2" Heavy duty double threaded polypropylene fitting	3¼"	B	63683
EPDM gasket for 2" (63683)			60336
Type B Viton gasket for 2" (63683)			60008
Siphon tube, 2" short			60335
Siphon tube, 2" x 12" long			63262
Anti-vortex adapter for 2" bulkhead fitting			62399
2" Polypropylene dust plug			60021
2" Self-aligning double threaded polypropylene fitting (designed to install in dome of vertical tank above the liquid level)	4½"		63668
EPDM gasket for 2" self-aligning (63668)			60331
Type B Viton gasket for 2" self-aligning (63668)			60351
3" Double threaded polypropylene fitting (hex nut as shown in photo C)	4½"	C	62299
EPDM gasket for 3" (62299)			60331
Type B Viton gasket for 3" (62299)			60351
2" Polypropylene reducer for 3"			60330
Siphon tube, 3" short			60327
Siphon tube, 3" x 12" long			63263
Siphon tube extension, 3" x 19-1/2" long			64102
4" Double threaded polypropylene fitting (hex nut as shown in photo C)	5¾"		62171
EPDM gasket for 4" (62171)			62785
Type B Viton gasket for 4" (62171)			62786
Siphon tube for 4"			62714



MANUFACTURING & DISTRIBUTION



WARRANTY – NORWESCO offers a three year warranty from date of manufacture on tanks shown in this brochure. Should a defect appear within the warranty period Norwesco will supply a new, equivalent tank in replacement thereof. Norwesco's liability is limited to the value of the tank itself and specifically excludes the cost of installation and/or removal or consequential damages. Please contact your chemical supplier or Norwesco Customer Service for chemical resistance information. Tank dimensions and capacities may vary slightly and are subject to change without notice.



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Poly Glass™ Vessels

The ideal pressure vessel for residential and light commercial water softener / filtration applications.

Structural Poly Glass™ pressure vessels provide years of reliable service for water softener and water filtration applications. These slim-diameter tanks hold up to 49 gallons of water and offer unmatched strength and chemical resistance. All 6"-13" Poly Glass vessels are backed by an exclusive 10-year warranty. All 14"-16" Poly Glass vessels are backed by an exclusive 5-year warranty.



Material of construction

*Inner shell material:
Polyethylene*

*Available inlets:
See chart*

Operating parameters

*Maximum operating pressure:
150 psi*

*Maximum operating temperature:
120° F*

Design parameters – Pentair

*Safety factor:
4:1 (Minimum burst at 600 psi)*

*Cycle test:
250,000 cycles without leakage*

Design parameters – NSF

*Safety factor:
4:1 (Minimum burst at 600 psi)*

*Cycle test:
100,000 cycles without leakage*



Poly Glass Specifications

Part No.	Size (Inches)	System Connection	Height w/ Base Inches / mm	Height w/o Base Inches / mm	Capacity Gallons / Liters	Cubic Feet	Colors	Minimum Order Quantity
30109	06 x 13	2.5" Threaded	13.2 / 335	12.6 / 320	1.1 / 4.2	0.15	AL, BL, NA	See Factory
30127	06 x 18	2.5" Threaded	18.6 / 472	18.0 / 457	1.8 / 6.8	0.24	All	None
30151	06 x 35	2.5" Threaded	35.8 / 909	35.2 / 894	3.8 / 14.4	0.51	All	None
30190	07 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	5.2 / 19.7	0.7	AL, BL, NA	See Factory
30213	07 x 44	2.5" Threaded	43.7 / 1110	43.4 / 1102	6.7 / 25.4	0.9	AL, BL, NA	See Factory
31835	08 x 18	2.5" Threaded	18.8 / 478	18.5 / 470	3.28 / 12.0	-	AL, NA	See Factory
30264	08 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	6.6 / 25.0	0.88	All	None
30286	08 x 40	2.5" Threaded	40.2 / 1021	39.9 / 1013	7.8 / 29.5	1.04	All	None
30305	08 x 44	2.5" Threaded	44.4 / 1128	44.1 / 1120	8.7 / 32.9	1.16	All	None
30317	09 x 18	2.5" Threaded	18.6 / 472	18.0 / 457	3.9 / 14.8	0.52	AL, BL, NA	See Factory
30347	09 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	8.3 / 31.4	1.11	All	None
30360	09 x 40	2.5" Threaded	40.2 / 1021	39.9 / 1013	9.5 / 31.4	1.27	All	None
30383	09 x 48	2.5" Threaded	48.2 / 1224	47.9 / 1217	11.8 / 44.7	1.58	All	None
30460	10 x 35	2.5" Threaded	35.6 / 904	35.3 / 897	10.2 / 38.6	1.36	All	None
30491	10 x 40	2.5" Threaded	40.3 / 1024	40.1 / 1018	11.5 / 43.5	1.54	All	None
30523	10 x 44	2.5" Threaded	44.6 / 1133	44.4 / 1128	13.1 / 49.6	1.75	All	None
30546	10 x 47	2.5" Threaded	47.4 / 1204	46.9 / 1191	15.1 / 57.0	2.02	All	None
30579	10 x 54	2.5" Threaded	54.8 / 1392	54.6 / 1387	16.4 / 62.0	2.19	All	None
32065	10 x 54	2.5" Threaded 1.25 TDH	54.8 / 1392	54.6 / 1387	16.4 / 62.0	2.19	All	None
30615	12 x 42	2.5" Threaded	42.8 / 1087	42.2 / 1072	19.1 / 72.0	2.55	AL, NA	See Factory
30617	12 x 42	4.5" Threaded (BTRS)	42.8 / 1087	42.2 / 1072	19.1 / 72.0	2.55	AL, NA	See Factory
30646	12 x 48	2.5" Threaded	48.8 / 1240	48.4 / 1229	20.6 / 78.0	2.75	All	None
30666	12 x 52	2.5" Threaded	52.9 / 1344	52.4 / 1331	22.2 / 84.0	2.97	All	None
30669	12 x 52	4.0" Threaded	52.9 / 1344	52.4 / 1331	22.2 / 84.0	2.97	AL, BL, NA	See Factory
32127	12 x 52	4.5" Threaded (BTRS)	52.9 / 1344	52.4 / 1331	22.2 / 84.0	2.97	AL, NA	See Factory
30721	13 x 54	2.5" Threaded	54.6 / 1387	53.9 / 1369	27.5 / 104.0	3.68	All	None
30724	13 x 54	4.0" Threaded	54.6 / 1387	53.9 / 1369	27.5 / 104.0	3.68	AL, BL, NA	See Factory
31389	14 x 47	2.5" Threaded	46.5 / 1181	46.0 / 1168	27.5 / 104.0	3.68	AL, NA	See Factory
30745	14 x 47	4.0" Threaded	46.5 / 1181	46.0 / 1168	27.5 / 104.0	3.68	AL, NA	See Factory
32006	14 x 47	4.5" Threaded (BTRS)	46.5 / 1181	46.0 / 1168	27.5 / 104.0	3.68	AL, NA	See Factory
30783	14 x 65	2.5" Threaded	64.6 / 1641	64.3 / 1633	40.6 / 154.0	5.43	AL, BL, NA	See Factory
30785	14 x 65	4.0" Threaded	64.6 / 1641	64.3 / 1633	40.6 / 154.0	5.43	All	None
31627	16 x 65	2.5" Threaded	64.6 / 1641	64.3 / 1633	49.0 / 185.0	6.55	AL, BL, NA	See Factory
30912	16 x 65	4.0" Threaded	64.6 / 1641	64.3 / 1633	49.0 / 185.0	6.55	All	None

Color Options: AL - Almond BL - Blue BK - Black GR - Gray NA - Natural



STENNER PUMPS

PERISTALTIC METERING PUMPS SINCE 1957

2014

STENNER PUMP COMPANY CATALOG

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STENNER PUMP COMPANY CATALOG

CLASSIC series

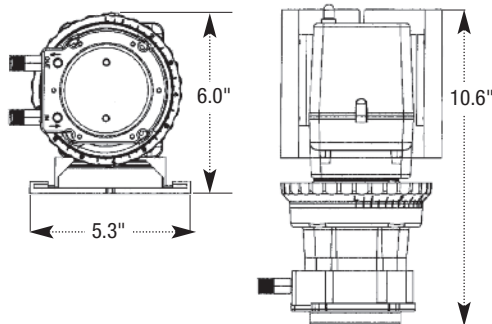
SINGLE HEAD ADJUSTABLE & FIXED OUTPUT PUMPS

The Classic Series metering pumps are a mechanical design, available in adjustable or fixed outputs. Typical installations include wired to a well pump pressure switch, activated by a water meter for proportional feed or with a controller.



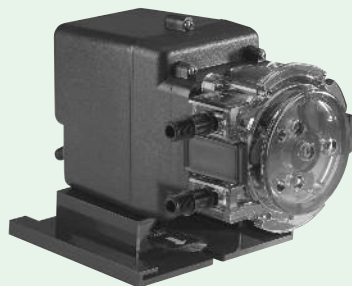
SINGLE HEAD ADJUSTABLE

The Classic Series single head adjustable metering pump is built with three detachable components; the motor, feed rate control, and the pump head. The output is determined by three factors; the rpm of the motor gears, the percentage setting on the feed rate control, and the size of the pump tube. The motor shaft rotates at a fixed rpm, which drives the feed rate control to intermittently engage the roller assembly within the pump head according to the setting on the external dial ring. The dial ring is labeled L to 10 and has a 20:1 turndown.



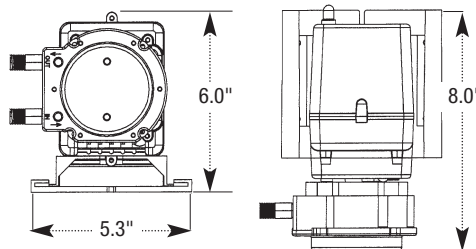
Shipping Weight 9 lbs (4 kg)

Box Dimensions 13 x 8 x 9 in. (33.0 x 20.4 x 22.9 cm)



SINGLE HEAD FIXED OUTPUT

The Classic Series single head fixed output metering pump is built with two detachable components; the motor and the pump head. The fixed rate pump does not have an output adjustment. The output is determined by the rpm of the motor gears and the size of the pump tube. The motor's output shaft rotates at a fixed rpm which drives the roller assembly within the pump head.



Shipping Weight 8 lbs (3.6 kg)

Box Dimensions 13 x 8 x 9 in. (33.0 x 20.4 x 22.9 cm)

Tank Systems are also available shipped pre-assembled for quick installations, refer to page 32.



The Classic Series Single Head Pumps are categorized into two sub-series, the 45 and 85.

45 SERIES

0.2 to 22.0 gpd up to 100 psi

0.2 to 50.0 gpd up to 25 psi

- 26 rpm
- Adjustable output 5%-100%, 2.5% increments
- Fixed output

85 SERIES

0.3 to 40.0 gpd up to 100 psi

0.3 to 85.0 gpd up to 25 psi

- 44 rpm
- Adjustable output 5%-100%, 2.5% increments
- Fixed output

The following pages display charts with pump output detail and are organized by pressure rating.

Features

- 3-point roller design assists in anti-siphon protection
- Pump head requires no valves, allows for easy maintenance
- Self-priming against maximum working pressure, foot valve not required
- Pump does not lose prime or vapor lock
- Pumps off-gassing solutions and can run dry
- Output volume is not affected by back pressure
- Easy to change pump tube; lubrication is not required
- Pump tubes and pump heads interchange between models

Accessory Kit Shipped With Each Pump

- 3 connecting nuts 1/4" or 3/8"
- 3 ferrules 1/4" or 6 mm *EUROPE* OR 2 ferrules 3/8"
- 1 injection check valve 100 psi (6.9 bar) OR 1 injection fitting 25 psi (1.7 bar)
- 1 weighted suction line strainer 1/4", 3/8" or 6 mm *EUROPE*
- 1 20' roll suction/discharge tubing 1/4" or 3/8", white or UV black OR 6 mm white *EUROPE*
- 1 additional pump tube
- 2 additional latches
- 1 mounting bracket
- 1 manual

SPECIFICATIONS

Maximum Operating z 125°F (52°C)

Maximum Suction Lift

25 ft (7.6 m) vertical lift, based on water

Motor Type 1/30 HP, shaded pole, class B

Duty Cycle Continuous

Motor Voltage (Amp Draw)

120V 60Hz 1PH (1.7)

220V 60Hz 1PH (0.9)

230V 50Hz 1PH (0.9) *INTERNATIONAL*

250V 50Hz 1PH (0.9) *INTERNATIONAL*

Power Cord Type SJTOW

Power Cord Plug End

120V 60Hz NEMA 5/15

220V 60Hz NEMA 6/15

230V 50Hz CEE 7/VII

250V 50Hz CEE 7/VII

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill Santoprene®, optional Tygothane®** #1, #2 & #5 tubes, FDA approved

CV Duckbill with Tygothane® Tube** Pellathane®†

Pump Head Rollers HDPE

Roller Bushings Oil impregnated sintered bronze

Suction/Discharge Tubing, Ferrules 1/4" & 6 mm

Polyethylene, FDA approved

Tube Fittings, Check Valve Fittings

Gray fittings: Type 1 Rigid PVC, NSF listed

Black fittings: PP, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

3/8" Adapter Type 1 Rigid PVC, NSF listed

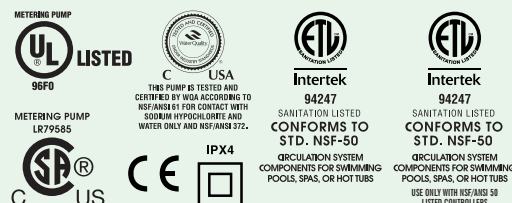
Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

Pump Head Latches Polypropylene

AGENCY LISTINGS

- Models (Santoprene® only) tested by Water Quality Association to conform to ANSI/NSF STD 61
- Adjustable models (Santoprene® only) tested by ETL to conform to ANSI/NSF STD 50
- Fixed output models (Santoprene® only) tested by ETL to conform to ANSI/NSF STD 50 only when used with ANSI/NSF STD 50 listed controllers



Listings vary by model

* Santoprene® is a registered trademark of Exxon Mobil Corporation.

** Tygothane® is a registered trademark of Saint-Gobain Performance Plastics.

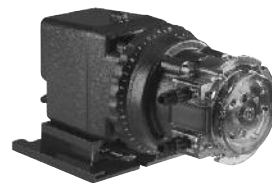
† Pellathane® is a registered trademark of The Dow Company.

USA and Canada 800.683.2378, International 904.641.1666 **3**

CLASSIC series

SINGLE HEAD ADJUSTABLE OUTPUT PUMP

0-25 psi (0-1.7 bar)

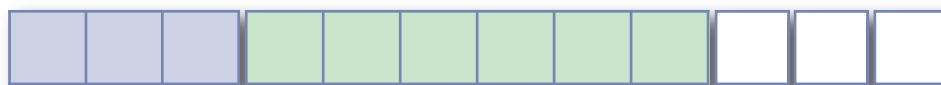


OUTPUT

Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute	
45 SERIES	45M1	45MJL1	#1	0.2 to 3.0	0.8 to 11.4	0.01 to 0.13	0.03 to 0.48	0.02 to 0.27	0.56 to 7.92	0.6 to 9.1	0.02 to 0.38	0.31 to 6.32
	45M2	45MJL2	#2	0.5 to 10.0	1.9 to 37.9	0.02 to 0.42	0.08 to 1.58	0.04 to 0.89	1.32 to 26.32	1.5 to 30.3	0.06 to 1.26	1.04 to 21.04
	45M3	45MJL3	#3	1.1 to 22.0	4.2 to 83.3	0.05 to 0.92	0.18 to 3.47	0.10 to 1.96	2.92 to 57.85	3.3 to 66.6	0.14 to 2.78	2.29 to 46.25
	45M4	45MJL4	#4	1.7 to 35.0	6.4 to 132.5	0.07 to 1.46	0.27 to 5.52	0.15 to 3.11	4.44 to 92.01	5.1 to 106.0	0.21 to 4.42	3.54 to 73.61
	45M5	45MJL5	#5	2.5 to 50.0	9.5 to 189.3	0.10 to 2.08	0.40 to 7.89	0.22 to 4.44	6.60 to 131.43	7.6 to 151.4	0.32 to 6.31	5.28 to 105.14
85 SERIES	85M1	85MJL1	#1	0.3 to 5.0	1.1 to 18.9	0.01 to 0.21	0.05 to 0.79	0.03 to 0.44	0.76 to 13.13	0.9 to 15.1	0.04 to 0.63	0.52 to 10.49
	85M2	85MJL2	#2	0.8 to 17.0	3.0 to 64.4	0.03 to 0.71	0.13 to 2.68	0.07 to 1.51	2.08 to 44.65	2.4 to 51.5	0.10 to 2.15	1.67 to 35.76
	85M3	85MJL3	#3	2.0 to 40.0	7.6 to 151.4	0.08 to 1.67	0.32 to 6.31	0.18 to 3.55	5.27 to 105.14	6.1 to 121.1	0.25 to 5.05	4.24 to 84.10
	85M4	85MJL4	#4	3.0 to 60.0	11.4 to 227.1	0.13 to 2.5	0.48 to 9.46	0.27 to 5.33	7.92 to 157.71	9.1 to 181.7	0.38 to 7.57	6.32 to 126.18
	85M5	85MJL5	#5	4.3 to 85.0	16.3 to 321.8	0.18 to 3.54	0.68 to 13.4	0.38 to 7.55	11.32 to 223.40	13.0 to 257.4	0.54 to 10.73	9.03 to 178.75
				Approximate Output @ 60Hz					Approximate Output @ 50Hz			

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



Select **Item Number Prefix** from output chart above

Omit if not ordering a Tank System

Tank

S7G 7.5-Gallon UV Gray
S7N 7.5-Gallon White
S1G 15-Gallon UV Gray
S1N 15-Gallon White
S3G 30-Gallon UV Gray
S3N 30-Gallon White

NOTE: Tanks also sold separately on page 33.

Voltage & Hertz

A 120V 60Hz
B 220V 60Hz
C 230V 50Hz, CEE7 Cord *INTERNATIONAL*
D 250V 50Hz, CEE7 Cord *INTERNATIONAL*

NOTE: Contact the factory for additional voltage and cord options.

Suction & Discharge Tubing

1 1/4" White
2 1/4" UV Black
3 3/8" White
4 3/8" UV Black
5 6 mm White *EUROPE*

NOTE: O.D. does not affect output.

Tube Material

S Santoprene®
T Tygothane® (#1, 2 & 5 only)

NOTE: Application specific, refer to chemical resistance guide for chemical compatibility.

CLASSIC series

SINGLE HEAD ADJUSTABLE OUTPUT PUMP 26-100 psi (1.8-6.9 bar)



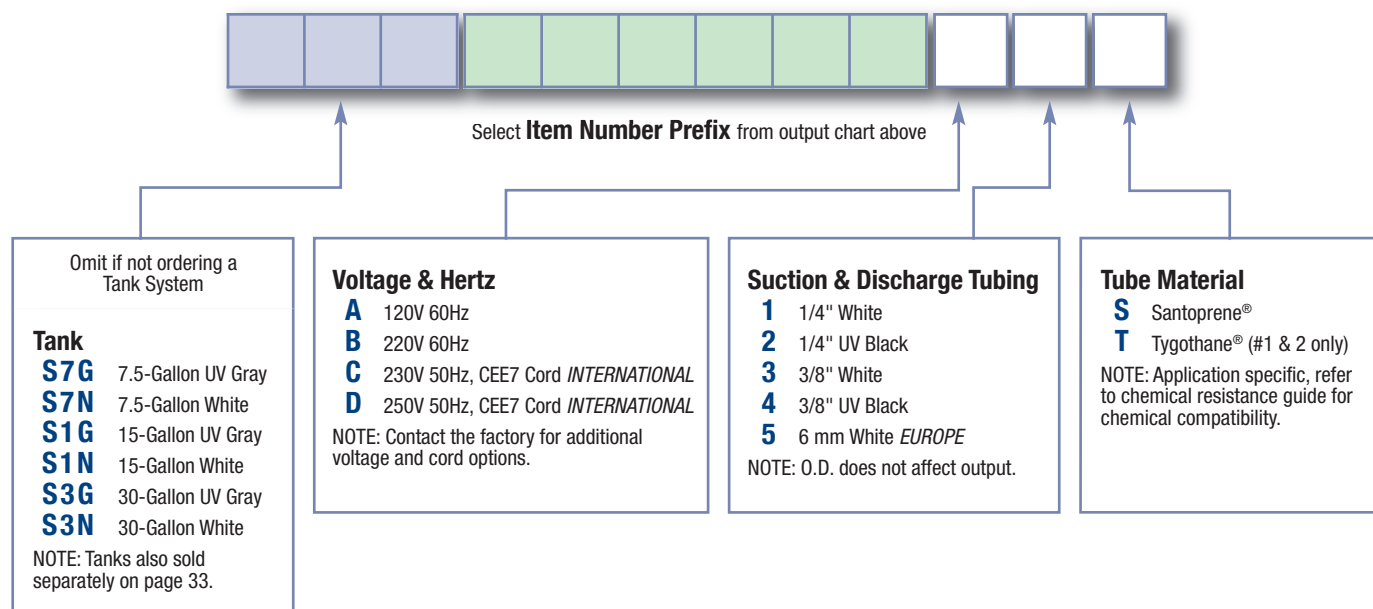
OUTPUT

Model		Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute
45 SERIES	45MHP2	45MJH1	#1	0.2 to 3.0	0.8 to 11.4	0.01 to 0.13	0.03 to 0.48	0.02 to 0.27	0.56 to 7.92	0.6 to 9.1	0.02 to 0.38	0.31 to 6.32
	45MHP10	45MJH2	#2	0.5 to 10.0	1.9 to 37.9	0.02 to 0.42	0.08 to 1.58	0.04 to 0.89	1.32 to 26.32	1.5 to 30.3	0.06 to 1.26	1.04 to 21.04
	45MHP22	45MJH7	#7	1.1 to 22.0	4.2 to 83.3	0.05 to 0.92	0.18 to 3.47	0.10 to 1.96	2.92 to 57.85	3.3 to 66.6	0.14 to 2.78	2.29 to 46.25
85 SERIES	85MHP5	85MJH1	#1	0.3 to 5.0	1.1 to 18.9	0.01 to 0.21	0.05 to 0.79	0.03 to 0.44	0.76 to 13.13	0.9 to 15.1	0.04 to 0.63	0.52 to 10.49
	85MHP17	85MJH2	#2	0.8 to 17.0	3.0 to 64.4	0.03 to 0.71	0.13 to 2.68	0.07 to 1.51	2.08 to 44.65	2.4 to 51.5	0.10 to 2.15	1.67 to 35.76
	85MHP40	85MJH7	#7	2.0 to 40.0	7.6 to 151.4	0.08 to 1.67	0.32 to 6.31	0.18 to 3.55	5.27 to 105.14	6.1 to 121.1	0.25 to 5.05	4.24 to 84.10
				Approximate Output @ 60Hz						Approximate Output @ 50Hz		

NOTE: Injection check valve included with pumps rated 26-100 psi (1.8-6.9 bar).

