

540 SMITH STREET  
FARMINGDALE, NEW YORK  
BLOCK 400, LOTS 8005 & 208  
NYSDEC SITE NO. 1-52-147

## SOIL INVESTIGATION OF HISTORICAL SOURCE AREA REPORT

**SUBMITTED TO:**



New York State Department of Environmental Conservation  
Division of Environmental Remediation  
Remedial Bureau A  
625 Broadway, 12<sup>th</sup> Floor  
Albany, New York 12233-7020

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PWGC Project Number: MIN2002

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P.W. GROSSER CONSULTING, INC.  
PROJECT No. MIN2001

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**SOIL INVESTIGATION OF HISTORICAL SOURCE AREA REPORT  
THE MINMILT REALTY SITE  
NYSDEC SITE NO: 1-52-147**

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ACRONYM	DEFINITION
ASP	Analytical Services Protocol
bls	Below Land Surface
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
DER	Division of Environmental Remediation
DER-10	Technical Guidance for Site Investigation and Remediation
DUSR	Data Usability Summary Report
EDD	Electronic Data Delivery
EIMS	Environmental Information Management System
ELAP	Environmental Laboratory Accreditation Program
EM	Electromagnetic
ESA	Environmental Site Assessment
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
HSM	Health and Safety Manager
IDW	Investigative Derived Waste
IRM	Interim Remedial Measure
LDC	Laboratory Data Consultants
MDL	Method Detection Limit
mg/kg	milligram per kilogram
MKA	Middleton, Kontokosta Associates
mL	milliliter
msl	mean seal level
MS/MSD	Matrix Spike / Matrix Spike Duplicate
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OM&M	Operation Monitoring and Maintenance
PCE	Tetrachloroethylene
PID	Photo-ionization Detector
PM-10	10 micrometers in size
PPE	Personal Protective Equipment
ppb	parts per billion
ppm	parts per million
PWGC	P.W. Grosser Consulting, Inc.
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance / Quality Control
QEP	Qualified Environmental Professional
RI	Remedial Investigation
RL	Reporting Limit
SCDHS	Suffolk County Department of Health Services
SCG	Standards, Criteria, and Guidance
SCO	Soil Cleanup Objective
SOP	Standard Operating Procedure
SVE	Soil Vapor Extraction
SVOC	Semi-volatile Organic Compound





ug/l	Micrograms per liter
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound



#### CERTIFICATION

I, Martin Meriwether, PG, certify that I am currently a Qualified Environmental Professional (QEP) as defined in 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 and that this soil investigation work plan was prepared in accordance with applicable statutes and regulations and in substantial conformance with the New York State Department of Environmental Conservation's (NYSDEC's) Division of Environmental Remediation's (DER's) Technical Guidance for Site Investigation and Remediation (DER-10).

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

7/14/20

Signature

Date

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.



## 1.0 INTRODUCTION

P.W. Grosser Consulting, Inc. (PWGC) has prepared this report to document activities and results associated with a subsurface investigation at 540 Smith Street, Farmingdale, New York (Block 400, Lots 8005 & 208), referred to herein as “the Minmilt Realty Site” or “the site”. The investigation was performed in accordance with the NYSDEC-approved *Soil Investigation of Historical Source Area Work Plan* (PWGC, March 2020) for the Minmilt Realty site, referred to herein as the “Work Plan.”

An onsite leaching pool was previously reported to have received periodic discharges of tetrachloroethylene (PCE) as the result of historical operations at the Minmilt Realty Site. A soil and groundwater investigation performed in 1994 identified significant PCE contamination in subsurface soils on the east side of the building, in the vicinity of the leaching pool. As further described in **Section 2.4**, remedial measures to address this source area and associated groundwater contamination have been ongoing since the mid-late 1990s, and as a result, detected groundwater impact is limited to the onsite recovery wells. The soil investigation documented herein was intended to verify remediation of the historical PCE source area in support of site closure.



## 2.0 SITE DESCRIPTION AND HISTORY

### 2.1 Site Description

The Minmilt Realty Site is a 2.28-acre industrial property located at 540 Smith Street, East Farmingdale, New York; and is identified as Tax Map 100 Section 6, Block 1 and Lot 25 on the Town of Babylon Tax Map. The site is bounded by Smith Street to the north, a commercial building (50 Engineers Lane, formerly Cantor Brothers) to the south, a commercial building (550 Smith Street, formerly Great Neck Saw) to the east, and to the west by commercial buildings. The site consists of a 47,103.6 square-foot building and parking area; and the entire site is paved. The current building tenant undertakes light manufacturing.

A Vicinity Map is included as **Figure 1**. A Site Plan is included as **Figure 2**.

### 2.2 Regional Geology/Hydrogeology

The geologic setting of Long Island is well documented and consists of crystalline bedrock composed of schist and gneiss overlain by layers of unconsolidated deposits. Immediately overlying the bedrock is the Raritan Formation, consisting of the Lloyd sand confined by the Raritan Clay Member. The Lloyd sand is an aquifer and consists of discontinuous layers of gravel, sand, sandy and silty clay, and solid clay. The Raritan Clay is a solid and silty clay with few lenses of sand and gravel, abundant lignite and pyrite, and is gray, red, or white in color.

Above the Raritan Clay lies the Magothy Formation. The Magothy Aquifer consists of layers of fine to coarse sand of moderate to high permeability, with interbedded lenses of silt and clay of low permeability resulting in areas of preferential horizontal flow; therefore, this aquifer generally becomes more confined with depth. The Magothy Aquifer is overlain by the Upper Glacial Aquifer. The Upper Glacial Aquifer is the water-table aquifer at this location and is comprised of medium to coarse sand and gravel with occasional thin lenses of fine sand and brown clay. This aquifer extends from the land surface to the top of the Magothy Aquifer; therefore, is hydraulically connected to the Magothy Aquifer. These aquifers are considered Sole Source Aquifers for Long Island.

### 2.3 Site Geology/Hydrogeology

Based upon drilling and geologic logging performed during previous investigations of the Minmilt Realty Site, Upper Glacial deposits are approximately 105 feet thick beneath the site. These sand deposits extend from land surface (approximately 100 feet above mean sea level [msl]) to a depth of approximately 105 feet (-5 feet msl), where the Magothy Aquifer is encountered. The Magothy Formation is several hundred



feet thick and includes the Magothy Brown Clay unit. Beneath the Site, the first Magothy deposits encountered consist predominantly of fine to medium sands approximately 80 feet thick (-5 to -85 feet msl) with a discontinuous layer of very fine sand, silt and clay present from approximately -55 to -60 feet msl. The Magothy Brown Clay unit is present from approximately -85 to -95 feet msl and is mapped as a continuous layer beneath the site. The Brown Clay is a low permeability layer and considered an aquitard, effectively prohibiting the vertical flow of groundwater through this unit. Beneath the Brown Clay unit, the Magothy consists of fine sands and clays.

The depth to groundwater is approximately 38 to 40 feet below land surface (bls). The general groundwater flow direction is toward the south-southeast. A groundwater contour map is shown in **Figure 3**. The estimated groundwater velocity/flow rate of the Upper Glacial aquifer is approximately 0.93 feet per day. The underlying Magothy aquifer consists of very fine sands with an estimated groundwater velocity/flow rate of 0.49 feet per day (NYSDEC, March 2002).

## 2.4 Site History

The site was used for agricultural purposes prior to 1965. The onsite building, currently owned by Minmilt Realty, was constructed in 1965 and the property was subsequently occupied by Hygrade Metal Moldings (Hygrade). Hygrade manufactured metal mouldings from strip metals used in construction of windows and other finish products. Prior to 1983, Hygrade used a vapor degreaser, which included a PCE component, to clean metal parts. The use of this vapor degreaser was terminated in 1983.

An Order on Consent (No. IW-91-0021) was issued to Minmilt Realty by the Suffolk County Department of Health Services (SCDHS) in January 1992. SCDHS alleged that Minmilt Realty caused or permitted the discharge of toxic or hazardous material to an onsite leaching pool in violation of Section 760-1205 of Article 12 of the Suffolk County Sanitary Code. The referenced leaching pool has been reported to have received periodic discharges from the vapor degreaser, which contained PCE.

In response to the SCDHS Order on Consent, a soil and groundwater investigation was conducted by PWGC under subcontract to Middleton, Kontokosta Associates (MKA) in 1994. The objective of the investigation was to identify on-site contamination and associated source areas resulting from the alleged discharges. The soil and groundwater investigation identified significant soil contamination present in the subsurface on the east side of the building. The contamination was primarily PCE and was detected at concentrations high enough to classify some of the soil material as hazardous. PCE concentrations were found to increase with depth towards the water table. At the time, it was estimated that approximately 5,500 cubic yards of



soil had been impacted. In addition, PCE was detected in the groundwater beneath the site in excess of permissible NYSDEC standards. Contaminated soils were suspected to be the primary source of PCE in the groundwater. The PCE plume was determined to extend down-gradient to at least the southern property line of Hygrade and vertically to at least 80 feet below grade (40 feet below the water table). The soil and groundwater investigation also determined that background and upgradient groundwater quality in the vicinity of the site was also degraded, indicating the presence of other upgradient sources of contamination.

In 1995, under the oversight of the NYSDEC, a RI was performed. No additional sources of PCE were identified by the remedial investigation at the Site. The vertical extent of the groundwater plume was determined to exist into the Magothy Aquifer to a depth of approximately 185 feet below grade, where it is contained by a clay layer. In addition, on-site monitoring well MW-3 was found to contain a mixture of fuel oil and PCE in a non-aqueous state.

To expedite the clean-up of the site and minimize further degradation of groundwater quality, an interim remedial measure (IRM) was proposed consisting of a soil vapor extraction (SVE) and groundwater remedial combination system to remove the contamination. Construction of the IRM was initiated in August 1996 and completed in February 1997. Subsequently, the Final Offsite RI was completed, and the Record of Decision (ROD) signed, accepting the IRM as the final remedy. The ROD identified three site goals:

- Goal No. 1 - Eliminate, to the extent practicable, off-site migration of groundwater that does not attain NYSDEC Class GA Ambient Water Quality Criteria;
- Goal No. 2 - Eliminate, to the extent practicable, exposures to on-site contamination through the remediation of volatile organic compounds (VOCs) in subsurface soils; and
- Goal No. 3 - Eliminate, to the extent practicable, the migration of site contamination into the groundwater.

PWGC prepared a modified Operation Monitoring and Maintenance (OM&M) plan based upon the offsite RI and the ROD. Minmilt Realty Corp. signed a new Order on Consent on October 24, 2003 addressing the continuing groundwater and soil monitoring at the site.

To further assess the nature of the remaining impacts at the site, PWGC conducted a vertical profile investigation south of MW-3 during 2009. This investigation identified PCE at concentrations up to 84,000 ug/L. High concentrations were primarily observed in the Magothy Aquifer between 120 feet and 130 feet below grade and were rather limited to this area, with concentrations rapidly dropping off in each of the



surrounding step-out borings conducted by PWGC. The results of the vertical profile investigation documented that the greatest groundwater impacts were located within the Magothy Aquifer, just south of MW-3.

PWGC oversaw installation of a new Magothy well (Magothy Extraction Well No. 4) onsite and south of MW-3 during the first quarter of 2012 to target the contamination identified in the 2009 vertical profile investigation. The well was installed with 6" diameter casing, screened from 103 to 163 feet below grade. PWGC subsequently determined that Magothy Extraction Well No. 4 had replaced Magothy Extraction Well No. 2 in remedial capacity, rendering Magothy Extraction Well No. 2 unnecessary. After receiving permission from the NYSDEC, original Magothy Extraction Well No. 2 was placed out of operation during the first half of 2014. During June/July 2015, a new onsite Upper Glacial well (Upper Glacial Extraction Well No. 3) was installed and placed into operation. This well was designed with 30 feet of screen set from 68.5 to 98.5 feet below grade. This depth coincides with, and targets, the highest remaining impacts in the Upper Glacial aquifer, based upon the results of PWGC's 2014 vertical profile investigation. System mass removal rates increased to the highest since 2008 indicating that the new extraction wells (Upper Glacial Extraction Well No. 3 and Magothy Extraction Well No. 4) are effectively treating the remaining groundwater impact. In March 2015, both off-Site extraction wells (Upper Glacial Extraction Well No. 1 and Magothy Extraction Well No. 2) were decommissioned and abandoned. Due to a drop in the PCE removal rate, the onsite SVE system was put on a pulsed pumping schedule (i.e., 2 weeks on, 2 weeks off) in 2016.

#### *2.4.1 Previous Environmental Reports/Remedial History Timeline*

The following narrative provides a remedial history timeline and brief summary of the available project records to document key investigative remedial milestones for the Minmilt Realty Site. Full titles for each of the reports referenced below are provided in **Section 10.0**.

1992: Order on Consent No. IW-91-0021 issued to Minmilt Realty by SCDHS.

1994: The Site was listed as a class 2 Site in March 1994.

PWGC, under contract to MKA, conducts an on-Site soil and groundwater investigation. A preliminary report was generated entitled *Investigation Report for Hygrade Metals* (PWGC, 1994).

1995: Remedial Investigation performed under NYSDEC oversight. PCE in groundwater extends vertically into the Magothy aquifer down to the Magothy Brown Clay (~185 feet below



grade). Non-aqueous phase liquid containing a mixture of fuel oil and PCE was present in MW-3. No additional PCE sources were identified at Site (*Remedial Investigation Report*, PWGC, October 1995, revised February 1996).

- 1996: Two Interim Remedial Measures (IRMs) were implemented: 1) a groundwater extraction and treatment system and 2) a soil vapor extraction system (*Interim Remedial Measure to be Conducted at the Hygrade Metal Moulding Facility, East Farmingdale, New York - An Evaluation of Alternatives and Design*, PWGC, January 1994, revised December 1995 and April 1996).
- 1997: IRM construction completed in February (*Construction Completion Report for the Interim Measure at Minmilt Remedial Site, East Farmingdale, New York*, PWGC, July 1997). Upper Glacial Extraction Well No. 1 and Magothy Extraction Well No. 2 begin pumping. PWGC submits the revised version of *Operation and Maintenance Program for the Interim Remedial Measure at Minmilt Realty, East Farmingdale, New York*, October 1996, revised March 1997. Quarterly SVE system sampling and monitoring well sampling begins.
- 1999: NYSDEC approves removal of the Granular Activated Carbon (GAC) treatment from the SVE system since the SVE air effluent is consistently below NYSDEC discharge limits. SVE effluent is routed directly to atmosphere on April 16.
- 2001: Minmilt Realty completed the offsite remedial investigation (*Offsite Remedial Investigation and Feasibility Study*, PWGC, October 2001).
- 2002: The Hygrade Metals Moulding (Minmilt Realty) Record of Decision (ROD) was published in March 2002 accepting the IRM as the final remedy (NYSDEC, March 2002).
- 2002 to Present: Operation, Maintenance and Monitoring (OM&M) of the treatment systems continues. NYSDEC approves removal of GAC treatment from the air stripper tower air effluent since the groundwater influent is consistently below NYSDEC discharge limits that GAC treatment of the vapor was no longer required. Air stripper effluent is routed directly to atmosphere on April 17, 2002.
- 2003: Minmilt Realty signs new Order on Consent on October 24, 2003.
- 2004: NYSDEC approves suspension of system SVOC sampling, a reduction in the number of monitoring wells sampled quarterly from 23 to 13, and streamlining the quarterly report.





- 2005: January 31, 2005, NYSDEC approves the *Operation, Maintenance and Monitoring (OM&M) Program for the Minmilt Realty Site* (PWGC, January 2005), replacing the *Operation and Maintenance Program* (PWGC, 1997).
- 2006: PWGC completes four quarters of indoor air monitoring (540 & 550 Smith Street) and reports that PCE concentrations have been non-detect or near non-detect ( $<5 \mu\text{g}/\text{m}^3$ ) since September 28, 2005, more than an order of magnitude below the New York State Department of Health (NYSDOH) Guidance Value of  $100 \mu\text{g}/\text{m}^3$  for PCE (PWGC, June 2006).
- 2007: NYSDEC submits minor changes to the Minmilt Realty ROD to remove the requirements for 1) existing use and development restrictions on groundwater use and 2) deed restrictions to restrict the further use of the Site for industrial use only. Other than standing town ordinances and SCDHS typical requirements, the only ICs in place for the Site are that all ECs must be operated and maintained as specified in the OM&M Plan, and that all ECs must be inspected in a manner and at a frequency specified in the OM&M Plan. These changes are accepted, and the Site Classification changed from 2 to 4 (NYSDEC, May 10, 2007 and November 9, 2007; NYSDOH, March 22, 2005).
- 2009: PWGC conducts a vertical profile investigation south of MW-3 and delineates high concentrations of PCE in the Magothy aquifer from 120-130 feet below grade.
- 2012: Magothy Extraction Well No. 4 installed on Site south of MW-3 in 2011 (screened from 103-163 feet below grade) goes into operation to target high concentrations of PCE.
- 2013: Report to NYSDEC after 16 years of O&M indicates that an estimated 33,600 pounds of total volatile organic compounds (TVOCs) have been removed by the groundwater treatment system and an additional 5,300 pounds of TVOCs have been removed by the SVE system (*2013 Remedial Status Report*, PWGC, September 2013). Magothy Extraction Well No. 2 was recommended for shutdown and removed from service during the fourth quarter of 2013 (*January – September 2015 Minmilt Groundwater Sampling Report*, PWGC, 2015).
- 2014: OM&M is modified to reduce groundwater sampling of monitoring wells from quarterly to every fifth quarter. Quarterly sampling of groundwater remedial system influent and SVE system influent to continue; monthly monitoring well gauging and groundwater system influent and effluent sampling to continue.



- 2015: Upper Glacial Extraction Well No. 3 was installed with the screened depth (68.5-98.5 feet below grade) designed to coincide with the highest PCE concentrations remaining in the Upper Glacial aquifer. The well was placed into operation in July 2015. System mass removal rates increased to the highest since 2008 indicating that the new extraction wells (Upper Glacial Extraction Well No. 3 and Magothy Extraction Well No. 4) are located within the area of greatest groundwater impacts. In March 2015, both off-Site extraction wells (Upper Glacial Extraction Well No. 1 and Magothy Extraction Well No. 2) were decommissioned and abandoned (*January – September 2015 Minmilt Groundwater Sampling Report*, PWGC, 2015).
- 2016: SVE system put on a pulsed pumping schedule (2 weeks on, 2 weeks off) due to drop in PCE removal rate.
- 2018: NYSDEC approves eliminating quarterly reporting requirement. O&M activities, system repairs, monitoring well gauging and treatment system review and trending will be detailed in the Periodic Review Report (PRR)
- NYSDEC begins converting the OM&M Plan into a Site Maintenance Plan (SMP).
- 2019: NYSDEC approves amending monthly groundwater level gauging frequency requirement from monthly to quarterly, and SVE sampling requirement from quarterly to biannually (twice annually).
- PWGC submitted a draft of the SMP on February 5<sup>th</sup>, 2020.



### 3.0 STANDARDS, CRITERIA, AND GUIDANCE (SCGs)

As detailed above in **Section 2.4**, the primary contaminants of concern at the Minmilt Realty Site are PCE and associated breakdown compounds. To confirm that soil remediation goals specified in the ROD have been achieved, soil sample results were compared to the initial concentrations of PCE and associated breakdown compounds in site soils, in addition to the Restricted Use soil cleanup objectives (SCOs) for Protection of Groundwater provided in NYSDEC 6 NYCRR Part 375.



#### 4.0 SUBSURFACE INVESTIGATION WORK ACTIVITIES

The subsurface investigation work activities were performed between May 18, 2020 and May 21, 2020. The primary objective of the subsurface investigation was to collect the information and field data necessary to verify remediation of the PCE source area in support of site closure. The scope of work included a geophysical survey and the characterization of soil in the PCE source area located in the driveway and parking area east and southeast of the onsite building. The geophysical survey and drilling contractor, Aquifer Drilling & Testing, Inc. (ADT), and PWGC mobilized to the Minmilt Realty Site on May 18, 2020. Site workers were briefed on the procedures and policies specified in the project-specific Health and Safety Plan (HASp), Community Air Monitoring Plan (CAMP) and Work Plan.

##### 4.1 Geophysical Survey

###### 4.1.1 *Geophysical Survey Protocol*

A ground-penetrating radar (GPR) survey was performed on May 18, 2020 to ensure proposed soil boring locations were clear of buried utilities, including those associated with onsite remedial systems. Results of the GPR survey were also used to confirm the locations of previously noted leaching structures within the original PCE source area.

The GPR method is based upon the transmission of repetitive, radio-frequency electromagnetic (EM) pulses into the subsurface. When the transmitted energy of down-going wave contacts an interface of dissimilar electrical character, part of the energy is returned to the surface in the form of a reflected signal. This reflected signal is detected by a receiving transducer and is displayed on the screen of the GPR unit as well as being recorded on the internal hard drive.

The received GPR response remains constant if the electrical contrast between media is present and constant. Lateral or vertical changes in the electrical properties of the subsurface result in equivalent changes in the GPR responses. The system records a continuous image of the subsurface by plotting two-way travel time of the reflected EM pulse versus distance traveled along the ground surface. Two-way travel time values are then converted to depth using known soil velocity functions. Each radar profile will be examined for characteristic GPR signatures that may indicate the presence of buried targets.

###### 4.1.2 *Geophysical Survey Results*

Results of the GPR survey indicated the presence of several underground utilities in the vicinity of the proposed soil boring locations. These included: a water line associated with the fire service manhole at the



north end of the driveway; electrical service running north/south along the eastern side of the driveway; the SVE line; and piping associated with the North and South Manholes. No previously unknown subsurface structures were identified by the GPR survey. The results of the GPR survey are illustrated on **Figure 4**.

## **4.2 Soil Characterization**

### **4.2.1 Soil Characterization Protocol**

Three soil borings, DB01 through DB03, were installed in the historical PCE source area in the driveway and parking area east and southeast of the onsite building (see **Figure 2**) between May 18, 2020 and May 21, 2020. Soil borings were installed using sonic drilling technology, which is a rotary vibratory drilling method capable of high drilling speeds and continuous coring. Soils were collected continuously from ground surface to 170 feet below grade at DB01 and DB02, and from ground surface to 180 feet below grade at DB03. Soils were classified in accordance with the Unified Soil Classification System and field screened for the presence of volatile organic vapors using a photoionization detector (PID). Discrete soil samples (i.e., non-composite and non-homogenous) were collected in tera-core sampling devices from intervals exhibiting the greatest signs of contamination based on field observations and PID screening results; and from intervals where the highest contaminant concentrations were detected during the 1994 soil investigation, as documented in the *Investigation Report for Hygrade Metals* (PWGC, 1994). Soil sample intervals were also be selected based on changes in lithology with depth, as observed in the field. A total of forty-five discrete soil samples were collected and analyzed for PCE and associated breakdown compounds by United States Environmental Protection Agency (USEPA) Method 8260: nine soil samples from DB01, fifteen soils samples from DB002, and twelve soil samples from DB03. Soil sampling was performed in accordance with DER-10. Analysis was performed by Alpha Analytical New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory.

### **4.2.2 Soil Characterization Results**

#### **Field Characterization Results**

Geologic logging for the three soil borings was mostly consistent with logging performed during previous investigations at the Minmilt Realty Site. With the exception of silt with gravel or interbedded sand, silt and clay encountered from land surface to approximately 8 feet bls (likely non-native material), sand deposits with small lenses of silt and gravel (i.e., DB01: 40-43 feet bls and 48-50 feet bls) extend to a minimum depth of 80 feet bls. Clay lenses ranging from 2 to 6 feet in thickness were encountered in DB01 between 80 and 97 feet bls, and a 1-foot thick clay lenses was encountered from 94 to 95 feet bls at DB03. Clay was not



encountered at depths of less than 100 feet bls in DB02. Fine to medium sands with multiple thin layers (i.e., 1 to 9 feet thick) of clay were encountered from 100 feet bls to the terminal depths (i.e., 170 to 180 feet bls) in each of the three soil borings. The water table was encountered at approximately 40 feet bls at each of the three soil boring locations. A geologic cross section is provided in **Figure 5**. Soil boring logs are provided in **Appendix A**.

PID screening results ranged from 0 parts per million (ppm) to greater than the upper detection limit for the PID (i.e., greater than 9,999 ppm) in all three soil borings. In DB01, the highest PID screening results were noted from 80 to 95 feet bls (7,196 ppm to greater than 9,999 ppm), which coincides with intervals where clay was encountered. PID screening results exceeded 1,000 ppm at several intervals in DB02, including 5 to 15 feet bls (1,843 ppm to 2,498 ppm), 60 to 70 feet bls (1,280 ppm) 85 to 90 feet bls (4,849 ppm) and 100 to 115 bls (2,975 ppm to greater than 9,999 ppm). The interval at DB02 with the highest PID screening results (i.e., 110-115 feet bls) coincide with a clay layer encountered at approximately 113 to 115 feet bls and the overlying fine to medium sands encountered at 100 to 113 feet bls. PID screening results at DB03 exceeded 1,000 ppm at approximately 80 to 90 feet bls (3,738 ppm) and approximately 119 to 129 feet bls (2,273 to greater than 9,999 ppm). The interval at DB03 with the highest PID screening results (i.e., 119-129 bls) coincide with a silty clay layer encountered at approximately 119 to 128 feet bls. PID screening results are included in the soil boring logs, which are provided in **Appendix A**.

### **Analysis Results**

Analytical results for discrete soil samples collected from the three soil borings indicate that PCE was the only VOC detected in exceedance of its associated Restricted Use SCO for Protection of Groundwater (i.e., 1,300 parts per billion [ppb]). Concentrations of cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Trichloroethene and Vinyl chloride were below their respective Restricted Use SCO for Protection of Groundwater in all analyzed soil samples. Analytical results are summarized in **Table 1**, and PCE concentrations throughout the three soil borings are illustrated on **Figure 5**. Laboratory data packages are provided in **Appendix B**.