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



Example

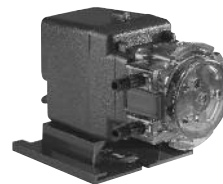


Pump Item Number: 85MJH2A1S

- 85MHP17 Pump
- 120V 60Hz
- 1/4" White Suction & Discharge Tubing
- Santoprene® Tube

CLASSIC series

SINGLE HEAD FIXED OUTPUT PUMP 0-25 psi (0-1.7 bar)

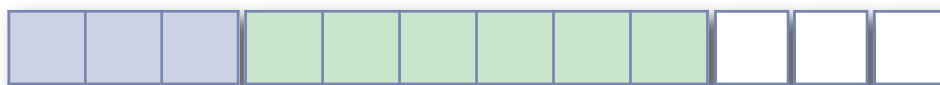


OUTPUT

	Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute
45 SERIES	45MP1	45MFL1	#1	3.0	11.4	0.13	0.48	0.27	7.92	9.1	0.38	6.32
	45MP2	45MFL2	#2	10.0	37.9	0.42	1.58	0.89	26.32	30.3	1.26	21.04
	45MP3	45MFL3	#3	22.0	83.3	0.92	3.47	1.96	57.85	66.6	2.78	46.25
	45MP4	45MFL4	#4	35.0	132.5	1.46	5.52	3.11	92.01	106.0	4.42	73.61
	45MP5	45MFL5	#5	50.0	189.3	2.08	7.89	4.44	131.43	151.4	6.31	105.14
85 SERIES	85MP1	85MFL1	#1	5.0	18.9	0.21	0.79	0.44	13.13	15.1	0.63	10.49
	85MP2	85MFL2	#2	17.0	64.4	0.71	2.68	1.51	44.65	51.5	2.15	35.76
	85MP3	85MFL3	#3	40.0	151.4	1.67	6.31	3.55	105.14	121.1	5.05	84.10
	85MP4	85MFL4	#4	60.0	227.1	2.50	9.46	5.33	157.71	181.7	7.57	126.18
	85MP5	85MFL5	#5	85.0	321.8	3.54	13.40	7.55	223.40	257.4	10.73	178.75
Approximate Output @ 60Hz										Approximate Output @ 50Hz		

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



Select **Item Number Prefix** from output chart above

Omit if not ordering a Tank System

Tank

- S7G** 7.5-Gallon UV Gray
- S7N** 7.5-Gallon White
- S1G** 15-Gallon UV Gray
- S1N** 15-Gallon White
- S3G** 30-Gallon UV Gray
- S3N** 30-Gallon White

NOTE: Tanks also sold separately on page 33.

Voltage & Hertz

- A** 120V 60Hz
- B** 220V 60Hz
- C** 230V 50Hz, CEE7 Cord *INTERNATIONAL*
- D** 250V 50Hz, CEE7 Cord *INTERNATIONAL*

NOTE: Contact the factory for additional voltage and cord options.

Suction & Discharge Tubing

- 1** 1/4" White
- 2** 1/4" UV Black
- 3** 3/8" White
- 4** 3/8" UV Black
- 5** 6 mm White *EUROPE*

NOTE: O.D. does not affect output.

Tube Material

- S** Santoprene®
- T** Tygothane® (#1, 2 & 5 only)

NOTE: Application specific, refer to chemical resistance guide for chemical compatibility.

CLASSIC series

SINGLE HEAD FIXED OUTPUT PUMP

26-100 psi (1.8-6.9 bar)



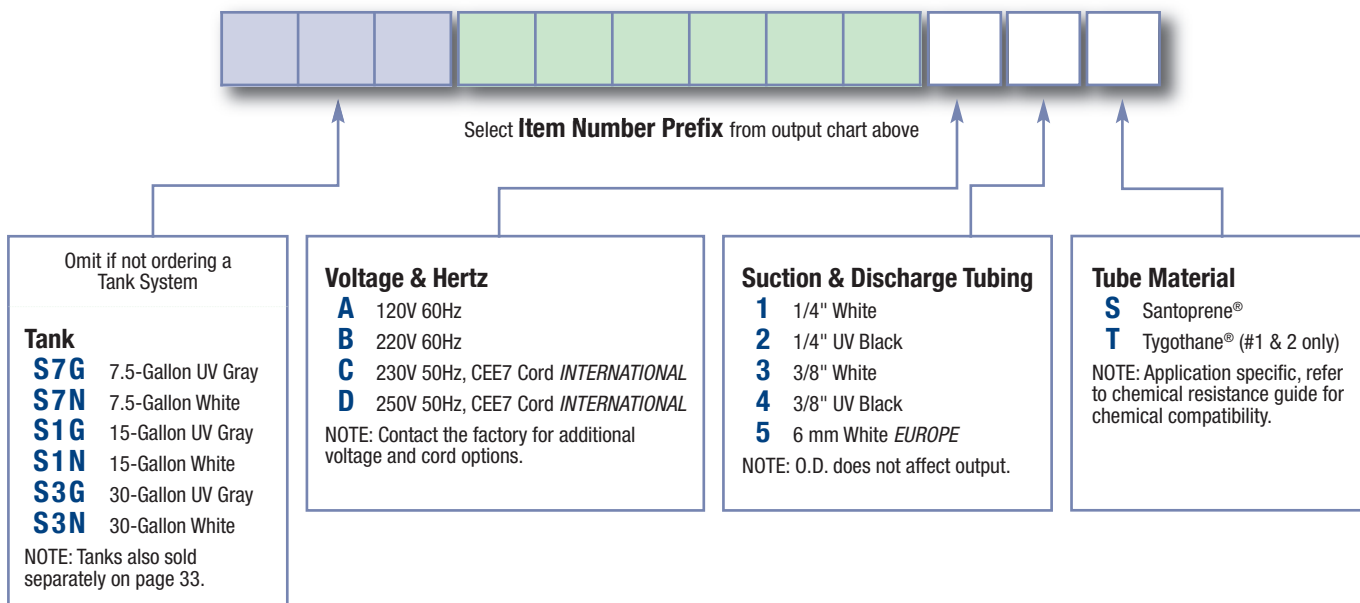
OUTPUT

	Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute
45 SERIES	45MPHP2	45MFH1	#1	3.0	11.4	0.13	0.48	0.27	7.92	9.1	0.38	6.32
	45MPHP10	45MFH2	#2	10.0	37.9	0.42	1.58	0.89	26.32	30.3	1.26	21.04
	45MPHP22	45MFH7	#7	22.0	83.3	0.92	3.47	1.96	57.85	66.6	2.78	46.25
85 SERIES	85MPHP5	85MFH1	#1	5.0	18.9	0.21	0.79	0.44	13.13	15.1	0.63	10.49
	85MPHP17	85MFH2	#2	17.0	64.4	0.71	2.68	1.51	44.65	51.5	2.15	35.76
	85MPHP40	85MFH7	#7	40.0	151.4	1.67	6.31	3.55	105.14	121.1	5.05	84.10
Approximate Output @ 60Hz										Approximate Output @ 50Hz		

NOTE: Injection check valve included with pumps rated 26-100 psi (1.8-6.9 bar).

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



Example



Pump Item Number: 45MFH7B4S

- 45MPHP22 Pump
- 220V 60Hz
- 3/8" UV Black Suction & Discharge Tubing
- Santoprene® Tube

CLASSIC series

DOUBLE HEAD ADJUSTABLE AND FIXED OUTPUT PUMPS

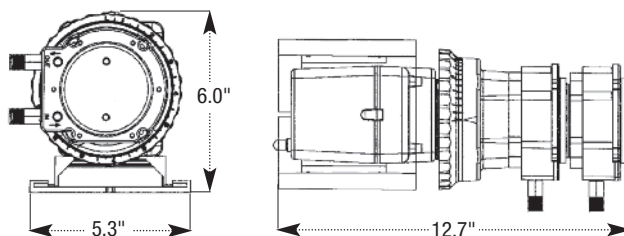
The Classic Series metering pumps are a mechanical design, available in adjustable or fixed outputs. Typical installations include wired to a well pump pressure switch, activated by a water meter for proportional feed or with a controller.



DOUBLE HEAD ADJUSTABLE

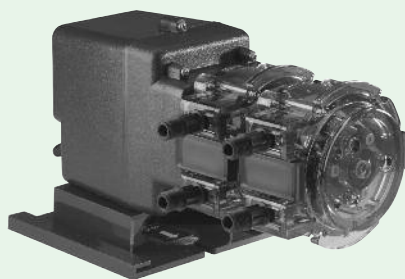
The Classic Series double head adjustable metering pump is built with four detachable components; the motor, feed rate control, and two pump heads. The output is determined by three factors; the rpm of the motor gears, the percentage setting on the feed rate control, and the size of the pump tubes in both heads.

The motor shaft rotates at a fixed rpm, which drives the feed rate control to intermittently engage the roller assembly within the pump head according to the setting on the external dial ring. The dial ring is labeled L to 10 and has a 20:1 turndown.



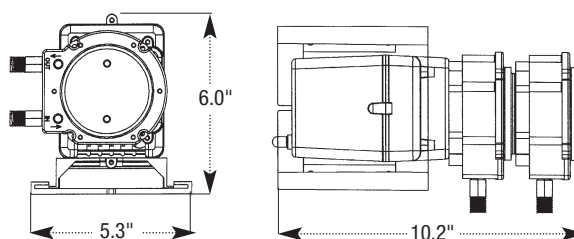
Shipping Weight 10 lbs (4.5 kg)

Box Dimensions 17 x 8 x 9 in. (43.2 x 20.4 x 22.9 cm)



DOUBLE HEAD FIXED OUTPUT

The Classic Series double head fixed output metering pump is built with three detachable components; the motor and two pump heads. The fixed rate pump does not have an output adjustment. The output is determined by the rpm of the motor gears and the size of the pump tubes in both heads. The motor's output shaft rotates at a fixed rpm which drives the roller assembly within the pump head.



Shipping Weight 9 lbs (4 kg)

Box Dimensions 17 x 8 x 9 in. (43.2 x 20.4 x 22.9 cm)

The Classic Series Double Head Pumps are categorized into two sub-series, the 100 and 170.

100 SERIES

0.3 to 20.0 gpd up to 100 psi

0.3 to 100.0 gpd up to 25 psi

- 26 rpm
- Adjustable output 5%-100%, 2.5% increments
- Fixed output

170 SERIES

0.5 to 34.0 gpd up to 100 psi

0.5 to 170.0 gpd up to 25 psi

- 44 rpm
- Adjustable output 5%-100%, 2.5% increments
- Fixed output

The following pages display charts with pump output detail and are organized by pressure rating.

Features

- 3-point roller design assists in anti-siphon protection
- Pump head requires no valves, allows for easy maintenance
- Self-priming against maximum working pressure, foot valve not required
- Pump does not lose prime or vapor lock
- Pumps off-gassing solutions and can run dry
- Output volume is not affected by back pressure
- Easy to change pump tube; lubrication is not required
- Pump tubes and pump heads interchange between models

Accessory Kit Shipped With Each Pump

- 6 connecting nuts 1/4" or 3/8"
- 6 ferrules 1/4" or 6 mm *EUROPE* OR 2 ferrules 3/8"
- 2 injection check valves 100 psi (6.9 bar) OR 1 injection fitting 25 psi (1.7 bar)
- 2 weighted suction line strainers 1/4", 3/8" or 6 mm *EUROPE*
- 2 20' roll suction/discharge tubings 1/4" or 3/8", white or UV black OR 6 mm white *EUROPE*
- 2 additional pump tubes
- 2 additional latches
- 1 mounting bracket
- 1 manual

SPECIFICATIONS

Maximum Operating Temperature 125°F (52°C)

Maximum Suction Lift

25 ft (7.6 m) vertical lift, based on water

Motor Type 1/30 HP, shaded pole, class B

Duty Cycle Continuous

Motor Voltage (Amp Draw)

120V 60Hz 1PH (1.7)

220V 60Hz 1PH (0.9)

230V 50Hz 1PH (0.9) *INTERNATIONAL*

250V 50Hz 1PH (0.9) *INTERNATIONAL*

Power Cord Type SJTOW

Power Cord Plug End

120V 60Hz NEMA 5/15

220V 60Hz NEMA 6/15

230V 50Hz CEE 7/VII

250V 50Hz CEE 7/VII

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill Santoprene®, optional Tygothane® #1, #2 & #5 tubes, FDA approved

CV Duckbill with Tygothane® Tube Pellathane®†

Pump Head Rollers HDPE

Roller Bushings Oil impregnated sintered bronze

Suction/Discharge Tubing, Ferrules 1/4" & 6 mm

Polyethylene, FDA approved

Tube Fittings, Check Valve Fittings

Gray fittings: Type 1 Rigid PVC, NSF listed

Black fittings: PP, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

3/8" Adapter Type 1 Rigid PVC, NSF listed

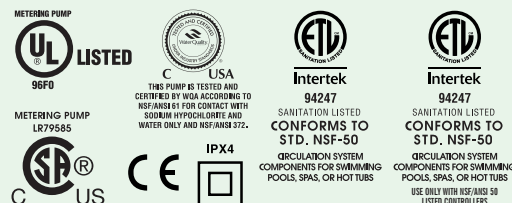
Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

Pump Head Latches Polypropylene

AGENCY LISTINGS

- Models (Santoprene® only) tested by Water Quality Association to conform to ANSI/NSF STD 61
- Adjustable models (Santoprene® only) tested by ETL to conform to ANSI/NSF STD 50
- Fixed output models (Santoprene® only) tested by ETL to conform to ANSI/NSF STD 50 only when used with ANSI/NSF STD 50 listed controllers



Listings vary by model

* Santoprene® is a registered trademark of Exxon Mobil Corporation.

** Tygothane® is a registered trademark of Saint-Gobain Performance Plastics.

† Pellathane® is a registered trademark of The Dow Company.

CLASSIC series

DOUBLE HEAD ADJUSTABLE OUTPUT PUMP 0-25 psi (0-1.7 bar)

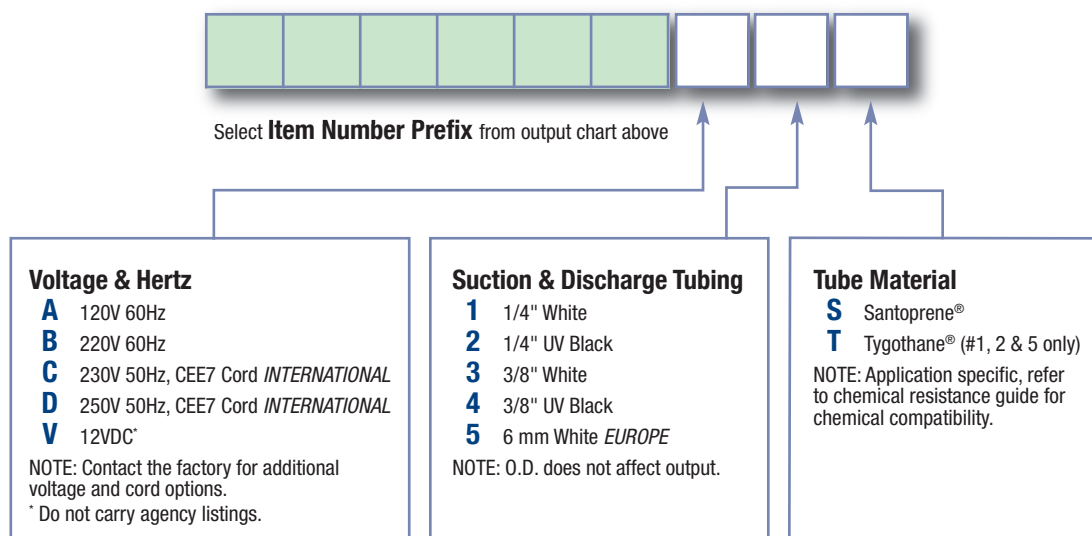


OUTPUT

	Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute
100 SERIES	100DM1	100JL1	#1	0.3 to 6.0	1.1 to 22.7	0.01 to 0.25	0.05 to 0.95	0.03 to 0.53	0.76 to 15.76	0.9 to 18.2	0.04 to 0.76	0.61 to 12.64
	100DM2	100JL2	#2	1.0 to 20.0	3.8 to 75.7	0.04 to 0.83	0.16 to 3.15	0.09 to 1.78	2.64 to 52.57	3.0 to 60.6	0.13 to 2.53	2.11 to 42.06
	100DM3	100JL3	#3	2.2 to 44.0	8.3 to 166.5	0.09 to 1.83	0.35 to 6.94	0.19 to 3.91	5.76 to 115.63	6.6 to 133.2	0.28 to 5.55	4.58 to 92.50
	100DM4	100JL4	#4	3.5 to 70.0	13.2 to 265.0	0.15 to 2.92	0.55 to 11.04	0.31 to 6.22	9.17 to 184.03	10.6 to 212.0	0.44 to 8.83	7.36 to 147.22
	100DM5	100JL5	#5	5.0 to 100.0	18.9 to 378.5	0.21 to 4.17	0.79 to 15.77	0.44 to 8.88	13.13 to 262.88	15.1 to 302.8	0.63 to 12.61	10.49 to 210.28
170 SERIES	170DM1	170JL1	#1	0.5 to 10.0	1.9 to 37.9	0.02 to 0.42	0.08 to 1.58	0.04 to 0.89	1.32 to 26.32	1.5 to 30.3	0.06 to 1.26	1.04 to 21.04
	170DM2	170JL2	#2	1.7 to 34.0	6.4 to 128.7	0.07 to 1.42	0.27 to 5.36	0.15 to 3.02	4.44 to 89.38	5.1 to 102.6	0.21 to 4.29	3.54 to 71.55
	170DM3	170JL3	#3	4.0 to 80.0	15.1 to 302.8	0.17 to 3.33	0.63 to 12.62	0.35 to 7.11	10.49 to 210.28	12.1 to 242.2	0.50 to 10.09	8.40 to 168.22
	170DM4	170JL4	#4	6.0 to 120.0	22.7 to 454.2	0.25 to 5.00	0.95 to 18.93	0.53 to 10.66	15.76 to 315.42	18.2 to 363.4	0.76 to 15.14	12.64 to 252.36
	170DM5	170JL5	#5	8.5 to 170.0	32.2 to 643.5	0.35 to 7.08	1.34 to 26.80	0.76 to 15.10	22.36 to 446.88	25.7 to 514.8	1.07 to 21.45	17.92 to 357.50
Approximate Output @ 60Hz										Approximate Output @ 50Hz		

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



CLASSIC series

DOUBLE HEAD ADJUSTABLE OUTPUT PUMP 26-100 psi (1.8-6.9 bar)



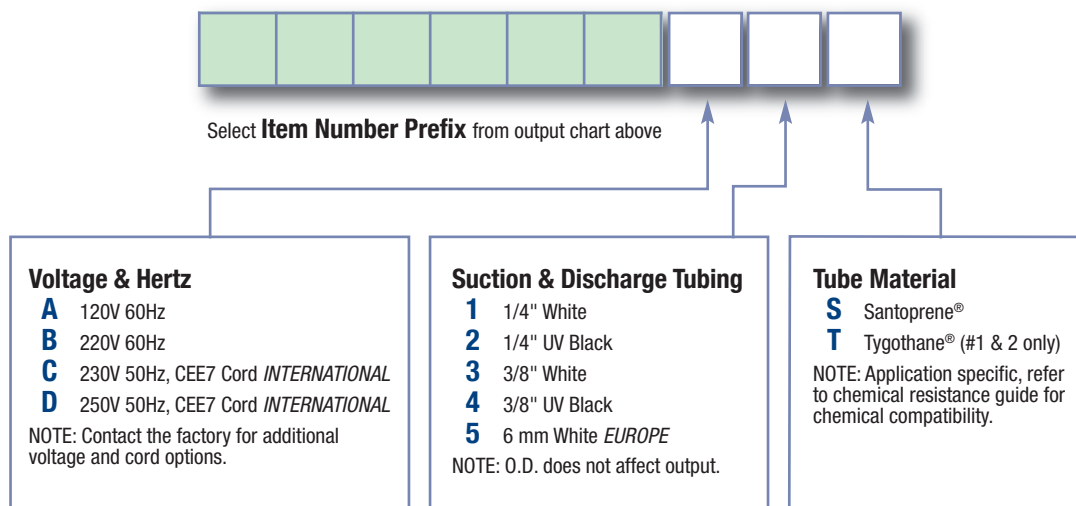
OUTPUT

	Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute
100 SERIES	100DMHP5	100JH1	#1	0.3 to 6.0	1.1 to 22.7	0.01 to 0.25	0.05 to 0.95	0.03 to 0.53	0.76 to 15.76	0.9 to 18.2	0.04 to 0.76	0.61 to 12.64
	100DMHP20	100JH2	#2	1.0 to 20.0	3.8 to 75.7	0.04 to 0.83	0.16 to 3.15	0.09 to 1.78	2.64 to 52.57	3.0 to 60.6	0.13 to 2.53	2.11 to 42.06
170 SERIES	170DMHP9	170JH1	#1	0.5 to 10.0	1.9 to 37.9	0.02 to 0.42	0.08 to 1.58	0.04 to 0.89	1.32 to 26.32	1.5 to 30.3	0.06 to 1.26	1.04 to 21.04
	170DMHP34	170JH2	#2	1.7 to 34.0	6.4 to 128.7	0.07 to 1.42	0.27 to 5.36	0.15 to 3.02	4.44 to 89.38	5.1 to 102.6	0.21 to 4.29	3.54 to 71.55
				Approximate Output @ 60Hz						Approximate Output @ 50Hz		

NOTE: Injection check valve included with pumps rated 26-100 psi (1.8-6.9 bar).

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



Example

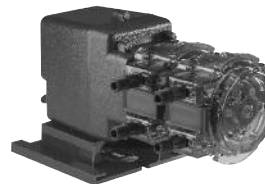


Pump Item Number: 170JH2A1S

- 170DMHP34 Pump
- 120V 60Hz
- 1/4" White Suction & Discharge Tubing
- Santoprene® Tube

CLASSIC series

DOUBLE HEAD FIXED OUTPUT PUMP 0-25 psi (0-1.7 bar)

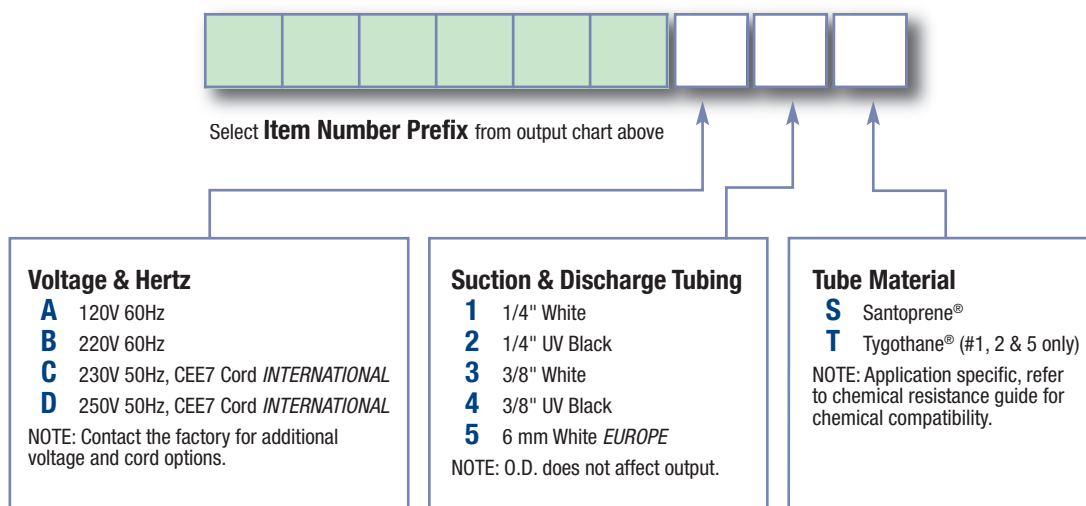


OUTPUT

	Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute
100 SERIES	100DMP1	100FL1	#1	6.0	22.7	0.25	0.95	0.53	15.76	18.2	0.76	12.64
	100DMP2	100FL2	#2	20.0	75.7	0.83	3.15	1.78	52.57	60.6	2.53	42.06
	100DMP3	100FL3	#3	44.0	166.5	1.83	6.94	3.91	115.63	133.2	5.55	92.50
	100DMP4	100FL4	#4	70.0	265.0	2.92	11.04	6.22	184.03	212.0	8.83	147.22
	100DMP5	100FL5	#5	100.0	378.5	4.17	15.77	8.88	262.88	302.8	12.61	210.28
170 SERIES	170DMP1	170FL1	#1	10.0	37.9	0.42	1.58	0.89	26.32	30.3	1.26	21.04
	170DMP2	170FL2	#2	34.0	128.7	1.42	5.36	3.02	89.38	102.6	4.29	71.55
	170DMP3	170FL3	#3	80.0	302.8	3.33	12.62	7.11	210.28	242.2	10.09	168.22
	170DMP4	170FL4	#4	120.0	454.2	5.00	18.93	10.66	315.42	363.4	15.14	252.36
	170DMP5	170FL5	#5	170.0	643.6	7.08	26.80	15.10	446.88	514.8	21.45	357.50
Approximate Output @ 60Hz										Approximate Output @ 50Hz		

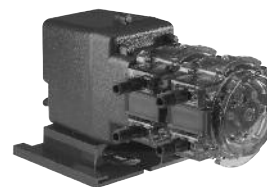
NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



CLASSIC series

DOUBLE HEAD FIXED OUTPUT PUMP 26-100 psi (1.8-6.9 bar)



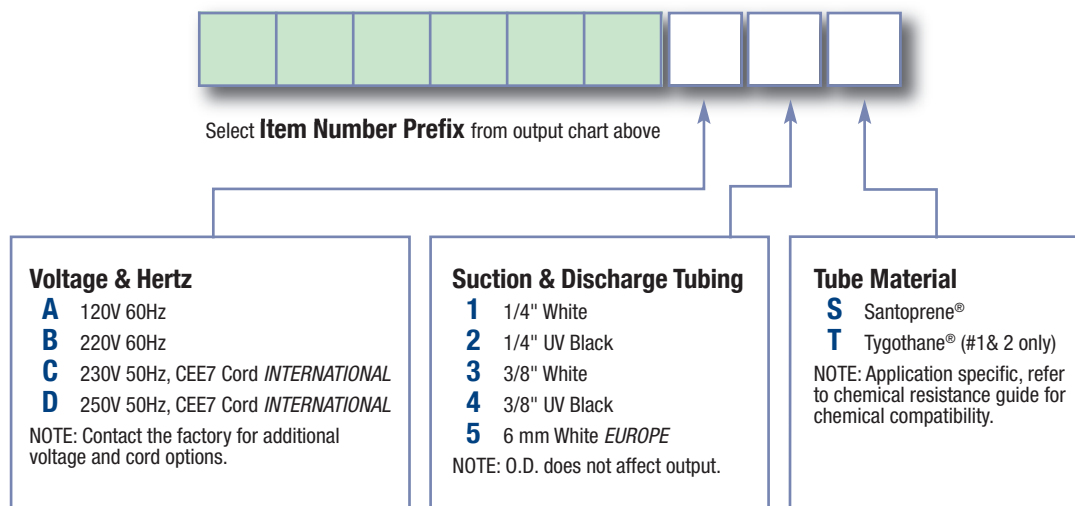
OUTPUT

	Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute	Liters per Day	Liters per Hour	Milliliters per Minute
100 SERIES	100DMPHP5	100FH1	#1	6.0	22.7	0.25	0.95	0.53	15.76	18.2	0.76	12.64
	100DMPHP20	100FH2	#2	20.0	75.7	0.83	3.15	1.78	52.57	60.6	2.53	42.06
170 SERIES	170DMPHP9	170FH1	#1	10.0	37.9	0.42	1.58	0.89	26.32	30.3	1.26	21.04
	170DMPHP34	170FH2	#2	34.0	128.7	1.42	5.36	3.02	89.38	102.6	4.29	71.55
Approximate Output @ 60Hz										Approximate Output @ 50Hz		

NOTE: Injection check valve included with pumps rated 26-100 psi (1.8-6.9 bar).

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



Example1



Pump Item Number: 100FH1B1S

- 100DMPHP5 Pump
- 220V 60Hz
- 1/4" White Suction & Discharge Tubing
- Santoprene® Tube

SVP series

VARIABLE SPEED PUMP

The SVP Series is a variable speed metering pump with a DC motor and detachable pump head. The SVP's output is digitally adjusted to increase or decrease the motor speed.



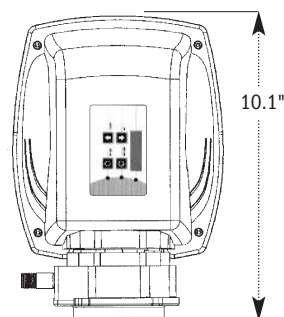
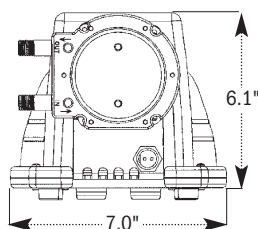
SVP1
MANUAL ADJUSTMENT



SVP4
4-20mA

The SVP1 pump is manually adjusted from 5%-100% in 1% increments with the up and down arrows on the keypad.

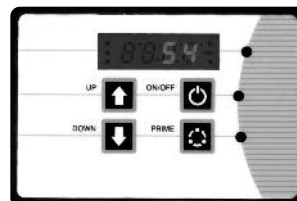
The SVP4 operates in a 4-20mA mode with an external port to accept an input control signal. The SVP4 pump can override the 4-20mA mode to be manually adjusted.



Shipping Weight 9 lbs (4 kg)

Box Dimensions 16 x 9 x 9 in. (40.6 x 22.9 x 22.9 cm)

The digital four button keypad has prime, on/off, and up & down arrows.



The SVP Series is categorized into two sub-series; the SVP1 (manual) and the SVP4 (4-20mA).

SVP1 SVP4

0.3 to 40.0 gpd up to 100 psi

0.3 to 85.0 gpd up to 25 psi

- 47 rpm
- Digital keypad
- 20:1 turndown, 1% increments, non-scalable
- SVP1: Manual output control
- SVP4: Automatic output control via 4-20mA signal or manual

The following pages display charts with pump output detail and are organized by pressure rating.

Features

- 3-point roller design assists in anti-siphon protection
- Pump head requires no valves, allows for easy maintenance
- Self-priming against maximum working pressure foot valve not required
- Pump does not lose prime or vapor lock
- Pumps off-gassing solutions and can run dry
- Output volume is not affected by back pressure
- Easy to change pump tube; lubrication is not required
- Pump tubes and pump heads interchange between models

Accessory Kit Shipped With Each Pump

- 3 connecting nuts 1/4" or 3/8"
- 3 ferrules 1/4" or 6 mm *EUROPE* OR 2 ferrules 3/8"
- 1 injection check valve 100 psi (6.9 bar) OR 1 injection fitting 25 psi (1.7 bar)
- 1 weighted suction line strainer 1/4", 3/8" or 6 mm *EUROPE*
- 1 20' roll suction/discharge tubing 1/4" or 3/8", white or UV black OR 6 mm white *EUROPE*
- 1 additional pump tube
- 2 additional latches
- 1 manual

SPECIFICATIONS

Maximum Operating Temperature 125°F (52°C)

Maximum Suction Lift

25 ft (7.6 m) vertical lift, based on water

Motor Type 12VDC gear motor

Duty Cycle Continuous

Motor Voltage (Amp Draw)

120V 50/60Hz 1PH (1.5)

220V 50/60Hz 1PH (1.5)

12VDC 1PH (1.5)

230V 50/60Hz 1PH (1.5) *INTERNATIONAL*

250V 50/60Hz 1PH (1.5) *INTERNATIONAL*

Power Cord Type

120V, 220V, 230V, 250V: SJTOW

12VDC: VW-1

Power Cord Plug End

120V 60Hz NEMA 5/15

220V 60Hz NEMA 6/15

230V 50Hz CEE 7/VII

250V 50Hz CEE 7/VII

12VDC Pigtail connection

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill Santoprene®, optional Tygothane®** #1, #2 & #5 tubes, FDA approved

CV Duckbill with Tygothane® Tube** Pellathane®†

Pump Head Rollers HDPE

Roller Bushings Oil impregnated sintered bronze

Suction/Discharge Tubing, Ferrules 1/4" & 6 mm Polyethylene, FDA approved

Tube Fittings, Check Valve Fittings

Gray fittings: Type 1 Rigid PVC, NSF listed

Black fittings: PP, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

3/8" Adapter Type 1 Rigid PVC, NSF listed

Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

Pump Head Latches Polypropylene

AGENCY LISTINGS

- Models tested by Water Quality Association to conform to ANSI/NSF STD 61 (Santoprene® only)



Listings vary by model††

* Santoprene® is a registered trademark of Exxon Mobil Corporation.

** Tygothane® is a registered trademark of Saint-Gobain Performance Plastics.

† Pellathane® is a registered trademark of The Dow Company.

†† 12VDC pumps do not carry any agency listings.

SVP series

VARIABLE SPEED PUMP 0-25 psi (0-1.7 bar)



OUTPUT

	Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute
MANUAL	SVP1L1	SVP1L1	#1	0.3 to 5.0	1.1 to 18.9	0.01 to 0.21	0.05 to 0.79	0.03 to 0.44	0.76 to 13.13
	SVP1L2	SVP1L2	#2	0.8 to 17.0	3.0 to 64.4	0.03 to 0.71	0.13 to 2.68	0.07 to 1.51	2.08 to 44.65
	SVP1L3	SVP1L3	#3	2.0 to 40.0	7.6 to 151.4	0.08 to 1.67	0.32 to 6.31	0.18 to 3.55	5.27 to 105.14
	SVP1L4	SVP1L4	#4	3.0 to 60.0	11.4 to 227.1	0.13 to 2.50	0.48 to 9.46	0.27 to 5.33	7.92 to 157.71
	SVP1L5	SVP1L5	#5	4.3 to 85.0	16.3 to 321.8	0.18 to 3.54	0.68 to 13.40	0.38 to 7.55	11.32 to 223.40
4-20mA INPUT*	SVP4L1	SVP4L1	#1	0.3 to 5.0	1.1 to 18.9	0.01 to 0.21	0.05 to 0.79	0.03 to 0.44	0.76 to 13.13
	SVP4L2	SVP4L2	#2	0.8 to 17.0	3.0 to 64.4	0.03 to 0.71	0.13 to 2.68	0.07 to 1.51	2.08 to 44.65
	SVP4L3	SVP4L3	#3	2.0 to 40.0	7.6 to 151.4	0.08 to 1.67	0.32 to 6.31	0.18 to 3.55	5.27 to 105.14
	SVP4L4	SVP4L4	#4	3.0 to 60.0	11.4 to 227.1	0.13 to 2.50	0.48 to 9.46	0.27 to 5.33	7.92 to 157.71
	SVP4L5	SVP4L5	#5	4.3 to 85.0	16.3 to 321.8	0.18 to 3.54	0.68 to 13.40	0.38 to 7.55	11.32 to 223.40
Approximate Output @ 50/60Hz									

* Input Signal Voltage/Resistance Max. 48 VDC/128 ohm.

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER

Select **Item Number Prefix** from output chart above

Voltage & Hertz

- A** 120V 60Hz
- B** 220V 60Hz
- C** 230V 50Hz, CEE7 Cord *INTERNATIONAL*
- D** 250V 50Hz, CEE7 Cord *INTERNATIONAL*
- V** 12VDC*

NOTE: Contact the factory for additional voltage and cord options.

* Do not carry any agency listings.

Suction & Discharge Tubing

- 1** 1/4" White
- 3** 3/8" White
- 5** 6 mm White *EUROPE*

NOTE: O.D. does not affect output.

Tube Material

- S** Santoprene®
- T** Tygothane® (#1, 2 & 5 only)

NOTE: Application specific, refer to chemical resistance guide for chemical compatibility.

SVP series

VARIABLE SPEED PUMP

26-100 psi (1.8-6.9 bar)



OUTPUT

Model	Item Number Prefix	Pump Tube Number	Gallons per Day	Liters per Day	Gallons per Hour	Liters per Hour	Ounces per Minute	Milliliters per Minute
MANUAL	SVP1H1	SVP1H1	#1	0.3 to 5.0	1.1 to 18.9	0.01 to 0.21	0.05 to 0.79	0.03 to 0.44
	SVP1H2	SVP1H2	#2	0.8 to 17.0	3.0 to 64.4	0.03 to 0.71	0.13 to 2.68	0.07 to 1.51
	SVP1H3	SVP1H7	#7	2.0 to 40.0	7.6 to 151.4	0.08 to 1.67	0.32 to 6.31	0.18 to 3.55
4-20mA INPUT*	SVP4H1	SVP4H1	#1	0.3 to 5.0	1.1 to 18.9	0.01 to 0.21	0.05 to 0.79	0.03 to 0.44
	SVP4H2	SVP4H2	#2	0.8 to 17.0	3.0 to 64.4	0.03 to 0.71	0.13 to 2.68	0.07 to 1.51
	SVP4H3	SVP4H7	#7	2.0 to 40.0	7.6 to 151.4	0.08 to 1.67	0.32 to 6.31	0.18 to 3.55
Approximate Output @ 50/60Hz								

* Input Signal Voltage/Resistance Max. 48 VDC/128 ohm.

NOTE: Injection check valve included with pumps rated 26-100 psi (1.8-6.9 bar).

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER

Select **Item Number Prefix** from output chart above

Voltage & Hertz

A 120V 60Hz

B 220V 60Hz

C 230V 50Hz, CEE7 Cord *INTERNATIONAL*

D 250V 50Hz, CEE7 Cord *INTERNATIONAL*

V 12VDC*

NOTE: Contact the factory for additional voltage and cord options.
* Do not carry any agency listings.

Suction & Discharge Tubing

1 1/4" White

3 3/8" White

5 6 mm White *EUROPE*

NOTE: O.D. does not affect output.

Tube Material

S Santoprene®

T Tygothane® (#1, 2 & 5 only)

NOTE: Application specific, refer to chemical resistance guide for chemical compatibility.

Example



Pump Item Number: SVP4H2A3S

- SVP4H2 Pump
- 120V 60Hz
- 3/8" White Suction & Discharge Tubing
- Santoprene® Tube

ECON FP series

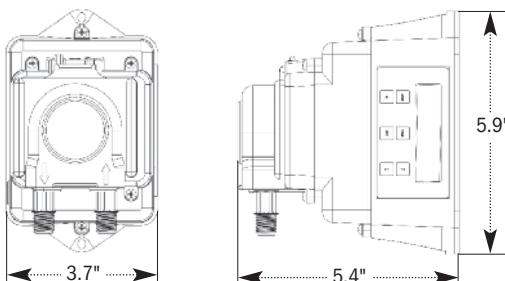
MULTI-FUNCTIONAL PUMP

The Econ FP has multi-functional control capability for interfacing with a dry contact water meter, dry contact flow switch, or an auxiliary output from a water softener control. It is compact and easy to program.



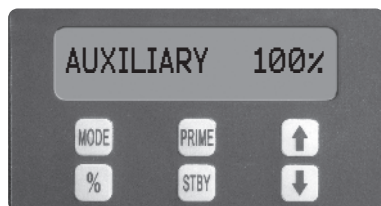
ECON FP

The Econ FP utilizes the latest microprocessor technology with a six button control pad and backlit LCD display. The pump features two button operation and an automatic keypad lockout for tamper resistance.



Shipping Weight 4 lbs (1.8 kg)

Box Dimensions 7.25 x 7 x 8.75 in. (18.4 x 17.8 x 22.2 cm)



Control Panel

During operation, the control panel will display one of the three operating modes and the percent setting.

SECONDS – The control panel displays the dry contact water meter mode as SECONDS. The pump accepts a non-voltage contact signal from a dry contact water meter and the pump runs for a set amount of time for each signal received. There are five pump operating time ranges. The control panel displays the maximum pump operating time in seconds: 1 SECOND (0.1 to 1.0), 5 SECONDS (0.5 to 5.0), 10 SECONDS (1.0 to 10.0), 20 SECONDS (2.0 to 20.0) or 60 SECONDS (6.0 to 60.0). The pump's operating time is adjustable from 10 to 100%.

FLOW SWITCH – The control panel displays the dry contact flow switch mode as FLOW SWITCH. The pump accepts a non-voltage contact signal from a dry contact flow switch and will run at the selected speed when the switch is closed and stop when the switch is open. The pump's speed is adjustable from 10% to 100%.

AUXILIARY – The control panel displays the 12-24 VAC/VDC mode as AUXILIARY. The pump accepts a 12-24 VAC/VDC input signal from a water softener control or other equipment that responds to flow. The pump will run at the selected speed when it receives the signal; the speed is adjustable from 10% to 100%.

Tank Systems are also available shipped pre-assembled for quick installations, refer to page 32.



The Econ FP is available up to 80 psi. The following pages display the pump output details and the FP as a system with a pump and water meter mounted to a panel.

Features

- Enclosed housing
- Patented quick release tube replacement
- Solid one piece tube construction
- Wall mountable
- Optional mounting accessories available
- UL & cUL for indoor use
- NSF 61 & 372 for USA & Canada

Accessory Kit Shipped With Each Pump

- 3 connecting nuts 1/4"
- 3 ferrules 1/4" or 6 mm *EUROPE*
- 1 injection check valve
- 1 weighted suction line strainer 1/4"
- 1 20' roll suction/discharge tubing 1/4" white or UV black
OR 6 mm white *EUROPE*
- 1 additional pump tube
- 1 manual



FLOW SWITCH

Stenner offers a flow switch compatible with the Econ FP. The flow switch is a paddle style with glass fiber reinforced plastic construction. It is available in 3/4" or 1" for PVC or copper pipe.

ITEM NUMBER	UM	DESCRIPTION	Works with
EC500	EA	Flow Switch 3/4" for PVC pipe	Econ FP
EC501	EA	Flow Switch 1" for PVC pipe	
EC50C	EA	Flow Switch 3/4" for copper pipe	
EC51C	EA	Flow Switch 1" for copper pipe	

SPECIFICATIONS

Output Control Six button control panel with LCD display

Maximum Working Pressure 80 psi (5.5 bar)

Maximum Operating Temperature 104°F (40°C)

Maximum Suction Lift

25 ft (7.6 m) vertical lift, based on water

Motor Type 24 VDC, brushless

Approximate Shaft RPM 60

Duty Cycle Continuous

Motor Voltage (Amp Draw)

120V 60Hz (1.7)

Power Cord Type STP-2W

Power Cord Plug End

Wall adapter power supply 100-120V, 60Hz
0.25 input, two prong polarized 24VDC, 1.25A, class II output

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill Santoprene®, FDA approved

Pump Head Rollers Polyethylene

Suction/Discharge Tubing, Ferrules

Polyethylene, FDA approved

Tube Fittings Polypropylene, NSF listed

Check Valve Fittings

Type 1 Rigid PVC, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

AGENCY LISTINGS

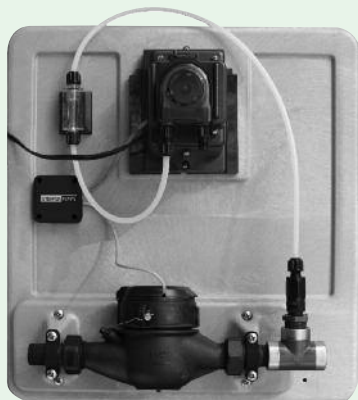


* Santoprene® is a registered trademark of Exxon Mobil Corporation.