In DB01, which was located adjacent to the leaching pool that reportedly received periodic PCE-containing discharges (i.e., UIC001), PCE was detected at concentrations of 55,500 ppb (80-85 feet bls), 4,700,000 ppb (85-90 feet bls), 8,100 ppb (90-95 feet bls) and 3,700 ppb (158-160 feet bls). Only a minor concentration





(1.6 ppb) of PCE was detected in the 20 to 22-foot bls sample interval at DB01, which correlates to the location where significant PCE contamination was detected during the 1994 investigation; and PCE was not detected in the sample interval that corresponds with the terminal depth of SB01 (168-170 feet bls).

In DB02, which was located in the previous vicinity of a concrete underground storage tank (UST) that received discharge from floor drains inside the onsite building, PCE was detected at concentrations of 220,000 ppb (85-90 feet bls), 10,000 ppb (120-125 feet bls) and 3,700 ppb (135-140 bls). PCE was not detected above the Restricted Use SCO for Protection of Groundwater in the three soil samples collected from above the water table (7-10 feet bls: 620 ppb, 10-15 feet bls: 280 ppb and 15-20 feet bls: 31 ppb), where significant PCE contamination was detected during the 1994 investigation. PCE was not detected in the sample interval that corresponds with the terminal depth of SB02 (165-170 feet bls).

DB03 was located adjacent to MW-3, where non-aqueous phase liquid containing a mixture of fuel oil and PCE was detected during the 1995 Remedial Investigation. PCE was detected in DB03 at concentrations of 6,500 ppb (80-85 feet bls), 24,000 ppb (85-90 feet bls), 4,500 ppb (115-120 feet bls) and 28,000 ppb (120-125 feet bls). PCE was not detected at depths shallower than 70 feet bls, and only a minor concentration of PCE (1.5 ppb) was detected in the sample interval that correspond with the terminal depth of SB03 (175-180 feet bls).

### **Results Summary**

As illustrated on **Figure 5**, significant PCE contamination was detected from approximately 80 to 90 feet bls in all three soil borings. This interval is just above, or coincides with, clay lenses detected at the base of the Upper Glacier Aquifer. The highest concentration of PCE (4,700,000 ppb) was detected at 85-90 feet bls in DB01, which was located adjacent to the leaching pool that reportedly received periodic PCE-containing discharges (i.e., UIC001). PCE concentrations in soil samples collected from these depths decreased significantly at soil boring locations further downgradient from UIC001: 220,000 ppb at 85-80 feet bls in SB02 and 24,000 ppb at 85-90 feet bls in SB03. A second, less significant, zone of PCE contamination was detected at depth of 120-125 feet bls in SB02 (10,000 ppb) and SB03 (28,000 ppb), where thin layers of clay were encountered in the upper Magothy Formation. PCE and associated breakdown compounds were not detected above Restricted Use SCOs for Protection of Groundwater in soil



samples collected above the water table (i.e., less than 40 feet bls), or in samples collected from the terminal depths of each of the three soil borings (i.e., 170-180 feet bls).

#### **4.3 Waste Management and Disposal**

Eight 55-gallon drums, five drums of soil cuttings and three drums of liquid, were generated during drilling activities. The drums were properly labeled and staged inside the locked remediation system fence. Waste characterization samples representative of the drum contents were collected and submitted to Alpha Analytical. Analytical results indicated that the soil cuttings should be disposed of as hazardous waste.

The liquids were treated onsite by pumping the contents of the three drums through filter socks and then through the groundwater treatment system. The associated filter socks were placed inside the soil cutting drums for offsite disposal as hazardous waste.

The five drums of soil cuttings will be disposed of as hazardous waste by Innovative Recycling Technologies (IRT) of Lindenhurst, NY. Waste characterization data is provided in **Appendix C**. The signed waste manifests will be provided to the NYSDEC once they are made available by the associated disposal facility.

#### **4.4 Site Restoration and Demobilization**

Upon completion of each soil boring, the associated borehole was filled with grout and the associated area of the driveway/parking lot was repaired with asphalt patch, which was tamped to grade. Work areas were swept clean of any debris, and as discussed in **Section 4.3**, soil cuttings and liquid generated during drilling activities were placed into 55-gallon drums that were subsequently staged inside the locked remediation system fence. At the completion of the subsurface investigation, all equipment was dismantled and removed from the Minmilt Realty Site.





## 5.0 QUALITY ASSURANCE/QUALITY CONTROL

Subsurface investigation work activities were performed in accordance with the quality assurance/quality control (QA/QC) requirements specified in the Quality Assurance Project Plan (QAPP), which was included as part of the project Work Plan. This included the collection of QA/QC samples at the following specified frequencies:

- Blind Duplicates – one per 20 environmental samples for each matrix sampled
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) - one per 20 environmental samples for each matrix sampled
- Equipment Blank – one per day for soil sampling activities
- Trip Blank – one per day for soil sampling activities

Soil samples and QA/QC samples were assigned the appropriate sample identifications, controlled under chain-of-custody, and packaged and shipped in accordance with the QAPP.

Independent third-party data validation was performed by Laboratory Data Consultants of Carlsbad, California (LDC) in accordance with the QAPP. The data usability evaluation for the data collected during the subsurface investigation is documented in LDC's data usability summary report (DUSR), which is provided in **Appendix D**. All data were deemed usable by LDC with minor qualifications due to sample matrix.

Non-dedicated sampling equipment was decontaminated to prevent cross-contamination, and monitoring equipment was routinely calibrated and/or response-checked in accordance with the manufacturers recommended schedules and standard operating procedures.

Subsurface investigation work activities were appropriately documented in the field logbook.



## **6.0 MONITROING, HEALTH AND SAFETY**

Real-time air monitoring for VOCs, the use of PPE and other health and safety protocols were followed during the subsurface investigation in accordance with the project HASP and CAMP. In addition, appropriate measures, including the use of face masks and physical distancing, were taken to reduce exposure relative to the COVID-19 pandemic. Monitoring results for VOCs were below the specified action levels and the subsurface investigation was completed without any incidents relative to health and safety.



## 7.0 CONCLUSIONS AND RECOMMENDATIONS

The subsurface investigation of the historical source area at the Minmilt Realty Site was completed between May 18, 2020 and May 21, 2020. The investigation included a GPR survey and the installation of three soil borings. Soils were collected continuously from ground surface to 170 feet below grade at DB01 and DB02, and from ground surface to 180 feet below grade at DB03.

Results of the GPR survey indicated the presence of several underground utilities in the vicinity of the proposed soil boring locations. These included: a water line associated with the fire service manhole at the north end of the driveway; electrical service running north/south along the eastern side of the driveway; the SVE line; and piping associated with the North and South Manholes. The GPR survey did not indicate the presence of any previously unknown subsurface structures or utilities.

PCE and associated breakdown compounds were not detected above Restricted Use SCOs for Protection of Groundwater in soil samples collected above the water table (i.e., less than 40 feet bls). Significant PCE contamination was detected from approximately 80 to 90 feet bls in all three soil borings. This interval is just above, or coincides with, clay lenses detected at the base of the Upper Glacier Aquifer. The highest concentration of PCE (4,700,000 ppb) was detected at 85-90 feet bls in DB01, which was located adjacent to the leaching pool that reportedly received periodic PCE-containing discharges (i.e., UIC001). PCE concentrations in soil samples collected from these depths decreased significantly at soil boring locations further downgradient from UIC001: 220,000 ppb at 85-80 feet bls in SB02 and 24,000 ppb at 85-90 feet bls in SB03. A second, less significant, zone of PCE contamination was detected at depth of 120-125 feet bls in SB02 (10,000 ppb) and SB03 (28,000 ppb), where thin layers of clay were encountered in the upper Magothy Formation.

Analytical results for soil samples collected above the water table indicate that the significant PCE contamination detected in shallow soils during the 1994 investigation has been effectively remediated by the onsite SVE system. The two zones of soil contamination (i.e., 80 to 90 feet bls and 120-125 feet bls) correlate to the depths at which significant PCE contamination in groundwater (54,000 to 84,000 ppb) was delineated during the 2009 vertical profile investigation. These results, as well as the data reported annually in the Periodic Review Reports, indicate that the onsite groundwater extraction wells are located within the contaminant source area and the residual source of contamination is being effectively contained



and removed by the groundwater remediation system. PWGC may evaluate additional remedial measures to address residual soil and groundwater contamination in an effort to expedite site closure.



## 8.0 REFERENCES

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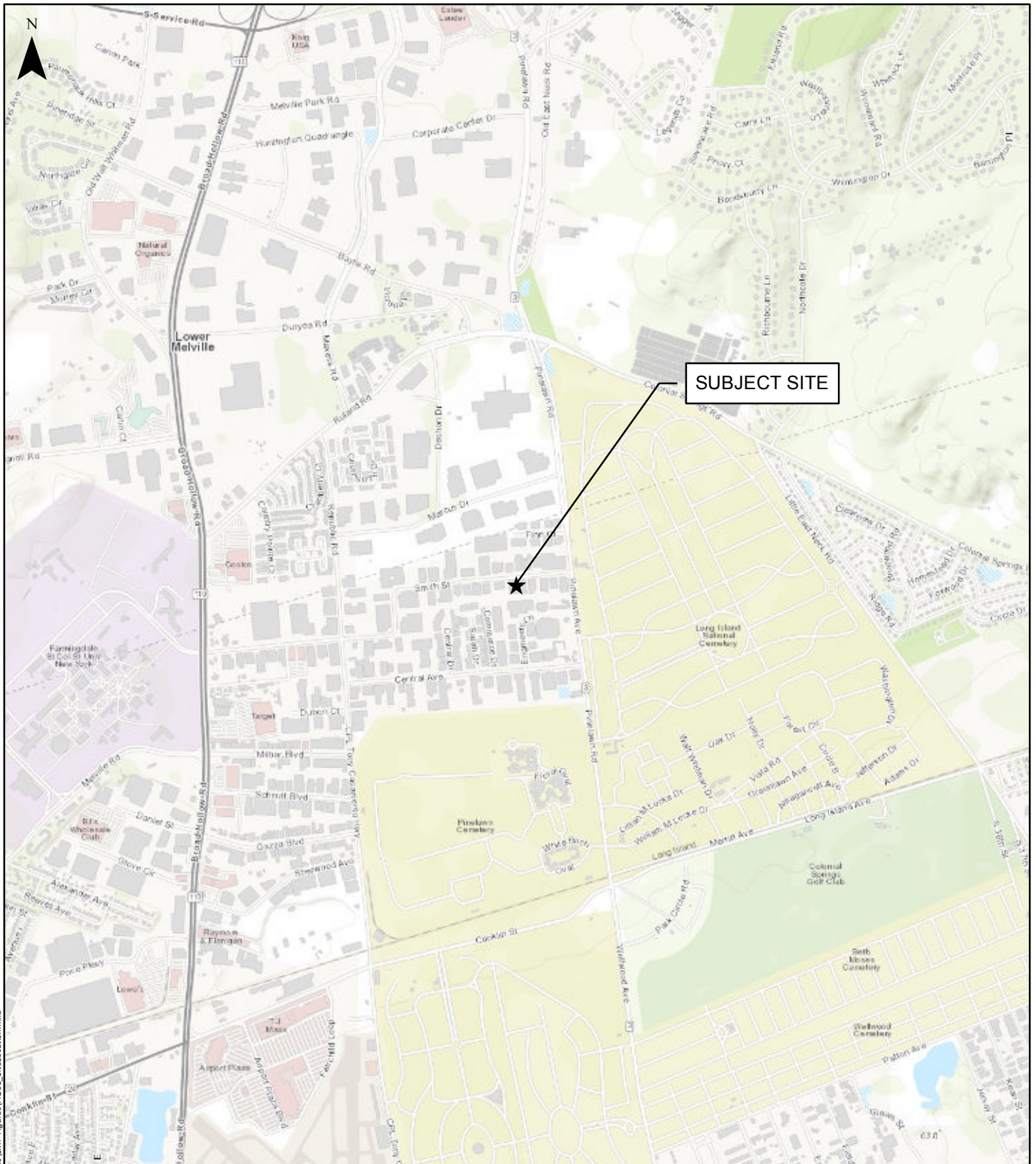
PWGC, September 2013. 2013 Remedial Status Report.

PWGC, 2015. January-September 2015 Minmilt Groundwater Sampling Report.



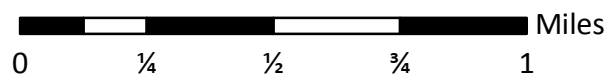
## FIGURES





## SITE LOCATION

540 Smith Street  
Farmingdale, NY



Project:	MIN2002
Date:	2/27/2020
Designed by:	JC
Drawn by:	PH
Approved by:	JY
Figure No:	1

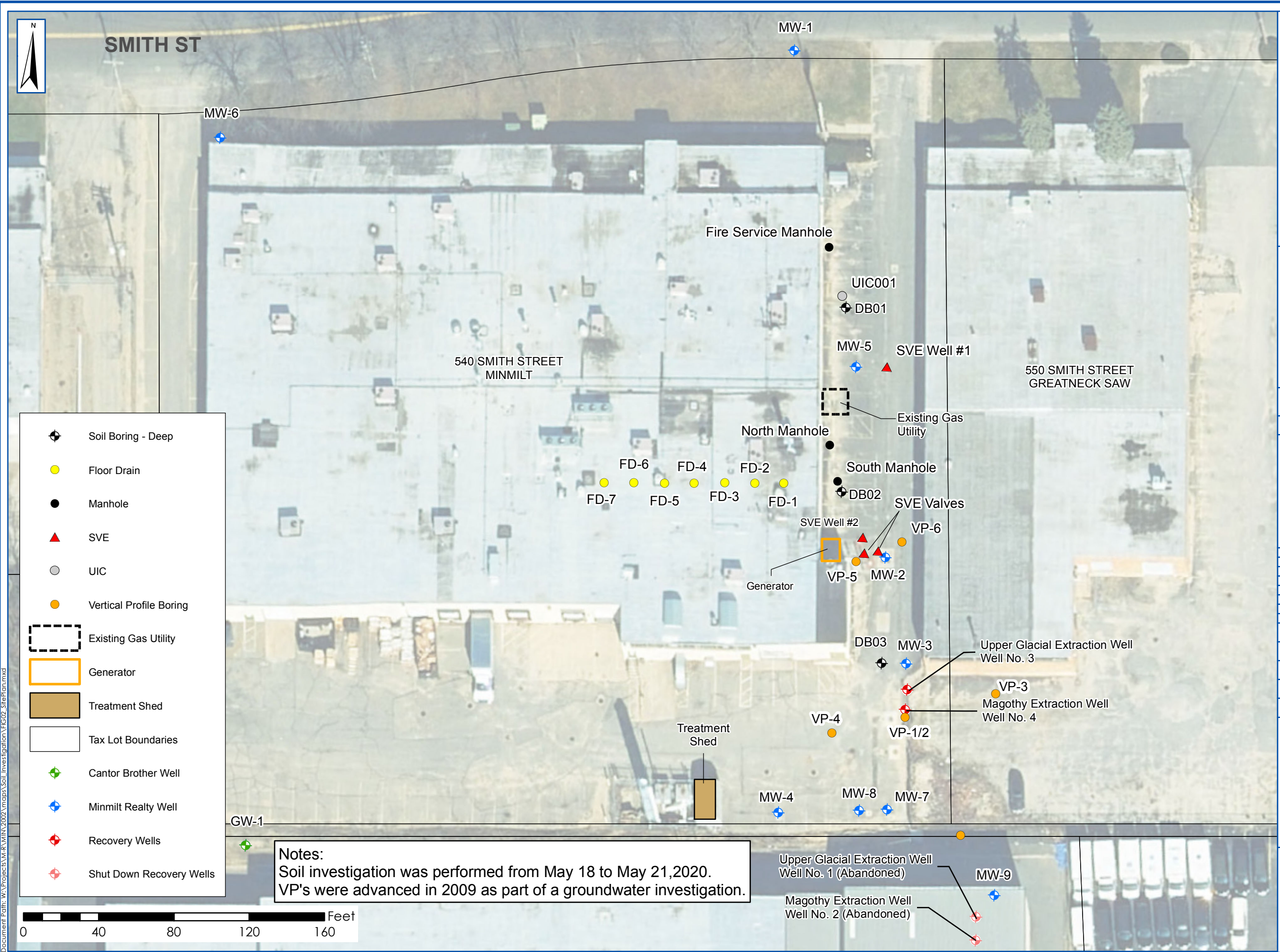



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**SOIL INVESTIGATION OF  
HISTORICAL SOURCE AREA  
REPORT**  
**MINMILT REALTY CORP.**  
**352 CARNATION DRIVE**  
**FARMINGDALE, NY 11735**

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	MIN2002	Designed by:	RB
Date:	7/10/2020	Drawn by:	PH
Scale:	AS SHOWN	Approved by:	RB

**SITE PLAN**

**540 SMITH ST**  
**EAST FARMINGDALE, NY**

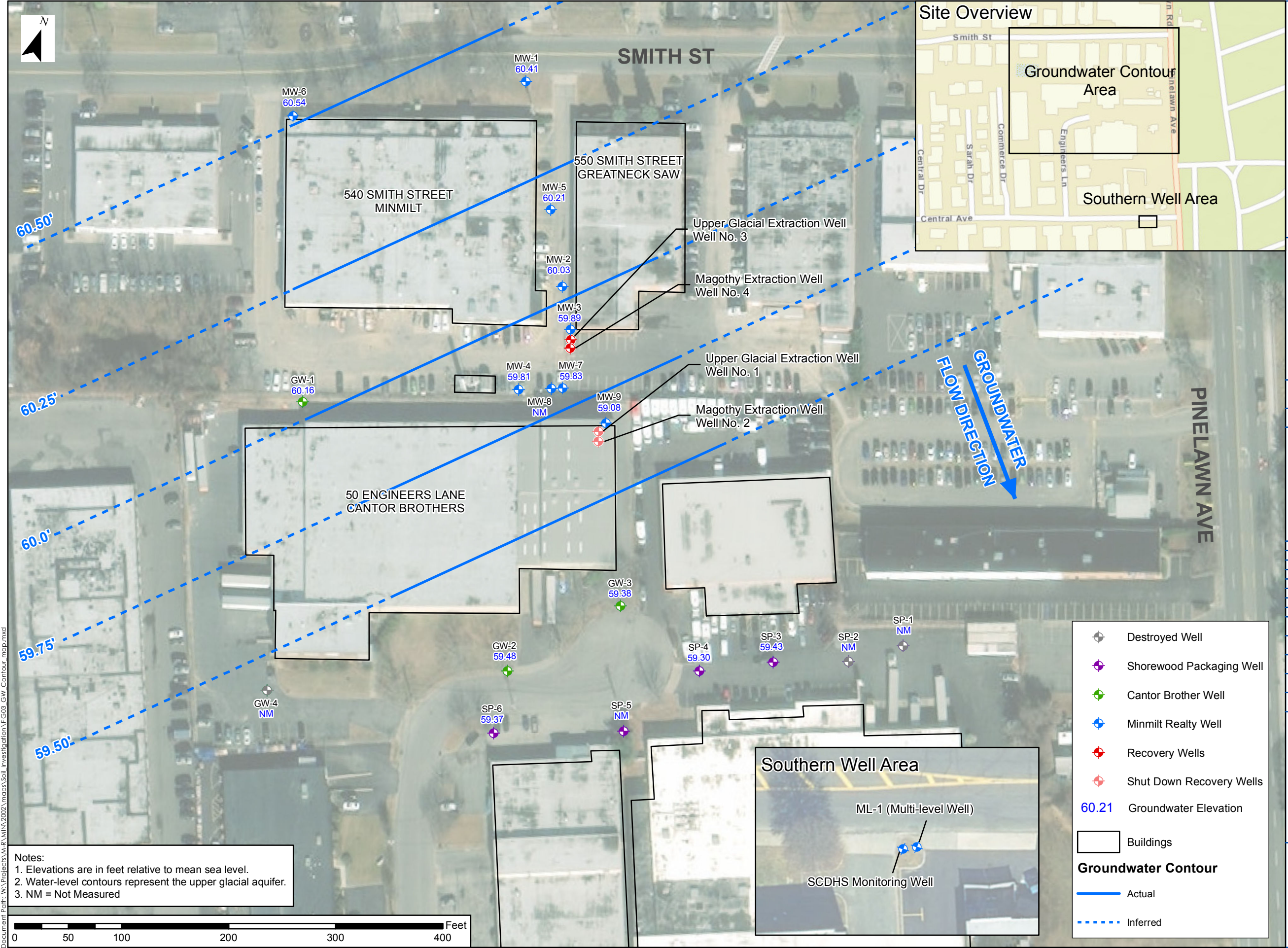
FIGURE NO:

2

SHEET:

Document Path: W:\Projects\MIN 2002\maps\Soil Investigation\FIG02\_SitePlan.mxd





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REVISION	DATE	INITIAL	COMMENTS

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Project:	MIN2002	Designed by:	JC
Date:	7/10/2020	Drawn by:	PH
Scale:	AS SHOWN	Approved by:	JY

**GROUNDWATER  
CONTOUR  
MAP - OCT 2019**

540 SMITH ST  
EAST FARMINGDALE, NY

FIGURE NO:

3





SMITH ST

540 SMITH STREET  
MINMILT

Fire Service Manhole

UIC001  
DB01

SVE Well #1

550 SMITH STREET  
GREATNECK SAW

North Manhole

South Manhole  
DB02

SVE Well #2

SVE Valves

DB03

Soil Boring - Deep

Floor Drain

Manhole

SVE

UIC

Electric Line

Pipes

SVE Line

Water Line

Tax Lot Boundaries

0 40 80 120 160 Feet

Notes:

1. The GPR survey was performed by Aquifer Drilling & Testing, Inc. (ADT) on May 18, 2020.



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REPORT  
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352 CARNATION DRIVE  
FARMINGDALE, NY 11735

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

Project:	MIN2002	Designed by:	RB
Date:	7/10/2020	Drawn by:	PH
Scale:	AS SHOWN	Approved by:	RB

## GPR SURVEY RESULTS

540 SMITH ST  
EAST FARMINGDALE, NY

FIGURE NO:

4

SHEET:

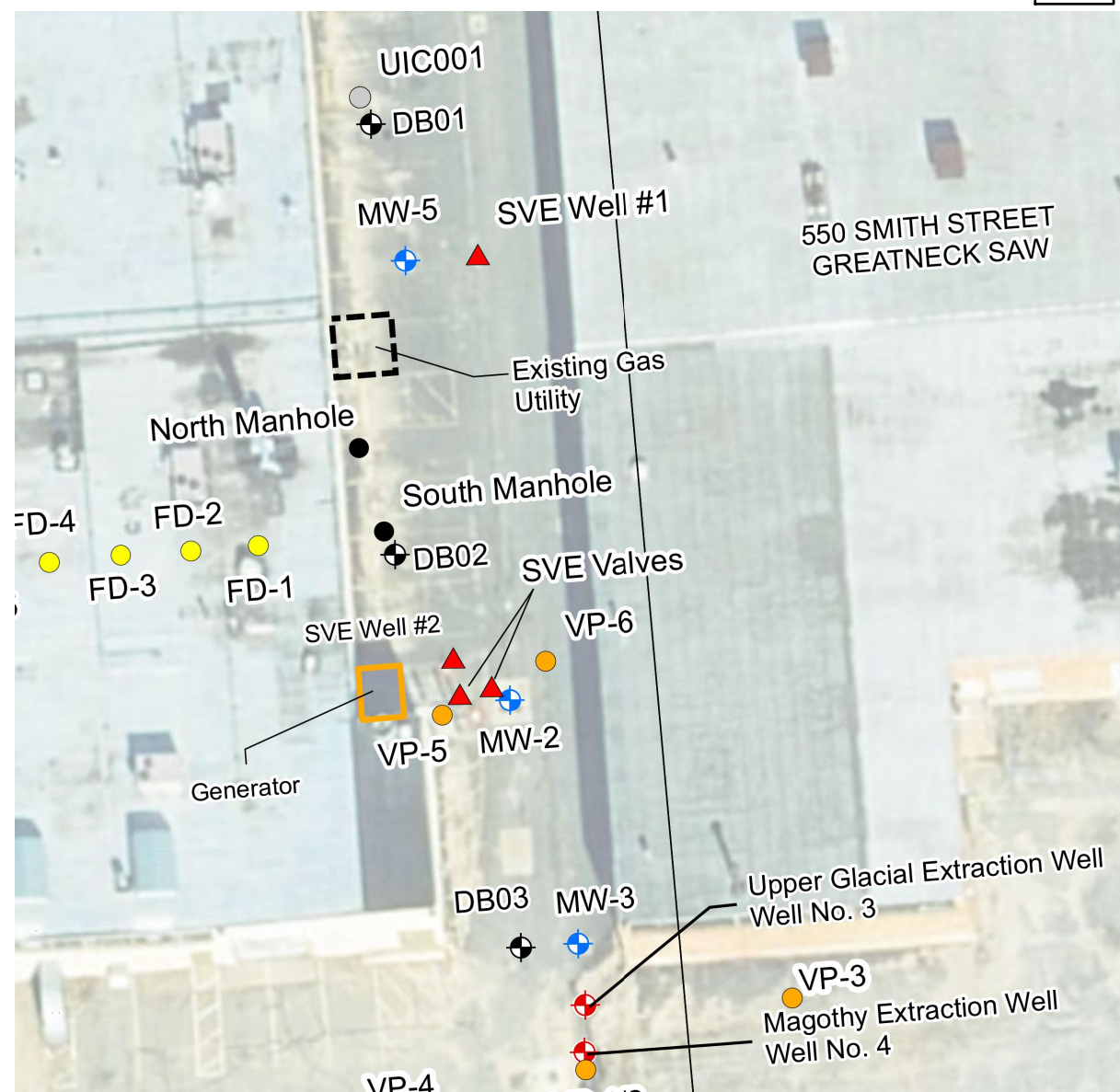


LEGEND

SYMBOL	NOTES
	SAND
	SAND W/ SILT
	SAND W/ CLAY
	SAND W/ GRAVEL
	SILT W/ GRAVEL
	SILT W/ CLAY
	CLAY
	INTERBEDDED SAND SILT AND CLAY
	INFERRED CLAY LAYER
	INFERRED GROUNDWATER LEVEL
	SAMPLE INTERVALS WITH PERC CONC. (PPB)
PERC. CONCENTRATION CONTOURS	
	4,000,000 PPB
	1,000,000 PPB
	100,000 PPB
	50,000 PPB
	10,000 PPB
	5,000 PPB