ECON FP series

ECON FP METER SYSTEM

The Econ FP Meter System consists of the Econ FP pump and a 3/4" or 1" plastic lead free (certified with WQA under ANSI/NSF-372), dry contact water meter. The components are pre-assembled and mounted on a heavy duty panel for quick and convenient installations.



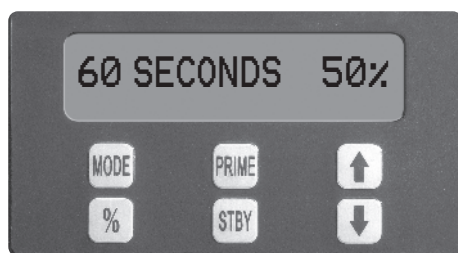
ECON FP METER SYSTEM

The water meter is available as 1, 2, 4 or 10 pulses per gallon.

A junction box is included on the panel to keep wires contained and a flow indicator is also attached as a visual reference that the solution is pumping.

Shipping Weight 16 lbs (7.26 kg)

Box Dimensions 23 x 22 x 11 in. (58.42 x 55.88 x 27.94 cm)



Control Panel

The control panel on the Econ FP pump has three operating modes to accommodate a flow switch, a 12-24 VAC/VDC signal or a water meter. When using the Econ FP Meter System, select the water meter mode which is displayed as SECONDS on the Econ FP control panel.

The pump will accept the non-voltage contact signal from the water meter and the pump will run the amount of time that is set for each signal received.

There are five pump operating time ranges available and the SECONDS displayed on the control panel represents the maximum. After the operating time is selected, it can be adjusted from 10% to 100% in 1% increments.

- 1 SECOND (1.0 to 1.0)
- 5 SECONDS (0.5 to 5.0)
- 10 SECONDS (1.0 to 10.0)
- 20 SECONDS (2.0 to 20.0)
- 60 SECONDS (6.0 to 60.0)

MULTI-FUNCTIONAL PUMP

0-80 psi (0-5.5 bar)



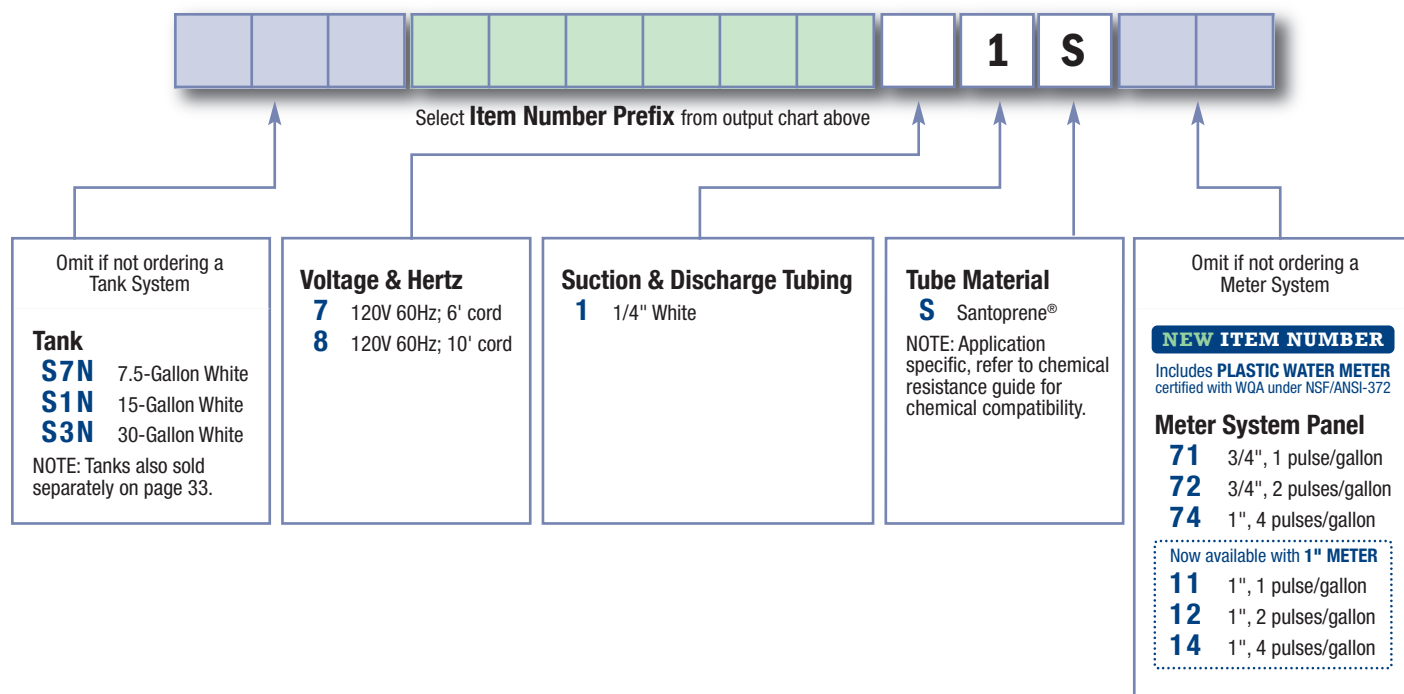
OUTPUT

Item Number Prefix	Pump Tube Number	Roller Assembly	Gallons per Day	Pressure psi	Liters per Day	Pressure bar
E20PHF	F	White	4.5	80	17.0	5.5
E20PHG	G	Black	16.0	80	60.6	5.5
E20PHH	H	Black	30.0	80	113.8	5.5
			Approximate Output @ 50/60Hz			

NOTE: Injection check valve included.

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



ECON T series

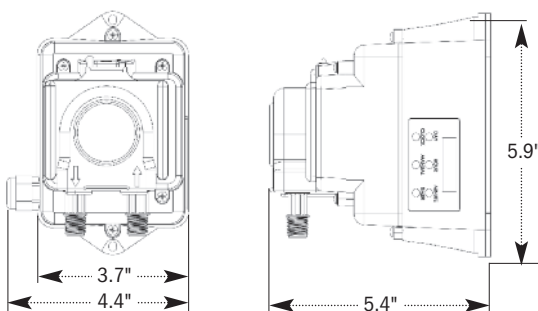
PROGRAMMABLE TIMER PUMP

The Econ T provides automatic dosing control for a variety of timed applications including injection of enzymes for drain line maintenance and biocide feed in small cooling towers or water fountains.



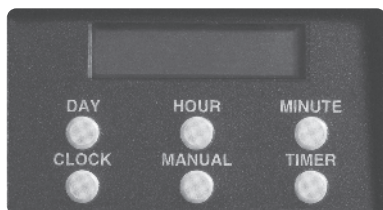
ECON T

The pump has an easy to program integral timer that provides flexible 7-day, 24 event control capability for varied schedules.



Shipping Weight 4 lbs (1.8 kg)

Box Dimensions 7.25 x 7 x 8.75 in. (18.4 x 17.8 x 22.2 cm)



Control Panel

The pump features a control panel with an LCD display; when operating it will display the current day, time, and the pump mode of operation. The display has indicators that represent the days of the week, operating mode and the event (timers).

There are 24 independent programmable on and off events within a 7 day period. Each event can be programmed for a specific ON time and a specific OFF time. The timer can be set in increments by hour and minute.

The control panel has a programmable clock using a 24 hour format and a battery back-up to maintain the internal time and programmed event settings.

Tank Systems are also available shipped pre-assembled for quick installations, refer to page 32.



The Econ T pumps are in two categories; up to 80 psi and up to 25 psi. The following pages display charts with the pump output details and are organized by the pressure rating.

Features

- Enclosed housing
- Patented quick release tube replacement
- Solid one piece tube construction
- Wall mountable
- Optional mounting accessories available
- UL & cUL for indoor use
- NSF 61 & 372 for USA & Canada

Accessory Kit Shipped With Each Pump

- 3 connecting nuts 1/4"
- 3 ferrules 1/4" or 6 mm *EUROPE*
- 1 injection check valve 80 psi (5.5 bar)
OR 1 injection fitting 25 psi (1.7 bar)
- 1 weighted suction line strainer 1/4"
- 1 20' roll suction/discharge tubing 1/4" white or UV black
OR 6 mm white *EUROPE*
- 1 additional pump tube
- 1 manual

SPECIFICATIONS

Output Control 24-hr programmable clock; 7 day, 24 event timer

Maximum Working Pressure

80 psi (5.5 bar) E10T1F, E10T2F, E20T4F, E20T4G, E20T4H; 25 psi (1.7 bar) E10T1A, E10T2A, E10T2B, E10T2C

Maximum Operating Temperature 104°F (40°C)

Maximum Suction Lift

25 ft (7.6 m) vertical lift, based on water

Motor Type 24 VDC, brushed

Approximate Shaft RPM 9, 18 or 40

Duty Cycle Continuous

Motor Voltage (Amp Draw) 120V 60Hz (1.7)

Power Cord Type STP-2W

Power Cord Plug End

Wall adapter power supply 100-120V, 60Hz 0.25 input, two prong polarized 24VDC, 1.25A, class II output

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill Santoprene®, FDA approved

Pump Head Rollers Polyethylene

Suction/Discharge Tubing, Ferrules

Polyethylene, FDA approved

Tube Fittings Polypropylene, NSF listed

Check Valve Fittings

Type 1 Rigid PVC, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

AGENCY LISTINGS



* Santoprene® is a registered trademark of Exxon Mobil Corporation.

ECON T series

PROGRAMMABLE TIMER PUMP

0-25 psi (0-1.7 bar)

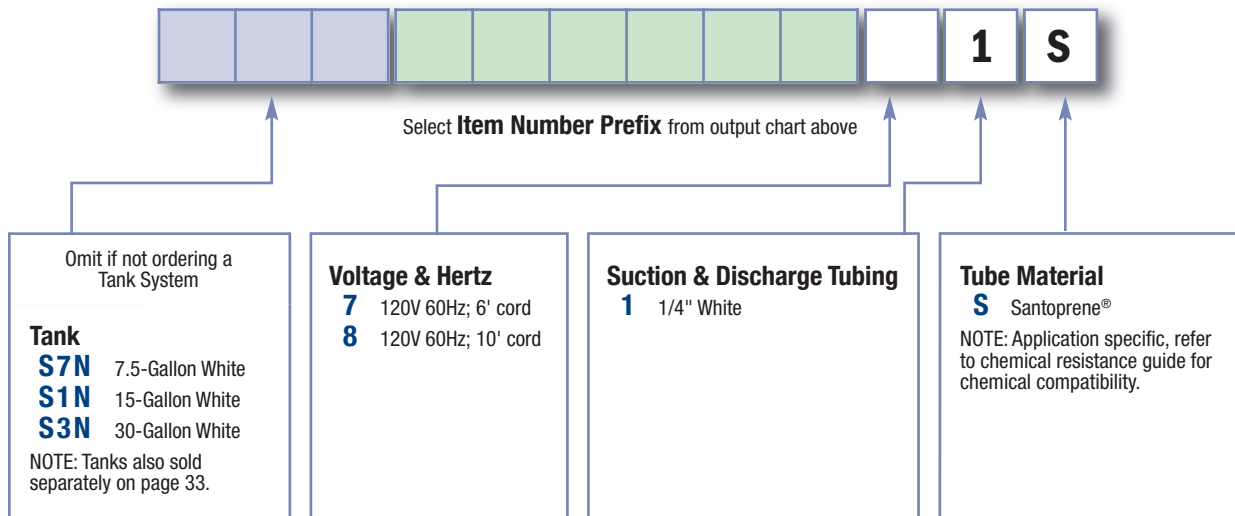


OUTPUT

Item Number Prefix	Pump Tube	Roller Assembly	Gallons per Day	Gallons per Hour	Ounces per Hour	Ounces per Minute	Pressure psi	Liters per Day	Liters per Hour	Milliliters per Hour	Milliliters per Minute	Pressure bar
E10T1A	A	White	2.5	0.10	13.2	0.22	25	9.5	0.39	396.0	6.60	1.7
E10T2A	A	White	5.0	0.21	26.4	0.44	25	18.9	0.79	786.0	13.10	1.7
E10T2B	B	White	8.5	0.35	45.6	0.76	25	32.2	1.34	1338.0	22.30	1.7
E10T2C	C	White	15.0	0.63	79.8	1.33	25	56.8	2.37	2364.0	39.40	1.7
Approximate Output @ 60Hz												

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



ECON T series

PROGRAMMABLE TIMER PUMP 26-80 psi (1.8-5.5 bar)



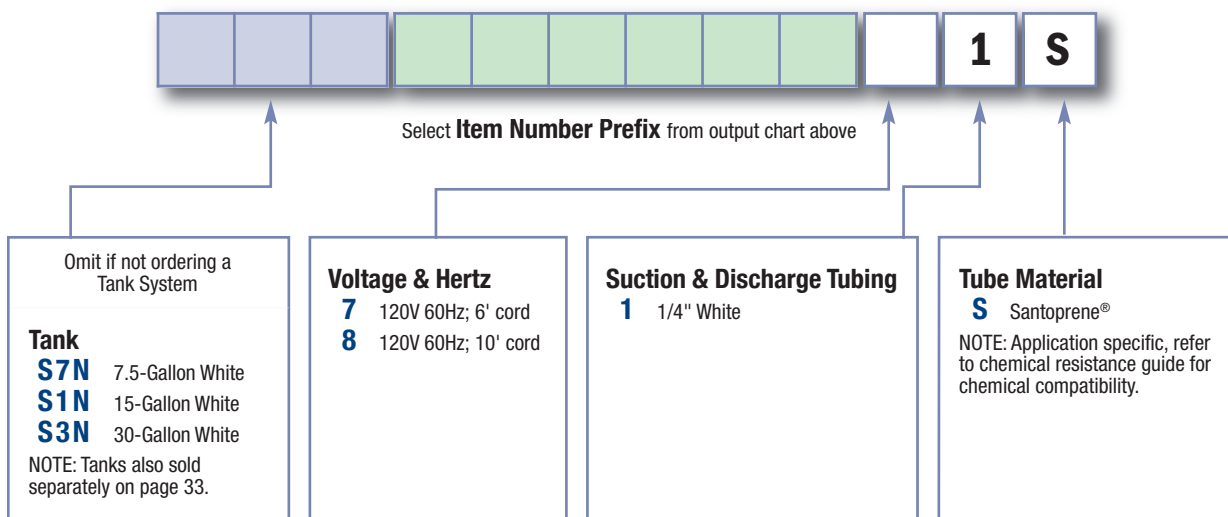
OUTPUT

Item Number Prefix	Pump Tube	Roller Assembly	Gallons per Day	Gallons per Hour	Ounces per Hour	Ounces per Minute	Pressure psi	Liters per Day	Liters per Hour	Milliliters per Hour	Milliliters per Minute	Pressure bar
E10T1F	F	White	0.6	0.02	3.0	0.05	80	2.2	0.09	90.0	1.50	5.5
E10T2F	F	White	1.3	0.05	6.6	0.11	80	4.8	0.20	198.0	3.30	5.5
E20T4F	F	White	3.4	0.14	18.0	0.30	80	13.1	0.54	544.8	9.08	5.5
E20T4G	G	Black	12.3	0.51	65.4	1.09	80	46.5	1.94	1937.4	32.29	5.5
E20T4H	H	Black	21.7	0.90	115.2	1.92	80	82.0	3.41	3416.4	56.94	5.5
Approximate Output @ 60Hz												

NOTE: Injection check valve included with pumps rated 80 psi (5.5 bar).

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

BUILD AN ITEM NUMBER



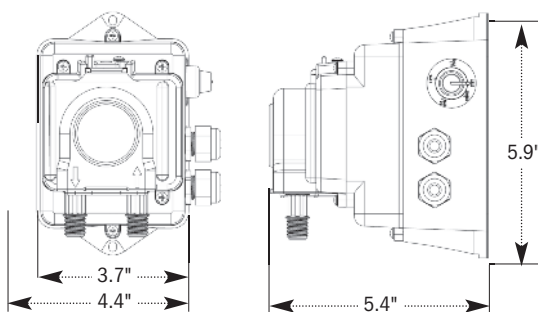
STENNICATOR PROPORTIONAL PUMP 1:128

The Stennicator is a compact, proportional pump for livestock operations requiring a dosage ratio of 1:128. It functions as a medicator and dispenses iodine, vaccines, acids, chlorine, electrolytes and more. The pump accepts a signal from a water meter providing a dry contact at a rate of 1 or 10 ppg or 1 ppl and injects directly into the water line. The Stennicator also features a signal repeater relay that can repeat the incoming signal to another Stennicator, controller or other device. When utilizing a house controller, the standby setting stops the pump from injecting while continuing to send the water meter's pulse output to the controller.



STENNICATOR

A Stennicator is utilized for 1:128 injection for water flow up to 2.7 gallons per minute (162 gallons per hour). A second Stennicator can be added to keep up with flow rates up to 5.4 gpm (325 gph).



Shipping Weight 4 lbs (1.8kg)

Box Dimensions 7.25 x 7 x 8.75 in. (18.4 x 17.8 x 22.2 cm)

The Stennicator System includes the pump and water meter mounted to a heavy duty panel. The dual system includes two Stennicators and water meter for higher outputs.

Single System

Output 2.7 oz/min @ 80 psi (74 ml/min @ 5.5 bar)

Item Number **SE20MH81S**

Shipping Weight 16 lbs (7.2 kg)

Box Dimensions 23 x 22 x 11 in. (58.42 x 55.88 x 27.94 cm)

Dual System

Output per Pump 2.7 oz/min @ 80 psi (74 ml/min @ 5.5 bar)

Item Number **DE20MH81S**

Shipping Weight 20 lbs (9.1 kg)

Box Dimensions 23 x 22 x 11 in. (58.42 x 55.88 x 27.94 cm)

Output

Item Number	Pump Tube	Roller Assembly	Ounces per Minute	Pressure psi	Milliliters per Minute	Pressure bar
E20MH81S	H	Black	2.7	80	74	5.5
Approximate Output @ 60Hz						

Features

- On/off switch
- Brushless motor
- Totally enclosed
- 3-point roller design assists in anti-siphon protection
- Pump head requires no valves, allows for easy maintenance
- Self-priming against maximum working pressure foot valve not required
- Pump does not lose prime or vapor lock
- Pumps off-gassing solutions and can run dry
- Output volume is not affected by back pressure
- Easy to change pump tube; lubrication is not required
- All pump accessories included allow a fast and easy installation
- UL & cUL for indoor & outdoor use

Accessory Kit Shipped With Each Pump

- 3 connecting nuts 1/4"
- 3 ferrules 1/4"
- 1 injection check valve 80 psi (5.5 bar)
- 1 weighted suction line strainer 1/4"
- 1 20' roll suction/discharge tubing 1/4" white
- 1 additional pump tube
- 1 manual

SPECIFICATIONS

Output Control on/off switch, fixed Output 1ppg, 10 ppg, or 1 ppl

Reproducibility $\pm 2\%$

Maximum Working Pressure

80 psi (5.5 bar)

Maximum Operating Temperature 104°F (40°C)

Maximum Suction Lift

25 ft (7.6 m) vertical lift, based on water

Motor Type 24 VDC, brushless

Approximate Shaft RPM 60

Duty Cycle Continuous

Max Viscosity 50 cps

Motor Voltage (Amp Draw) 120V 60Hz (1.7)

External Power Supply 100-120VAC, 60 Hz

Power Cord Type STP-2W

Power Cord Length 10 ft (3.05 m)

Power Cord Plug End

Wall adapter power supply 100-120V, 60Hz, 0.75A input, two prong, polarized 24VDC, 1.25A, Class II output

Environment Indoor & outdoor

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill Santoprene®, FDA approved

Pump Head Rollers Polyethylene

Suction/Discharge Tubing, Ferrules

Polyethylene, FDA approved

Tube Fittings Polypropylene, NSF listed

Check Valve Fittings

Type 1 Rigid PVC, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

AGENCY LISTINGS



* Santoprene® is a registered trademark of Exxon Mobil Corporation.

M128 series

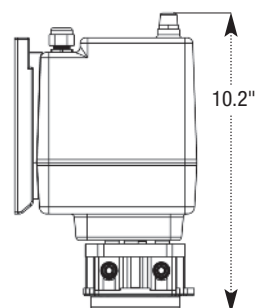
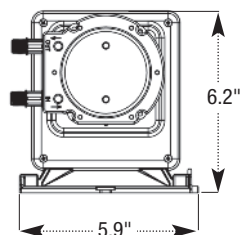
PROPORTIONAL PUMP 1:128

The M128 pump is used primarily in the agricultural industry to treat livestock water with sanitizers, disinfectants, nutrients and medications. Also referred to as a medicator, the pump injects at a fixed rate of one ounce per gallon and is actuated by signal from a dry contacting water meter. The pump has a cable with four lead wires; two are connected to the water meter. Installations with a house controller can utilize the two remaining wires to register water consumption to the controller.

**M128**

Pulse Dial

A pulse dial on the back of the pump is adjustable to work with a dry contact water meter with pulse rates of 1, 2, 4 or 10 pulses per gallon or 1 pulse per liter. The dial also features a “standby” setting that disables the pump while water consumption still registers to the controller.



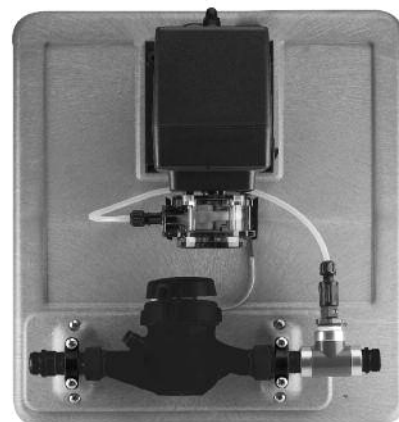
Shipping Weight 9 lbs (4 kg)

Box Dimensions 13.5 x 9 x 9.5 in. (34.3 x 22.9 x 24.1 cm)

The M128 System includes the M128 pump and a 3/4" or 1" plastic meter mounted to a heavy duty panel.

Shipping Weight 23 lbs (10.4 kg)

Box Dimensions 23.5 x 22.75 x 12.5 in. (59.7 x 55.9 x 31.8 cm)



The M128 Series is available as two models; the M05 and the M07.

M05

8.4 ounces per minute up to 25 psi

- 55 rpm
- Prime button
- Signal splitter

M07

3.5 ounces per minute up to 100 psi

- 55 rpm
- Prime button
- Signal splitter

Most livestock operations have a pressure reducer in place to drop pressures to a manageable level at the drinker lines. Injecting after the pressure reducer is an option, if higher outputs are needed.

The following pages display charts with pump output detail and are organized by pressure rating.

Features

- Water bypass isn't needed meaning no water restriction or pressure loss
- No need for back pressure valves and filters upstream to pull out grit, sand and debris
- Solution is not in contact with moving parts
- Pump head requires no valves, allows for easy maintenance
- Self-priming against maximum working pressure, foot valve not required
- Pump does not lose prime or vapor lock
- Pumps off-gassing solutions and can run dry
- Output volume is not affected by back pressure
- Easy to change pump tube; lubrication is not required
- Pump tubes and pump heads interchange between models
- Optional panel system for turnkey installations

Accessory Kit Shipped With Each Pump

- 3 connecting nuts 1/4"
- 3 ferrules 1/4"
- 1 weighted suction line strainer 1/4"
- 1 20' roll suction/discharge tubing 1/4"
- 1 additional pump tube
- 2 additional latches
- 1 mounting bracket
- 1 manual

SPECIFICATIONS

Maximum Operating Temperature 104°F (40°C)

Maximum Suction Lift

25 ft (7.6 m) vertical lift, based on water

Motor Type 24VDC, 2.0 A, Brushed DC, 1/30 HP

Duty Cycle Continuous

Motor Voltage (Amp Draw)

120V 60Hz 1PH (0.5)

220V 60Hz 1PH (0.33)

Power Cord Type SJTOW

Power Cord Plug End

120V 60Hz NEMA 5/15

220V 60Hz NEMA 6/15

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill

Santoprene®, FDA approved

Pump Head Rollers HDPE

Roller Bushings Oil impregnated sintered bronze

Suction/Discharge Tubing, Ferrules 1/4"

Polyethylene, FDA approved

Tube Fittings, Check Valve Fittings

Gray fittings: Type 1 Rigid PVC, NSF listed

Black fittings: PP, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

Pump Head Latches Polypropylene

AGENCY LISTINGS



* Santoprene® is a registered trademark of Exxon Mobil Corporation.

M128 series

PROPORTIONAL PUMP 1:128

0-25 psi (0-1.7 bar)



OUTPUT

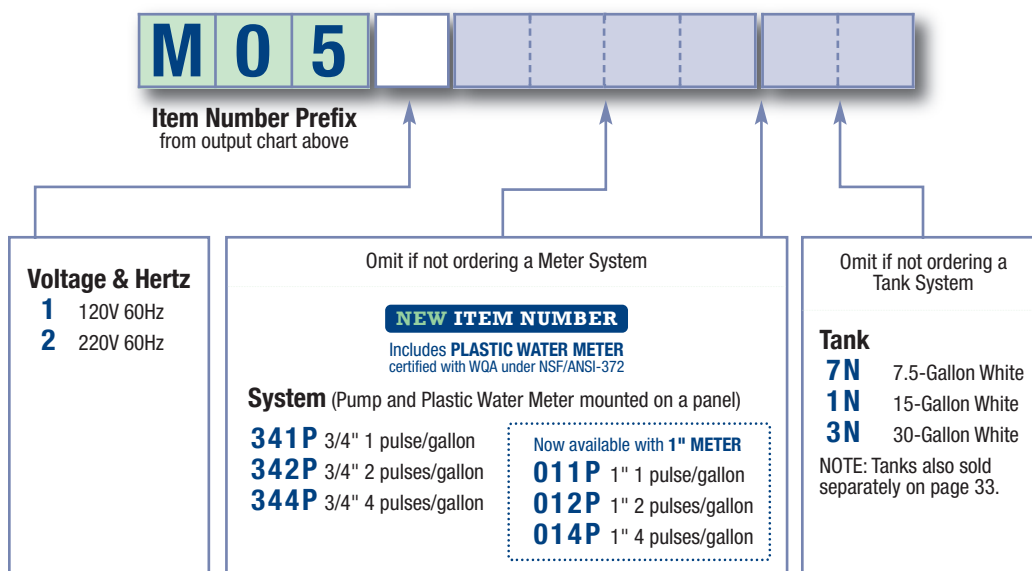
Model	Item Number Prefix	Pump Tube Number	Ounces per Minute	Gallons per Hour	Gallons per Day	Milliliters per Minute	Liters per Hour	Liters per Day
M05	M05	#5	8.4	3.9	95.0	249.7	14.9	359.6
Approximate Output @ 50/60Hz								

Maximum system water flow for 1:128 dosing is 8.4 gallons/minute or 31.8 liters/minute.

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

ITEM NUMBER for M128 Pump: M051 (120V), M052 (220V)

BUILD AN ITEM NUMBER for M128 Meter System or Tank System



NOTE: Includes 1/4" white suction/discharge tubing only.

Examples



Pump Item Number: M051

- M05 Pump
- 120V 60Hz



System Item Number: M051341P

- M05 Pump
- 120V 60Hz
- 3/4" water meter, 1 pulse/gallon

PROPORTIONAL PUMP 1:128



OUTPUT

Model	Item Number Prefix	Pump Tube Number	Ounces per Minute	Gallons per Hour	Gallons per Day	Milliliters per Minute	Liters per Hour	Liters per Day
M07	M07	#7	3.5	1.6	40.0	105	6.3	151.4
			Approximate Output @ 50/60Hz					

Maximum system water flow for 1:128 dosing is 3.5 gallons/minute or 13.2 liters/minute.

ALTERNATIVE SIZING FOR M07 MODEL USING 1 pulse/gallon Meter

Dosage oz/gal	Dosage Ratio	Max. System Water Flow gal/min	Pulse Setting
1.0	1:128	3.5	1
0.50	1:256	7.0	2
0.25	1:512	14.0	4

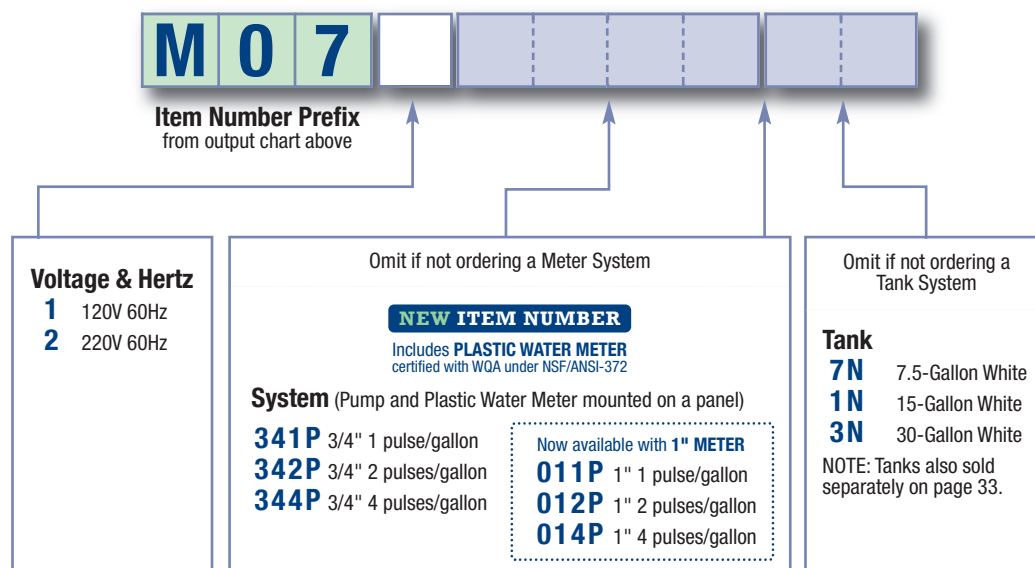
NOTE: 1 oz = 29.57 ml ; 1 gallon = 3.78 liters. Contact factory for assistance with sizing.

NOTE: Injection check valve included with pumps rated 26-100 psi (1.8-6.9 bar).

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.

ITEM NUMBER for M128 Pump: M071 (120V), M072 (220V)

BUILD AN ITEM NUMBER for M128 Meter System or Tank System



NOTE: Includes 1/4" white suction/discharge tubing only.

TANK SYSTEMS



7.5-GALLON (28.4 LITERS)



15-GALLON (56.8 LITERS)



30-GALLON (113.6 LITERS)

MATERIALS OF CONSTRUCTION

Tank Polyethylene, approved to NSF/ANSI 61

Lid with child resistant lock Polypropylene

Grommets Viton

Screws Stainless steel

AGENCY LISTINGS



USA
THIS TANK IS TESTED AND
CERTIFIED BY WQA ACCORDING TO
NSF/ANSI 61 FOR CONTACT WITH
SODIUM HYPOCHLORITE AND
WATER ONLY AND NSF/ANSI 372.

The Tank System consists of the tank and pump and is built with any of the following pumps—Classic single head adjustable or fixed, M128 or Econ.

Features

- Shipped pre-assembled for easy installation and convenience
- Includes rain roof to help protect motor (Classic series only)
- Vertically mounted for solution containment
- Child resistant lid
- Polyethylene construction is lightweight and rugged
- UV resistant gray or translucent white

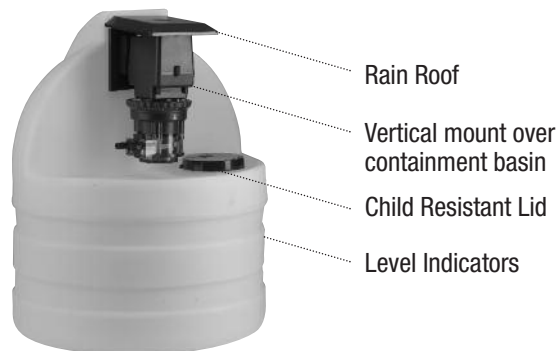
Shipping Weight and Box Dimensions

Tank Size	Shipping Weight			Box Dimensions
	Classic Adjustable or M128	Classic Fixed	Econ	
7.5-Gallon	18 lbs (8.1 kg)	15 lbs (6.8 kg)	14 lbs (6.4 kg)	23 x 23 x 21 in. (58.4 x 58.4 x 53.3 cm)
15-Gallon	27 lbs (12.3 kg)	25 lbs (11.3 kg)	23 lbs (10.4 kg)	23 x 23 x 27 in. (58.4 x 58.4 x 68.6 cm)
30-Gallon	35 lbs (15.9 kg)	32 lbs (14.5 kg)	31 lbs (14 kg)	23 x 23 x 38 in. (58.4 x 58.4 x 96.5 cm)

Product Dimensions

- 7.5-Gallon: 20.5 OD x 19.6 in. (52.1 OD x 49.8 cm)
- 15-Gallon: 20.5 OD x 25.3 in. (52.1 OD x 64.1 cm)
- 30-Gallon: 20.5 OD x 37.5 in. (52.1 OD x 95.3 cm)

Build a tank system item number on pages 4-7, 21 & 24-25



Tank system with Classic Series single head adjustable pump

TANKS



7.5-GALLON (28.4 LITERS)



15-GALLON (56.8 LITERS)



30-GALLON (113.6 LITERS)

MATERIALS OF CONSTRUCTION

Tank Polyethylene, approved to NSF/ANSI 61

Lid with child resistant lock Polypropylene

Grommets Viton

Screws Stainless steel

AGENCY LISTINGS



THIS TANK IS TESTED AND
CERTIFIED BY WQA ACCORDING TO
NSF/ANSI 61 FOR CONTACT WITH
SODIUM HYPOCHLORITE AND
WATER ONLY AND NSF/ANSI 372.

Colors

- UV resistant gray
- Translucent white

Shipping Weight and Box Dimensions

Tank Size	Shipping Weight	Box Dimension
7.5-Gallon	9 lbs (4.1 kg)	23 x 23 x 21 in. (58.4 x 58.4 x 53.3 cm)
15-Gallon	19 lbs (8.6 kg)	23 x 23 x 27 in. (58.4 x 58.4 x 68.6 cm)
30-Gallon	26 lbs (11.8 kg)	23 x 23 x 38 in. (58.4 x 58.4 x 96.5 cm)

Product Dimensions

- 7.5-Gallon: 20.5 OD x 19.6 in. (52.1 OD x 49.9 cm)
- 15-Gallon: 20.5 OD x 25.3 in. (52.1 OD x 64.1 cm)
- 30-Gallon: 20.5 OD x 37.5 in. (52.1 OD x 95.3 cm)

Tanks For Classic 45, 85 or Econ Pumps

Includes screws and grommets

ITEM NUMBER	UM	DESCRIPTION
STS7GC	EA	7.5-Gallon Gray
STS7NC	EA	7.5-Gallon White
STS15GC	EA	15-Gallon Gray
STS15NC	EA	15-Gallon White
STS30GC	EA	30-Gallon Gray
STS30NC	EA	30-Gallon White

Tanks For SVP Series Pumps

Includes screws, grommets and pump mounting kit

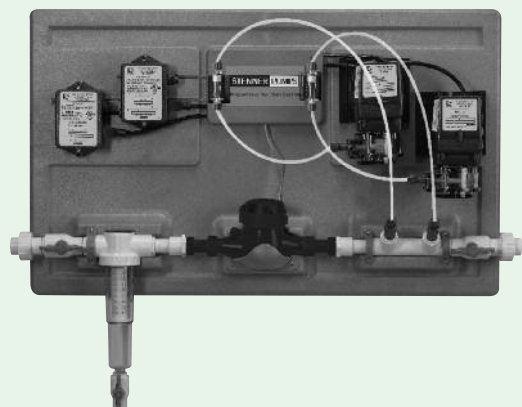
ITEM NUMBER	UM	DESCRIPTION
STS7G-02	EA	7.5-Gallon Gray
STS7N-02	EA	7.5-Gallon White
STS15G-02	EA	15-Gallon Gray
STS15N-02	EA	15-Gallon White
STS30G-02	EA	30-Gallon Gray
STS30N-02	EA	30-Gallon White

PROPORTIONAL INJECTION SYSTEM

The Proportional Injection System doses solution that is proportional to the system's flow rate based on water volume. The water meter sends a signal to the PCM which actuates the pump. The system is suited for constant pressure (variable speed) well pumps, poultry and livestock houses, irrigation, systems with demand based backup wells and any application with varying flow rates.



SINGLE PROPORTIONAL INJECTION SYSTEM



DUAL PROPORTIONAL INJECTION SYSTEM

The primary components are the PCM (pages 36 & 37), Classic Series single head fixed output pump (pages 2, 3 & 7) and a dry contact 3/4" plastic lead free (certified with WQA/ANSI-372) water meter (page 38). The components are pre-assembled on a panel and include wall mounting brackets for quick installation and equipment accessibility. The cabinet keeps the cords and wires contained. Unions provide easy installation and removal. The system includes 1/4" white suction/discharge tubing and a flow indicator (page 54) is also installed as a visual reference to confirm solution is pumping.

The Proportional Injection System is available as a Single or a Dual with two pumps, and two PCMs.

Shipping Weight

- Single: 29 lbs (13.2 kg)
- Dual: 43 lbs (19.5 kg)

Box Dimensions

- Single: 36 x 23 x 11 in. (91.4 x 58.4 x 27.9 cm)
- Dual: 43 x 27 x 11 in. (109.22 x 68.6 x 27.9 cm)



SPECIFICATIONS

Voltage 120V 60Hz

MATERIALS OF CONSTRUCTION

Panel & Panel Fittings Polyethylene

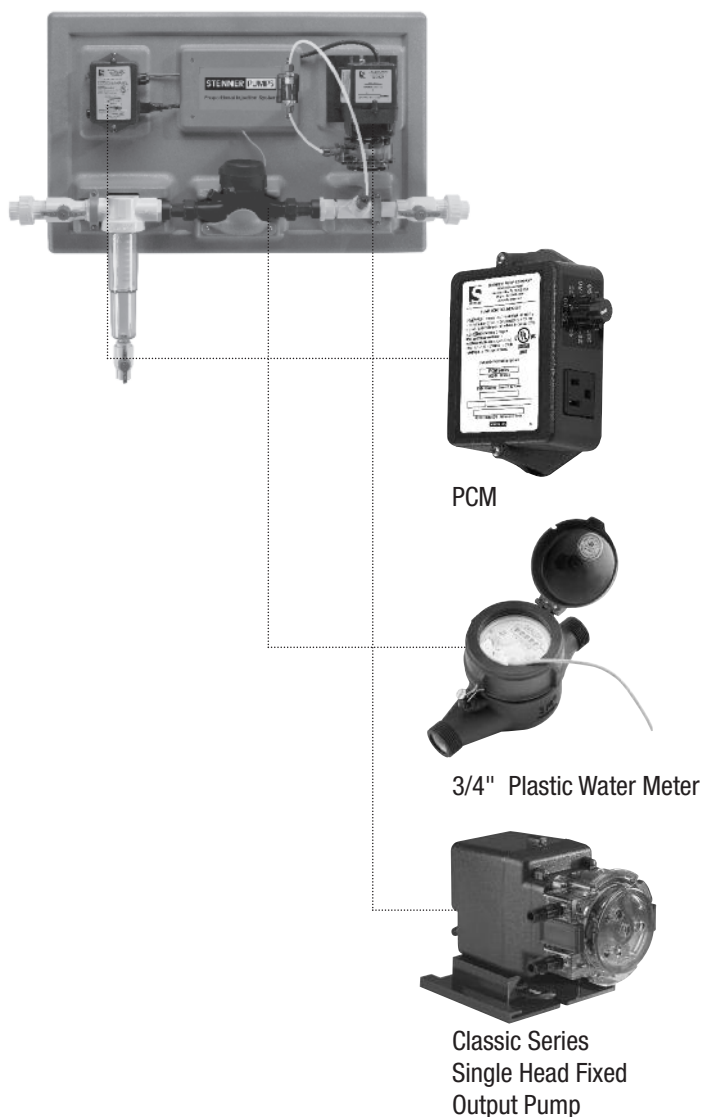
Mounting Hardware Stainless steel

Piping and Associated Fittings PVC

Water Meter Plastic lead free (certified with WQA/ANSI-372)

Filter PVC with polycarbonate cover and two polyester screens 30 and 100 mesh

NOTE: PVC connections are socket weld union 3/4" connections. Two 1" to 3/4" reducer couplings are included in the accessory kit to allow unit to adapt to 1" piping systems.



BUILD AN ITEM NUMBER

System	Pump	Pump & PCM Voltage	PCM	NEW ITEM NUMBER
S Single D Dual	gpd lpd Fixed Model 03 3 11.4 45MPHP2 05 5 18.9 85MPHP5 10 10 37.9 45MPHP10 17 17 64.4 85MPHP17 22 22 83.3 45MPHP22 40 40 151.4 85MPHP40	1 120V 60Hz	Operating Range (sec.) Model 01 0.1 to 1.0 PCM1 05 0.5 to 5.0 PCM5 10 1.0 to 10.0 PCM10 20 2.0 to 20.0 PCM20	Includes PLASTIC WATER METER certified with WQA under NSF/ANSI-372 Plastic Water Meter 3/4" 341P 1 pulse/gallon 342P 2 pulses/gallon 344P 4 pulses/gallon

NOTE: Proportional Injection System includes 1/4" white suction/discharge tubing only.

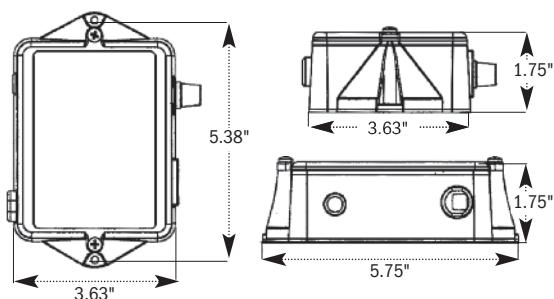
PCM

The PCM (Pump Control Module) is a time adjustable controller that powers a fixed output pump. A pulsing dry contact water meter sends a signal to the PCM which actuates the pump to deliver the desired dose based upon water volume.



PUMP CONTROL MODULE

The PCM is one of the components in the Proportional Injection System or a proportional feed installation. A proportional feed set-up is suited for constant pressure (variable speed) well pumps and applications with varying flow rates requiring proportional injection.