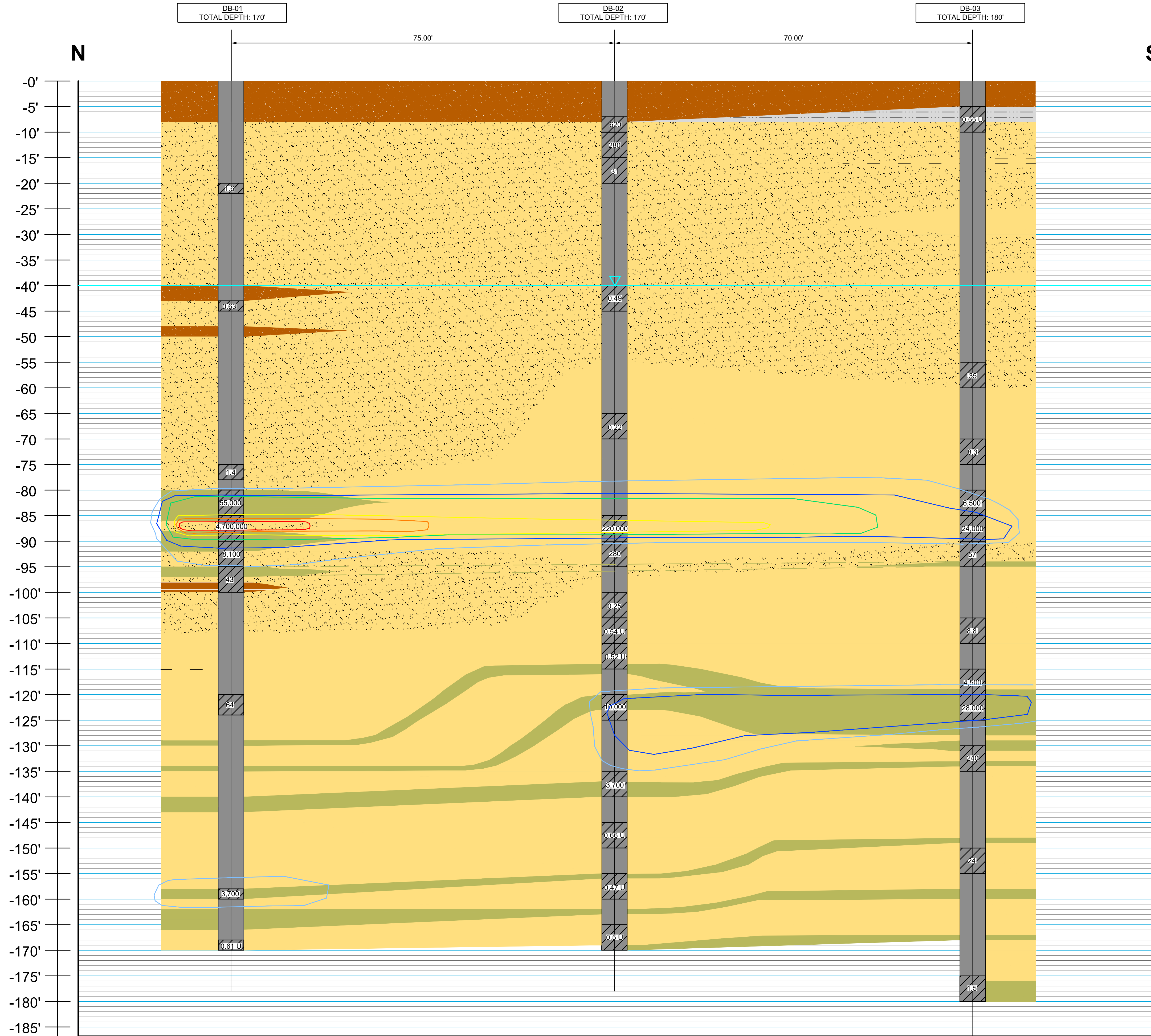
NOTES:

- SOIL BORINGS PERFORMED BY ADT DRILLING USING A SONIC DRILLING RIG FROM MAY 18, 2020 TO MAY 21, 2020.
- SAMPLING PERFORMED BY PWGC VIA TERA-CORE SAMPLING.
- U = NOT DETECTED AT THE REPORTED DETECTION LIMIT FOR THE SAMPLE.



VICINITY MAP  
NOT TO SCALE

FEET BELOW GROUND LEVEL



PROFILE DB01-DB-03  
VERTICAL SCALE: 1" = 10'  
HORIZONTAL SCALE: 1" = 10'

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CONSULTANTS

7		
6		
5		
4		
3		
2		
1		
Number	Revision Description	Revision Date
Designed By	HS	Date Submitted 6/19/2020
Drawn By	HS	Date Created 6/17/2020
Approved By	RB	Scale AS SHOWN

Client:  
**MINMILT REALTY CORP.**  
352 CARNATION DRIVE  
FARMINGDALE, NEW YORK 11735  
Project:  
**SOIL INVESTIGATION  
OF HISTORICAL  
SOURCE AREA**

Project Address:  
**540 SMITH STREET  
EAST FARMINGDALE, TOWN OF BABYLON  
SUFFOLK COUNTY, NEW YORK**

County Tax Map Number:      Contract Number:  
Regulatory Reference Number:

Title of Drawing:  
**FIGURE 5  
GEOLOGIC CROSS SECTION  
AND TETRACHLOROETHENE  
(PERC) CONCENTRATIONS IN SOIL**


Drawing Number:  
Sheet **1** of **1**  
PWGC Project Number:  
**MIN2002**

Unauthorized alteration or addition  
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is a violation of Section 7209  
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## APPENDIX A SOIL BORING LOGS




PROJECT #:		MIN2002			
SITE ADDRESS:		540 Smith Street, Farmingdale, NY			
BORING ID:		DB001		BORING DEPTH (FT):	CORE LENGTH (FT):
WELL ID:		N/A		170	10
DRILLING CONTRACTOR:		ADT Drilling		BORING DIAMETER (IN):	WELL DIAMETER (IN):
DRILLING METHOD:		Sonic Drilling		4	2
DRILLING EQUIPMENT:		Sonic Drill Rig		DATE STARTED:	DATE FINISHED:
SAMPLING METHOD:		Tera-core Sampling		05/18/2020	05/19/2020
				TIME STARTED:	TIME FINISHED:
				09:40	09:10
				LATITUDE:	LONGITUDE:
				N/A	N/A
				PROJECT MANAGER:	LOGGED BY:
				Regina Bykov	Kaitlyn Crosby
DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor	PID Reading (ppm)
0			5	Hand Digging, gravel-sand-silt mixtures	
			5	SILTY GRAVELS (GM): Yellowish Orange, gravel-sand-silt mixtures	0
				WELL GRADED SAND (SW): Greenish gray, medium sand with gravel	0
10			5	WELL GRADED SAND (SW): Yellowish Orange, coarse sand with gravel	0
				POORLY GRADED SAND (SP): Yellowish Orange, gravelly sands with little to no fines	15
20			5	WELL GRADED SAND (SW): Yellowish Orange, coarse sand with gravel	0
			5	WELL GRADED SAND (SW): Yellowish Orange, medium to coarse sand with gravel	0
30			5	WELL GRADED SAND (SW): Yellowish Orange, medium to coarse sand with gravel	0
			5	SILTY GRAVELS (GM): Yellowish Orange, gravel-sand-silt mixtures	0
				WELL GRADED SAND (SW): Dark Brown, medium to coarse sand with gravel	0
40			5	SILTY GRAVELS (GM): Dark Brown, gravel-sand-silt mixtures	0
50					
Boring Id: DB001			End of Boring Depth (feet): 170		Water Table Symbol: ▼
					Page 1 of 3

DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor	PID Reading (ppm)
50			5		
					0
60			7	WELL GRADED SAND (SW): Yellowish Orange, medium sand with gravel	0
					0
70			7	POORLY GRADED SAND (SP): Light Brown, gravely sands with little to no fines	64
80				WELL GRADED SAND (SW): Yellowish Orange, medium sand with gravel	0
			8	LEAN CLAY (CL): Light Gray, inorganic clays with low to medium plasticity	7196
				POORLY GRADED SAND (SP): Yellowish Orange, gravely sands with little to no fines	8877
90				LEAN CLAY (CL): Light Gray, inorganic clays with low to medium plasticity	9999
			8	POORLY GRADED SAND (SP): Yellowish Orange, gravely sands with little to no fines	472
				LEAN CLAY (CL): Light Gray, inorganic clays with low to medium plasticity	643
				POORLY GRADED SAND (SP): Yellowish Orange, gravely sands with little to no fines	212
				Inorganic Silts (ML): Light Gray, silty or clayey fine sands	175
100			7	POORLY GRADED SAND (SP): Light Brown to Dark Red, gravely sands with little to no fines	101
					178
110				POORLY GRADED SAND (SP): Light Gray, fine sand no gravel present	30
			7	POORLY GRADED SAND (SP): Light Gray, medium sand no gravel present	0
Boring Id: DB001				End of Boring Depth (feet): 170	Water Table Symbol: ▼
				Page 2 of 3	


DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor	PID Reading (ppm)
120			6	Silty Sands (SM): Light gray, sand and silt mixtures	18
					70
				POORLY GRADED SAND (SP): Light Gray, medium sand no gravel present	27
130			7	LEAN CLAY (CL): Light Gray, inorganic clays with low to medium plasticity	6
				POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	0
				LEAN CLAY (CL): Yellowish Orange, inorganic clays with low to medium plasticity	0
140			7	POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	0
				LEAN CLAY (CL): Yellowish Orange, inorganic clays with low to medium plasticity	0
				LEAN CLAY (CL): Light Gray, inorganic clays with low to medium plasticity	0
150			9	POORLY GRADED SAND (SP): Yellowish Orange to Dark Gray, medium sand no gravel present	0
160			8	LEAN CLAY (CL): Light Gray, inorganic clays with sand and low to medium plasticity	30
				LEAN CLAY (CL): Light Gray, inorganic clays with low to medium plasticity	289
				POORLY GRADED SAND (SP): Light Brown, medium sand no gravel present	0
170				LEAN CLAY (CL): Yellowish Orange, inorganic silty clays with low to medium plasticity	0
				LEAN CLAY (CL): Light Gray, inorganic clays with low to medium plasticity	0
				LEAN CLAY (CL): Light Gray, inorganic silty clays with low to medium plasticity	0
				POORLY GRADED SAND (SP): Light Brown, medium sand no gravel present	0



PROJECT #:				MIN2002									
SITE ADDRESS:				540 Smith Street, Farmingdale, NY									
BORING ID:				DB002				BORING DEPTH (FT):		CORE LENGTH (FT):			
								170		10			
WELL ID:				N/A				BORING DIAMETER (IN):		WELL DIAMETER (IN):			
								4		2			
DRILLING CONTRACTOR:				ADT Drilling				DATE STARTED:		DATE FINISHED:			
								05/19/2020		05/18/2018			
DRILLING METHOD:				Sonic Drilling				TIME STARTED:		TIME FINISHED:			
								12:20		13:20			
DRILLING EQUIPMENT:				Sonic Drill Rig				LATITUDE:		LONGITUDE:			
								N/A		N/A			
SAMPLING METHOD:				Tera-core Sampling				PROJECT MANAGER:		LOGGED BY:			
								Regina Bykov		Kaitlyn Crosby			
DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor						PID Reading (ppm)			
										80			
0			5	Hand Digging, gravel-sand-silt mixtures						2175			
										2175			
10			4	SILTY GRAVELS (GM): Olive Gray, gravel-sand-silt mixtures						1843			
										1843			
			4	WELL GRADED SAND (SW): Yellowish Orange, medium sand with gravel						2498			
										2498			
			4	WELL GRADED GRAVELS (GW): Olive Gray, well-graded gravels with silty clay						378			
										378			
20			2	WELL GRADED SAND (SW): Yellowish Orange, medium sand with gravel						36			
										36			
30			2	WELL GRADED SAND (SW): Yellowish Orange, medium to coarse sand with gravel						12			
										12			
40			3	WELL GRADED SAND (SW): Light Brown, coarse sand with gravel						516			
										516			
				WELL GRADED SAND (SW): Light Brown, medium sand with gravel						860			
										860			
50										80			
										80			
Boring Id: DB002				End of Boring Depth (feet): 170				Water Table Symbol: ▼				Page 1 of 3	

DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor	PID Reading (ppm)
50			7	WELL GRADED SAND (SW): Light Brown, medium to coarse sand with gravel	0
				POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	0
60			9	POORLY GRADED SAND (SP): Yellowish Orange, fine to medium sand no gravel present	1280
70			8	POORLY GRADED SAND (SP): Light Brown, medium sand no gravel present	172
				POORLY GRADED SAND (SP): Yellowish Orange, fine sand no gravel present	0
80			8	POORLY GRADED SAND (SP): Light Brown, fine sand no gravel present	135
				POORLY GRADED SAND (SP): Yellowish Orange,medium sand no gravel present	4849
90			10	POORLY GRADED SAND (SP): Light Brown, fine to medium sand no gravel present	46
				WELL GRADED SAND (SW): Yellowish Orange, medium to coarse sand with gravel	12
100					0
			10	POORLY GRADED SAND (SP): Light Brown, fine to medium sand no gravel present	9999
110				POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	3261
			10	LEAN CLAY (CL): Yellowish Orange, inorganic silty clays with low to medium plasticity	2975
Boring Id: DB002			End of Boring Depth (feet): 170		Water Table Symbol: ▼
Page 2 of 3					



PROJECT #:		MIN2002			
SITE ADDRESS:		540 Smith Street, Farmingdale, NY			
BORING ID:		DB003		BORING DEPTH (FT):	CORE LENGTH (FT):
WELL ID:		N/A		180	10
DRILLING CONTRACTOR:		ADT Drilling		BORING DIAMETER (IN):	WELL DIAMETER (IN):
DRILLING METHOD:		Sonic Drilling		4	2
DRILLING EQUIPMENT:		Sonic Drill Rig		DATE STARTED:	DATE FINISHED:
SAMPLING METHOD:		Tera-core Sampling		05/19/2020	05/18/2018
				TIME STARTED:	TIME FINISHED:
				11:00	12:10
				LATITUDE:	LONGITUDE:
				N/A	N/A
				PROJECT MANAGER:	LOGGED BY:
				Regina Bykov	Kaitlyn Crosby
DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor	PID Reading (ppm)
0			5	Hand Digging, gravel-sand-silt mixtures	164
			3	Inorganic Silts to Very Fine Sands (ML): Yellowish Orange, silty to clayey fine sands or clayey silts with slight plasticity	103
10					529
			5	WELL GRADED SAND (SW): Yellowish Orange, medium sand with gravel	15
				Silty Sands (SM): Yellowish Orange, sand and silt mixtures	28
				WELL GRADED SAND (SW): Yellowish Orange, medium sand with gravel	46
20			5	WELL GRADED GRAVELS (GW): Yellowish Orange, well-graded gravels with medium to coarse sand	0
				POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	0
30			3	WELL GRADED GRAVELS (GW): Light Brown, well-graded gravels with medium to coarse sand	0
				POORLY GRADED SAND (SP): Light Brown, medium sand no gravel present	0
40			3	WELL GRADED GRAVELS (GW): Light Brown, well-graded gravels with medium to coarse sand	12
				WELL GRADED SAND (SW): Light Brown, medium sand with gravel	15
50					
Boring Id: DB003		End of Boring Depth (feet): 180		Water Table Symbol: ▼	Page 1 of 3

DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor	PID Reading (ppm)
50			7	WELL GRADED GRAVELS (GW): Light Brown, well-graded gravels with medium to coarse sand	427
				WELL GRADED SAND (SW): Light Brown, medium sand with gravel	406
60			9	POORLY GRADED SAND (SP): Light Brown, medium sand no gravel present	363
70			9		870
80			9	POORLY GRADED SAND (SP): Light Brown, fine to medium sand no gravel present	3738
90			9	POORLY GRADED SAND (SP): Light Brown, medium sand with some gravel present	198
			9	LEAN CLAY (CL): Light Brown, inorganic silty clays with low to medium plasticity	18
				POORLY GRADED SAND (SP): Light Brown, fine to medium sand no gravel present	0
100			8	POORLY GRADED SAND (SP): Light Brown, medium sand no gravel present	12
				POORLY GRADED SAND (SP): Red Brown, fine to medium sand no gravel present	270
110			7	POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	461
Boring Id: DB003			End of Boring Depth (feet): 180		Water Table Symbol: ▼
Page 2 of 3					

DEPTH (feet)	SAMPLE INTERVAL	USCS KEY	RECOVERY (feet)	DESCRIPTION NAME (USCS): color, moist, plasticity, gravel, odor	PID Reading (ppm)
120				LEAN CLAY (CL): Olive Gray, inorganic silty clays with low plasticity	2356
			10	LEAN CLAY (CL): Light Gray to Yellowish Orange, inorganic silty clays with low plasticity	9999
				POORLY GRADED SAND (SP): Light Gray, medium sand no gravel present	2273
				LEAN CLAY (CL): Light Gray, inorganic silty clays with low plasticity	83
				LEAN CLAY (CL): Light Gray, inorganic silty clays with low to medium plasticity	70
				POORLY GRADED SAND (SP): Light Gray, medium sand no gravel present	46
				LEAN CLAY (CL): Light Gray, inorganic silty clays with low to medium plasticity	46
			10	POORLY GRADED SAND (SP): Light Gray, fine to medium sand no gravel present	24
140				POORLY GRADED SAND (SP): Light Gray, medium sand no gravel present	104
			9	LEAN CLAY (CL): Yellowish Orange, inorganic silty clays with low plasticity	9
				POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	12
			8	POORLY GRADED SAND (SP): Light Gray, fine sand no gravel present	178
160				LEAN CLAY (CL): Light Gray, inorganic silty clays with low to medium plasticity	0
			8	POORLY GRADED SAND (SP): Yellowish Orange, medium sand no gravel present	0
				LEAN CLAY (CL): Light Gray, inorganic silty clays with low to medium plasticity	0
				POORLY GRADED SAND (SP): Light Gray, fine to medium sand no gravel present	6
170				POORLY GRADED SAND (SP): Light Brown, fine to medium sand no gravel present	12
			7	LEAN CLAY (CL): Yellowish Orange, inorganic silty clays with low plasticity	27
180					





## APPENDIX B

### SOIL CHARATIZATION ANALYTICAL DATA



## ANALYTICAL REPORT

Lab Number:	L2020621
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Regina Bykov
Phone:	(631) 589-6353
Project Name:	MINMILT
Project Number:	MIN2001
Report Date:	05/27/20

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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).

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



**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2020621-01	DB001 (20-22)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 10:30	05/19/20
L2020621-02	DB001 (43-45)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 11:00	05/19/20
L2020621-03	DB001 (75-78)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 11:50	05/19/20
L2020621-04	DB001 (80-85)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 12:20	05/19/20
L2020621-05	DB001 (85-90)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 12:45	05/19/20
L2020621-06	DB001 (90-95)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 13:00	05/19/20
L2020621-07	DB001 (95-100)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 13:05	05/19/20
L2020621-08	DB001 (120-124)	SOIL	540 SMITH ST, FARMINGDALE, NY	05/18/20 14:30	05/19/20
L2020621-09	EB001	EQUIPMENT BLANK	540 SMITH ST, FARMINGDALE, NY	05/18/20 15:35	05/19/20
L2020621-10	TB001	TRIP BLANK (AQUEOUS)	540 SMITH ST, FARMINGDALE, NY	05/18/20 00:00	05/19/20

**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

### 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.

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**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

### 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

L2020621-07: The sample was analyzed as a High Level Methanol in order to quantitate results within the calibration range. The result should be considered estimated, and is qualified with an E flag, for any compound that exceeded the calibration on the initial Low Level analysis. The results of both analyses are reported. Differences were noted between the results of the Volatile Organics by EPA Method 5035/8260 High and the Low level analyses which have been attributed to vial discrepancies.

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: 05/27/20

# ORGANICS



# **VOLATILES**

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-01  
 Client ID: DB001 (20-22)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 10:30  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 17:54  
 Analyst: JC  
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	1.6		ug/kg	0.56	0.22	1
Vinyl chloride	ND		ug/kg	1.1	0.38	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.15	1
Trichloroethene	ND		ug/kg	0.56	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.20	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	103		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-02  
 Client ID: DB001 (43-45)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 11:00  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 18:15  
 Analyst: JC  
 Percent Solids: 92%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	0.63		ug/kg	0.55	0.21	1
Vinyl chloride	ND		ug/kg	1.1	0.37	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	ND		ug/kg	0.55	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	108		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-03  
 Client ID: DB001 (75-78)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 11:50  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 18:36  
 Analyst: JC  
 Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	1.4		ug/kg	0.59	0.23	1
Vinyl chloride	ND		ug/kg	1.2	0.39	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1
Trichloroethene	ND		ug/kg	0.59	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.21	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	106		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-04 D2  
 Client ID: DB001 (80-85)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 12:20  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 10:22  
 Analyst: MV  
 Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	49000	E	ug/kg	66	26.	2.5
Vinyl chloride	ND		ug/kg	130	44.	2.5
trans-1,2-Dichloroethene	ND		ug/kg	200	18.	2.5
Trichloroethene	45	J	ug/kg	66	18.	2.5
cis-1,2-Dichloroethene	ND		ug/kg	130	23.	2.5
1,2-Dichloroethene, Total	ND		ug/kg	130	18.	2.5

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

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-04 D  
 Client ID: DB001 (80-85)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 12:20  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 05/21/20 21:46

Analyst: JC

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by EPA 5035 High - Westborough Lab

Tetrachloroethene	55000		ug/kg	130	52.	5
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	95		70-130



**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-05 D2  
 Client ID: DB001 (85-90)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 12:45  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 11:05  
 Analyst: MV  
 Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	4600000	E	ug/kg	6200	2400	250
Vinyl chloride	ND		ug/kg	12000	4100	250
trans-1,2-Dichloroethene	ND		ug/kg	18000	1700	250
Trichloroethene	4300	J	ug/kg	6200	1700	250
cis-1,2-Dichloroethene	ND		ug/kg	12000	2200	250
1,2-Dichloroethene, Total	ND		ug/kg	12000	1700	250

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	95		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-05 D  
 Client ID: DB001 (85-90)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 12:45  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 22:07  
 Analyst: JC  
 Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by EPA 5035 High - Westborough Lab

Tetrachloroethene	4700000		ug/kg	12000	4800	500
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	98		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-06  
 Client ID: DB001 (90-95)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 13:00  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 21:04  
 Analyst: JC  
 Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	8100		ug/kg	31	12.	1
Vinyl chloride	ND		ug/kg	62	21.	1
trans-1,2-Dichloroethene	ND		ug/kg	93	8.5	1
Trichloroethene	ND		ug/kg	31	8.5	1
cis-1,2-Dichloroethene	ND		ug/kg	62	11.	1
1,2-Dichloroethene, Total	ND		ug/kg	62	8.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	98		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-07  
 Client ID: DB001 (95-100)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 13:05  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 21:25  
 Analyst: JC  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	43		ug/kg	32	13.	1
Vinyl chloride	ND		ug/kg	65	22.	1
trans-1,2-Dichloroethene	ND		ug/kg	98	8.9	1
Trichloroethene	ND		ug/kg	32	8.9	1
cis-1,2-Dichloroethene	ND		ug/kg	65	11.	1
1,2-Dichloroethene, Total	ND		ug/kg	65	8.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	105		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-07  
 Client ID: DB001 (95-100)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 13:05  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 10:01  
 Analyst: MV  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	380	E	ug/kg	0.55	0.22	1
Vinyl chloride	ND		ug/kg	1.1	0.37	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	0.58		ug/kg	0.55	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	95		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-08  
 Client ID: DB001 (120-124)  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 14:30  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 18:58  
 Analyst: JC  
 Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	64		ug/kg	0.50	0.20	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	0.21	J	ug/kg	0.50	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-09  
 Client ID: EB001  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 15:35  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Equipment Blank  
 Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 15:52  
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	111		70-130

**Project Name:** MINMILT**Lab Number:** L2020621**Project Number:** MIN2001**Report Date:** 05/27/20**SAMPLE RESULTS**

Lab ID: L2020621-10  
 Client ID: TB001  
 Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 00:00  
 Date Received: 05/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Trip Blank (Aqueous)

Analytical Method: 1,8260C

Analytical Date: 05/21/20 16:17

Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	114		70-130



**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 08:02  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 09-10 Batch: WG1373375-5					
Tetrachloroethene	ND		ug/l	0.50	0.18
Vinyl chloride	ND		ug/l	1.0	0.07
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	108		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 16:08  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-03,08 Batch: WG1373393-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	102		70-130

Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 09:40  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 04-05 Batch: WG1373612-12					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/21/20 16:08  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 04-07 Batch: WG1373612-5					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	102		70-130

Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 09:40  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 07 Batch: WG1373689-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	102		70-130

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09-10 Batch: WG1373375-3 WG1373375-4								
Tetrachloroethene	100		100		70-130	0		20
Vinyl chloride	85		83		55-140	2		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	96		96		70-130	0		20
cis-1,2-Dichloroethene	96		96		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	85		85		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	87		88		70-130
Dibromofluoromethane	105		105		70-130

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-03,08 Batch: WG1373393-3 WG1373393-4								
Tetrachloroethene	90		84		70-130	7		30
Vinyl chloride	107		103		67-130	4		30
trans-1,2-Dichloroethene	102		97		70-130	5		30
Trichloroethene	98		95		70-130	3		30
cis-1,2-Dichloroethene	101		98		70-130	3		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	100		97		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	105		110		70-130
Dibromofluoromethane	97		97		70-130