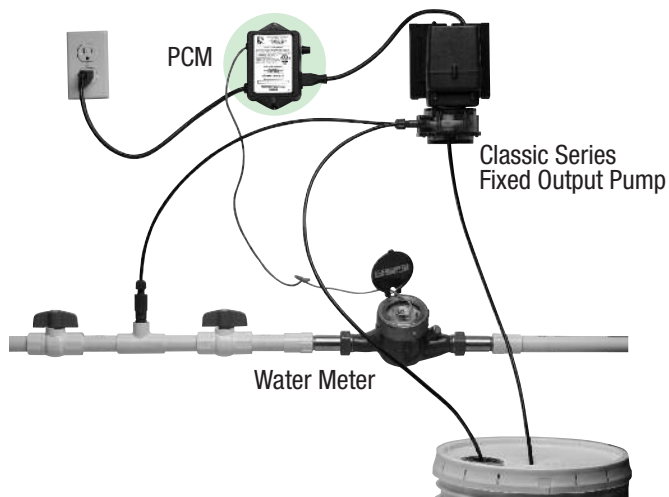


Shipping Weight 2 lbs (0.9 kg)

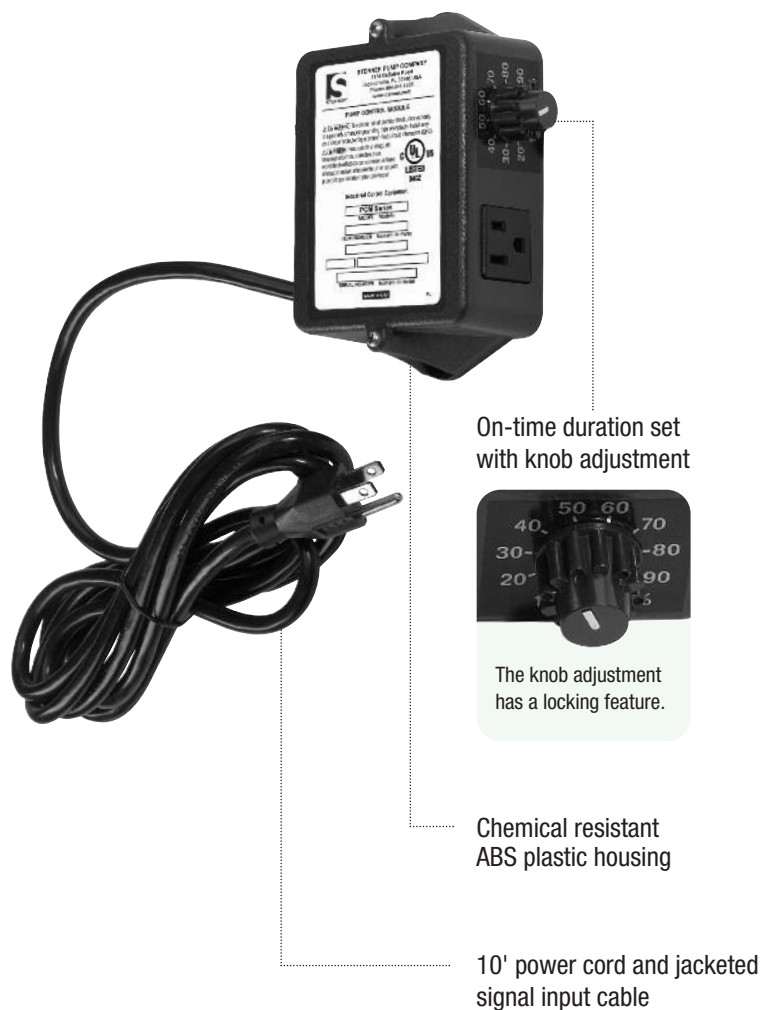
Box Dimensions 8 x 8 x 6 in. (20.3 x 20.3 x 15.2 cm)



The Proportional Injection System includes a PCM (highlighted in photo above), a Classic Series single head fixed output pump and a 3/4" plastic water meter.



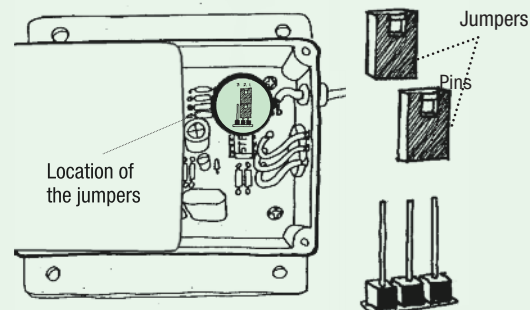
Components are sold separately to assemble a "proportional feed installation" and consist of a PCM (highlighted in the photo above), a Classic Series single head fixed output pump and a water meter. Purchasing the items separately offers flexibility with the water meter selection; available in plastic or brass with variety of sizes and pulse rates.



PCM Models

ITEM NUMBER	UM	DESCRIPTION
PCM1	EA	0.1 to 1.0 Second
PCM5	EA	0.5 to 5.0 Seconds
PCM10	EA	1.0 to 10.0 Seconds
PCM20	EA	2.0 to 20.0 Seconds

The PCM's operating range can be converted by changing the position of the jumpers on the circuit board so another model doesn't have to be purchased.



MATERIALS OF CONSTRUCTION

- Housings** Polycarbonate
- Timer** Microcontroller with triac output
- Turndown Ratio** 10:1
- Pump Head Rollers** HDPE
- Input Signal** Non-voltage dry contact, water meter
- Reset Time** Immediate
- Minimum Signal Durations** 10 milliseconds
- Input Electrical** 120V 60Hz
- No Load Current** 0.45mA AC maximum
- Output Electrical**
Maximum device load, 1.8 amp at 120V

AGENCY LISTINGS



PLASTIC WATER METER



PLASTIC METER

FLOW RATES

Size	Flow Rate gpm	Pulses Per Gallon			
3/4"	0.25 to 22	1	2	4	10
1"	0.75 to 50	1	2	4	10
1 1/2"	2.0 to 100	1	2	4	10

SPECIFICATIONS

Accuracy $\pm 2\%$ when operating between minimum and maximum flow range

Temperature Range 35-122°F (1.7-50°C)

Pressure Ratings 15-100 psi (1.0-6.9 bar)

Maximum Current 20mA

Maximum Voltage 24VDC or VAC

Sensor Reed Switch

Cable Length 6 ft (1.8 m)

MATERIALS OF CONSTRUCTION

Body* Engineered reinforced plastic (nylon)

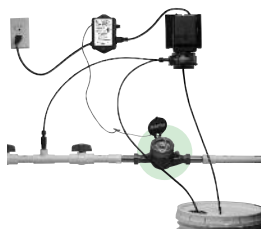
Internal Engineered thermoplastic

Magnet Alnico

* 1 1/2" meter may include plastic or lead free brass couplings.

The plastic water meter doesn't require power and utilizes a reed switch that provides a pulsing dry contact signal. It is certified with the Water Quality Association under NSF/ANSI-372 (low lead).

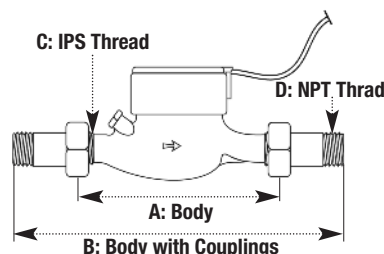
The 3/4" size is included in the Econ FP Meter System (pages 20-21). The meter is also available separately when selecting products individually according to the application, such as a proportional feed installation (page 36).



Proportional Feed Installation



Econ FP Meter System



Shipping Weight & Dimensions

SIZE	Shipping Weight	Dimensions			
		A	B	C	D
3/4"	2 lbs (0.90 kg)	7.5" (19.1 cm)	11.5" (29.2 cm)	1"	0.75"
1"	2 lbs (0.90 kg)	10.25" (26.0 cm)	15.25" (38.8 cm)	1.25"	1"
1 1/2"	6 lbs (2.72 kg)	9.63" (24.4 cm)	14.75" (37.4 cm)	2"	1 1/2"

Plastic Meters

ITEM NUMBER	UM	DESCRIPTION
JLP0750-1PPG	EA	3/4", 1 pulse/gallon
JLP0750-2PPG	EA	3/4", 2 pulses/gallon
JLP0750-4PPG	EA	3/4", 4 pulses/gallon
JLP0750-10PPG	EA	3/4", 10 pulses/gallon
JLP1000-1PPG	EA	1", 1 pulse/gallon
JLP1000-2PPG	EA	1", 2 pulses/gallon
JLP1000-4PPG	EA	1", 4 pulses/gallon
JLP1500-1PPG	EA	1.5", 1 pulses/gallon
JLP1500-2PPG	EA	1.5", 2 pulses/gallon
JLP1500-4PPG	EA	1.5", 4 pulses/gallon

ECO BRASS WATER METER



ECO BRASS METER

FLOW RATES

Size	Flow Rate gpm	Pulses per Gallon	Gallons per Pulse	Flow Range gpm
2"	1.98 to 132	4 2 1	1 5 10 50 100	2-160

SPECIFICATIONS

Accuracy $\pm 1.5\%$

Maximum Operating Temperature 122°F (50°C)

Maximum Operating Pressure 150 psi (10.3 bar)

Maximum Current 20mA

Maximum Voltage 24VDC or VAC

Sensor Reed Switch

Cable Length 6 ft (2 m) standard

MATERIALS OF CONSTRUCTION

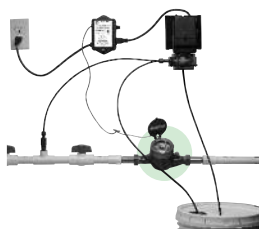
Body Cast bronze

Internal Engineered thermoplastic

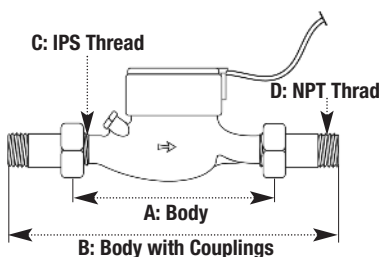
Magnet Alnico

The Eco Brass meter is certified with the Water Quality Association under NSF/ANSI 372 (low lead). It doesn't require power and utilizes a reed switch that provides a pulsing dry contact signal.

It is also sold separately for selecting products individually according to the application, such as a proportional feed installation.



Proportional Feed Installation



Shipping Weight & Dimensions

SIZE	Shipping Weight	Dimensions			
		A	B	C	D
2"	13 lbs (2.72 kg)	15.25" (38.7 cm)	20.75" (52.7 cm)	2.5"	2"

Eco Brass Meters

ITEM NUMBER	UM	DESCRIPTION
MNLR20-1PPG	EA	2", 1 pulse/gallon
MNLR20-2PPG	EA	2", 2 pulses/gallon
MNLR20-4PPG	EA	2", 4 pulses/gallon

NOTE: Two week lead time for non-stocked meters. Contact factory to confirm availability.

MIXER

The Mixer is utilized in applications when injecting solutions that are difficult to keep in suspension. It has been designed to retro-fit existing Stenner tank systems and tanks and modifications are not required. The mixer is intended for intermittent use applications and is available in 7.5, 15 and 30 gallon and 120V or 220V.



7.5-GALLON



15-GALLON



30-GALLON

The patent pending design creates a rapid flow in a circular path. The speed and constant movement delivers high volume output for constant mixing to help keep the chemical in solution and prevent it from settling out around the outer edges of the solution tank.

The mixing head is sealed to keep it from getting entangled with the suction line. The sealed design eliminates the need for a suction line guard.

The mixer is easily installed by placing the unit in the solution tank opening, then, attaching the safety screws with a Phillips head screwdriver and plugging it in.

Shipping Weight

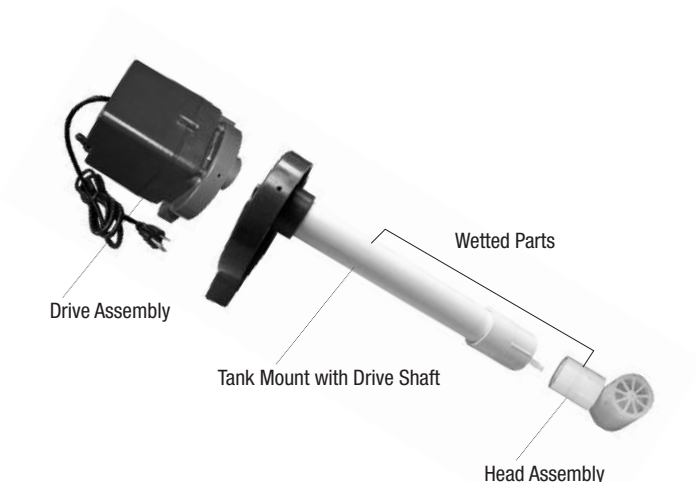
- 7.5-Gallon: 6.6 lbs (3.0 kg)
- 15-Gallon: 7.4 lbs (3.4 kg)
- 30-Gallon: 9.4 lbs (4.3 kg)

Dimensions

- 7.5-Gallon: 16 x 10 x 10 in. (40.6 x 25.4 x 25.4 cm)
- 15-Gallon: 22 x 10 x 10 in. (55.9 x 25.4 x 25.4 cm)
- 30-Gallon: 33 x 10 x 10 in. (83.8 x 25.4 x 25.4 cm)

Mixer Models

ITEM NUMBER	UM	DESCRIPTION
SMS75A	EA	7.5-Gallon, 120V 60Hz
SMS75B	EA	7.5-Gallon, 220V 60Hz
SMS15A	EA	15-Gallon, 120V 60Hz
SMS15B	EA	15-Gallon, 220V 60Hz
SMS30A	EA	30-Gallon, 120V 60Hz
SMS30B	EA	30-Gallon, 220V 60Hz



Drive Assembly

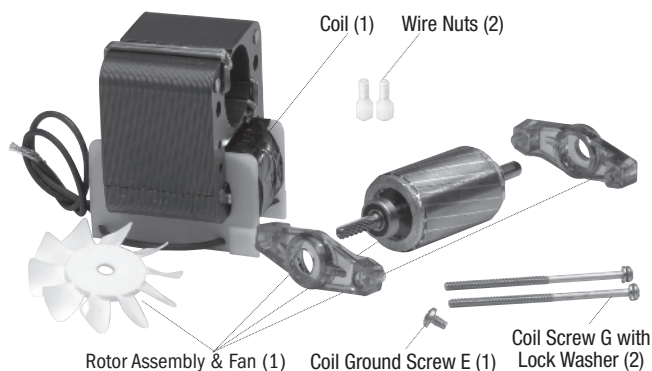
PART NUMBER	UM	DESCRIPTION
MXAD	EA	120V 60Hz
MXBD	EA	220V 60Hz

Tank Mount with Drive Shaft

PART NUMBER	UM	DESCRIPTION
MX75M	EA	For 7.5-Gallon tank
MX15M	EA	For 15-Gallon tank
MX30M	EA	For 30-Gallon tank

Head Assembly

PART NUMBER	UM	DESCRIPTION
MX100	EA	For all mixers



Motor Service Kit

PART NUMBER	UM	DESCRIPTION
MX120	KIT	120V 60Hz
MX220	KIT	220V 60Hz

SPECIFICATIONS

Maximum Operating Temperature 125°F (52°C)

Motor Type 1/30 HP, shaded pole, class B

Motor RPM Approximately 3600

Duty Cycle Continuous

Motor Voltage (Amp Draw)

120V 60Hz 1PH (1.7)

220V 60Hz 1PH (0.9)

Power Cord Type SJTOW

Power Cord Plug End

120V 60Hz NEMA 5/15

220V 60Hz NEMA 6/15

MATERIALS OF CONSTRUCTION

Motor Housing Polycarbonate

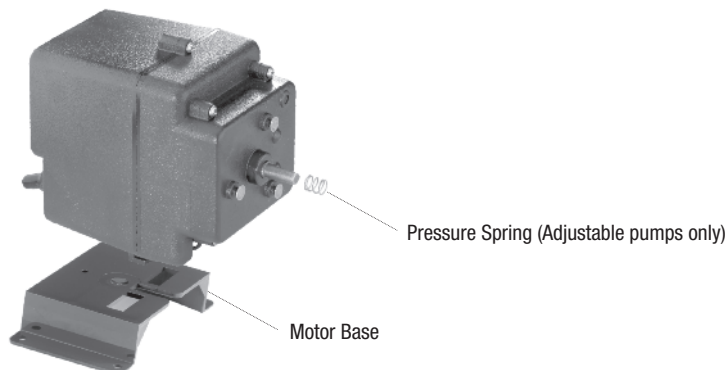
Wetted Parts Nylon, Fiberglass, Santoprene[®], PE, PVC, NSF approved or FDA compliant Hastelloy

All Fasteners Stainless steel

* Santoprene[®] is a registered trademark of Exxon Mobil Corporation.

CLASSIC series

MOTORS



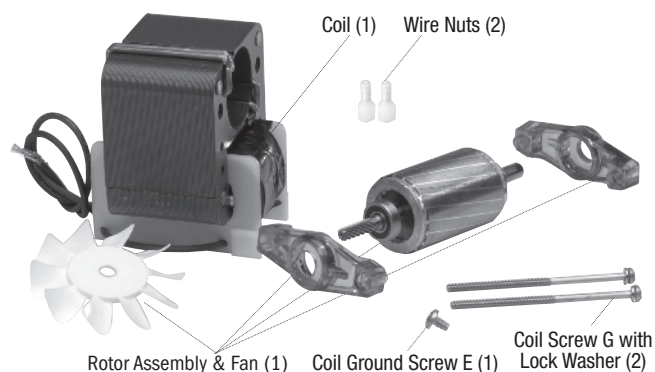
MOTOR 60Hz

PART NUMBER	UM	DESCRIPTION	Works with
PM6041D	EA	120V	Adjustable 45 & 100
PM6042D	EA	220V	
PM6081D	EA	120V	Adjustable 85 & 170
PM6082D	EA	220V	
ME6041D	EA	120V	Fixed 45
ME6042D	EA	220V	
ME6081D	EA	120V	Fixed 85
ME6082D	EA	220V	
DM6041D	EA	120V	Fixed 100
DM6042D	EA	220V	
DM6081D	EA	120V	Fixed 170
DM6082D	EA	220V	

MOTOR 50Hz *INTERNATIONAL*

PART NUMBER	UM	DESCRIPTION	Works with
PM64230	EA	230V	Adjustable 45 & 100
PM6426D	EA	250V	
PM68230	EA	230V	Adjustable 85 & 170
PM6826D	EA	250V	
ME64230	EA	230V	Fixed 45
ME6426D	EA	250V	
ME68230	EA	230V	Fixed 85
ME6826D	EA	250V	
DM64230	EA	230V	Fixed 100
DM64250	EA	250V	
DM68230	EA	230V	Fixed 170
DM68250	EA	250V	

CLASSIC series MOTOR SERVICE KITS



PART NUMBER	UM	DESCRIPTION	Works with
MSK120	KIT	120V 60Hz	All Classic Pumps
MSK220	KIT	220V 60Hz	

CLASSIC series GEAR CASE SERVICE KITS



PART NUMBER	UM	DESCRIPTION	Works with
GSK45A	KIT	Gear Case Service Kit	Adjustable 45 & 100
GSK85A	KIT		Adjustable 85 & 170
GSK45F	KIT		Fixed 45
GSK85F	KIT		Fixed 85

CLASSIC series

MOTOR PARTS

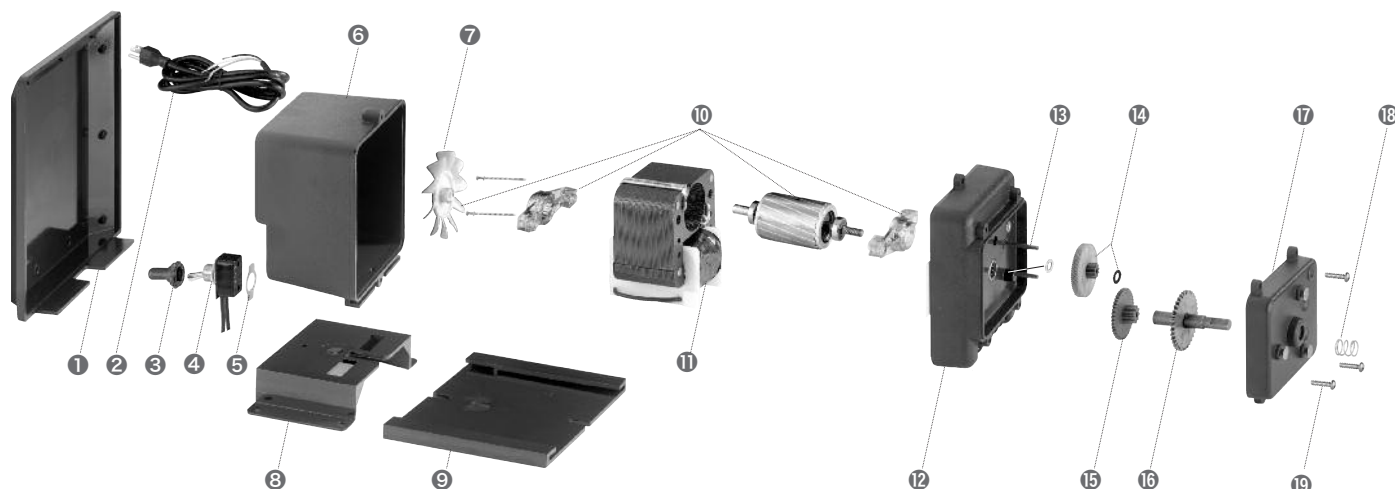
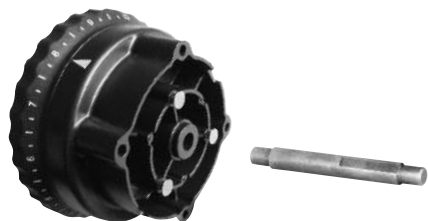


DIAGRAM	PART NUMBER	UM	DESCRIPTION	Works with
①	MP90000	EA	Rain Roof	All Classic Pumps
Not shown	MP90001	EA	Pump Cover	Adjustable 45 & 85
Not shown	MP90002	KIT	Pump Cover & Rain Roof	Adjustable 45 & 85
②	MP6B010	EA	Power Cord 120V	All Classic Pumps
	MP6B020	EA	Power Cord 220V	
③	MP6C000	EA	Switch Boot	
④	MP6D000	EA	On-Off Switch Plate	
⑤	PM6E000	EA	Toggle Switch	
⑥	PM6A0BL	EA	Motor Cover with 120V Cord	
	PM6A00L	EA	Motor Cover with 220V Cord	
⑦	PM6F000	EA	Motor Fan	
⑧	MP70000	EA	Motor Base	
⑨	MP80000	EA	Mounting Bracket	
⑩	PMBRPL2	EA	Rotor Assembly with Bearings, Brackets, Tolerance Rings & Fan	
⑪	MP6J115	EA	Coil 60Hz 120V	
	MP6J226	EA	Coil 60Hz 220V	
	MP6J223	EA	Coil 50Hz 230V	
	MP6J222	EA	Coil 50Hz 250V	

DIAGRAM	PART NUMBER	UM	DESCRIPTION	Works with
⑫	PM6K0BL	EA	Gear Case with Posts	All Classic Pumps
⑬	PM6M000	EA	Gear Posts	
⑭	MP6N040	EA	Phenolic Gear with Spacer 26 RPM	Adjustable 45 & 100 / Fixed 45 & 100
	MP6N080	EA	Phenolic Gear with Spacer 44 RPM	Adjustable 85 & 170 / Fixed 85 & 170
⑮	MP6O040	EA	Metal Reduction Gear 26 RPM	Adjustable 45 & 100 / Fixed 45 & 100
	MP6O080	EA	Metal Reduction Gear 44 RPM	Adjustable 85 & 170 / Fixed 85 & 170
⑯	MP6Q00D	EA	Motor Shaft with Gear	Adjustable 45, 85, 100 & 170
	ME6Q0LD	EA	Motor Shaft with Gear	Fixed 45 & 85
	DM6Q0LD	EA	Motor Shaft with Gear	Fixed 100 & 170
⑰	PM6R0BL	EA	Gear Case Cover	All Classic Pumps
⑱	MP6T000	EA	Pressure Spring	Adjustable 45, 85, 100 & 170
⑲	UCCPS0B MCCPS0B	10-PK 24-PK	Cover Screw B	All Pumps

CLASSIC series

FEED RATE CONTROL

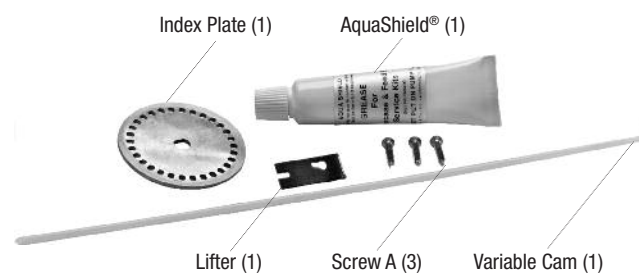


Feed Rate Control with Shaft

PART NUMBER	UM	DESCRIPTION	Works with
FC5040D	EA	Feed Rate Control	Adjustable 45 & 85
DM5040D	EA	with Shaft	Adjustable 100 & 170

CLASSIC series

FEED RATE CONTROL SERVICE KIT



PART NUMBER	UM	DESCRIPTION	Works with
FSK100	KIT	Feed Rate Control Service Kit	Adjustable 45, 85, 100 & 170

CLASSIC series

FEED RATE CONTROL PARTS

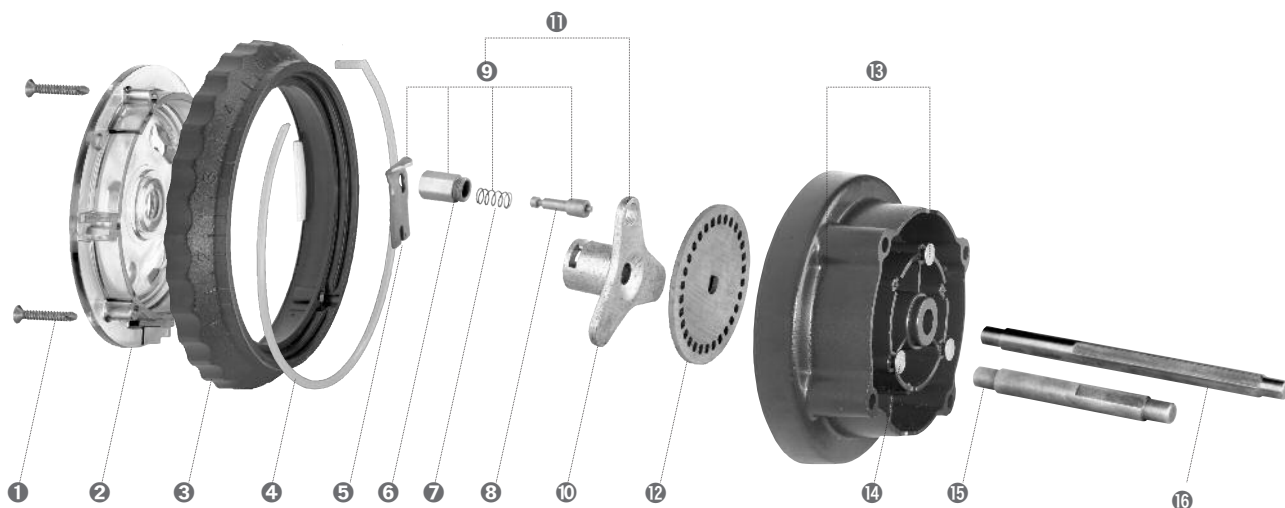


DIAGRAM	PART NUMBER	UM	DESCRIPTION	Works with
1	FCS000A	EA	FRC Screw A	Adjustable 45, 85, 100 & 170
2	FC5N000	EA	Feed Rate Mounting Plate	
3	FC5M040	EA	Dial Ring	
4	UCFC5H0 MCFC5H0	2-PK 5-PK	Variable Cam	
5	UCFC5L1 MCFC5L1	2-PK 5-PK	Index Pin Lifter	
6	FC5L003	EA	Index Pin Holder	
7	FC5L005	EA	Index Pin Spring	
8	FC5L002	EA	Index Pin	
9	UCFC5AY MCFC5AY	EA 2-PK	Index Pin Assembly with Lifter (includes 5, 6, 7 & 8)	
10	FC5K00D	EA	Index Spider	
11	FC5LASV	EA	Brass Spider Assembly (includes 9 & 10)	
12	UCFC5ID MCFC5ID	EA 5-PK	Index Plate	
13	FC5D00S	EA	Feed Rate Housing with Roller Clutch, Seal & Rivets	Adjustable 45 & 85
14	FCS000C	EA	Mounting Rivet C	
15	UCFC5AD MCFC5AD	EA 2-PK	Main Shaft	
16	DM5A00D	EA	Main Shaft	Adjustable 100 & 170

QuickPro® PUMP HEADS

The Classic, SVP and M128 series are manufactured with the patented QuickPro® pump head. A pump with the QuickPro® can be recognized by the latches on the pump head instead of screws. The pump head also features a collapsible roller assembly for fast tube replacement without tools.

QuickPro® PUMP HEAD



0-25 psi (0-1.7 bar)

Includes pump tube, ferrules 1/4" (EUROPE 6 mm)

PART NUMBER	UM	DESCRIPTION	Works with
QP25-1	EA	includes Santoprene® tube	Classic / SVP
QP25-2	2-PK	select # 1, 2, 3, 4 for ■	
QP255-1	EA	includes #5 Santoprene® tube	Classic / SVP / M128 (M05 only)
QP255-2	2-PK		
QP25T-1	EA	includes Tygothane® tube	Classic / SVP
		select # 1, 2 or 5 for ■	
EUROPE	QP17-1	EA	Classic / SVP
	QP17-2	2-PK	
	QP17T-1	EA	Classic / SVP
		includes Tygothane® tube	
		select # 1, 2 or 5 for ■	

26-100 psi (1.8-6.9 bar)

Includes pump tube, duckbill, ferrules 1/4" (EUROPE 6 mm)

PART NUMBER	UM	DESCRIPTION	Works with
QP10-1	EA	includes Santoprene® tube	Classic / SVP
		select # 1, 2 for ■	
QP107-1	EA	includes #7 Santoprene® tube	Classic (45 & 85 only) / SVP / M128 (M07 only)
QP10T-1	EA	includes Tygothane® tube	Classic / SVP
		select # 1 or 2 for ■	
EUROPE	QP69-1	EA	Classic / SVP
		includes Santoprene® tube	
		select # 1, 2 for ■	
	QP697-1	EA	Classic (45 & 85 only) / SVP
		includes #7 Santoprene® tube	
	QP69T-1	EA	Classic / SVP
		includes Tygothane® tube	
		select # 1 or 2 for ■	

PUMP TUBE** PRESSURE RATING

0-25 psi (0-1.7 bar): # 1, 2, 3, 4, 5

26-100 psi (1.8-6.9 bar): # 1, 2, 7 check valve required

** Refer to output chart to match tube & pump model.

INNERMOST QuickPro® PUMP HEAD For Classic Double Head Pumps (100 & 170)



0-25 psi (0-1.7 bar)

Includes pump tube, ferrules 1/4" (EUROPE 6 mm)

PART NUMBER	UM	DESCRIPTION	Works with
QPA25-1	EA	includes Santoprene® tube	Classic 100 & 170 only
QPA25-2	2-PK	select # 1, 2, 3, 4 or 5 for ■	
EUROPE	QPA17-1	EA	Classic 100 & 170 only
	QPA17-2	2-PK	
		includes Santoprene® tube	
		select # 1, 2, 3, 4 or 5 for ■	

26-100 psi (1.8-6.9 bar)

Includes pump tube, duckbill, ferrules 1/4" (EUROPE 6 mm)

PART NUMBER	UM	DESCRIPTION	Works with
QPA10-1	EA	includes Santoprene® tube	Classic 100 & 170 only
QPA10-2	2-PK	select # 1 or 2 for ■	
EUROPE	QPA69-1	EA	Classic 100 & 170 only
	QPA69-2	2-PK	
		includes Santoprene® tube	
		select # 1 or 2 for ■	

INNERMOST QuickPro® PUMP HEAD PARTS

PART NUMBER	UM	DESCRIPTION	Works with
QP10A-1	EA	Pump Head Cover	Classic 100 & 170 only
QP10A-2	2-PK		
QP50A-1	EA	Roller Assembly	

* Tygothane® tubes are application specific; confirm chemical compatibility with the chemical resistance guide in the catalog or on the website. In 26-100 psi (1.8-6.9 bar) applications with a Tygothane® tube, a Pelliathane® duckbill is in the check valve; both materials are clear. M128 and Econ pumps are excluded.

QuickPro® PUMP HEAD PARTS

QuickPro® PUMP HEAD PARTS

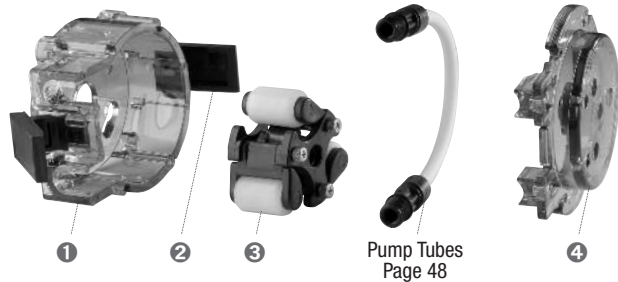
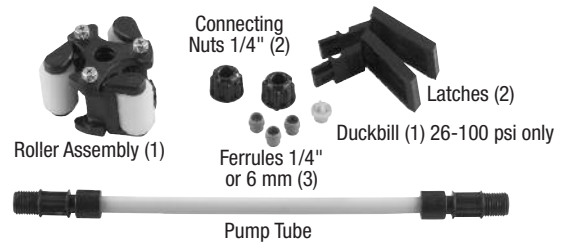


DIAGRAM	PART NUMBER	UM	DESCRIPTION	Works with
1	QP400-1 QP400-2	EA 2-PK	QP Tube Housing with Latches <i>UNIVERSAL</i>	Classic / SVP / M128
2	QP401-2	2-PK	QP Latches	
3	QP500-1 QP500-4	EA 4-PK	QP Roller Assembly	
	QP501-3	EA	QP Roller Arm Assembly includes arms, bushings, rollers, screws	
4	QP100-1 QP100-4	EA 4-PK	QP Tube Housing Cover with Bushing	

NOTE: *UNIVERSAL* for QuickPro® (QP) & non-QuickPro pump heads.

QuickPro® PUMP HEAD SERVICE KITS



0-25 psi (0-1.7 bar)

PART NUMBER	UM	DESCRIPTION	Works with
QP25■K	KIT	includes Santoprene® tube select # 1, 2, 3, 4 for ■	Classic / SVP
QP255K	KIT	includes #5 Santoprene® tube	Classic / SVP / M128 (M05 only)
QP25T■K	KIT	includes Tygothane®** tube select # 1, 2 or 5 for ■	Classic / SVP
EUROPE	QP17■K	KIT includes Santoprene® tube select # 1, 2, 3, 4 or 5 for ■	Classic / SVP
	QP17T■K	KIT includes Tygothane®** tube select # 1, 2 or 5 for ■	Classic / SVP

26-100 psi (1.8-6.9 bar)

PART NUMBER	UM	DESCRIPTION	Works with
QP10■K	KIT	includes Santoprene® tube select # 1, 2 for ■	Classic / SVP
QP107K	KIT	includes #7 Santoprene® tube	Classic (45 & 85 only) / SVP / M128 (M07 only)
QP10T■K	KIT	includes Tygothane®** tube select # 1 or 2 for ■	Classic / SVP
EUROPE	QP69■K	KIT includes Santoprene® tube select # 1, 2 for ■	Classic / SVP
	QP697K	KIT includes #7 Santoprene® tube	Classic (45 & 85 only) / SVP
	QP69T■K	KIT includes Tygothane®** tube select # 1 or 2 for ■	Classic / SVP

PUMP TUBE* PRESSURE RATING

0-25 psi (0-1.7 bar): # 1, 2, 3, 4, 5

26-100 psi (1.8-6.9 bar): # 1, 2, 7 check valve required

* Refer to output chart to match tube & pump model.

** Tygothane® tubes are application specific; confirm chemical compatibility with the chemical resistance guide in the catalog or on the website. In 26-100 psi (1.8-6.9 bar) applications with a Tygothane® tube, a Pellathane® duckbill is in the check valve; both materials are clear. M128 and Econ pumps are excluded.

NON-QuickPro PUMP HEAD PARTS

• **Pumps with non-QuickPro pump head:** Serial number prefix begins with the date 042911 and prior.

PUMP HEAD PARTS

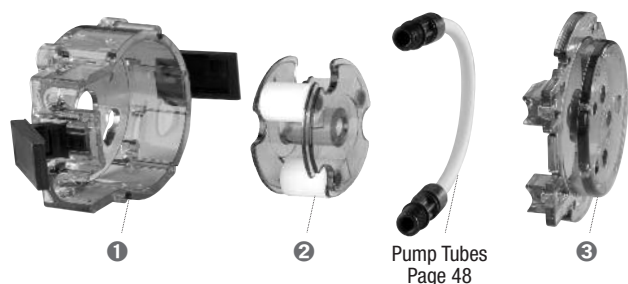


DIAGRAM	PART NUMBER	UM	DESCRIPTION	Works with
①	QP400-1 QP400-2	EA 2-PK	QP Tube Housing with Latches <i>UNIVERSAL</i>	Classic / SVP / M128
②	UC3ASYD MC3ASYD	EA 4-PK	Roller Assembly	
③	UCCP100 MCCP100	EA 4-PK	QP Tube Housing Cover with Bushing	
Not shown	UCCPSOB MCCPSOB	10-PK 24-PK	Cover Screw B (not needed if using QP Tube Housing with Latches & QP Tube Housing Cover)	All Pumps

NOTE: *UNIVERSAL* for QuickPro® (QP) & non-QuickPro pump heads.

PUMP TUBE* PRESSURE RATING

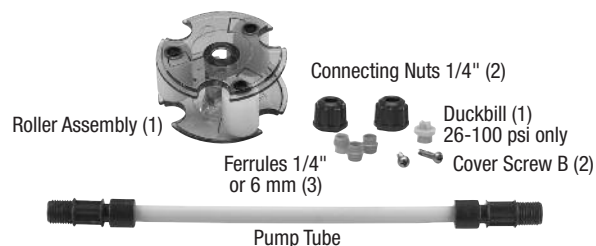
0-25 psi (0-1.7 bar): # 1, 2, 3, 4, 5

26-100 psi (1.8-6.9 bar): # 1, 2, 7 check valve required

* Refer to output chart to match tube & pump model.

PUMP HEAD SERVICE KITS

#7 tube for Classic single head, SVP and M128 pumps only



0-25 psi (0-1.7 bar)

PART NUMBER	UM	DESCRIPTION	Works with
PSKL0	KIT	includes Santoprene® tube # 1, 2, 3, 4 for ■	Classic / SVP
PSKL05	KIT	includes #5 Santoprene® tube	Classic / SVP / M128 (M05 only)
PSKLT	KIT	includes Tygothane®** tube select # 1, 2 or 5 for ■	Classic / SVP
PSKL ■ CE	KIT	includes Santoprene® tube select # 1, 2, 3, 4 or 5 for ■	Classic / SVP
PSKLT ■ CE	KIT	includes Tygothane®** tube select # 1, 2 or 5 for ■	Classic / SVP

26-100 psi (1.8-6.9 bar)

PART NUMBER	UM	DESCRIPTION	Works with
PSKH0	KIT	includes Santoprene® tube select # 1, 2 for ■	Classic / SVP
PSKH07	KIT	includes #7 Santoprene® tube	Classic (45 & 85 only) / SVP / M128 (M07 only)
PSKHT	KIT	includes Tygothane®** tube select # 1 or 2 for ■	Classic / SVP
PSKH ■ CE	KIT	includes Santoprene® tube select # 1, 2 for ■	Classic / SVP
PSKH7 ■ CE	KIT	includes #7 Santoprene® tube	Classic (45 & 85 only) / SVP
PSKHT ■ CE	KIT	includes Tygothane®** tube select # 1 or 2 for ■	Classic / SVP

** Tygothane® tubes are application specific; confirm chemical compatibility with the chemical resistance guide in the catalog or on the website. In 26-100 psi (1.8-6.9 bar) applications with a Tygothane® tube, a Pellathane® duckbill is in the check valve; both materials are clear. M128 and Econ pumps are excluded.

PUMP TUBES



Santoprene® Pump Tubes
1, 2, 3, 4, 5 & 7



Tygothane® Pump Tubes # 1, 2 & 5

PUMP TUBE* PRESSURE RATING

0-25 psi (0-1.7 bar): # 1, 2, 3, 4, 5

26-100 psi (1.8-6.9 bar): # 1, 2, 7 check valve required

* Refer to output chart to match tube & pump model.

Includes ferrules 1/4" (EUROPE 6 mm)

PART NUMBER	UM	DESCRIPTION	Works with
UCCP20	2-PK	Santoprene® tube	Classic (#7 for 45 & 85 only) / SVP / M128 (#5 for M05 / #7 for M07)
MCCP20	5-PK	select # 1, 2, 3, 4, 5 or 7 for ■	
UCTYGO	2-PK	Tygothane® tube	Classic / SVP
MCTYGO	5-PK	select # 1, 2 or 5 for ■	
EUROPE	UCCP2 ■ CE	2-PK Santoprene® tube	Classic / SVP
	MCCP2 ■ CE	5-PK select tube # 1, 2, 3, 4 or 5 for ■	
	UCTY ■ CE	2-PK Tygothane® tube	Classic / SVP
	MCTY ■ CE	5-PK select tube # 1, 2 or 5 for ■	

Includes duckbills, ferrules 1/4" (EUROPE 6 mm)

PART NUMBER	UM	DESCRIPTION	Works with
UCCP ■ FD	2-PK	Santoprene® tube select # 1, 2 or 7 for ■	Classic (#7 for 45 & 85 only) / SVP / M128 (#7 for M07 only)
UCTY ■ FD	2-PK	Tygothane® tube select # 1 or 2 for ■	Classic / SVP
EUROPE	UC ■ FDCE	2-PK Santoprene® tube select # 1, 2 or 7 for ■	Classic (#7 for 45 & 85 only) / SVP
	UCTY ■ DCE	2-PK Tygothane® tube select # 1 or 2 for ■	Classic / SVP

NOTE: Econ pump tubes on page 52.

** Tygothane® tubes are application specific; confirm chemical compatibility with the chemical resistance guide in the catalog or on the website. In 26-100 psi (1.8-6.9 bar) applications with a Tygothane® tube, a Pellathane® duckbill is in the check valve; both materials are clear. M128 and Econ pumps are excluded.