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 04-05 Batch: WG1373612-10 WG1373612-11								
Tetrachloroethene	92		84		70-130	9		30
Vinyl chloride	108		98		67-130	10		30
trans-1,2-Dichloroethene	101		91		70-130	10		30
Trichloroethene	99		92		70-130	7		30
cis-1,2-Dichloroethene	101		93		70-130	8		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	97		98		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	106		107		70-130
Dibromofluoromethane	100		97		70-130



# **Lab Control Sample Analysis** **Batch Quality Control**

Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 04-07 Batch: WG1373612-3 WG1373612-4								
Tetrachloroethene	90		84		70-130	7		30
Vinyl chloride	107		103		67-130	4		30
trans-1,2-Dichloroethene	102		97		70-130	5		30
Trichloroethene	98		95		70-130	3		30
cis-1,2-Dichloroethene	101		98		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		97		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	105		110		70-130
Dibromofluoromethane	97		98		70-130

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 07 Batch: WG1373689-3 WG1373689-4								
Tetrachloroethene	92		84		70-130	9		30
Vinyl chloride	108		98		67-130	10		30
trans-1,2-Dichloroethene	101		91		70-130	10		30
Trichloroethene	99		92		70-130	7		30
cis-1,2-Dichloroethene	101		93		70-130	8		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	97		98		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	106		107		70-130
Dibromofluoromethane	100		97		70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** MINMILT

**Project Number:** MIN2001

**Lab Number:** L2020621

**Report Date:** 05/27/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Client ID: DB001 (90-95)												
Associated sample(s): 04-07    QC Batch ID: WG1373612-6    WG1373612-7    QC Sample: L2020621-06												
Tetrachloroethene	8100	6200	14000	102		12000	64	Q	70-130	17		30
Vinyl chloride	ND	6200	5400	86		4900	79		67-130	9		30
trans-1,2-Dichloroethene	ND	6200	7100	114		6700	108		70-130	6		30
Trichloroethene	ND	6200	7100	114		6500	104		70-130	9		30
cis-1,2-Dichloroethene	ND	6200	6900	111		6600	106		70-130	5		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		100		70-130
4-Bromofluorobenzene	108		107		70-130
Dibromofluoromethane	99		97		70-130
Toluene-d8	99		100		70-130

# **INORGANICS & MISCELLANEOUS**

Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

**SAMPLE RESULTS**

Lab ID: L2020621-01

Client ID: DB001 (20-22)

Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 10:30

Date Received: 05/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.2		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

**SAMPLE RESULTS**

Lab ID: L2020621-02

Client ID: DB001 (43-45)

Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 11:00

Date Received: 05/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.8		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

**SAMPLE RESULTS**

Lab ID: L2020621-03

Client ID: DB001 (75-78)

Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 11:50

Date Received: 05/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.9		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

**SAMPLE RESULTS**

Lab ID: L2020621-04

Client ID: DB001 (80-85)

Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 12:20

Date Received: 05/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.2		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI





Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

**SAMPLE RESULTS**

Lab ID: L2020621-05

Client ID: DB001 (85-90)

Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 12:45

Date Received: 05/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.4		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

**SAMPLE RESULTS**

Lab ID: L2020621-06

Client ID: DB001 (90-95)

Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 13:00

Date Received: 05/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.6		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2001**Lab Number:** L2020621**Report Date:** 05/27/20**SAMPLE RESULTS****Lab ID:** L2020621-07**Client ID:** DB001 (95-100)**Sample Location:** 540 SMITH ST, FARMINGDALE, NY**Date Collected:** 05/18/20 13:05**Date Received:** 05/19/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.7		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2001

Lab Number: L2020621

Report Date: 05/27/20

**SAMPLE RESULTS**

Lab ID: L2020621-08

Client ID: DB001 (120-124)

Sample Location: 540 SMITH ST, FARMINGDALE, NY

Date Collected: 05/18/20 14:30

Date Received: 05/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.8		%	0.100	NA	1	-	05/20/20 11:52	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2001

**Lab Duplicate Analysis**  
*Batch Quality Control***Lab Number:** L2020621**Report Date:** 05/27/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1372619-1 QC Sample: L2020621-06 Client ID: DB001 (90-95)						
Solids, Total	81.6	81.8	%	0		20

**Project Name:** MINMILT  
**Project Number:** MIN2001

Serial\_No:05272011:26  
**Lab Number:** L2020621  
**Report Date:** 05/27/20

**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(*)
L2020621-01A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-01B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-01C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-01D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-02A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-02B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-02C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-02D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-03A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-03B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-03C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-03D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-04A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-04B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-04C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-04D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-05A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-05B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-05C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-05D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-06A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-06A1	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-06A2	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)

**Project Name:** MINMILT  
**Project Number:** MIN2001

Serial\_No:05272011:26  
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**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2020621-06B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-06B1	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-06B2	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-06C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-06C1	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-06C2	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-06D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-06D1	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-06D2	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-07A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260H(14),NYTCL-8260HLW(14)
L2020621-07B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260H(14),NYTCL-8260HLW(14)
L2020621-07C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260H(14),NYTCL-8260HLW(14)
L2020621-07D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-08A	Vial MeOH preserved	A	NA		2.9	Y	Absent		NYTCL-8260HLW(14)
L2020621-08B	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-08C	Vial water preserved	A	NA		2.9	Y	Absent	20-MAY-20 01:29	NYTCL-8260HLW(14)
L2020621-08D	Plastic 2oz unpreserved for TS	A	NA		2.9	Y	Absent		TS(7)
L2020621-09A	Vial HCl preserved	A	NA		2.9	Y	Absent		NYTCL-8260(14)
L2020621-09B	Vial HCl preserved	A	NA		2.9	Y	Absent		NYTCL-8260(14)
L2020621-09C	Vial HCl preserved	A	NA		2.9	Y	Absent		NYTCL-8260(14)
L2020621-10A	Vial HCl preserved	A	NA		2.9	Y	Absent		NYTCL-8260(14)
L2020621-10B	Vial HCl preserved	A	NA		2.9	Y	Absent		NYTCL-8260(14)

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**Project Number:** MIN2001

**Lab Number:** L2020621  
**Report Date:** 05/27/20

## 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:** MINMILT  
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**Report Date:** 05/27/20

- 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. 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.
- 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

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



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**Data Qualifiers**

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

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**Project Name:** MINMILT  
**Project Number:** MIN2001

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**Report Date:** 05/27/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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 17

Published Date: 4/28/2020 9:42:21 AM

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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 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, 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.****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.

 <b>NEW YORK CHAIN OF CUSTODY</b> 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		<b>Service Centers</b> Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <b>1 of 2</b>		Date Rec'd in Lab <b>5/19/20</b>		ALPHA Job # <b>L2020621</b>					
		<b>Project Information</b> Project Name: <b>M:inMilt</b> Project Location: <b>540 Smith St, Farmingdale, NY</b> Project # <b>MIN2001</b> (Use Project name as Project #) <input type="checkbox"/>		<b>Deliverables</b> <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQulS (1 File) <input type="checkbox"/> EQulS (4 File) <input type="checkbox"/> Other		<b>Billing Information</b> <input checked="" type="checkbox"/> Same as Client Info PO #							
<b>Client Information</b> Client: <b>PWGC</b> Address: <b>630 Johnson Ave Bohemia, NY 11716</b> Phone: <b>631-589-6353</b> Fax: <b>631-589-6353</b> Email: <b>RBykov@pwgrosser.com</b>		<b>Project Manager:</b> <b>Regina Bykov</b> <b>ALPHAQuote #:</b> <b>Turn-Around Time</b> Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		<b>Regulatory Requirement</b> <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		<b>Disposal Site Information</b> 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: <b>Email also to: martinm@pwgrosser.com</b> Please specify Metals or TAL.						<b>ANALYSIS</b>		<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do (Please Specify below) <b>Sample Specific Comments</b>					
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials		PCE TCE DCE Vinyl Chloride		Total Bottles	
<b>70621-01</b>		<b>DB001 (20-22)</b>		<b>5-18-2020 1030</b>		<b>S</b>		<b>KC</b>		<b>X X X X</b>		<b>4</b>	
<b>-02</b>		<b>DB001 (43-45)</b>		<b>1100</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-03</b>		<b>DB001 (75-78)</b>		<b>1150</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-04</b>		<b>DB001 (80-85)</b>		<b>1220</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-05</b>		<b>DB001 (85-90)</b>		<b>1245</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-06</b>		<b>DB001 (90-95)</b>		<b>1300</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-06</b>		<b>DB001 (90-95) MS</b>		<b>1300</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-06</b>		<b>DB001 (90-95) MSD</b>		<b>1300</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-07</b>		<b>DB001 (95-100)</b>		<b>1305</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
<b>-08</b>		<b>DB001 (120-124)</b>		<b>1430</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>		<b>↓</b>	
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 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		0 0 0 0 0 0 0 0		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: <b>[Signature]</b>		Date/Time: <b>5/19/20 10:25</b>		Received By: <b>[Signature]</b>		Date/Time: <b>5/19/20 10:25</b>		Date/Time: <b>5/19/20 10:40</b>		Date/Time: <b>5/19/20 2000</b>		Date/Time: <b>5/19/20 2000</b>	



[illegible]

JOB: L2020812      REPORT STYLE: Data Usability Report  
0010: Alpha Analytical Report Cover Page - OK  
0015: Sample Cross Reference Summary - OK  
0060: Case Narrative - OK  
0100: Volatiles Cover Page - OK  
0110: Volatiles Sample Results - OK  
0120: Volatiles Method Blank Report - OK  
0130: Volatiles LCS Report - OK  
1180: Inorganics Cover Page - OK  
1200: Wet Chemistry Sample Results - OK  
1250: Wet Chemistry Duplicate Report - OK  
5100: Sample Receipt & Container Information Report - OK  
5200: Glossary - OK  
5400: References - OK

-----



## ANALYTICAL REPORT

Lab Number:	L2020812
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Regina Bykov
Phone:	(631) 589-6353
Project Name:	MINMILT
Project Number:	MIN2002
Report Date:	05/28/20

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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).

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2020812-01	DB001 (158-160)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 08:20	05/20/20
L2020812-02	DB001 (168-170)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 09:15	05/20/20
L2020812-03	DB002 (7-10)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 12:15	05/20/20
L2020812-04	DB002 (10-15)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 12:40	05/20/20
L2020812-05	DB002 (15-20)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 12:50	05/20/20
L2020812-06	DB002 (39-41)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 13:15	05/20/20
L2020812-07	DB002 (40-45)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 13:40	05/20/20
L2020812-08	DB002 (65-70)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 14:10	05/20/20
L2020812-09	DB002 (85-90)	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 15:15	05/20/20
L2020812-10	DUP001	SOIL	540 SMITH STREET, FARMINGDALE	05/19/20 00:00	05/20/20
L2020812-11	FB002	WATER	540 SMITH STREET, FARMINGDALE	05/19/20 09:30	05/20/20
L2020812-12	TB002	WATER	540 SMITH STREET, FARMINGDALE	05/19/20 00:00	05/20/20

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

### 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.

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

### Case Narrative (continued)

#### Report Submission

May 28, 2020: 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

L2020812-04: The sample was analyzed as a Low Level in an effort to meet criteria. The results of both analyses are reported. Differences were noted between the results of the analyses which have been attributed to vial discrepancies.

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:

*Tiffani Morrissey* - Tiffani Morrissey

Title: Technical Director/Representative

Date: 05/28/20

# ORGANICS

# **VOLATILES**

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-01  
 Client ID: DB001 (158-160)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 08:20  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 16:22  
 Analyst: MKS  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	3700		ug/kg	30	12.	1
Vinyl chloride	ND		ug/kg	60	20.	1
trans-1,2-Dichloroethene	ND		ug/kg	91	8.3	1
Trichloroethene	ND		ug/kg	30	8.3	1
cis-1,2-Dichloroethene	ND		ug/kg	60	11.	1
1,2-Dichloroethene, Total	ND		ug/kg	60	8.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	101		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-02  
 Client ID: DB001 (168-170)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 09:15  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 13:12  
 Analyst: MKS  
 Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.61	0.24	1
Vinyl chloride	ND		ug/kg	1.2	0.41	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.17	1
Trichloroethene	ND		ug/kg	0.61	0.17	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.21	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	109		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-03  
 Client ID: DB002 (7-10)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 12:15  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 12:46  
 Analyst: JC  
 Percent Solids: 92%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	630		ug/kg	25	9.9	1
Vinyl chloride	ND		ug/kg	51	17.	1
trans-1,2-Dichloroethene	ND		ug/kg	76	6.9	1
Trichloroethene	ND		ug/kg	25	6.9	1
cis-1,2-Dichloroethene	ND		ug/kg	51	8.9	1
1,2-Dichloroethene, Total	ND		ug/kg	51	6.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	104		70-130



**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-04  
 Client ID: DB002 (10-15)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 12:40  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 16:43  
 Analyst: MKS  
 Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	280		ug/kg	25	9.7	1
Vinyl chloride	ND		ug/kg	50	17.	1
trans-1,2-Dichloroethene	ND		ug/kg	74	6.8	1
Trichloroethene	12	J	ug/kg	25	6.8	1
cis-1,2-Dichloroethene	73		ug/kg	50	8.7	1
1,2-Dichloroethene, Total	73		ug/kg	50	6.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	101		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-04  
 Client ID: DB002 (10-15)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 12:40  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/24/20 19:41  
 Analyst: JC  
 Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	17		ug/kg	0.43	0.17	1
Vinyl chloride	ND		ug/kg	0.86	0.29	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.12	1
Trichloroethene	1.7		ug/kg	0.43	0.12	1
cis-1,2-Dichloroethene	11		ug/kg	0.86	0.15	1
1,2-Dichloroethene, Total	11		ug/kg	0.86	0.12	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	98		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-05  
 Client ID: DB002 (15-20)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 12:50  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 13:33  
 Analyst: MKS  
 Percent Solids: 95%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	31		ug/kg	0.51	0.20	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	0.71		ug/kg	0.51	0.14	1
cis-1,2-Dichloroethene	3.1		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	3.1		ug/kg	1.0	0.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-07  
 Client ID: DB002 (40-45)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 13:40  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 13:54  
 Analyst: MKS  
 Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	0.49	J	ug/kg	0.58	0.23	1
Vinyl chloride	ND		ug/kg	1.2	0.39	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.16	1
Trichloroethene	ND		ug/kg	0.58	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.20	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	133	Q	70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	135	Q	70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-08  
 Client ID: DB002 (65-70)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 14:10  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 14:36  
 Analyst: MKS  
 Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	0.22	J	ug/kg	0.54	0.21	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	ND		ug/kg	0.54	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	132	Q	70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	273	Q	70-130
Dibromofluoromethane	136	Q	70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-09  
 Client ID: DB002 (85-90)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 15:15  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/24/20 19:15  
 Analyst: JC  
 Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	270000	E	ug/kg	180	70.	5
Vinyl chloride	ND		ug/kg	360	120	5
trans-1,2-Dichloroethene	ND		ug/kg	540	49.	5
Trichloroethene	ND		ug/kg	180	49.	5
cis-1,2-Dichloroethene	ND		ug/kg	360	63.	5
1,2-Dichloroethene, Total	ND		ug/kg	360	49.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	98		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-09 D  
 Client ID: DB002 (85-90)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 15:15  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 15:39  
 Analyst: MKS  
 Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	220000		ug/kg	720	280	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	97		70-130



**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-10  
 Client ID: DUP001  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 00:00  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 14:57  
 Analyst: MKS  
 Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.60	0.23	1
Vinyl chloride	ND		ug/kg	1.2	0.40	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1
Trichloroethene	ND		ug/kg	0.60	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.21	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	109		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-11  
 Client ID: FB002  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 09:30  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 10:42  
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	105		70-130

**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**SAMPLE RESULTS**

Lab ID: L2020812-12  
 Client ID: TB002  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 00:00  
 Date Received: 05/20/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 11:04  
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	105		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 08:07  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 11-12 Batch: WG1373640-5					
Tetrachloroethene	ND		ug/l	0.50	0.18
Vinyl chloride	ND		ug/l	1.0	0.07
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	106		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 09:40  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02,05,07-08,10 Batch: WG1373689-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/22/20 09:40  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01,04,09 Batch: WG1374132-5					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/24/20 11:05  
 Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 09 Batch: WG1374391-5					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	96		70-130



**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/24/20 11:05  
 Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 04 Batch: WG1374392-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	96		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 08:11  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 03 Batch: WG1375317-5					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	106		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 11-12 Batch: WG1373640-3 WG1373640-4								
Tetrachloroethene	90		90		70-130	0		20
Vinyl chloride	97		94		55-140	3		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		100		70-130	10		20

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	96		98		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	103		103		70-130
Dibromofluoromethane	100		100		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02,05,07-08,10 Batch: WG1373689-3 WG1373689-4								
Tetrachloroethene	92		84		70-130	9		30
Vinyl chloride	108		98		67-130	10		30
trans-1,2-Dichloroethene	101		91		70-130	10		30
Trichloroethene	99		92		70-130	7		30
cis-1,2-Dichloroethene	101		93		70-130	8		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		98		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	106		107		70-130
Dibromofluoromethane	100		97		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01,04,09 Batch: WG1374132-3 WG1374132-4								
Tetrachloroethene	92		84		70-130	9		30
Vinyl chloride	108		98		67-130	10		30
trans-1,2-Dichloroethene	101		91		70-130	10		30
Trichloroethene	99		92		70-130	7		30
cis-1,2-Dichloroethene	101		93		70-130	8		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		98		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	106		107		70-130
Dibromofluoromethane	100		97		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 09 Batch: WG1374391-3 WG1374391-4								
Tetrachloroethene	113		109		70-130	4		30
Vinyl chloride	103		97		67-130	6		30
trans-1,2-Dichloroethene	112		106		70-130	6		30
Trichloroethene	108		106		70-130	2		30
cis-1,2-Dichloroethene	109		106		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		99		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	101		100		70-130
Dibromofluoromethane	103		102		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 04 Batch: WG1374392-3 WG1374392-4								
Tetrachloroethene	113		109		70-130	4		30
Vinyl chloride	103		97		67-130	6		30
trans-1,2-Dichloroethene	112		106		70-130	6		30
Trichloroethene	108		106		70-130	2		30
cis-1,2-Dichloroethene	109		106		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		99		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	101		100		70-130
Dibromofluoromethane	103		103		70-130



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 03 Batch: WG1375317-3 WG1375317-4								
Tetrachloroethene	116		113		70-130	3		30
Vinyl chloride	84		85		67-130	1		30
trans-1,2-Dichloroethene	117		117		70-130	0		30
Trichloroethene	113		112		70-130	1		30
cis-1,2-Dichloroethene	108		107		70-130	1		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	97		97		70-130
Toluene-d8	103		103		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	102		102		70-130

# **INORGANICS & MISCELLANEOUS**

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2020812

Report Date: 05/28/20

**SAMPLE RESULTS**

Lab ID: L2020812-01

Client ID: DB001 (158-160)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 08:20

Date Received: 05/20/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.4		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2020812**Report Date:** 05/28/20**SAMPLE RESULTS****Lab ID:** L2020812-02**Client ID:** DB001 (168-170)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/19/20 09:15**Date Received:** 05/20/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.1		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2020812

Report Date: 05/28/20

## SAMPLE RESULTS

Lab ID: L2020812-03

Client ID: DB002 (7-10)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 12:15

Date Received: 05/20/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.8		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2020812**Report Date:** 05/28/20**SAMPLE RESULTS****Lab ID:** L2020812-04**Client ID:** DB002 (10-15)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/19/20 12:40**Date Received:** 05/20/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.2		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2020812

Report Date: 05/28/20

**SAMPLE RESULTS**

Lab ID: L2020812-05

Client ID: DB002 (15-20)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 12:50

Date Received: 05/20/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.3		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI





**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2020812**Report Date:** 05/28/20**SAMPLE RESULTS****Lab ID:** L2020812-07**Client ID:** DB002 (40-45)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/19/20 13:40**Date Received:** 05/20/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.6		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2020812

Report Date: 05/28/20

## SAMPLE RESULTS

Lab ID: L2020812-08

Client ID: DB002 (65-70)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/19/20 14:10

Date Received: 05/20/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.5		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2020812**Report Date:** 05/28/20**SAMPLE RESULTS****Lab ID:** L2020812-09**Client ID:** DB002 (85-90)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/19/20 15:15**Date Received:** 05/20/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.9		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2020812**Report Date:** 05/28/20**SAMPLE RESULTS****Lab ID:** L2020812-10**Client ID:** DUP001**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/19/20 00:00**Date Received:** 05/20/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.4		%	0.100	NA	1	-	05/21/20 14:48	121,2540G	RI



**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Duplicate Analysis**  
*Batch Quality Control*

**Lab Number:** L2020812  
**Report Date:** 05/28/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05,07-10 QC Batch ID: WG1373235-1 QC Sample: L2020812-01 Client ID: DB001 (158-160)						
Solids, Total	83.4	82.3	%	1		20

**Project Name:** MINMILT  
**Project Number:** MIN2002

Serial\_No:05282014:27  
**Lab Number:** L2020812  
**Report Date:** 05/28/20

### 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(*)
L2020812-01A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-01B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-01C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-01D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-02A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-02B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-02C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-02D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-03A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-03B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-03C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-03D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-04A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14),NYTCL-8260H(14)
L2020812-04B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14),NYTCL-8260H(14)
L2020812-04C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14),NYTCL-8260H(14)
L2020812-04D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-05A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-05B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-05C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-05D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-06A	Vial MeOH preserved	A	NA		2.0	Y	Absent		HOLD-8260HLW(14)
L2020812-06B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	HOLD-8260HLW(14)
L2020812-06C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	HOLD-8260HLW(14)

**Project Name:** MINMILT  
**Project Number:** MIN2002

Serial\_No:05282014:27  
**Lab Number:** L2020812  
**Report Date:** 05/28/20

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2020812-06D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		HOLD-WETCHEM()
L2020812-07A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-07B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-07C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-07D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-08A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-08B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-08C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-08D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-09A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-09B	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-09C	Vial water preserved	A	NA		2.0	Y	Absent	21-MAY-20 01:55	NYTCL-8260HLW(14)
L2020812-09D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-10A	Vial MeOH preserved	A	NA		2.0	Y	Absent		NYTCL-8260HLW(14)
L2020812-10B	Vial water preserved	A	NA		2.0	Y	Absent	<b>21-MAY-20 01:55</b>	NYTCL-8260HLW(14)
L2020812-10C	Vial water preserved	A	NA		2.0	Y	Absent	<b>21-MAY-20 01:55</b>	NYTCL-8260HLW(14)
L2020812-10D	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		TS(7)
L2020812-11A	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2020812-11B	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2020812-11C	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2020812-12A	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)
L2020812-12B	Vial HCl preserved	A	NA		2.0	Y	Absent		NYTCL-8260(14)

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

## 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





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- 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. 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.
- 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

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



**Project Name:** MINMILT**Lab Number:** L2020812**Project Number:** MIN2002**Report Date:** 05/28/20**Data Qualifiers**

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:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2020812  
**Report Date:** 05/28/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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 17

Published Date: 4/28/2020 9:42:21 AM

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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 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.

**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B


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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, 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.****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.

 <b>NEW YORK CHAIN OF CUSTODY</b>		<b>Service Centers</b> 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 2		Date Rec'd in Lab 5/20/20		ALPHA Job # 12020812	
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		<b>Project Information</b> Project Name: <i>MinMilt</i> Project Location: <i>540 Smith Street, Farmingdale</i> Project # <i>MIN2002</i> (Use Project name as Project #) <input type="checkbox"/>		<b>Deliverables</b> <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQuIS (1 File) <input type="checkbox"/> EQuIS (4 File) <input type="checkbox"/> Other		<b>Billing Information</b> <input checked="" type="checkbox"/> Same as Client Info PO #	
<b>Client Information</b> Client: <i>PWGC</i> Address: <i>630 Johnson Ave</i> <i>Bahemia, NY 11716</i> Phone: <i>631-589-6353</i> Fax: _____ Email: <i>RBykov@pwgrasser.com</i>		Project Manager: <i>Regina Bykov</i> ALPHAQuote #: _____ Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: _____ Rush (only if pre approved) <input type="checkbox"/> # of Days: _____		<b>Regulatory Requirement</b> <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		<b>Disposal Site Information</b> 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"/>				<b>ANALYSIS</b>				<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)	
Other project specific requirements/comments: <i>Also email to: martinm@pwgrasser.com</i>				Please specify Metals or TAL.				Total Bottles	
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials	
20812 01		DB001 (158-160)		5-19-2020 0820		S		KC	
02		DB001 (168-170)		0915					
03		DB002 (7-10)		1215					
04		DB002 (10-15)		1240					
05		DB002 (15-20)		1250					
06		DB002 (39-41)		1315					
07		DB002 (40-45)		1340					
08		DB002 (65-70)		1410					
09		DB002 (85-90)		1515					
10		DUP001		XX					
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 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	
						O O O O		O O O O	
Relinquished By: <i>[Signature]</i>		Date/Time: <i>5/20/20 800</i>		Received By: <i>D. Santos</i>		Date/Time: <i>5/20/20 800</i>		THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
<i>[Signature]</i>		<i>5/20/20 1400</i>		<i>[Signature]</i>		<i>5/20/20 1645</i>			
<i>[Signature]</i>		<i>5/20/20 2030</i>		<i>[Signature]</i>		<i>5/20/20 2030</i>			
<i>[Signature]</i>		<i>5/20/20 2240</i>		<i>[Signature]</i>		<i>5/20/20 2240</i>			



 <b>NEW YORK CHAIN OF CUSTODY</b> 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		<b>Service Centers</b> Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <div style="border: 1px solid black; padding: 2px; display: inline-block;">2 of 2</div>		Date Rec'd in Lab <div style="font-size: 1.5em; margin-left: 100px;">5/20/20</div>		ALPHA Job # <div style="font-size: 1.5em; margin-left: 100px;">12020812</div>																											
		<b>Project Information</b> Project Name: <u>Min/Milt</u> Project Location: <u>540 Smith Street, Farmingdale</u> Project # <u>MIN 2002</u> (Use Project name as Project #) <input type="checkbox"/>		<b>Deliverables:</b> <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		<b>Billing Information</b> <input checked="" type="checkbox"/> Same as Client Info PO #																													
<b>Client Information</b> Client: <u>PWGC</u> Address: <u>630 Johnson Ave</u> <u>Bohemia, NY 11716</u> Phone: <u>631-589-6353</u> Fax: _____ Email: <u>R Bykov@pwgrosser.com</u>		<b>Project Manager:</b> <u>Regina Bykov</u> <b>ALPHAQuote #:</b> _____ <b>Turn-Around Time</b> Standard <input checked="" type="checkbox"/> Due Date: _____ Rush (only if pre approved) <input type="checkbox"/> # of Days: _____		<b>Regulatory Requirement</b> <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		<b>Disposal Site Information</b> Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:																													
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Other project specific requirements/comments: <u>Also email to: Martinm@pwgrosser.com</u>						<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">Collection</th> <th rowspan="2">Sample Matrix</th> <th rowspan="2">Sampler's Initials</th> <th rowspan="2">TCE</th> <th rowspan="2">PCE</th> <th rowspan="2">DCE</th> <th rowspan="2">Vinyl Chloride</th> </tr> <tr> <th>Date</th> <th>Time</th> </tr> <tr> <td>5-19-2020</td> <td>0930</td> <td>WNT KC</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>↓</td> <td>XX</td> <td>WNT ↓</td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </table>		Collection		Sample Matrix	Sampler's Initials	TCE	PCE	DCE	Vinyl Chloride	Date	Time	5-19-2020	0930	WNT KC		X	X	X	X	↓	XX	WNT ↓		X	X	X	X	<b>Sample Specific Comments</b>	
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Relinquished By: <u>[Signature]</u> Date/Time: <u>5/20/20 800</u>						Received By: <u>[Signature]</u> Date/Time: <u>5/20/20 800</u>		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>5/20/20 1100</u>						Received By: <u>[Signature]</u> Date/Time: <u>5/20/20 1100</u>																													

JOB: L2021006      REPORT STYLE: Data Usability Report  
0010: Alpha Analytical Report Cover Page - OK  
0015: Sample Cross Reference Summary - OK  
0060: Case Narrative - OK  
0100: Volatiles Cover Page - OK  
0110: Volatiles Sample Results - OK  
0120: Volatiles Method Blank Report - OK  
0130: Volatiles LCS Report - OK  
0150: Volatiles Matrix Spike Report - OK  
1180: Inorganics Cover Page - OK  
1200: Wet Chemistry Sample Results - OK  
1250: Wet Chemistry Duplicate Report - OK  
5100: Sample Receipt & Container Information Report - OK  
5200: Glossary - OK  
5400: References - OK

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## ANALYTICAL REPORT

Lab Number:	L2021006
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Regina Bykov
Phone:	(631) 589-8705
Project Name:	MINMILT
Project Number:	MIN2002
Report Date:	05/29/20

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2021006-01	DB002 (90-95)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 07:45	05/21/20
L2021006-02	DB002 (100-105)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 09:35	05/21/20
L2021006-03	DB002 (105-110)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 09:45	05/21/20
L2021006-04	DB002 (110-115)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 10:40	05/21/20
L2021006-05	DB002 (115-120)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 10:50	05/21/20
L2021006-06	DB002 (120-125)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 11:00	05/21/20
L2021006-07	DB002 (125-130)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 11:05	05/21/20
L2021006-08	DB002 (135-140)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 11:30	05/21/20
L2021006-09	DB002 (145-150)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 11:45	05/21/20
L2021006-10	DB002 (150-155)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 12:25	05/21/20
L2021006-11	DB002 (155-160)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 12:30	05/21/20
L2021006-12	DB002 (160-165)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 12:35	05/21/20
L2021006-13	DB002 (165-170)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 12:40	05/21/20
L2021006-14	EB003	WATER	540 SMITH STREET, FARMINGDALE	05/20/20 13:30	05/21/20
L2021006-15	TB003	TRIP BLANK (AQUEOUS)	540 SMITH STREET, FARMINGDALE	05/14/20 00:00	05/21/20
L2021006-16	DB003 (5-10)	SOIL	540 SMITH STREET, FARMINGDALE	05/20/20 15:00	05/21/20

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

### 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.

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

### Case Narrative (continued)

#### Report Submission

May 29, 2020: 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.

#### Sample Receipt

L2021006-08: The collection date and time on the chain of custody was 20-MAY-20 11:30; however, the collection date and time on the container label was 19-MAY-20 11:30. The collection date and time is reported as 20-MAY-20 11:30.

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:

*Tiffani Morrissey* - Tiffani Morrissey

Title: Technical Director/Representative

Date: 05/29/20

# ORGANICS

# **VOLATILES**

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-01  
 Client ID: DB002 (90-95)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 07:45  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/27/20 21:37  
 Analyst: JC  
 Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	280		ug/kg	0.48	0.19	1
Vinyl chloride	ND		ug/kg	0.97	0.32	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1
Trichloroethene	0.90		ug/kg	0.48	0.13	1
cis-1,2-Dichloroethene	ND		ug/kg	0.97	0.17	1
1,2-Dichloroethene, Total	ND		ug/kg	0.97	0.13	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-02  
 Client ID: DB002 (100-105)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 09:35  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 16:26  
 Analyst: MKS  
 Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	0.25	J	ug/kg	0.51	0.20	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	ND		ug/kg	0.51	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	103		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-03  
 Client ID: DB002 (105-110)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 09:45  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 05/27/20 22:28

Analyst: JC

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.54	0.21	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	ND		ug/kg	0.54	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	102		70-130



**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-04  
 Client ID: DB002 (110-115)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 10:40  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 05/27/20 22:53

Analyst: JC

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.52	0.20	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1
Trichloroethene	ND		ug/kg	0.52	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	101		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-06  
 Client ID: DB002 (120-125)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 11:00  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 02:13  
 Analyst: JC  
 Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	10000		ug/kg	35	14.	1
Vinyl chloride	ND		ug/kg	70	23.	1
trans-1,2-Dichloroethene	ND		ug/kg	100	9.5	1
Trichloroethene	14	J	ug/kg	35	9.5	1
cis-1,2-Dichloroethene	ND		ug/kg	70	12.	1
1,2-Dichloroethene, Total	ND		ug/kg	70	9.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-08  
 Client ID: DB002 (135-140)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 11:30  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 02:38  
 Analyst: JC  
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	3700		ug/kg	29	11.	1
Vinyl chloride	ND		ug/kg	57	19.	1
trans-1,2-Dichloroethene	ND		ug/kg	86	7.8	1
Trichloroethene	ND		ug/kg	29	7.8	1
cis-1,2-Dichloroethene	ND		ug/kg	57	10.	1
1,2-Dichloroethene, Total	ND		ug/kg	57	7.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-09  
 Client ID: DB002 (145-150)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 11:45  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/27/20 23:18  
 Analyst: JC  
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.66	0.26	1
Vinyl chloride	ND		ug/kg	1.3	0.44	1
trans-1,2-Dichloroethene	ND		ug/kg	2.0	0.18	1
Trichloroethene	ND		ug/kg	0.66	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.23	1
1,2-Dichloroethene, Total	ND		ug/kg	1.3	0.18	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	98		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-11  
 Client ID: DB002 (155-160)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 12:30  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 00:08  
 Analyst: JC  
 Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.47	0.18	1
Vinyl chloride	ND		ug/kg	0.94	0.31	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1
Trichloroethene	ND		ug/kg	0.47	0.13	1
cis-1,2-Dichloroethene	ND		ug/kg	0.94	0.16	1
1,2-Dichloroethene, Total	ND		ug/kg	0.94	0.13	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	105		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-13  
 Client ID: DB002 (165-170)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 12:40  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 00:33  
 Analyst: JC  
 Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.50	0.20	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	0.32	J	ug/kg	0.50	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-14  
 Client ID: EB003  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 13:30  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 05/27/20 11:34  
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	105		70-130

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-15  
 Client ID: TB003  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/14/20 00:00  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Trip Blank (Aqueous)  
 Analytical Method: 1,8260C  
 Analytical Date: 05/27/20 11:56  
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	109		70-130



**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**SAMPLE RESULTS**

Lab ID: L2021006-16  
 Client ID: DB003 (5-10)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 15:00  
 Date Received: 05/21/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 00:58  
 Analyst: JC  
 Percent Solids: 98%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.55	0.22	1
Vinyl chloride	ND		ug/kg	1.1	0.37	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	ND		ug/kg	0.55	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	97		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/27/20 08:17  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 14-15 Batch: WG1374846-5					
Tetrachloroethene	ND		ug/l	0.50	0.18
Vinyl chloride	ND		ug/l	1.0	0.07
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	106		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 08:11  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1375231-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	106		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/27/20 18:33  
 Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 06,08 Batch: WG1375251-5					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/27/20 18:08  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,03-04,09,11,13,16 Batch: WG1375252-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	102		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 14-15 Batch: WG1374846-3 WG1374846-4								
Tetrachloroethene	94		96		70-130	2		20
Vinyl chloride	100		110		55-140	10		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	110		120		70-130	9		20
cis-1,2-Dichloroethene	110		110		70-130	0		20

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	97		100		70-130
Toluene-d8	98		97		70-130
4-Bromofluorobenzene	97		97		70-130
Dibromofluoromethane	103		105		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1375231-3 WG1375231-4								
Tetrachloroethene	116		113		70-130	3		30
Vinyl chloride	84		85		67-130	1		30
trans-1,2-Dichloroethene	117		117		70-130	0		30
Trichloroethene	113		112		70-130	1		30
cis-1,2-Dichloroethene	108		107		70-130	1		30

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

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 06,08 Batch: WG1375251-3 WG1375251-4								
Tetrachloroethene	112		102		70-130	9		30
Vinyl chloride	119		110		67-130	8		30
trans-1,2-Dichloroethene	109		104		70-130	5		30
Trichloroethene	113		108		70-130	5		30
cis-1,2-Dichloroethene	108		101		70-130	7		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	104		102		70-130
Toluene-d8	96		95		70-130
4-Bromofluorobenzene	95		95		70-130
Dibromofluoromethane	102		102		70-130



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03-04,09,11,13,16 Batch: WG1375252-3 WG1375252-4								
Tetrachloroethene	112		102		70-130	9		30
Vinyl chloride	119		110		67-130	8		30
trans-1,2-Dichloroethene	109		104		70-130	5		30
Trichloroethene	113		108		70-130	5		30
cis-1,2-Dichloroethene	108		101		70-130	7		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		102		70-130
Toluene-d8	96		95		70-130
4-Bromofluorobenzene	95		95		70-130
Dibromofluoromethane	102		102		70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03-04,09,11,13,16 QC Batch ID: WG1375252-6 WG1375252-7 QC Sample: L2021006-13 Client ID: DB002 (165-170)												
Tetrachloroethene	ND	106	70	66	Q	100	90		70-130	37	Q	30
Vinyl chloride	ND	106	130	121		150	130		67-130	14		30
trans-1,2-Dichloroethene	ND	106	100	98		130	114		70-130	21		30
Trichloroethene	0.32J	106	95	89		120	109		70-130	27		30
cis-1,2-Dichloroethene	ND	106	110	101		130	113		70-130	18		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		102		70-130
4-Bromofluorobenzene	96		95		70-130
Dibromofluoromethane	100		102		70-130
Toluene-d8	95		95		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20**SAMPLE RESULTS****Lab ID:** L2021006-01**Client ID:** DB002 (90-95)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/20/20 07:45**Date Received:** 05/21/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.4		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021006

Report Date: 05/29/20

**SAMPLE RESULTS**

Lab ID: L2021006-02

Client ID: DB002 (100-105)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 09:35

Date Received: 05/21/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.8		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20**SAMPLE RESULTS****Lab ID:** L2021006-03**Client ID:** DB002 (105-110)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/20/20 09:45**Date Received:** 05/21/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.1		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20**SAMPLE RESULTS****Lab ID:** L2021006-04**Client ID:** DB002 (110-115)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/20/20 10:40**Date Received:** 05/21/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.4		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20**SAMPLE RESULTS****Lab ID:** L2021006-06**Client ID:** DB002 (120-125)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/20/20 11:00**Date Received:** 05/21/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.0		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI





**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20**SAMPLE RESULTS****Lab ID:** L2021006-08**Client ID:** DB002 (135-140)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/20/20 11:30**Date Received:** 05/21/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.0		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20**SAMPLE RESULTS****Lab ID:** L2021006-09**Client ID:** DB002 (145-150)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/20/20 11:45**Date Received:** 05/21/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.5		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021006

Report Date: 05/29/20

## SAMPLE RESULTS

Lab ID: L2021006-11

Client ID: DB002 (155-160)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 12:30

Date Received: 05/21/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.0		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20**SAMPLE RESULTS****Lab ID:** L2021006-13**Client ID:** DB002 (165-170)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/20/20 12:40**Date Received:** 05/21/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.7		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021006

Report Date: 05/29/20

**SAMPLE RESULTS**

Lab ID: L2021006-16

Client ID: DB003 (5-10)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/20/20 15:00

Date Received: 05/21/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	98.4		%	0.100	NA	1	-	05/22/20 10:59	121,2540G	RI



**Lab Duplicate Analysis**  
*Batch Quality Control***Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021006**Report Date:** 05/29/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-09,11-13,16 QC Batch ID: WG1373636-1 QC Sample: L2021006-13 Client ID: DB002 (165-170)						
Solids, Total	86.7	87.0	%	0		20

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information****Cooler**                      **Custody Seal**

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2021006-01A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-01B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-01C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-01D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-02A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-02B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-02C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-02D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-03A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-03B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-03C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-03D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-04A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-04B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-04C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-04D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-05A	Vial MeOH preserved	A	NA		2.1	Y	Absent		HOLD-8260HLW(14)
L2021006-05B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-05C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-05D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		HOLD-WETCHEM()
L2021006-06A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-06B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-06C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)

**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2021006-06D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-07A	Vial MeOH preserved	A	NA		2.1	Y	Absent		HOLD-8260HLW(14)
L2021006-07B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-07C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-07D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		HOLD-WETCHEM()
L2021006-08A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-08B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-08C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-08D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-09A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-09B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-09C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-09D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-10A	Vial MeOH preserved	A	NA		2.1	Y	Absent		HOLD-8260HLW(14)
L2021006-10B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-10C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-10D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		HOLD-WETCHEM()
L2021006-11A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-11B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-11C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-11D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-12A	Vial MeOH preserved	A	NA		2.1	Y	Absent		HOLD-8260HLW(14)
L2021006-12B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-12C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	HOLD-8260HLW(14)
L2021006-12D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		HOLD-WETCHEM()
L2021006-13A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-13A1	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-13A2	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)



**Project Name:** MINMILT**Lab Number:** L2021006**Project Number:** MIN2002**Report Date:** 05/29/20**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2021006-13B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-13B1	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-13B2	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-13C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-13C1	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-13C2	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-13D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-13D1	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-13D2	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)
L2021006-14A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L2021006-14B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L2021006-14C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L2021006-15A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L2021006-15B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260(14)
L2021006-16A	Vial MeOH preserved	A	NA		2.1	Y	Absent		NYTCL-8260HLW(14)
L2021006-16B	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-16C	Vial water preserved	A	NA		2.1	Y	Absent	22-MAY-20 00:48	NYTCL-8260HLW(14)
L2021006-16D	Plastic 2oz unpreserved for TS	A	NA		2.1	Y	Absent		TS(7)

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

## 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:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

- 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. 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.
- 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

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



**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

**Data Qualifiers**

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

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021006  
**Report Date:** 05/29/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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 17

Published Date: 4/28/2020 9:42:21 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, Naphthalene**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, NO<sub>2</sub>, NO<sub>3</sub>.**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.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, 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.****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

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

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

1 of 2

Date Rec'd  
in Lab

5 | 21 | 20

ALPHA Job #

62021056

Project Name: Min/Milt  
Project Location: 540 Smith Street, Farmingdale  
Project # MIN2002

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

☒ Same as Client Info

Client: PWG-C  
Address: 630 Johnson Ave  
Bohemia, NY 11716  
Phone: 631-589-6353  
Fax:  
Email: RBykov@pwgcsser.com

(Use Project name as Project #) ☐

Project Manager: Regina Bykov

ALPHAQuote #: \_\_\_\_\_

<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	

Please identify below location of applicable disposal facilities.

Disposal Facility:

☐ NJ ☐ NY

☐ Other:

These samples have been previously analyzed by Alpha ☐

Also email to: [martinn@plwgrosser.com](mailto:martinn@plwgrosser.com)

## Please specify Metals or TAL.

PCF
TCE
DCE
Any/ Chloride

- ☐ Done
- ☐ Lab to do
- Preservation*
- ☐ Lab to do

(Please Specify below)

Sample Specific Comments
<p>1. The sample is a 100% pure substance, as indicated by the single sharp peak in the mass spectrum.</p> <p>2. The molecular ion peak is observed at m/z 100, which corresponds to the molecular weight of the compound.</p> <p>3. The base peak is at m/z 43, which is a common fragment for many organic compounds.</p> <p>4. The fragmentation pattern suggests a branched alkane structure.</p> <p>5. The compound is likely 2-methylbutane, based on the mass spectral data.</p>

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
21006 -01	DB002 (90-95)	5-20-2020	0745	S	KE
-02	DB002 (100-105)		0935		
-03	DB002 (105-110)		0945		
-04	DB002 (110-115)		1040		
-05	DB002 (115-120)		1050		
-06	DB002 (120-125)		1100		
-07	DB002 (125-130)		1105		
-08	DB002 (135-140)		1130		
-09	DB002 (145-150)		1145		
-10	DB002 (150-155)		1225		

A = None  
B = HCl  
C = HNO<sub>3</sub>  
D = H<sub>2</sub>SO<sub>4</sub>  
E = NaOH  
F = MeOH  
G = NaHSO<sub>4</sub>  
H = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
K/E = Zn Ac/NaOH  
O = Other

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

Mansfield: Certification No: MA015

0	0	0	0
---	---	---	---

0	0	0	0
---	---	---	---

Date/Time

Date/Time

Pauline ATC	5/21/20	11:57
Pauline ATC	5/21/20	20:30
Pauline ATC	5/21/20	22:30

Red Duck App	5/2/20	9:25
Tommy's App	5/2/20	16:40
John RAC	5/2/20	20:30
Cur W	5/2/20	22:30

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







JOB: L2021318      REPORT STYLE: Data Usability Report  
0010: Alpha Analytical Report Cover Page - OK  
0015: Sample Cross Reference Summary - OK  
0060: Case Narrative - OK  
0100: Volatiles Cover Page - OK  
0110: Volatiles Sample Results - OK  
0120: Volatiles Method Blank Report - OK  
0130: Volatiles LCS Report - OK  
0150: Volatiles Matrix Spike Report - OK  
1180: Inorganics Cover Page - OK  
1200: Wet Chemistry Sample Results - OK  
1250: Wet Chemistry Duplicate Report - OK  
5100: Sample Receipt & Container Information Report - OK  
5200: Glossary - OK  
5400: References - OK

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## ANALYTICAL REPORT

Lab Number:	L2021318
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Regina Bykov
Phone:	(631) 589-8705
Project Name:	MINMILT
Project Number:	MIN2002
Report Date:	06/01/20

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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).

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



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2021318-01	DB003 (55-60)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 11:15	05/22/20
L2021318-02	DB003 (60-65)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 11:30	05/22/20
L2021318-03	DB003 (70-75)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 11:40	05/22/20
L2021318-04	DB003 (75-80)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 11:50	05/22/20
L2021318-05	DB003 (80-85)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 12:30	05/22/20
L2021318-06	DB003 (85-90)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 12:40	05/22/20
L2021318-07	DB003 (90-95)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 13:00	05/22/20
L2021318-08	DB003 (105-110)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 14:35	05/22/20
L2021318-09	DB003 (115-120)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 15:30	05/22/20
L2021318-10	DB003 (120-125)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 16:00	05/22/20
L2021318-11	DB003 (130-135)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 16:15	05/22/20
L2021318-12	DB003 (140-145)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 16:30	05/22/20
L2021318-13	DB003 (150-155)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 16:50	05/22/20
L2021318-14	DB003 (165-170)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 17:15	05/22/20
L2021318-15	DB003 (175-180)	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 17:30	05/22/20
L2021318-16	DUP002	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 00:00	05/22/20
L2021318-17	DUP003	SOIL	540 SMITH STREET, FARMINGDALE	05/21/20 00:00	05/22/20
L2021318-18	EB004	EQUIPMENT BLANK	540 SMITH STREET, FARMINGDALE	05/21/20 09:00	05/22/20
L2021318-19	TB004	TRIP BLANK (AQUEOUS)	540 SMITH STREET, FARMINGDALE	05/21/20 00:00	05/22/20

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

### 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.

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

**Case Narrative (continued)**

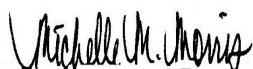
Report Submission

June 01, 2020: 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.

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: 06/01/20

# ORGANICS

# VOLATILES

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-01  
 Client ID: DB003 (55-60)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 11:15  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 13:27  
 Analyst: MV  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	0.35	J	ug/kg	0.61	0.24	1
Vinyl chloride	ND		ug/kg	1.2	0.41	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.17	1
Trichloroethene	ND		ug/kg	0.61	0.17	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.22	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.17	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	86		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	102		70-130



**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-03  
 Client ID: DB003 (70-75)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 11:40  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 13:55  
 Analyst: MV  
 Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	8.3		ug/kg	0.66	0.26	1
Vinyl chloride	ND		ug/kg	1.3	0.44	1
trans-1,2-Dichloroethene	ND		ug/kg	2.0	0.18	1
Trichloroethene	0.97		ug/kg	0.66	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	1.3	0.23	1
1,2-Dichloroethene, Total	ND		ug/kg	1.3	0.18	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	84		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	128		70-130
Dibromofluoromethane	100		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-05  
 Client ID: DB003 (80-85)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 12:30  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 17:35  
 Analyst: MV  
 Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	6500		ug/kg	31	12.	1
Vinyl chloride	ND		ug/kg	62	21.	1
trans-1,2-Dichloroethene	ND		ug/kg	93	8.5	1
Trichloroethene	ND		ug/kg	31	8.5	1
cis-1,2-Dichloroethene	ND		ug/kg	62	11.	1
1,2-Dichloroethene, Total	ND		ug/kg	62	8.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	86		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-06  
 Client ID: DB003 (85-90)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 12:40  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/31/20 11:18  
 Analyst: AD  
 Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	24000	E	ug/kg	30	12.	1
Vinyl chloride	ND		ug/kg	59	20.	1
trans-1,2-Dichloroethene	ND		ug/kg	89	8.1	1
Trichloroethene	ND		ug/kg	30	8.1	1
cis-1,2-Dichloroethene	ND		ug/kg	59	10.	1
1,2-Dichloroethene, Total	ND		ug/kg	59	8.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-06 D  
 Client ID: DB003 (85-90)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 12:40  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 05/30/20 18:03

Analyst: MV

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by EPA 5035 High - Westborough Lab

Tetrachloroethene	28000		ug/kg	120	46.	4
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	87		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	102		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-07  
 Client ID: DB003 (90-95)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 13:00  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 14:22  
 Analyst: MV  
 Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	57		ug/kg	0.56	0.22	1
Vinyl chloride	ND		ug/kg	1.1	0.37	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.15	1
Trichloroethene	ND		ug/kg	0.56	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.20	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	103		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-08  
 Client ID: DB003 (105-110)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 14:35  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 14:50  
 Analyst: MV  
 Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	8.8		ug/kg	0.54	0.21	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.15	1
Trichloroethene	ND		ug/kg	0.54	0.15	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	100		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-09  
 Client ID: DB003 (115-120)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 15:30  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 18:30  
 Analyst: MV  
 Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	4500		ug/kg	28	11.	1
Vinyl chloride	ND		ug/kg	57	19.	1
trans-1,2-Dichloroethene	ND		ug/kg	85	7.8	1
Trichloroethene	ND		ug/kg	28	7.8	1
cis-1,2-Dichloroethene	ND		ug/kg	57	9.9	1
1,2-Dichloroethene, Total	ND		ug/kg	57	7.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	86		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	101		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-10  
 Client ID: DB003 (120-125)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 16:00  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/31/20 11:44  
 Analyst: AD  
 Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Tetrachloroethene	28000	E	ug/kg	33	13.	1
Vinyl chloride	ND		ug/kg	66	22.	1
trans-1,2-Dichloroethene	ND		ug/kg	98	9.0	1
Trichloroethene	17	J	ug/kg	33	9.0	1
cis-1,2-Dichloroethene	ND		ug/kg	66	11.	1
1,2-Dichloroethene, Total	ND		ug/kg	66	9.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	100		70-130



**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-10 D  
 Client ID: DB003 (120-125)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 16:00  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 05/30/20 18:58

Analyst: MV

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by EPA 5035 High - Westborough Lab

Tetrachloroethene	30000		ug/kg	66	26.	2
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	86		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-11  
 Client ID: DB003 (130-135)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 16:15  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/31/20 10:26  
 Analyst: AD  
 Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	240		ug/kg	0.51	0.20	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	0.31	J	ug/kg	0.51	0.14	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	98		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-13  
 Client ID: DB003 (150-155)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 16:50  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 15:17  
 Analyst: MV  
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	24		ug/kg	0.58	0.23	1
Vinyl chloride	ND		ug/kg	1.2	0.39	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1
Trichloroethene	ND		ug/kg	0.58	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.20	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	101		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-15  
 Client ID: DB003 (175-180)  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 17:30  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 15:45  
 Analyst: MV  
 Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	1.5		ug/kg	0.45	0.18	1
Vinyl chloride	ND		ug/kg	0.90	0.30	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.12	1
Trichloroethene	13		ug/kg	0.45	0.12	1
cis-1,2-Dichloroethene	0.24	J	ug/kg	0.90	0.16	1
1,2-Dichloroethene, Total	0.24	J	ug/kg	0.90	0.12	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	103		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-16  
 Client ID: DUP002  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 00:00  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 16:12  
 Analyst: MV  
 Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	ND		ug/kg	0.58	0.23	1
Vinyl chloride	ND		ug/kg	1.2	0.39	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1
Trichloroethene	ND		ug/kg	0.58	0.16	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.20	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	104		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-17  
 Client ID: DUP003  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 00:00  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 16:40  
 Analyst: MV  
 Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Tetrachloroethene	1.8		ug/kg	0.52	0.20	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1
Trichloroethene	19		ug/kg	0.52	0.14	1
cis-1,2-Dichloroethene	0.29	J	ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	0.29	J	ug/kg	1.0	0.14	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	102		70-130

Project Name: MINMILT

Lab Number: L2021318

Project Number: MIN2002

Report Date: 06/01/20

## SAMPLE RESULTS

Lab ID: L2021318-18  
 Client ID: EB004  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 09:00  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Equipment Blank  
 Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 15:38  
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	118		70-130

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**SAMPLE RESULTS**

Lab ID: L2021318-19  
 Client ID: TB004  
 Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 00:00  
 Date Received: 05/22/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Trip Blank (Aqueous)

Analytical Method: 1,8260C

Analytical Date: 05/28/20 16:00

Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	124		70-130



**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/28/20 08:21  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 18-19 Batch: WG1375197-5					
Tetrachloroethene	ND		ug/l	0.50	0.18
Vinyl chloride	ND		ug/l	1.0	0.07
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	112		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8260C  
**Analytical Date:** 05/30/20 12:59  
**Analyst:** MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01,03,07-08,13,15-17 Batch: WG1376189-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	84		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/30/20 12:59  
 Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 05-06,09-10 Batch: WG1376190-5					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	84		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 05/31/20 10:00  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 11 Batch: WG1376312-5					
Tetrachloroethene	ND		ug/kg	0.50	0.20
Vinyl chloride	ND		ug/kg	1.0	0.34
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	99		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 05/31/20 10:00  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 06,10 Batch: WG1376313-5					
Tetrachloroethene	ND		ug/kg	25	9.8
Vinyl chloride	ND		ug/kg	50	17.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	99		70-130

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 18-19 Batch: WG1375197-3 WG1375197-4								
Tetrachloroethene	91		92		70-130	1		20
Vinyl chloride	100		100		55-140	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	100		100		70-130
Toluene-d8	95		98		70-130
4-Bromofluorobenzene	96		96		70-130
Dibromofluoromethane	102		104		70-130

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03,07-08,13,15-17 Batch: WG1376189-3 WG1376189-4								
Tetrachloroethene	117		114		70-130	3		30
Vinyl chloride	81		78		67-130	4		30
trans-1,2-Dichloroethene	114		112		70-130	2		30
Trichloroethene	108		108		70-130	0		30
cis-1,2-Dichloroethene	98		99		70-130	1		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	79		80		70-130
Toluene-d8	107		105		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	97		97		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 05-06,09-10 Batch: WG1376190-3 WG1376190-4								
Tetrachloroethene	117		114		70-130	3		30
Vinyl chloride	81		78		67-130	4		30
trans-1,2-Dichloroethene	114		112		70-130	2		30
Trichloroethene	108		108		70-130	0		30
cis-1,2-Dichloroethene	98		99		70-130	1		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	80		80		70-130
Toluene-d8	107		105		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	97		97		70-130



# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 11 Batch: WG1376312-3 WG1376312-4								
Tetrachloroethene	119		112		70-130	6		30
Vinyl chloride	103		92		67-130	11		30
trans-1,2-Dichloroethene	118		110		70-130	7		30
Trichloroethene	117		111		70-130	5		30
cis-1,2-Dichloroethene	117		110		70-130	6		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	98		97		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	98		99		70-130
Dibromofluoromethane	106		104		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 06,10 Batch: WG1376313-3 WG1376313-4								
Tetrachloroethene	119		112		70-130	6		30
Vinyl chloride	103		92		67-130	11		30
trans-1,2-Dichloroethene	118		110		70-130	7		30
Trichloroethene	117		111		70-130	5		30
cis-1,2-Dichloroethene	117		110		70-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		97		70-130
Toluene-d8	97		96		70-130
4-Bromofluorobenzene	98		99		70-130
Dibromofluoromethane	106		104		70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** MINMILT

**Project Number:** MIN2002

**Lab Number:** L2021318

**Report Date:** 06/01/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01,03,07-08,13,15-17 QC Batch ID: WG1376189-6 WG1376189-7 QC Sample: L2021318-15 Client ID: DB003 (175-180)												
Tetrachloroethene	1.5	96	91	93		140	117		70-130	44	Q	30
Vinyl chloride	ND	96	76	79		100	86		67-130	31	Q	30
trans-1,2-Dichloroethene	ND	96	100	106		150	120		70-130	35	Q	30
Trichloroethene	13	96	110	99		170	128		70-130	43	Q	30
cis-1,2-Dichloroethene	0.24J	96	86	89		130	104		70-130	38	Q	30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	85		85		70-130
4-Bromofluorobenzene	95		96		70-130
Dibromofluoromethane	99		100		70-130
Toluene-d8	102		103		70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** MINMILT

**Project Number:** MIN2002

**Lab Number:** L2021318

**Report Date:** 06/01/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Client ID: DB003 (80-85)												
Associated sample(s): 05-06,09-10				QC Batch ID: WG1376190-6 WG1376190-7 QC Sample: L2021318-05								
Tetrachloroethene	6500	6200	13000	103		14000	119		70-130	7		30
Vinyl chloride	ND	6200	4800	77		5300	86		67-130	11		30
trans-1,2-Dichloroethene	ND	6200	7300	118		8300	134	Q	70-130	13		30
Trichloroethene	ND	6200	6900	111		7800	126		70-130	12		30
cis-1,2-Dichloroethene	ND	6200	6600	106		7300	117		70-130	10		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	81		83		70-130
4-Bromofluorobenzene	95		96		70-130
Dibromofluoromethane	96		98		70-130
Toluene-d8	103		102		70-130

# **INORGANICS & MISCELLANEOUS**

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

**SAMPLE RESULTS**

Lab ID: L2021318-01

Client ID: DB003 (55-60)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 11:15

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.2		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

**SAMPLE RESULTS**

Lab ID: L2021318-03

Client ID: DB003 (70-75)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 11:40

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.1		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021318**Report Date:** 06/01/20**SAMPLE RESULTS****Lab ID:** L2021318-05**Client ID:** DB003 (80-85)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/21/20 12:30**Date Received:** 05/22/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.5		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI





Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

## SAMPLE RESULTS

Lab ID: L2021318-06

Client ID: DB003 (85-90)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 12:40

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.0		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

## SAMPLE RESULTS

Lab ID: L2021318-07

Client ID: DB003 (90-95)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 13:00

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.8		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

## SAMPLE RESULTS

Lab ID: L2021318-08

Client ID: DB003 (105-110)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 14:35

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.7		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021318**Report Date:** 06/01/20**SAMPLE RESULTS****Lab ID:** L2021318-09**Client ID:** DB003 (115-120)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/21/20 15:30**Date Received:** 05/22/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.7		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

**SAMPLE RESULTS**

Lab ID: L2021318-10

Client ID: DB003 (120-125)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 16:00

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.7		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

**SAMPLE RESULTS**

Lab ID: L2021318-11

Client ID: DB003 (130-135)

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 16:15

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.7		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021318**Report Date:** 06/01/20**SAMPLE RESULTS****Lab ID:** L2021318-13**Client ID:** DB003 (150-155)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/21/20 16:50**Date Received:** 05/22/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.8		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021318**Report Date:** 06/01/20**SAMPLE RESULTS****Lab ID:** L2021318-15**Client ID:** DB003 (175-180)**Sample Location:** 540 SMITH STREET, FARMINGDALE**Date Collected:** 05/21/20 17:30**Date Received:** 05/22/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.5		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI





Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

## SAMPLE RESULTS

Lab ID: L2021318-16

Client ID: DUP002

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 00:00

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.6		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2021318

Report Date: 06/01/20

## SAMPLE RESULTS

Lab ID: L2021318-17

Client ID: DUP003

Sample Location: 540 SMITH STREET, FARMINGDALE

Date Collected: 05/21/20 00:00

Date Received: 05/22/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.4		%	0.100	NA	1	-	05/23/20 08:55	121,2540G	RI



**Lab Duplicate Analysis**  
*Batch Quality Control***Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2021318**Report Date:** 06/01/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01,03,05-11,13,15-17 QC Batch ID: WG1373939-1 QC Sample: L2021318-05 Client ID: DB003 (80-85)						
Solids, Total	81.5	81.4	%	0		20

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Serial\_No:** 06012013:14  
**Lab Number:** L2021318  
**Report Date:** 06/01/20

### 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(*)
L2021318-01A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-01B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-01C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-01D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-02A	Vial MeOH preserved	A	NA		2.7	Y	Absent		HOLD-8260HLW(14)
L2021318-02B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-02C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-02D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		HOLD-WETCHEM()
L2021318-03A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-03B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-03C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-03D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-04A	Vial MeOH preserved	A	NA		2.7	Y	Absent		HOLD-8260HLW(14)
L2021318-04B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-04C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-04D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		HOLD-WETCHEM()
L2021318-05A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-05A1	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-05A2	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-05B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-05B1	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-05B2	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-05C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2021318-05C1	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-05C2	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-05D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-05D1	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-05D2	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-06A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-06B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-06C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-06D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-07A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-07B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-07C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-07D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-08A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-08B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-08C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-08D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-09A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-09B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-09C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-09D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-10A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-10B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-10C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-10D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-11A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-11B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-11C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)

**Project Name:** MINMILT**Lab Number:** L2021318**Project Number:** MIN2002**Report Date:** 06/01/20**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2021318-11D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-12A	Vial MeOH preserved	A	NA		2.7	Y	Absent		HOLD-8260HLW(14)
L2021318-12B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-12C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-12D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		HOLD-WETCHEM()
L2021318-13A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-13B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-13C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-13D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-14A	Vial MeOH preserved	A	NA		2.7	Y	Absent		HOLD-8260HLW(14)
L2021318-14B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-14C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	HOLD-8260HLW(14)
L2021318-14D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		HOLD-WETCHEM()
L2021318-15A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-15A1	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-15A2	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-15B	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-15B1	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-15B2	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-15C	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-15C1	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-15C2	Vial water preserved	A	NA		2.7	Y	Absent	23-MAY-20 01:57	NYTCL-8260HLW(14)
L2021318-15D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-15D1	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-15D2	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-16A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-16B	Vial water preserved	A	NA		2.7	Y	Absent	22-MAY-20 23:45	NYTCL-8260HLW(14)
L2021318-16C	Vial water preserved	A	NA		2.7	Y	Absent	22-MAY-20 23:45	NYTCL-8260HLW(14)

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**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2021318-16D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-17A	Vial MeOH preserved	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-17A1	Vial MeOH preserved split	A	NA		2.7	Y	Absent		NYTCL-8260HLW(14)
L2021318-17B	Vial water preserved	A	NA		2.7	Y	Absent	22-MAY-20 23:45	NYTCL-8260HLW(14)
L2021318-17C	Vial water preserved	A	NA		2.7	Y	Absent	22-MAY-20 23:45	NYTCL-8260HLW(14)
L2021318-17D	Plastic 2oz unpreserved for TS	A	NA		2.7	Y	Absent		TS(7)
L2021318-18A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260(14)
L2021318-18B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260(14)
L2021318-18C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260(14)
L2021318-19A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260(14)
L2021318-19B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260(14)

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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.
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





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- 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. 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.
- 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

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



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**Data Qualifiers**

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

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2021318  
**Report Date:** 06/01/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.

**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B


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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, 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.****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**


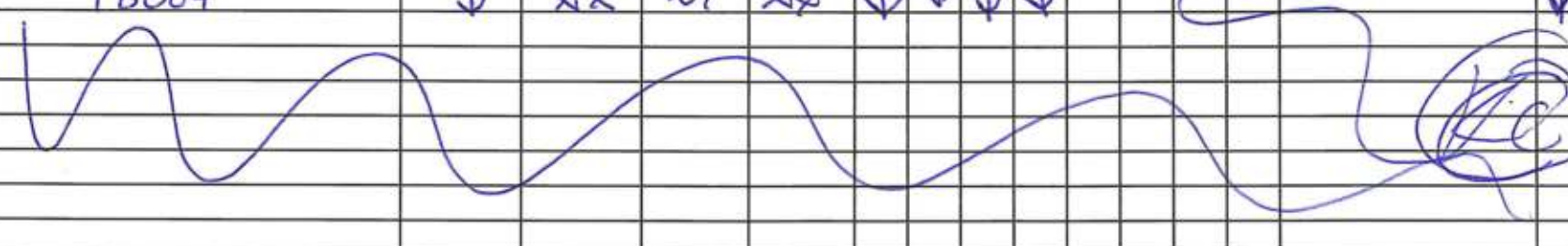
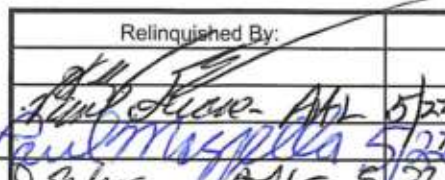
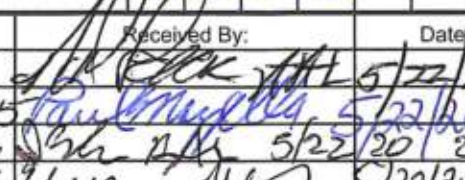
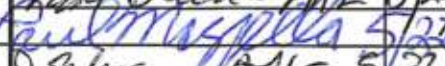
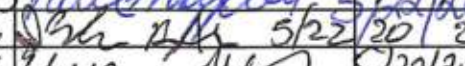


For a complete listing of analytes and methods, please contact your Alpha Project Manager.

[illegible]



 <b>NEW YORK CHAIN OF CUSTODY</b> Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		<b>Service Centers</b> Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <b>2 of 3</b>		Date Rec'd in Lab <b>5/22/20</b>		ALPHA Job # <b>L2021318</b>	
<b>Client Information</b> Client: <b>PWGC</b> Address: <b>630 Johnson Ave Bohemia, NY 11716</b> Phone: <b>631-589-6353</b> Fax: <b>[Redacted]</b> Email: <b>RBykov@pugrosser.com</b>		<b>Project Information</b> Project Name: <b>Min M.I.T</b> Project Location: <b>540 Smith Street, Farmingdale</b> Project # <b>MIN2002</b> (Use Project name as Project #) <input type="checkbox"/>		<b>Deliverables</b> <input type="checkbox"/> ASP-A <input type="checkbox"/> EQulS (1 File) <input type="checkbox"/> Other		<input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQulS (4 File) <input type="checkbox"/> Other		<b>Billing Information</b> <input checked="" type="checkbox"/> Same as Client Info PO #	
<b>Regulatory Requirement</b> <input type="checkbox"/> NY TOGS <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		<input type="checkbox"/> NY Part 375 <input type="checkbox"/> NY CP-51 <input type="checkbox"/> Other		<b>Disposal Site Information</b> Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:		<b>Turn-Around Time</b> Standard <input checked="" type="checkbox"/> Rush (only if pre approved) <input type="checkbox"/> Due Date: # of Days:		<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)	
These samples have been previously analyzed by Alpha <input type="checkbox"/>		<b>Other project specific requirements/comments:</b> <b>Also email to: martinm@pugrosser.com</b>		<b>ANALYSIS</b>		<b>Sample Specific Comments</b>		<b>Total Bottles</b>	
<b>ALPHA Lab ID (Lab Use Only)</b>		<b>Sample ID</b>		<b>Collection</b> Date Time		<b>Sample Matrix</b>		<b>Sampler's Initials</b>	
<b>Preservative Code:</b> A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> K/E = Zn Ac/NaOH O = Other		<b>Container Code</b> 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		<b>Container Type</b>		<b>Preservative</b>	
Form No: 01-25 HC (rev. 30-Sept-2013)		<b>Relinquished By:</b> <b>Paul Magella</b>		<b>Date/Time</b> <b>5/22/20 13:15</b>		<b>Received By:</b> <b>Paul Magella</b>		<b>Date/Time</b> <b>5/22/20 10:30</b>	
Form No: 01-25 HC (rev. 30-Sept-2013)		<b>Relinquished By:</b> <b>Paul Magella</b>		<b>Date/Time</b> <b>5/22/20 20:00</b>		<b>Received By:</b> <b>Paul Magella</b>		<b>Date/Time</b> <b>5/22/20 10:40</b>	
Form No: 01-25 HC (rev. 30-Sept-2013)		<b>Relinquished By:</b> <b>Paul Magella</b>		<b>Date/Time</b> <b>5/22/20 21:45</b>		<b>Received By:</b> <b>Paul Magella</b>		<b>Date/Time</b> <b>5/22/20 21:45</b>	



 <b>NEW YORK CHAIN OF CUSTODY</b> Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		<b>Service Centers</b> Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page <b>3 of 3</b>		Date Rec'd in Lab <b>5/22/20</b>		ALPHA Job # <b>L2021318</b>																																																																																																																																																																																																															
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<table border="1"> <thead> <tr> <th rowspan="2">ALPHA Lab ID (Lab Use Only)</th> <th rowspan="2">Sample ID</th> <th colspan="2">Collection</th> <th rowspan="2">Sample Matrix</th> <th rowspan="2">Sampler's Initials</th> <th rowspan="2">PCE</th> <th rowspan="2">TCE</th> <th rowspan="2">DCE</th> <th rowspan="2">Vinyl Chloride</th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> <th rowspan="2"></th> </tr> <tr> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>1318-17</td> <td>DUP003</td> <td>5-21-2020</td> <td>XX</td> <td>S</td> <td>KE</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>-18</td> <td>EB004</td> <td></td> <td>0900</td> <td>WT</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>-19</td> <td>TB004</td> <td></td> <td>XX</td> <td>WT</td> <td>XX</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		ALPHA Lab ID (Lab Use Only)	Sample ID	Collection			Sample Matrix	Sampler's Initials	PCE	TCE	DCE	Vinyl Chloride											Date	Time	1318-17	DUP003	5-21-2020	XX	S	KE	X	X	X	X												-18	EB004		0900	WT																	-19	TB004		XX	WT	XX																																																																																																																																														<b>Sample Specific Comments</b> 	
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Relinquished By: 		Date/Time: <b>5/22/20 13:15</b>		Received By: 		Date/Time: <b>5/22/20 16:40</b>		Relinquished By: 		Date/Time: <b>5/22/20 20:00</b>		Received By: 		Date/Time: <b>5/22/20 20:00</b>		Relinquished By: 		Date/Time: <b>5/22/20 21:45</b>		Received By: 		Date/Time: <b>5/22/20 21:45</b>																																																																																																																																																																																																	



## APPENDIX C

### WASTE CHARATIZATION ANALYTICAL DATA





## ANALYTICAL REPORT

Lab Number:	L2025985
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Regina Bykov
Phone:	(631) 589-8705
Project Name:	MINMILT
Project Number:	MIN2002
Report Date:	06/26/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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).

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



**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2025985-01	WC0001 (S)	SOIL	540 SMITH STREET, FARMINGDALE, NY	06/19/20 14:00	06/19/20
L2025985-02	WC0001 (L)	WATER	540 SMITH STREET, FARMINGDALE, NY	06/19/20 14:15	06/19/20

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### 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.

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### 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

The WG1385834-5 Method Blank, associated with L2025985-01D2, has a concentration above the reporting limit for Naphthalene. Since the sample was non-detect to the RL for this target analyte, no further actions were taken. The results of the original analysis are reported.

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:

*Tiffani Morrissey* - Tiffani Morrissey

Title: Technical Director/Representative

Date: 06/26/20

# ORGANICS

# **VOLATILES**

Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-01 D2  
 Client ID: WC0001 (S)  
 Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:00  
 Date Received: 06/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8260C  
 Analytical Date: 06/25/20 11:33  
 Analyst: KJD  
 Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Methylene chloride	ND		ug/kg	5900	2700	20
1,1-Dichloroethane	ND		ug/kg	1200	170	20
Chloroform	ND		ug/kg	1800	160	20
Carbon tetrachloride	ND		ug/kg	1200	270	20
1,2-Dichloropropane	ND		ug/kg	1200	150	20
Dibromochloromethane	ND		ug/kg	1200	160	20
1,1,2-Trichloroethane	ND		ug/kg	1200	320	20
Tetrachloroethene	490000	E	ug/kg	590	230	20
Chlorobenzene	ND		ug/kg	590	150	20
Trichlorofluoromethane	ND		ug/kg	4700	820	20
1,2-Dichloroethane	ND		ug/kg	1200	300	20
1,1,1-Trichloroethane	ND		ug/kg	590	200	20
Bromodichloromethane	ND		ug/kg	590	130	20
trans-1,3-Dichloropropene	ND		ug/kg	1200	320	20
cis-1,3-Dichloropropene	ND		ug/kg	590	190	20
1,3-Dichloropropene, Total	ND		ug/kg	590	190	20
1,1-Dichloropropene	ND		ug/kg	590	190	20
Bromoform	ND		ug/kg	4700	290	20
1,1,2,2-Tetrachloroethane	ND		ug/kg	590	200	20
Benzene	ND		ug/kg	590	200	20
Toluene	ND		ug/kg	1200	640	20
Ethylbenzene	ND		ug/kg	1200	170	20
Chloromethane	ND		ug/kg	4700	1100	20
Bromomethane	ND		ug/kg	2400	690	20
Vinyl chloride	ND		ug/kg	1200	400	20
Chloroethane	ND		ug/kg	2400	530	20
1,1-Dichloroethene	ND		ug/kg	1200	280	20
trans-1,2-Dichloroethene	ND		ug/kg	1800	160	20

Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-01 D2  
 Client ID: WC0001 (S)  
 Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:00  
 Date Received: 06/19/20  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
Trichloroethene	280	J	ug/kg	590	160	20
1,2-Dichlorobenzene	ND		ug/kg	2400	170	20
1,3-Dichlorobenzene	ND		ug/kg	2400	180	20
1,4-Dichlorobenzene	ND		ug/kg	2400	200	20
Methyl tert butyl ether	ND		ug/kg	2400	240	20
p/m-Xylene	ND		ug/kg	2400	660	20
o-Xylene	ND		ug/kg	1200	340	20
Xylenes, Total	ND		ug/kg	1200	340	20
cis-1,2-Dichloroethene	ND		ug/kg	1200	210	20
1,2-Dichloroethene, Total	ND		ug/kg	1200	160	20
Dibromomethane	ND		ug/kg	2400	280	20
Styrene	ND		ug/kg	1200	230	20
Dichlorodifluoromethane	ND		ug/kg	12000	1100	20
Acetone	ND		ug/kg	12000	5700	20
Carbon disulfide	ND		ug/kg	12000	5400	20
2-Butanone	ND		ug/kg	12000	2600	20
Vinyl acetate	ND		ug/kg	12000	2500	20
4-Methyl-2-pentanone	ND		ug/kg	12000	1500	20
1,2,3-Trichloropropane	ND		ug/kg	2400	150	20
2-Hexanone	ND		ug/kg	12000	1400	20
Bromochloromethane	ND		ug/kg	2400	240	20
2,2-Dichloropropane	ND		ug/kg	2400	240	20
1,2-Dibromoethane	ND		ug/kg	1200	330	20
1,3-Dichloropropane	ND		ug/kg	2400	200	20
1,1,1,2-Tetrachloroethane	ND		ug/kg	590	160	20
Bromobenzene	ND		ug/kg	2400	170	20
n-Butylbenzene	ND		ug/kg	1200	200	20
sec-Butylbenzene	ND		ug/kg	1200	170	20
tert-Butylbenzene	ND		ug/kg	2400	140	20
o-Chlorotoluene	ND		ug/kg	2400	220	20
p-Chlorotoluene	ND		ug/kg	2400	130	20
1,2-Dibromo-3-chloropropane	ND		ug/kg	3500	1200	20
Hexachlorobutadiene	ND		ug/kg	4700	200	20
Isopropylbenzene	ND		ug/kg	1200	130	20
p-Isopropyltoluene	ND		ug/kg	1200	130	20
Naphthalene	ND		ug/kg	4700	770	20
Acrylonitrile	ND		ug/kg	4700	1400	20



Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-01 D2  
 Client ID: WC0001 (S)  
 Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:00  
 Date Received: 06/19/20  
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 High - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1200	200	20
1,2,3-Trichlorobenzene	ND		ug/kg	2400	380	20
1,2,4-Trichlorobenzene	ND		ug/kg	2400	320	20
1,3,5-Trimethylbenzene	ND		ug/kg	2400	230	20
1,2,4-Trimethylbenzene	ND		ug/kg	2400	400	20
1,4-Dioxane	ND		ug/kg	95000	42000	20
p-Diethylbenzene	ND		ug/kg	2400	210	20
p-Ethyltoluene	ND		ug/kg	2400	450	20
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2400	220	20
Ethyl ether	ND		ug/kg	2400	400	20
trans-1,4-Dichloro-2-butene	ND		ug/kg	5900	1700	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	95		70-130

**Project Name:** MINMILT**Lab Number:** L2025985**Project Number:** MIN2002**Report Date:** 06/26/20**SAMPLE RESULTS**

Lab ID: L2025985-01 D  
 Client ID: WC0001 (S)  
 Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:00  
 Date Received: 06/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 06/25/20 01:55

Analyst: JC

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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## Volatile Organics by EPA 5035 High - Westborough Lab

Tetrachloroethene	500000		ug/kg	5900	2300	200
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	106		70-130

Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-02  
 Client ID: WC0001 (L)  
 Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:15  
 Date Received: 06/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8260C  
 Analytical Date: 06/24/20 12:58  
 Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	150		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
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	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

Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-02

Date Collected: 06/19/20 14:15

Client ID: WC0001 (L)

Date Received: 06/19/20

Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	1.4		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
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
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	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
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-02

Date Collected: 06/19/20 14:15

Client ID: WC0001 (L)

Date Received: 06/19/20

Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

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

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 06/24/20 08:17  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1385822-5					
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
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
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

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 06/24/20 08:17  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1385822-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
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
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
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
Vinyl acetate	ND		ug/l	5.0	1.0
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
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8260C  
**Analytical Date:** 06/24/20 08:17  
**Analyst:** PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1385822-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	97		70-130



**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 06/24/20 18:36  
 Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1385834-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 06/24/20 18:36  
 Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1385834-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 06/24/20 18:36  
 Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 01 Batch: WG1385834-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	290		ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	106		70-130

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8260C  
 Analytical Date: 06/25/20 06:47  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1385860-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
1,3-Dichloropropene, Total	ND		ug/kg	25	7.9
1,1-Dichloropropene	ND		ug/kg	25	8.0
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C  
 Analytical Date: 06/25/20 06:47  
 Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1385860-5					
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
Xylenes, Total	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
1,2-Dichloroethene, Total	ND		ug/kg	50	6.8
Dibromomethane	ND		ug/kg	100	12.
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
Vinyl acetate	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
1,2,3-Trichloropropane	ND		ug/kg	100	6.4
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
2,2-Dichloropropane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
1,3-Dichloropropane	ND		ug/kg	100	8.4
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	6.6
Bromobenzene	ND		ug/kg	100	7.2
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
tert-Butylbenzene	ND		ug/kg	100	5.9
o-Chlorotoluene	ND		ug/kg	100	9.6

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8260C  
**Analytical Date:** 06/25/20 06:47  
**Analyst:** MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1385860-5					
p-Chlorotoluene	ND		ug/kg	100	5.4
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Hexachlorobutadiene	ND		ug/kg	200	8.4
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
Naphthalene	33	J	ug/kg	200	32.
Acrylonitrile	ND		ug/kg	200	58.
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
1,4-Dioxane	ND		ug/kg	4000	1800
p-Diethylbenzene	ND		ug/kg	100	8.8
p-Ethyltoluene	ND		ug/kg	100	19.
1,2,4,5-Tetramethylbenzene	ND		ug/kg	100	9.6
Ethyl ether	ND		ug/kg	100	17.
trans-1,4-Dichloro-2-butene	ND		ug/kg	250	71.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	93		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1385822-3 WG1385822-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	100		110		70-130	10		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	100		110		63-132	10		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	97		99		63-130	2		20
1,1,2-Trichloroethane	98		99		70-130	1		20
Tetrachloroethene	100		110		70-130	10		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	95		97		54-136	2		20
1,1,1,2-Tetrachloroethane	90		94		67-130	4		20
Benzene	100		110		70-130	10		20
Toluene	100		110		70-130	10		20
Ethylbenzene	97		100		70-130	3		20
Chloromethane	91		98		64-130	7		20
Bromomethane	110		110		39-139	0		20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1385822-3 WG1385822-4								
Vinyl chloride	96		100		55-140	4		20
Chloroethane	100		110		55-138	10		20
1,1-Dichloroethene	100		110		61-145	10		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	97		100		70-130	3		20
1,2-Dichlorobenzene	98		100		70-130	2		20
1,3-Dichlorobenzene	99		100		70-130	1		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	99		100		63-130	1		20
p/m-Xylene	100		105		70-130	5		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	86		90		64-130	5		20
Acrylonitrile	95		93		70-130	2		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	90		89		36-147	1		20
Acetone	87		85		58-148	2		20
Carbon disulfide	100		110		51-130	10		20
2-Butanone	86		99		63-138	14		20
Vinyl acetate	98		98		70-130	0		20
4-Methyl-2-pentanone	88		90		59-130	2		20
2-Hexanone	90		88		57-130	2		20



# Lab Control Sample Analysis

## Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1385822-3 WG1385822-4								
Bromochloromethane	110		110		70-130	0		20
2,2-Dichloropropane	120		130		63-133	8		20
1,2-Dibromoethane	97		98		70-130	1		20
1,3-Dichloropropane	98		100		70-130	2		20
1,1,1,2-Tetrachloroethane	100		100		64-130	0		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	93		100		53-136	7		20
sec-Butylbenzene	94		100		70-130	6		20
tert-Butylbenzene	96		100		70-130	4		20
o-Chlorotoluene	96		100		70-130	4		20
p-Chlorotoluene	97		100		70-130	3		20
1,2-Dibromo-3-chloropropane	89		92		41-144	3		20
Hexachlorobutadiene	90		100		63-130	11		20
Isopropylbenzene	97		100		70-130	3		20
p-Isopropyltoluene	95		100		70-130	5		20
Naphthalene	81		90		70-130	11		20
n-Propylbenzene	95		100		69-130	5		20
1,2,3-Trichlorobenzene	88		98		70-130	11		20
1,2,4-Trichlorobenzene	93		100		70-130	7		20
1,3,5-Trimethylbenzene	97		100		64-130	3		20
1,2,4-Trimethylbenzene	97		100		70-130	3		20
1,4-Dioxane	86		96		56-162	11		20
p-Diethylbenzene	95		100		70-130	5		20

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1385822-3 WG1385822-4								
p-Ethyltoluene	96		100		70-130	4		20
1,2,4,5-Tetramethylbenzene	96		100		70-130	4		20
Ethyl ether	100		100		59-134	0		20
trans-1,4-Dichloro-2-butene	100		95		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		93		70-130
Toluene-d8	99		100		70-130
4-Bromofluorobenzene	98		100		70-130
Dibromofluoromethane	101		100		70-130

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1385834-3 WG1385834-4								
Methylene chloride	94		91		70-130	3		30
1,1-Dichloroethane	99		100		70-130	1		30
Chloroform	109		109		70-130	0		30
Carbon tetrachloride	123		122		70-130	1		30
1,2-Dichloropropane	100		100		70-130	0		30
Dibromochloromethane	117		119		70-130	2		30
1,1,2-Trichloroethane	98		98		70-130	0		30
Tetrachloroethene	120		125		70-130	4		30
Chlorobenzene	101		101		70-130	0		30
Trichlorofluoromethane	129		124		70-139	4		30
1,2-Dichloroethane	110		109		70-130	1		30
1,1,1-Trichloroethane	119		119		70-130	0		30
Bromodichloromethane	119		118		70-130	1		30
trans-1,3-Dichloropropene	102		104		70-130	2		30
cis-1,3-Dichloropropene	118		115		70-130	3		30
1,1-Dichloropropene	111		111		70-130	0		30
Bromoform	109		105		70-130	4		30
1,1,2,2-Tetrachloroethane	85		80		70-130	6		30
Benzene	108		107		70-130	1		30
Toluene	96		101		70-130	5		30
Ethylbenzene	98		99		70-130	1		30
Chloromethane	74		70		52-130	6		30
Bromomethane	134		123		57-147	9		30

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1385834-3 WG1385834-4								
Vinyl chloride	94		91		67-130	3		30
Chloroethane	131		125		50-151	5		30
1,1-Dichloroethene	110		105		65-135	5		30
trans-1,2-Dichloroethene	113		112		70-130	1		30
Trichloroethene	116		116		70-130	0		30
1,2-Dichlorobenzene	97		96		70-130	1		30
1,3-Dichlorobenzene	97		98		70-130	1		30
1,4-Dichlorobenzene	96		94		70-130	2		30
Methyl tert butyl ether	106		101		66-130	5		30
p/m-Xylene	105		105		70-130	0		30
o-Xylene	106		106		70-130	0		30
cis-1,2-Dichloroethene	115		114		70-130	1		30
Dibromomethane	122		119		70-130	2		30
Styrene	110		109		70-130	1		30
Dichlorodifluoromethane	82		77		30-146	6		30
Acetone	84		76		54-140	10		30
Carbon disulfide	101		97		59-130	4		30
2-Butanone	75		67	Q	70-130	11		30
Vinyl acetate	85		83		70-130	2		30
4-Methyl-2-pentanone	81		78		70-130	4		30
1,2,3-Trichloropropane	83		79		68-130	5		30
2-Hexanone	75		68	Q	70-130	10		30
Bromochloromethane	134	Q	133	Q	70-130	1		30

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1385834-3 WG1385834-4								
2,2-Dichloropropane	113		112		70-130	1		30
1,2-Dibromoethane	111		110		70-130	1		30
1,3-Dichloropropane	95		94		69-130	1		30
1,1,1,2-Tetrachloroethane	112		111		70-130	1		30
Bromobenzene	97		96		70-130	1		30
n-Butylbenzene	87		90		70-130	3		30
sec-Butylbenzene	90		91		70-130	1		30
tert-Butylbenzene	94		94		70-130	0		30
o-Chlorotoluene	86		71		70-130	19		30
p-Chlorotoluene	85		85		70-130	0		30
1,2-Dibromo-3-chloropropane	94		88		68-130	7		30
Hexachlorobutadiene	99		99		67-130	0		30
Isopropylbenzene	91		92		70-130	1		30
p-Isopropyltoluene	96		96		70-130	0		30
Naphthalene	111		103		70-130	7		30
Acrylonitrile	82		76		70-130	8		30
n-Propylbenzene	86		87		70-130	1		30
1,2,3-Trichlorobenzene	101		101		70-130	0		30
1,2,4-Trichlorobenzene	101		102		70-130	1		30
1,3,5-Trimethylbenzene	91		92		70-130	1		30
1,2,4-Trimethylbenzene	92		92		70-130	0		30
1,4-Dioxane	115		104		65-136	10		30
p-Diethylbenzene	95		96		70-130	1		30

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 01 Batch: WG1385834-3 WG1385834-4								
p-Ethyltoluene	90		90		70-130	0		30
1,2,4,5-Tetramethylbenzene	94		95		70-130	1		30
Ethyl ether	102		96		67-130	6		30
trans-1,4-Dichloro-2-butene	74		69	Q	70-130	7		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
1,2-Dichloroethane-d4	98		97		70-130
Toluene-d8	89		94		70-130
4-Bromofluorobenzene	85		85		70-130
Dibromofluoromethane	109		108		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

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: WG1385860-3 WG1385860-4								
Methylene chloride	100		96		70-130	4		30
1,1-Dichloroethane	94		92		70-130	2		30
Chloroform	90		89		70-130	1		30
Carbon tetrachloride	92		90		70-130	2		30
1,2-Dichloropropane	90		90		70-130	0		30
Dibromochloromethane	89		90		70-130	1		30
1,1,2-Trichloroethane	94		96		70-130	2		30
Tetrachloroethene	111		110		70-130	1		30
Chlorobenzene	91		91		70-130	0		30
Trichlorofluoromethane	96		92		70-139	4		30
1,2-Dichloroethane	90		92		70-130	2		30
1,1,1-Trichloroethane	104		102		70-130	2		30
Bromodichloromethane	86		88		70-130	2		30
trans-1,3-Dichloropropene	97		98		70-130	1		30
cis-1,3-Dichloropropene	90		91		70-130	1		30
1,1-Dichloropropene	102		101		70-130	1		30
Bromoform	88		90		70-130	2		30
1,1,2,2-Tetrachloroethane	88		91		70-130	3		30
Benzene	91		90		70-130	1		30
Toluene	100		99		70-130	1		30
Ethylbenzene	102		101		70-130	1		30
Chloromethane	92		84		52-130	9		30
Bromomethane	98		93		57-147	5		30

# **Lab Control Sample Analysis** **Batch Quality Control**

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

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: WG1385860-3 WG1385860-4								
Vinyl chloride	100		94		67-130	6		30
Chloroethane	93		88		50-151	6		30
1,1-Dichloroethene	106		102		65-135	4		30
trans-1,2-Dichloroethene	100		97		70-130	3		30
Trichloroethene	96		95		70-130	1		30
1,2-Dichlorobenzene	95		94		70-130	1		30
1,3-Dichlorobenzene	95		95		70-130	0		30
1,4-Dichlorobenzene	94		93		70-130	1		30
Methyl tert butyl ether	91		92		66-130	1		30
p/m-Xylene	99		98		70-130	1		30
o-Xylene	95		94		70-130	1		30
cis-1,2-Dichloroethene	94		93		70-130	1		30
Dibromomethane	90		92		70-130	2		30
Styrene	96		95		70-130	1		30
Dichlorodifluoromethane	96		90		30-146	6		30
Acetone	72		72		54-140	0		30
Carbon disulfide	90		86		59-130	5		30
2-Butanone	90		92		70-130	2		30
Vinyl acetate	103		105		70-130	2		30
4-Methyl-2-pentanone	92		96		70-130	4		30
1,2,3-Trichloropropane	92		94		68-130	2		30
2-Hexanone	85		88		70-130	3		30
Bromochloromethane	89		89		70-130	0		30



# Lab Control Sample Analysis

## Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

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: WG1385860-3 WG1385860-4								
2,2-Dichloropropane	103		99		70-130	4		30
1,2-Dibromoethane	94		97		70-130	3		30
1,3-Dichloropropane	95		97		69-130	2		30
1,1,1,2-Tetrachloroethane	90		90		70-130	0		30
Bromobenzene	89		90		70-130	1		30
n-Butylbenzene	104		103		70-130	1		30
sec-Butylbenzene	103		101		70-130	2		30
tert-Butylbenzene	99		98		70-130	1		30
o-Chlorotoluene	96		95		70-130	1		30
p-Chlorotoluene	96		95		70-130	1		30
1,2-Dibromo-3-chloropropane	93		96		68-130	3		30
Hexachlorobutadiene	105		104		67-130	1		30
Isopropylbenzene	100		99		70-130	1		30
p-Isopropyltoluene	102		100		70-130	2		30
Naphthalene	102		105		70-130	3		30
Acrylonitrile	89		93		70-130	4		30
n-Propylbenzene	102		101		70-130	1		30
1,2,3-Trichlorobenzene	96		100		70-130	4		30
1,2,4-Trichlorobenzene	99		100		70-130	1		30
1,3,5-Trimethylbenzene	99		98		70-130	1		30
1,2,4-Trimethylbenzene	97		96		70-130	1		30
1,4-Dioxane	106		110		65-136	4		30
p-Diethylbenzene	100		100		70-130	0		30

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

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: WG1385860-3 WG1385860-4								
p-Ethyltoluene	100		99		70-130	1		30
1,2,4,5-Tetramethylbenzene	101		102		70-130	1		30
Ethyl ether	93		92		67-130	1		30
trans-1,4-Dichloro-2-butene	96		104		70-130	8		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		101		70-130
Toluene-d8	103		104		70-130
4-Bromofluorobenzene	100		100		70-130
Dibromofluoromethane	95		96		70-130

# PCBS

**Project Name:** MINMILT**Lab Number:** L2025985**Project Number:** MIN2002**Report Date:** 06/26/20**SAMPLE RESULTS**

Lab ID: L2025985-01  
 Client ID: WC0001 (S)  
 Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:00  
 Date Received: 06/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil  
 Analytical Method: 1,8082A  
 Analytical Date: 06/25/20 20:00  
 Analyst: JAW  
 Percent Solids: 90%

Extraction Method: EPA 3546  
 Extraction Date: 06/24/20 09:05  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 06/25/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 06/25/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.0	3.11	1	A
Aroclor 1221	ND		ug/kg	35.0	3.51	1	A
Aroclor 1232	ND		ug/kg	35.0	7.43	1	A
Aroclor 1242	ND		ug/kg	35.0	4.72	1	A
Aroclor 1248	ND		ug/kg	35.0	5.26	1	A
Aroclor 1254	ND		ug/kg	35.0	3.83	1	A
Aroclor 1260	ND		ug/kg	35.0	6.48	1	A
Aroclor 1262	ND		ug/kg	35.0	4.45	1	A
Aroclor 1268	ND		ug/kg	35.0	3.63	1	A
PCBs, Total	ND		ug/kg	35.0	3.11	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		30-150	B
Decachlorobiphenyl	85		30-150	B

**Project Name:** MINMILT**Lab Number:** L2025985**Project Number:** MIN2002**Report Date:** 06/26/20**SAMPLE RESULTS**

Lab ID: L2025985-02  
 Client ID: WC0001 (L)  
 Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:15  
 Date Received: 06/19/20  
 Field Prep: Not Specified

Sample Depth:

Matrix: Water  
 Analytical Method: 1,8082A  
 Analytical Date: 06/26/20 11:50  
 Analyst: JM

Extraction Method: EPA 3510C  
 Extraction Date: 06/25/20 07:56  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 06/25/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 06/26/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.034	1	A
Aroclor 1221	ND		ug/l	0.083	0.067	1	A
Aroclor 1232	ND		ug/l	0.083	0.046	1	A
Aroclor 1242	ND		ug/l	0.083	0.039	1	A
Aroclor 1248	ND		ug/l	0.083	0.049	1	A
Aroclor 1254	ND		ug/l	0.083	0.039	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.035	1	A
Aroclor 1268	ND		ug/l	0.083	0.034	1	A
PCBs, Total	ND		ug/l	0.083	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	102		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	79		30-150	B

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8082A  
**Analytical Date:** 06/25/20 09:03  
**Analyst:** JM

**Extraction Method:** EPA 3510C  
**Extraction Date:** 06/24/20 08:17  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 06/24/20  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 06/25/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 02 Batch: WG1385261-1						
Aroclor 1016	ND		ug/l	0.083	0.034	A
Aroclor 1221	ND		ug/l	0.083	0.067	A
Aroclor 1232	ND		ug/l	0.083	0.046	A
Aroclor 1242	ND		ug/l	0.083	0.039	A
Aroclor 1248	ND		ug/l	0.083	0.049	A
Aroclor 1254	ND		ug/l	0.083	0.039	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.035	A
Aroclor 1268	ND		ug/l	0.083	0.034	A
PCBs, Total	ND		ug/l	0.083	0.032	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	106		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	89		30-150	B

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082A  
 Analytical Date: 06/25/20 04:13  
 Analyst: JM

Extraction Method: EPA 3546  
 Extraction Date: 06/24/20 09:00  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 06/24/20  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 06/24/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1385279-1						
Aroclor 1016	ND		ug/kg	32.7	2.90	A
Aroclor 1221	ND		ug/kg	32.7	3.28	A
Aroclor 1232	ND		ug/kg	32.7	6.94	A
Aroclor 1242	ND		ug/kg	32.7	4.41	A
Aroclor 1248	ND		ug/kg	32.7	4.91	A
Aroclor 1254	ND		ug/kg	32.7	3.58	A
Aroclor 1260	ND		ug/kg	32.7	6.05	A
Aroclor 1262	ND		ug/kg	32.7	4.16	A
Aroclor 1268	ND		ug/kg	32.7	3.39	A
PCBs, Total	ND		ug/kg	32.7	2.90	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	60		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 02 Batch: WG1385261-2 WG1385261-3									
Aroclor 1016	70		76		40-140	8		50	A
Aroclor 1260	80		97		40-140	19		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		75		30-150	A
Decachlorobiphenyl	87		93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		74		30-150	B
Decachlorobiphenyl	78		85		30-150	B



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1385279-2 WG1385279-3									
Aroclor 1016	60		61		40-140	2		50	A
Aroclor 1260	54		55		40-140	2		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		67		30-150	A
Decachlorobiphenyl	59		62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		76		30-150	B
Decachlorobiphenyl	66		67		30-150	B

## METALS

**Project Name:** MINMILT**Lab Number:** L2025985**Project Number:** MIN2002**Report Date:** 06/26/20**SAMPLE RESULTS**

Lab ID: L2025985-01

Date Collected: 06/19/20 14:00

Client ID: WC0001 (S)

Date Received: 06/19/20

Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 06/22/20 12:34

Matrix: Soil

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	06/24/20 10:04	06/25/20 22:04	EPA 3015	1,6010D	BV
Barium, TCLP	0.060	J	mg/l	0.500	0.021	1	06/24/20 10:04	06/25/20 22:04	EPA 3015	1,6010D	BV
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/24/20 10:04	06/25/20 22:04	EPA 3015	1,6010D	BV
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/24/20 10:04	06/25/20 22:04	EPA 3015	1,6010D	BV
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/24/20 10:04	06/25/20 22:04	EPA 3015	1,6010D	BV
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/24/20 10:42	06/24/20 18:40	EPA 7470A	1,7470A	AL
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/24/20 10:04	06/25/20 22:04	EPA 3015	1,6010D	BV
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/24/20 10:04	06/25/20 22:04	EPA 3015	1,6010D	BV



**Project Name:** MINMILT**Lab Number:** L2025985**Project Number:** MIN2002**Report Date:** 06/26/20**SAMPLE RESULTS**

Lab ID: L2025985-02

Date Collected: 06/19/20 14:15

Client ID: WC0001 (L)

Date Received: 06/19/20

Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 06/22/20 08:14

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	06/23/20 15:48	06/25/20 00:33	EPA 3015	1,6010D	BV
Barium, TCLP	0.058	J	mg/l	0.500	0.021	1	06/23/20 15:48	06/25/20 00:33	EPA 3015	1,6010D	BV
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/23/20 15:48	06/25/20 00:33	EPA 3015	1,6010D	BV
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/23/20 15:48	06/25/20 00:33	EPA 3015	1,6010D	BV
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/23/20 15:48	06/25/20 00:33	EPA 3015	1,6010D	BV
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/23/20 16:04	06/24/20 10:00	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/23/20 15:48	06/25/20 00:33	EPA 3015	1,6010D	BV
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/23/20 15:48	06/25/20 00:33	EPA 3015	1,6010D	BV



Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 02 Batch: WG1384853-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	06/23/20 15:48	06/24/20 23:37	1,6010D	BV
Barium, TCLP	ND		mg/l	0.500	0.021	1	06/23/20 15:48	06/24/20 23:37	1,6010D	BV
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/23/20 15:48	06/24/20 23:37	1,6010D	BV
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/23/20 15:48	06/24/20 23:37	1,6010D	BV
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/23/20 15:48	06/24/20 23:37	1,6010D	BV
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/23/20 15:48	06/24/20 23:37	1,6010D	BV
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/23/20 15:48	06/24/20 23:37	1,6010D	BV

### Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 06/22/20 08:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 02 Batch: WG1384854-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/23/20 16:04	06/24/20 09:50	1,7470A	GD

### Prep Information

Digestion Method: EPA 7470A

TCLP/SPLP Extraction Date: 06/22/20 08:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01 Batch: WG1384904-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	06/24/20 09:27	06/25/20 08:31	1,6010D	PE
Barium, TCLP	ND		mg/l	0.500	0.021	1	06/24/20 09:27	06/25/20 08:31	1,6010D	PE
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/24/20 09:27	06/25/20 08:31	1,6010D	PE
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/24/20 09:27	06/25/20 08:31	1,6010D	PE
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/24/20 09:27	06/25/20 08:31	1,6010D	PE
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/24/20 09:27	06/25/20 08:31	1,6010D	PE
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/24/20 09:27	06/25/20 08:31	1,6010D	PE

Project Name: MINMILT

Lab Number: L2025985

Project Number: MIN2002

Report Date: 06/26/20

## Method Blank Analysis Batch Quality Control

### Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 06/20/20 13:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01 Batch: WG1384906-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/24/20 10:42	06/24/20 17:58	1,7470A	AL

### Prep Information

Digestion Method: EPA 7470A

TCLP/SPLP Extraction Date: 06/20/20 13:15

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 Batch: WG1384853-2								
Arsenic, TCLP	100		-		75-125	-		20
Barium, TCLP	98		-		75-125	-		20
Cadmium, TCLP	100		-		75-125	-		20
Chromium, TCLP	102		-		75-125	-		20
Lead, TCLP	101		-		75-125	-		20
Selenium, TCLP	104		-		75-125	-		20
Silver, TCLP	97		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 Batch: WG1384854-2								
Mercury, TCLP	88		-		80-120	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 Batch: WG1384904-2								
Arsenic, TCLP	108		-		75-125	-		20
Barium, TCLP	100		-		75-125	-		20
Cadmium, TCLP	97		-		75-125	-		20
Chromium, TCLP	97		-		75-125	-		20
Lead, TCLP	104		-		75-125	-		20
Selenium, TCLP	107		-		75-125	-		20
Silver, TCLP	96		-		75-125	-		20

**Lab Control Sample Analysis**  
Batch Quality Control**Project Name:** MINMILT**Project Number:** MIN2002**Lab Number:** L2025985**Report Date:** 06/26/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 Batch: WG1384906-2					
Mercury, TCLP	102	-	80-120	-	



# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02    QC Batch ID: WG1384853-3    QC Sample: L2025567-86    Client ID: MS Sample												
Arsenic, TCLP	ND	1.2	1.20	100		-	-		75-125	-		20
Barium, TCLP	ND	20	19.7	98		-	-		75-125	-		20
Cadmium, TCLP	ND	0.51	0.517	101		-	-		75-125	-		20
Chromium, TCLP	ND	2	2.05	102		-	-		75-125	-		20
Lead, TCLP	ND	5.1	5.20	102		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.25	104		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.490	98		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02    QC Batch ID: WG1384854-3    QC Sample: L2025567-86    Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0229	92		-	-		80-120	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01    QC Batch ID: WG1384904-3    QC Sample: L2025567-77    Client ID: MS Sample												
Arsenic, TCLP	0.019J	1.2	1.31	109		-	-		75-125	-		20
Barium, TCLP	0.736	20	21.1	102		-	-		75-125	-		20
Cadmium, TCLP	0.012J	0.51	0.515	101		-	-		75-125	-		20
Chromium, TCLP	ND	2	1.99	100		-	-		75-125	-		20
Lead, TCLP	0.196J	5.1	5.58	109		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.30	108		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.491	98		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01    QC Batch ID: WG1384906-3    QC Sample: L2025567-77    Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0244	98		-	-		80-120	-		20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** MINMILT

**Project Number:** MIN2002

**Lab Number:** L2025985

**Report Date:** 06/26/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1384853-4 QC Sample: L2025567-86 Client ID: DUP Sample						
Arsenic, TCLP	ND	ND	mg/l	NC		20
Barium, TCLP	ND	ND	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1384854-4 QC Sample: L2025567-86 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1384904-4 QC Sample: L2025567-77 Client ID: DUP Sample						
Arsenic, TCLP	0.019J	ND	mg/l	NC		20
Barium, TCLP	0.736	0.786	mg/l	7		20
Cadmium, TCLP	0.012J	0.012J	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	0.196J	0.201J	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1384906-4 QC Sample: L2025567-77 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20

# **INORGANICS & MISCELLANEOUS**

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

**SAMPLE RESULTS**

Lab ID: L2025985-01

Client ID: WC0001 (S)

Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:00

Date Received: 06/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

**Test Material Information**

Source of Material: Unknown

Description of Material: Non-Metallic - Damp Sand

Particle Size: Medium

Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/25/20 05:40	1,1030	MV



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-01

Client ID: WC0001 (S)

Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:00

Date Received: 06/19/20

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.2		%	0.100	NA	1	-	06/20/20 13:47	121,2540G	RI
pH (H)	7.4		SU	-	NA	1	-	06/22/20 20:32	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/22/20 21:32	06/22/20 22:46	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/22/20 21:32	06/22/20 22:35	125,7.3	KF



Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

## SAMPLE RESULTS

Lab ID: L2025985-02

Client ID: WC0001 (L)

Sample Location: 540 SMITH STREET, FARMINGDALE, NY

Date Collected: 06/19/20 14:15

Date Received: 06/19/20

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										
pH (H)	7.4		SU	-	NA	1	-	06/22/20 19:07	121,4500H+-B	AS
Flash Point	>150		deg F	70	NA	1	-	06/22/20 14:45	1,1010A	AG
Cyanide, Reactive	ND		mg/l	1.0	1.0	1	06/22/20 20:14	06/22/20 21:02	125,7.3	KF
Sulfide, Reactive	ND		mg/l	1.0	1.0	1	06/22/20 20:14	06/22/20 20:58	125,7.3	KF



**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

### Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1384617-1										
Sulfide, Reactive	ND		mg/l	1.0	1.0	1	06/22/20 20:14	06/22/20 20:56	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1384618-1										
Cyanide, Reactive	ND		mg/l	1.0	1.0	1	06/22/20 20:14	06/22/20 21:00	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1384629-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/22/20 21:32	06/22/20 22:32	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1384630-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/22/20 21:32	06/22/20 22:42	125,7.3	KF

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1384502-1								
Flash Point	100		-		96-104	-		
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1384573-1								
pH	101		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1384576-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1384617-2								
Sulfide, Reactive	102		-		60-125	-		25
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1384618-2								
Cyanide, Reactive	84		-		30-125	-		25
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1384629-2								
Sulfide, Reactive	104		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1384630-2								
Cyanide, Reactive	83		-		30-125	-		40



# Lab Duplicate Analysis

*Batch Quality Control*

Project Name: MINMILT

Project Number: MIN2002

Lab Number: L2025985

Report Date: 06/26/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1384065-1 QC Sample: L2025928-01 Client ID: DUP Sample						
Solids, Total	94.6	95.0	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1384573-2 QC Sample: L2025939-01 Client ID: DUP Sample						
pH	7.2	7.1	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1384576-2 QC Sample: L2026114-01 Client ID: DUP Sample						
pH	7.5	7.5	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1384617-3 QC Sample: L2025985-02 Client ID: WC0001 (L)						
Sulfide, Reactive	ND	ND	mg/l	NC		25
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1384618-3 QC Sample: L2025985-02 Client ID: WC0001 (L)						
Cyanide, Reactive	ND	ND	mg/l	NC		25
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1384629-3 QC Sample: L2025985-01 Client ID: WC0001 (S)						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1384630-3 QC Sample: L2025985-01 Client ID: WC0001 (S)						
Cyanide, Reactive	ND	ND	mg/kg	NC		40

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Serial\_No:** 06262013:37  
**Lab Number:** L2025985  
**Report Date:** 06/26/20

### 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(*)
L2025985-01A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2025985-01B	Vial water preserved	A	NA		3.7	Y	Absent	20-JUN-20 08:37	NYTCL-8260HLW(14)
L2025985-01C	Vial water preserved	A	NA		3.7	Y	Absent	20-JUN-20 08:37	NYTCL-8260HLW(14)
L2025985-01D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2025985-01E	Glass 500ml/16oz unpreserved	A	NA		3.7	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082(14)
L2025985-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.7	Y	Absent		CD-CI(180),BA-CI(180),AS-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2025985-01X9	Tumble Vessel	A	NA		3.7	Y	Absent		-
L2025985-02A	Vial HCl preserved	A	NA		3.7	Y	Absent		NYTCL-8260(14)
L2025985-02B	Vial HCl preserved	A	NA		3.7	Y	Absent		NYTCL-8260(14)
L2025985-02C	Vial HCl preserved	A	NA		3.7	Y	Absent		NYTCL-8260(14)
L2025985-02D	Amber 120ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8082-LVI(7)
L2025985-02E	Amber 120ml unpreserved	A	7	7	3.7	Y	Absent		NYTCL-8082-LVI(7)
L2025985-02F	Amber 500ml unpreserved	A	7	7	3.7	Y	Absent		REACTS(7),REACTCN(7),FLASH()
L2025985-02G	Plastic 950ml unpreserved	A	7	7	3.7	Y	Absent		PH-4500(.01)
L2025985-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.7	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L2025985-02X9	Tumble Vessel	A	NA		3.7	Y	Absent		-

**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

## 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:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

- 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. 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.
- 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

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



**Project Name:** MINMILT**Lab Number:** L2025985**Project Number:** MIN2002**Report Date:** 06/26/20**Data Qualifiers**

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

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**Project Name:** MINMILT  
**Project Number:** MIN2002

**Lab Number:** L2025985  
**Report Date:** 06/26/20

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

## 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 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, NO<sub>2</sub>, NO<sub>3</sub>.**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.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, 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.****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.



6/19/20

L2025705

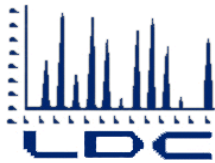
Page 64 of 64





## APPENDIX D

# DATA USABILITY SUMMARY REPORT



## LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

P.W. Grosser Consulting  
630 Johnson Ave, Suite 7  
Bohemia, NY 11716  
ATTN: Mr. Ryan Morley  
[ryanm@pwgrosser.com](mailto:ryanm@pwgrosser.com)

July 8, 2020

SUBJECT: MINMILT, Data Usability Summary Report

Dear Mr. Morley,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on June 18, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

**LDC Project #48381:**

<b><u>SDG #</u></b>	<b><u>Fraction</u></b>
L2020621, L2020812 L2021006, L2021318	Volatiles

The data validation was performed under modified Category B guidelines using quality control summaries provided by the laboratory. The analyses were validated using the following documents, as applicable to each method:

- USEPA Region 2 Standard Operating Procedure for Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-Method 8260B and 8260C, SOP HW-24, Revision 4; October 2014
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, EPA 540-R-2017-002; January 2017
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink  
[crink@lab-data.com](mailto:crink@lab-data.com)  
Project Manager/Senior Chemist

[illegible]

**Site:** MINMILT  
**Laboratory:** Alpha Analytical, Inc.  
**Report No.:** L2020621  
**Reviewer:** Josephine Go and Christina Rink/Laboratory Data Consultants for P.W.  
Grosser Consulting  
**Date:** July 7, 2020

**Samples Reviewed and Evaluation Summary**

FIELD ID	LAB ID	FRACTIONS VALIDATED
DB001 (90-95)	L2020621-06	VOC
DB001 (90-95)MS	L2020621-06MS	VOC
DB001 (90-95)MSD	L2020621-06MSD	VOC

**Associated QC Samples(s):**

**Field/Trip Blanks:** TB001, EB001  
**Field Duplicate pair:** None Associated

The above-listed soil samples were collected on May 18, 2020 and were analyzed for volatile organic compounds (VOCs) by SW-846 method 8260C. The data validation was performed in accordance with the USEPA Region 2 *Standard Operating Procedure for Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-Method 8260B and 8260C*, SOP HW-24, Revision 4 (October 2014) and the USEPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA 540-R-2017-002 (January 2017), modified as necessary to accommodate the non-CLP methodologies used.

The organic data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Moisture Content
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

### **Overall Evaluation of Data and Potential Usability Issues**

All results are usable as reported or usable with minor qualification due to sample matrix.

The validation findings were based on the following information.

### **Data Completeness**

The data package was complete as defined under the requirements for the NYSDEC ASP category B laboratory deliverables.

### **Holding Times and Sample Preservation**

All criteria were met.

### **GC/MS Tunes**

All criteria were met.

### **Initial and Continuing Calibrations**

All criteria were met.

### **Blanks**

Contamination was not detected in the method blanks.

No positive results were found in the trip blank sample TB001 and equipment blank sample EB001 for VOC analysis.

### **Surrogate Recoveries**

All criteria were met.

### **MS/MSD Results**

MS/MSD analyses were performed on sample DB001 (90-95) for VOC analysis. The following table lists the MS/MSD percent recoveries (%R) outside of control limits in the VOC analysis and the resulting validation actions.

MS ID	Compound	MS %R (Limits)	MS/D %R (Limits)	Affected Sample	Validation Action
DB001 (90-95)MS/MSD	Tetrachloroethene	-	64 (70-130)	DB001 (90-95)	J detects

- Within control limits

The tetrachloroethene result may be biased low due to low MS/MSD percent recovery. The result can be used for project objectives as an estimated value (J) which may have a minor impact on the data usability.

**LCS Results**

All criteria were met.

**Internal Standards**

All criteria were met.

**Field Duplicate Results**

A field duplicate pair was not associated with this sample set. Validation action was not required on this basis.

**Moisture Content**

All criteria were met.

**Quantitation Limits and Data Assessment**

No results were reported below the reporting limit (RL) and above the method detection limit (MDL) in the VOC analysis.

Due to high target compound levels or difficult sample matrix, select samples were analyzed at dilutions. The following table lists the sample dilutions which were performed and the results reported. RLs were elevated accordingly.

Sample	VOC Analysis Reported
DB001 (90-95)	50-fold dilution due to nature of sample matrix

**Sample Quantitation and Compound Identification**

Calculations were spot-checked; no discrepancies were noted.

## DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- JN - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

# Results Summary

## Form 1

### Volatile Organics by EPA 5035

Client : P. W. Grosser  
 Project Name : MINMILT  
 Lab ID : L2020621-06  
 Client ID : DB001 (90-95)  
 Sample Location : 540 SMITH ST, FARMINGDALE, NY  
 Sample Matrix : SOIL  
 Analytical Method : 1,8260C  
 Lab File ID : V27200521A20  
 Sample Amount : 6.1 g  
 Level : HIGH  
 Extract Volume (MeOH) : 5 ml

Lab Number : L2020621  
 Project Number : MIN2001  
 Date Collected : 05/18/20 13:00  
 Date Received : 05/19/20  
 Date Analyzed : 05/21/20 21:04  
 Dilution Factor : 1  
 Analyst : JC  
 Instrument ID : VOA127  
 GC Column : RTX-VMS  
 %Solids : 82  
 Injection Volume : N/A

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
127-18-4	Tetrachloroethene	8100	31	12.	
75-01-4	Vinyl chloride	ND	62	21.	U
156-60-5	trans-1,2-Dichloroethene	ND	93	8.5	U
79-01-6	Trichloroethene	ND	31	8.5	U
156-59-2	cis-1,2-Dichloroethene	ND	62	11.	U
540-59-0	1,2-Dichloroethene, Total	ND	62	8.5	U

JUL 08 2020

Initials: *CR*





**METHOD:** GC/MS Volatiles (EPA SW 846 Method 8260<sup>6</sup>)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A, A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A, A	KAL = 20% ICV = 30%
IV.	Continuing calibration	A	CV = 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB = EB601 TB = TB001 (Same SDG)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	SW	
IX.	Laboratory control samples	A	LCS (D)
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	(no results < RL)
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB=Source blank  
OTHER:

	Client ID (50X)	Lab ID	Matrix	Date
1	DB001 (90-95)	L2020621-06	Soil	05/18/20
2	DB001 (90-95)MS	L2020621-06MS	Soil	05/18/20
3	DB001 (90-95)MSD	L2020621-06MSD	Soil	05/18/20
4				
5				
6				
7				
8				
9				

Notes:

WG1377612-5 BLANK				

(C, S, AA, PPP, QQQ, J)

LDC #: 48381 A1a

## VALIDATION FINDINGS CHECKLIST

Page: 1 of 2  
Reviewer: JVG  
2nd Reviewer: [Signature]

Method: Volatiles (EPA SW 846 Method 8260C)

Validation Area	Yes	No	NA	Findings/Comments
<b>I. Technical holding times</b>				
Were all technical holding times met?	/			
Was cooler temperature criteria met?	/			
<b>II. GC/MS Instrument performance check</b>				
Were the BFB performance results reviewed and found to be within the specified criteria?	/			
Were all samples analyzed within the 12 hour clock criteria?	/			
<b>IIIa. Initial calibration</b>				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) $\leq$ 20% and relative response factors (RRF) within method criteria?	/			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of $> 0.990$ ?	<u>Yes</u>		/	
<b>IIIb. Initial Calibration Verification</b>				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	/			
Were all percent differences (%D) $\leq$ 30%?	/			
<b>IV. Continuing calibration</b>				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	/			
Were all percent differences (%D) $\leq$ 20% and relative response factors (RRF) within method criteria?	/			
<b>V. Laboratory Blanks</b>				
Was a laboratory blank associated with every sample in this SDG?	/			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	/			
Was there contamination in the laboratory blanks?		/		
<b>VI. Field blanks</b>				
Were field blanks were identified in this SDG?	/			
Were target compounds detected in the field blanks?		/		
<b>VII. Surrogate spikes</b>				
Were all surrogate percent recovery (%R) within QC limits?	/			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			/	
<b>VIII. Matrix spike/Matrix spike duplicates</b>				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	/			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	/			

LDC #: 4898 A1a

## VALIDATION FINDINGS CHECKLIST

Page: 2 of 2  
Reviewer: JVG  
2nd Reviewer: [Signature]

Validation Area	Yes	No	NA	Findings/Comments
<b>IX. Laboratory control samples</b>				
Was an LCS analyzed per analytical batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	/			
<b>X. Field duplicates</b>				
Were field duplicate pairs identified in this SDG?		/		
Were target compounds detected in the field duplicates?			/	
<b>XI. Internal standards</b>				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	/			
Were retention times within + 30 seconds of the associated calibration standard?	/			
<b>XII. Compound quantitation</b>				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	/			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	/			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
<b>XIII. Target compound identification</b>				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	/			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	/			
Were chromatogram peaks verified and accounted for?	/			
<b>XIV. System performance</b>				
System performance was found to be acceptable.	/			
<b>XV. Overall assessment of data</b>				
Overall assessment of data was found to be acceptable.	/			

# TARGET COMPOUND WORKSHEET

## METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene	A2.
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane	B2.
C. Vinyl chloride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane	C2.
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene	D2.
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11	E2.
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12	F2.
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113	G2.
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114	H2.
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane	I2.
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide	J2.
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane	K2.
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane	L2.
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane	M2.
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane	N2.
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO. 1,1-Difluoroethane	O1. 3-Methylpentane	O2.
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane	P2.
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane	Q2.
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3-Trimethylbutane	R2.
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane	S2.
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methylcyclohexane	T1. 2-Methylhexane	T2.
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal	U2.
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene	V2.
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol	W2.
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Diisopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene	X2.
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1.	Y2.
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1.	Z2.

LDC #: 48381 CIA

## VALIDATION FINDINGS WORKSHEET

### Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1

Reviewer: JVG

2nd Reviewer: \_\_\_\_\_

**METHOD :** GC/MS VOA (EPA SW 846 Method 8260C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Was a MS/MSD analyzed every 20 samples of each matrix?

Y	N	N/A	Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

[illegible]

LDC #: 48381A1a

**VALIDATION FINDINGS WORKSHEET**  
**Initial Calibration Calculation Verification**

Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer: [Signature]

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$\text{RRF} = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\% \text{RSD} = 100 * (S/X)$$

 $A_x$  = Area of Compound $C_x$  = Concentration of compound, $S$  = Standard deviation of the RRFs, $A_{is}$  = Area of associated internal standard $C_{is}$  = Concentration of internal standard $X$  = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 20 std)	Recalculated RRF (RRF 20 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL VOA 127	02/12/20	Trichloroethene (FB)	0.250	0.250	0.265	0.265	9.61	9.62
			Tetrachloroethene (CBZ)	0.372	0.372	0.377	0.377	4.79	4.77

**VALIDATION FINDINGS WORKSHEET**  
**Continuing Calibration Results Verification**

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$
$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound,

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	V27200521A02 VOA 127	05/21/20	Trichloroethene (FB)	0.265	0.261	0.261	1.6	1.7
			Tetrachloroethene (CBZ)	0.377	0.341	0.341	9.5	9.5

LDC #: 48381 Ara

# **VALIDATION FINDINGS WORKSHEET** **Surrogate Results Verification**

Page: 1 of 1Reviewer: JVG2nd reviewer: [Signature]**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery:  $SF/SS \times 100$ 

Where: SF = Surrogate Found

SS = Surrogate Spiked

Sample ID: # 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	20.0	19.561	98	98	0
1,2-Dichloroethane-d4		20.709	104	104	
Toluene-d8		19.207	96	96	
Bromofluorobenzene		20.614	103	103	

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					



LDC #: 48381 Ala

**VALIDATION FINDINGS WORKSHEET**  
**Matrix Spike/Matrix Spike Duplicates Results Verification**

Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer: [Signature]

**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery =  $100 * (SSC - SC) / SA$ 

Where: SSC = Spiked sample concentration  
SA = Spike added

SC = Sample concentration

RPD =  $|MSC - MSCD| * 2 / (MSC + MSCD)$ 

MSC = Matrix spike concentration

MSCD = Matrix spike duplicate concentration

MS/MSD sample: 2/3

Compound	Spike Added ( $\mu\text{g/kg}$ )		Sample Concentration ( $\mu\text{g/kg}$ )	Spiked Sample Concentration ( $\mu\text{g/kg}$ )		Matrix Spike		Matrix Spike Duplicate		MS/MSD	
	MS	MSD	-----	MS	MSD	Percent Recovery		Percent Recovery		RPD	
						Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene											
Trichloroethene	6200	6200	0	7100	6500	114	114	164	104.8	9	13
Benzene											
Toluene											
Chlorobenzene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 48781 Arc

# **VALIDATION FINDINGS WORKSHEET** **Laboratory Control Sample Results Verification**

Page: 1 of 1  
 Reviewer: JVG  
 2nd Reviewer: [Signature]

**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery =  $100 * \text{SSC} / \text{SA}$ 

Where: SSC = Spiked sample concentration  
 SA = Spike added

RPD =  $100 * (\text{LCSC} - \text{LCSDC}) / (\text{LCSC} + \text{LCSDC})$ 

LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: WG1373612-3,4

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS		LCSD		LCS/LCSD	
					Percent Recovery		Percent Recovery		RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene	2000	2000	1968	1907	98	98	97	95	7	3
Benzene										
Toluene										
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 48381 A1a

## VALIDATION FINDINGS WORKSHEET

### Sample Calculation Verification

Page: 1 of 1

Reviewer: JVG

2nd reviewer: \_\_\_\_\_

**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

(Y)N N/A

Were all reported results recalculated and verified for all level IV samples?

Y	N	N/A
---	---	-----

Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

$$\text{Concentration} = \frac{(A_s)(I_s)(V_p)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$$

$A_x$  = Area of the characteristic ion (EICP) for the compound to be measured

$A_{is}$  = Area of the characteristic ion (EICP) for the specific internal standard

$I_s$  = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

$V_o$  = Volume or weight of sample purged in milliliters (ml) or grams (g).

$$V_p = \text{Purge Volume}$$

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 1, PCE:

$$\text{Conc.} = \frac{(608238)(20)(6.118)(50)}{(246405)(0.377)(6.069)(0.8155)}$$

$$= 8105.79$$

$$\approx 8100 \text{ mg kg}^{-1}$$

[illegible]

**Site:** MINMILT  
**Laboratory:** Alpha Analytical, Inc.  
**Report No.:** L2020812  
**Reviewer:** Josephine Go and Christina Rink/Laboratory Data Consultants for P.W.  
Grosser Consulting  
**Date:** July 7, 2020

**Samples Reviewed and Evaluation Summary**

FIELD ID	LAB ID	FRACTIONS VALIDATED
DB002 (10-15)(Low level)	L2020812-04LL	VOC
DB002 (10-15) (High level)	L2020812-04HL	VOC

**Associated QC Samples(s):**

Field/Trip Blanks: TB002, FB002  
Field Duplicate pair: None Associated

The above-listed soil samples were collected on May 19, 2020 and were analyzed for volatile organic compounds (VOCs) by SW-846 method 8260C. The data validation was performed in accordance with the USEPA Region 2 *Standard Operating Procedure for Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-Method 8260B and 8260C*, SOP HW-24, Revision 4 (October 2014) and the USEPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA 540-R-2017-002 (January 2017), modified as necessary to accommodate the non-CLP methodologies used.

The organic data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Moisture Content
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

### **Overall Evaluation of Data and Potential Usability Issues**

All results are usable as reported.

The validation findings were based on the following information.

### **Data Completeness**

The data package was complete as defined under the requirements for the NYSDEC ASP category B laboratory deliverables.

### **Holding Times and Sample Preservation**

All criteria were met.

### **GC/MS Tunes**

All criteria were met.

### **Initial and Continuing Calibrations**

All criteria were met.

### **Blanks**

Contamination was not detected in the method blanks.

No positive results were found in the trip blank sample TB002 and field blank sample FB002 for VOC analysis.

### **Surrogate Recoveries**

All criteria were met.

### **MS/MSD Results**

MS/MSD analyses were not associated with this sample set. Validation action was not required on this basis.

### **LCS Results**

All criteria were met.

### **Internal Standards**

All criteria were met.

**Field Duplicate Results**

A field duplicate pair was not associated with this sample set. Validation action was not required on this basis.

**Moisture Content**

All criteria were met.

**Quantitation Limits and Data Assessment**

Results were reported which were below the reporting limit (RL) and above the method detection limit (MDL) in the VOC analysis. These results were qualified as estimated (J) by the laboratory.

Due to high target compound levels or difficult sample matrix, select samples were analyzed at dilutions. The following table lists the sample dilutions which were performed and the results reported. RLs were elevated accordingly.

Sample	VOC Analysis Reported
DB002 (10-15) (High level)	50-fold dilution due to nature of sample matrix

**Sample Quantitation and Compound Identification**

Calculations were spot-checked; no discrepancies were noted.

In the case where more than one result was reported for an individual sample, the least technically acceptable results were deemed not reportable as follows:

Sample	Compound	Reason	Validation Action
DB002 (10-15) (Low level)	Tetrachloroethene Trichloroethene cis-1,2-Dichloroethene 1,2-Dichloroethene, total	Lower results.	Not reportable
DB002 (10-15) (High level)	Vinyl chloride trans-1,2-Dichloroethene	Higher reporting limits.	Not reportable

## DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- JN - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

# Results Summary

## Form 1

### Volatile Organics by EPA 5035 High

Client	: P. W. Grosser	Lab Number	: L2020812
Project Name	: MINMILT	Project Number	: MIN2002
Lab ID	: L2020812-04	Date Collected	: 05/19/20 12:40
Client ID	: DB002 (10-15)	Date Received	: 05/20/20
Sample Location	: 540 SMITH STREET, FARMINGDALE	Date Analyzed	: 05/22/20 16:43
Sample Matrix	: SOIL	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MKS
Lab File ID	: V27200522A25	Instrument ID	: VOA127
Sample Amount	: 5.8 g	GC Column	: RTX-VMS
Level	: HIGH	%Solids	: 93
Extract Volume (MeOH)	: 5 ml	Injection Volume	: N/A

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
127-18-4	Tetrachloroethene	280	25	9.7	
75-01-4	Vinyl chloride	ND	50	17.	U <i>Not reportable</i>
156-60-5	trans-1,2-Dichloroethene	ND	74	6.8	U <i>Not reportable</i>
79-01-6	Trichloroethene	12	25	6.8	J <i>J</i>
156-59-2	cis-1,2-Dichloroethene	73	50	8.7	
540-59-0	1,2-Dichloroethene, Total	73	50	6.8	

JUL 08 2020

Initials: *CR*





# Results Summary

## Form 1

### Volatile Organics by EPA 5035

Client : P. W. Grosser  
 Project Name : MINMILT  
 Lab ID : L2020812-04  
 Client ID : DB002 (10-15)  
 Sample Location : 540 SMITH STREET, FARMINGDALE  
 Sample Matrix : SOIL  
 Analytical Method : 1,8260C  
 Lab File ID : V00200524A24  
 Sample Amount : 6.3 g  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2020812  
 Project Number : MIN2002  
 Date Collected : 05/19/20 12:40  
 Date Received : 05/20/20  
 Date Analyzed : 05/24/20 19:41  
 Dilution Factor : 1  
 Analyst : JC  
 Instrument ID : VOA100  
 GC Column : RTX-VMS  
 %Solids : 93  
 Injection Volume : N/A

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
127-18-4	Tetrachloroethene	17	0.43	0.17	Not reportable
75-01-4	Vinyl chloride	ND	0.86	0.29	U U
156-60-5	trans-1,2-Dichloroethene	ND	1.3	0.12	U U
79-01-6	Trichloroethene	1.7	0.43	0.12	Not reportable
156-59-2	cis-1,2-Dichloroethene	11	0.86	0.15	Not reportable
540-59-0	1,2-Dichloroethene, Total	11	0.86	0.12	Not reportable

JUL 08 2020

Initials: CR



LDC #: 48381B1a **VALIDATION COMPLETENESS WORKSHEET**

SDG #: L2020812

Category B

Laboratory: Alpha Analytical, Inc.

Date: 07/