ECON FP, ECON T, Stennicator MOTOR PARTS

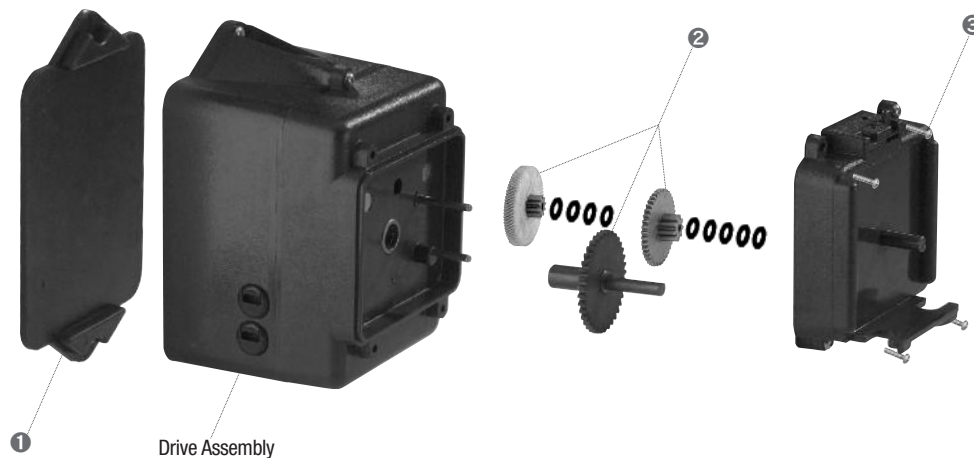


DIAGRAM	PART NUMBER	UM	DESCRIPTION	Works with
1	EC302	EA	Drive Assembly Pad	Econ FP / EconT / Stennicator
Not shown	EC300	EA	DC Motor, brushed with leads	Econ T (E10 only)
Not shown	EC307	EA	DC Motor, brushed with leads	Econ T (E20 only)
Not shown	EC301	EA	DC Motor, brushless	Econ FP / Stennicator
	EC310	KIT	Gear Kit includes spacers, screws & AquaShield®	Econ T (E10 only)
	EC320	KIT	Gear Kit includes spacers, screws & AquaShield®	Econ FP / Econ T (E20 only) / Stennicator
3	UCCPSOB MCCPSOB	10-PK 24-PK	Cover Screw B	Econ FP / Econ T / Stennicator



Optional Mounting Accessories

PART NUMBER	UM	DESCRIPTION	Works with
EC303	KIT	Mounting Kit (for wall mount or Stenner tank)	Econ FP / Econ T / Stennicator
EC304	EA	Stand (for horizontal display or wall mount)	

ECON FP, ECON T, Stennicator PUMP HEAD PARTS

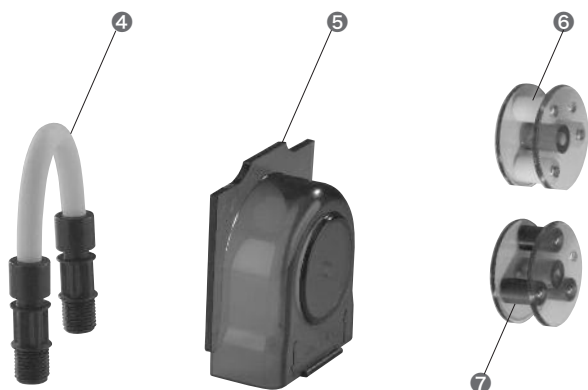


DIAGRAM	PART NUMBER	UM	DESCRIPTION	Works with
④	EC30A-2	2-PK	includes Pump Tube A, Ferrules 1/4"	Econ T
	EC30B-2	2-PK	includes Pump Tube B, Ferrules 1/4"	Econ T
	EC30C-2	2-PK	includes Pump Tube C, Ferrules 1/4"	Econ T
	EC30F-2	2-PK	includes Pump Tube F, Ferrules 1/4"	Econ FP / Econ T
	EC30G-2	2-PK	includes Pump Tube G, Ferrules 1/4"	Econ FP / Econ T
	EC30H-2 EC30H-5	2-PK 5-PK	includes Pump Tube H, Ferrules 1/4"	Econ FP / Stennicator
⑤	EC355	EA	Pump Head Cover	Econ FP / Econ T / Stennicator
⑥	EC350	EA	White Roller Assembly (for pump tubes A, B, C, F)	Econ FP (with tube F only) / Econ T
⑦	EC351	EA	Black Roller Assembly (for pump tubes G, H)	Econ FP / Econ T / Stennicator (with tube H only)

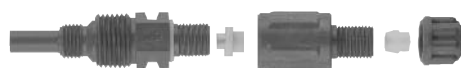
NOTE: For check valves, injection parts, suction/discharge tubing and miscellaneous parts reference pages 53-54.

ECON PUMP TUBE GUIDE

Pressure	Series	Tube/Roller Assembly
25 psi (1.7 bar)	Econ T	A/White B/White C/White
80 psi (5.5 bar) check valve required	Econ FP or T	F/White G/Black
	Econ FP, Econ T, Stennicator	H/Black

Refer to output chart to match tube & pump model.

CHECK VALVE



Injection Check Valve 1/4"



Injection Check Valve 3/8"

26-100 psi (1.8-6.9 bar)

PART NUMBER	UM	DESCRIPTION	Works with	
UCDBINJ MCDBINJ	EA 5-PK	includes Santoprene® duckbill, ferrule 1/4"	All Pumps	
UCINJ38 MCINJ38	EA 5-PK	includes Santoprene® duckbill, ferrule 3/8"	Classic / SVP	
UCTYINJ MCTYINJ	EA 5-PK	includes Pellathane®* duckbill, ferrule 1/4"		
UCTYIJ38 MCTYIJ38	EA 5-PK	includes Pellathane®* duckbill, ferrule 3/8"		
BCV14TVH	EA	Injection ball check valve 1/4"	All Pumps	
EUROPE	UCINJCE MCINJCE	EA 5-PK	includes Santoprene® duckbill, ferrule 6 mm	All Pumps
	UCTINJCE MCTINJCE	EA 5-PK	includes Pellathane®* duckbill, ferrule 6 mm	Classic / SVP

INJECTION PARTS



Injection Fitting



Injection Fitting with Nut & Ferrule 1/4"



Santoprene® Duckbill



O-Ring



Pellathane® Duckbill

0-25 psi (0-1.7 bar)

PART NUMBER	UM	DESCRIPTION	Works with
UCAK300 MCAK300	EA 5-PK	Injection Fitting with Nut & Ferrule 1/4"	All Pumps
EUROPE UCAK3CE	KIT	Injection Fitting with Nut & Ferrule 6 mm	Classic / SVP

26-100 psi (1.8-6.9 bar)

PART NUMBER	UM	DESCRIPTION	Works with
CVIJ1/4	EA	Check Valve Injection Fitting 1/4"	All Pumps
CVIJ3/8	EA	Check Valve Injection Fitting 3/8"	Classic / SVP
UCCVDB0 MCCVDB0	2-PK 5-PK	Santoprene® Check Valve Duckbill	All Pumps
CVIJOR	EA	Santoprene® Check Valve O-Ring	All Pumps
UCTYDB2 MCTYDB5	2-PK 5-PK	Pellathane® Check Valve Duckbill	Classic / SVP
TVIJOR	EA	Pellathane® Check Valve O-Ring	Classic / SVP

* Tygothane® tubes are application specific; confirm chemical compatibility with the chemical resistance guide in the catalog or on the website. In 26-100 psi (1.8-6.9 bar) applications with a Tygothane® tube, a Pellathane® duckbill is in the check valve; both materials are clear. M128 and Econ pumps are excluded.

MISCELLANEOUS PARTS



Connecting Nut 1/4"



Connecting Nut 3/8"

Connecting Nut 3/8"
with Adapter

Ferrule 1/4"

Weighted Suction
Line Strainer

AquaShield®

Flow Indicator
with Bracket

Filter Assembly

PART NUMBER	UM	DESCRIPTION	Works with
UCAK100 MCAK100	10-PK 24-PK	Connecting Nut 1/4"	All Pumps
MANUT00	EA	Connecting Nut 3/8"	Classic / SVP
UCADPTR MCADPTR	2-PK 5-PK	Connecting Nut 3/8" with Adapter	Classic / SVP
UCAK200 MCAK200	10-PK 24-PK	Ferrule 1/4"	All Pumps
ST114	EA	Weighted Suction Line Strainer 1/4"	All Pumps
ST138	EA	Weighted Suction Line Strainer 3/8"	Classic / SVP
MAGCSGR	EA	AquaShield® 8 oz. Tube	All Pumps
AK600	EA	Flow Indicator 1/4" with Bracket	All Pumps
AK700	EA	Flow Indicator 3/8" with Bracket	Classic / SVP
AK900	EA	Flow Indicator Bracket	All Pumps
P2000	EA	Filter Assembly	Proportional Injection System
EUROPE	MCAK2CE	24-PK Ferrule 6 mm	Classic / SVP
	ST114	EA Weighted Suction Line Strainer 6 mm	Classic / SVP
	AK800	EA Flow Indicator 6 mm with Bracket	Classic / SVP

SUCTION/DISCHARGE TUBING



1/4" White



3/8" UV Black

PART NUMBER	UM	DESCRIPTION	Works with
AK4002B	ROLL	1/4" x 20' UV Black	All Pumps
AK4002W	ROLL	1/4" x 20' White	
AK4010B	ROLL	1/4" x 100' UV Black	
AK4010W	ROLL	1/4" x 100' White	
AK4100B	ROLL	1/4" x 1000' UV Black	
AK4100W	ROLL	1/4" x 1000' White	
MALT02B	ROLL	3/8" x 20' UV Black	Classic / SVP
MALT002	ROLL	3/8" x 20' White	
MALT10B	ROLL	3/8" x 100' UV Black	
MALT010	ROLL	3/8" x 100' White	
MALTB10	ROLL	3/8" x 1000' UV Black	
MALT100	ROLL	3/8" x 1000' White	
EUROPE AK20W6M	ROLL	6 mm x 20' White	Classic / SVP

POLICIES

Limited Warranty

Stenner Pump Company will for a period of one (1) year from the date of purchase (proof of purchase required) repair or replace – at our option – all defective parts. Stenner is not responsible for any removal or installation costs. Pump tube assemblies and rubber components are considered perishable and are not covered in this warranty. Pump tube will be replaced each time a pump is in for service, unless otherwise specified. The cost of the pump tube replacement will be the responsibility of the customer. Stenner will incur shipping costs for warranty products shipped from our factory in Jacksonville, Florida. Any tampering with major components, chemical damage, faulty wiring, weather conditions, water damage, power surges, or products not used with reasonable care and maintained in accordance with the instructions will void the warranty. Stenner limits its liability solely to the cost of the original product. We make no other warranty expressed or implied.

Returns

Stenner offers a 30-day return policy on factory direct purchases. Except as otherwise provided, no merchandise will be accepted for return after 30 days from purchase. To return merchandise at any time, call Stenner at 800.683.2378 for a Return Merchandise Authorization (RMA) number. A 15% restocking fee will be applied. Include a copy of your invoice or packing slip with your return.

Problem with Shipment

Check orders immediately upon arrival. Any claim of damage, shortage or order discrepancy must be noted on the delivery receipt and reported to Stenner Customer Service at 800.683.2378 within seven (7) days of receipt.

Pump Service & Repairs

Before returning a pump for warranty or repair, remove chemical from pump tube by running water through the tube, and then run the pump dry. Following expiration of the warranty period, Stenner Pump Company will clean and overhaul any Stenner metering pump for a minimum labor charge plus necessary replacement parts and shipping. All metering pumps received for overhaul will be restored to their original condition. The customer will be charged for missing parts unless specific instructions are given. To return merchandise for repair, call Stenner at 800.683.2378 or 904.641.1666 for a Return Merchandise Authorization (RMA) number.

Disclaimer

This information is not intended for specific application purposes. Stenner Pump Company reserves the right to make changes to prices, products, and specifications at any time without prior notice.

Trademarks

Santoprene® is a registered trademark of Exxon Mobil Corporation.
Tygothane® is a registered trademark of Saint-Gobain Performance Plastics.
Pellathane® is a registered trademark of The Dow Company.
AquaShield® is a registered trademark of D.A. Stuart.

* Refer to chemical resistance guide for compatibility.

CHEMICAL RESISTANCE GUIDE

Ratings Key – Chemical Effect

- A** Fluid has minor or no effects
- B** Fluid has minor to moderate effects
- C** Fluid has severe effects
- * No data available



CAUTION

The information is provided ONLY as a guide to assist in determining chemical compatibility for wetted components. Testing under the specific conditions of the application is recommended. Stenner Pump Company assumes no responsibility for its accuracy. Outside factors including but not limited to temperature, pressure, mechanical stress, and solution concentration can affect material compatibility in a particular application. Stenner makes no warranty, expressed or implied, as to the accuracy of this guide or any materials' suitability for fitness or purpose for any application. User assumes all risk and liability for use of this guide.

Chemical / Solution	PP/Santoprene®	Tygothane®	PVC	LDPE
Acetic Acid 20%	A	B	B	A
Acetic Acid 30%	B	C	C	A
Acetic Acid, Glacial	C	C	C	C
Acetic Anhydride	B	C	C	C
Aliphatic Hydrocarbons	B	B	B	B
Aluminum Chloride	A	A	A	B
Aluminum Sulfate	A	A	A	A
Alums	A	A	A	A
Ammonium Acetate	B	B	A	A
Ammonium Carbonate	A	A	A	A
Ammonium Chloride	A	B	A	B
Ammonium Hydroxide	A	B	A	A
Ammonium Nitrate	A	A	A	A
Ammonium Phosphate	A	A	A	A
Ammonium Sulfate	A	A	A	A
Amyl Acetate	A	C	C	C
Aniline	B	C	C	C
Antimony Salts	A	A	A	B
Arsenic Salts	A	A	A	B
Barium Hydroxide	A	A	A	B
Barium Salts	A	*	A	B
Beer	A	A	A	A
Benzene	C	C	C	C
Benzoic Acid	A	C	A	A
Bleach 5.25%	A	A	A	A
Boric Acid	A	A	A	A
Bromine	A	B	B	B
Butyl Acetate	A	C	C	C
Butyric Acid	A	C	B	C
Calcium Chloride	A	A	B	A
Calcium Hydroxide	A	C	A	A
Calcium Hypochlorite 5%	A	B	A	A
Calcium Salts	A	A	A	A
Carbon Disulfide	C	C	C	C
Carbon Tetrachloride	C	C	C	C

Chemical / Solution	PP/Santoprene®	Tygothane®	PVC	LDPE
Castor Oil	B	A	A	*
Chlorine <i>see Sodium Hypochlorite</i>	*	*	*	*
Chloroacetic Acid	A	C	B	C
Chloroform	C	C	C	C
Chlorosulfonic Acid	B	C	C	C
Chromic Acid < 50%	B	C	B	A
Chromium Salts	A	*	A	B
Citric Acid	B	B	B	C
Copper Chloride	A	A	A	A
Copper Sulfate	A	A	A	A
Cottonseed Oil	B	A	B	A
Ethyl Acetate	A	C	C	C
Ethyl Alcohol	B	C	C	B
Ethyl Chloride	C	C	C	C
Ethylene Dichloride	C	C	C	C
Ethylene Glycol	A	A	A	A
Ethylene Oxide	B	A	C	C
Eucalyptus Oil	C	B	C	C
Fatty Acids	C	B	A	A
Ferric Chloride	A	A	A	A
Ferric Sulfate	A	A	A	A
Ferrous Chloride	A	A	A	A
Ferrous Sulfate	A	A	A	A
Fluoboric Acid	A	C	A	C
Fluosilicic Acid	A	A	A	A
Formaldehyde < 40%	A	B	A	C
Formic Acid	A	C	B	C
Glucose	A	A	A	A
Glue	A	A	A	A
Glycerin	A	A	A	A
Hydrochloric Acid 20%	A	C	A	A
Hydrochloric Acid 37%	A	C	A	A
Hydrocyanic Acid	A	B	A	A
Hydrofluoric Acid < 48%	A	C	B	A

Chemical / Solution	PP/Santoprene®	Tygothane®	PVC	LDPE
Hydrofluoric Acid 48-75%	A	C	C	C
Hydrofluoric Acid, anhydrous	B	C	C	C
Hydrogen Peroxide < 50%	A	B	A	B
Hydrogen Sulfide	A	A	B	A
Iodine	A	A	C	B
Lactic Acid	A	B	B	A
Lead Acetate	B	A	A	A
Linseed Oil	B	A	A	A
Limonene	C	B	B	B
Lubricating Oils	C	A	B	C
Magnesium Chloride	A	A	B	A
Magnesium Hydroxide	A	A	A	A
Magnesium Sulfate	A	A	A	A
Malic Acid	A	B	A	A
Manganese Salts	A	A	A	A
Mercuric Chloride	A	A	A	A
Methylene Chloride	C	C	C	C
Mineral Oil	B	A	B	B
Mineral Spirits	C	A	B	B
Muriatic Acid, 20° Baume	A	C	A	A
Nitric Acid < 10%	A	C	A	B
Nitric Acid 10-30%	B	C	A	C
Nitric Acid 30-60%	C	C	B	C
Nitric Acid 70%	C	C	B	C
Nitric Acid, red fuming	C	C	C	C
Nitrous Acid	A	B	*	*
Oleic Acid	A	B	C	C
Oleum 20-25%	C	C	C	C
Oxalic Acid	A	C	B	A
Palmitic Acid	A	B	B	A
Petroleum Distillates	C	B	B	C
Phenol	B	C	C	B
Phosphoric Acid	A	C	A	A
Phthalic Acid	A	C	A	A
Pickling Solutions	A	C	*	*
Plating Solutions	A	C	*	*
Polyphosphate	A	A	A	A
Potassium Carbonate	A	A	A	A
Potassium Chlorate	A	A	A	A
Potassium Hydroxide	A	A	A	A
Potassium Dichromate	A	A	A	A
Potassium Iodide	A	A	B	B

Chemical / Solution	PP/Santoprene®	Tygothane®	PVC	LDPE
Potassium Permanganate	A	A	A	A
Sea Water	A	A	A	A
Silicone Oil	C	A	A	B
Silver Nitrate	A	A	A	A
Soap Solutions	A	A	A	C
Sodium	A	A	A	A
Sodium Bisulfate	A	A	A	A
Sodium Bisulfite	A	A	A	A
Sodium Borate	A	A	A	A
Sodium Carbonate	A	A	A	A
Sodium Chlorate	A	A	A	A
Sodium Chloride	A	A	A	A
Sodium Dichromate 20%	A	*	B	*
Sodium Hydroxide < 20%	A	B	A	B
Sodium Hydroxide 20-46.5%	A	C	A	B
Sodium Hypochlorite 5%	A [†]	B	A	A
Sodium Hypochlorite 6-15%	A [†]	B	A	A
Sodium Nitrate	A	A	A	A
Sodium Silicate	A	A	A	A
Sodium Sulfide	A	A	A	A
Sodium Sulfite	A	A	A	A
Solvents	C	B	B	B
Soybean Oil	B	A	A	A
Stannous Chloride 15%	A	A	A	B
Stearic Acid	A	B	B	B
Sulfur Dioxide liquid	A	C	C	C
Sulfur Trioxide	B	C	A	C
Sulfuric Acid < 40%	B	B	B	B
Sulfuric Acid > 40%	C	C	C	C
Sulfurous Acid	A	A	A	B
Tannic Acid 10%	A	B	A	B
Tanning Liquors	A	A	A	A
Tartaric Acid	A	A	A	A
Titanium Salts	A	A	A	B
Triethanolamine	A	C	C	C
Tri Sodium Phosphate	A	A	A	A
Tung Oil	B	B	C	C
Turpentine	B	B	C	C
Urea	B	A	B	A
Water & Brine	A [†]	A	A	A
Zinc Chloride	A	A	B	A
Zinc Salts	A	A	A	A

[†] Products tested and certified to WQA to NSF/ANSI 372 for low lead compliance and NSF/ANSI 61 for Sodium Hypochlorite and Water only.

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made in the USA

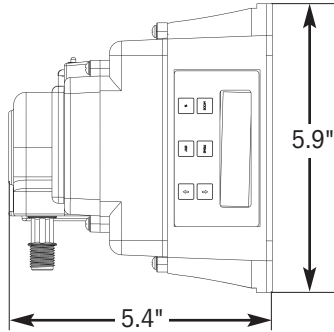
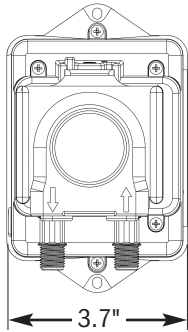
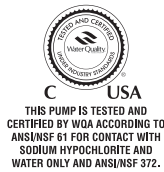
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ECON FP SERIES SPECIFICATIONS

STENNER PUMPS®



SHIPPING WEIGHT 4 lbs (1.8 kg)



FEATURES

- Pump is field programmable to accept a dry contact signal or a 12-24 VAC/VDC input signal from any control equipment that responds to flow
- cULus for indoor/outdoor use
- 3-point roller design assists in anti-siphon protection
- Pump head requires no valves, allows for easy maintenance
- Self-priming against maximum working pressure, foot valve not required
- Pump does not lose prime or vapor lock
- Pumps off-gassing solutions and can run dry
- Output volume is not affected by back pressure
- Easy to change pump tube; lubrication is not required

Output Control Six button control panel with LCD display

Reproducibility ±2%

Maximum Working Pressure 80 psi (5.5 bar)

Maximum Operating Temperature 104°F (40°C)

Maximum Suction Lift 25 ft (7.6 m) vertical lift, based on water

Motor Type 24 VDC, brushless

Approximate Shaft RPM 60

Duty Cycle Continuous

Motor Voltage 120V 60Hz (0.17 amp), 240V 50Hz (10 watts)

Power Cord Type STP-2W

Power Cord Plug End

Wall adapter power supply 100-120V, 60Hz, 0.75A input, two prong, polarized 24VDC, 1.25A, Class II output

Classification Indoor/Outdoor

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate

Pump Tube & Check Valve Duckbill Santoprene™, FDA approved

Pump Head Rollers Polyethylene

Suction/Discharge Tubing, Ferrules Polyethylene, FDA approved

Tube Fittings Polypropylene, NSF listed

Check Valve Fittings Type 1 Rigid PVC, NSF listed

Connecting Nuts PP or Type 1 Rigid PVC

Suction Line Strainer PP or Type 1 Rigid PVC body with Type 1 Rigid PVC cap, NSF listed; ceramic weight

All Fasteners Stainless steel

* Santoprene™ is a trademark of Exxon Mobil Corporation.

ACCESSORY KIT SHIPPED WITH EACH PUMP

3 connecting nuts 1/4"

3 ferrules 1/4"

1 injection check valve

1 weighted suction line strainer 1/4"

1 20' roll suction/discharge tubing 1/4" white or black
OR 6 mm white *Europe*

1 additional pump tube

1 manual

FLOW RATE OUTPUT CHART

Item Number Prefix	Pump Tube	Roller Assembly	Turndown Ratio	Gallons per Day	Gallons per Hour	Ounces per Hour	Ounces per Minute	Pressure psi	Liters per Day	Liters per Hour	Milliliters per Hour	Milliliters per Minute	Pressure bar
E20PHF	F	White	10:1	4.5	0.19	24.00	0.40	80	17.0	0.71	708.8	11.8	5.5
E20PHG	G	Black	10:1	16.0	0.67	85.33	1.42	80	60.5	2.52	2520.0	42.0	5.5
E20PHH	H	Black	10:1	30.0	1.25	160.00	2.67	80	113.4	4.72	4725.0	78.8	5.5
Approximate Maximum Outputs @ 50/60Hz													

NOTE: Injection check valve is included.

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs.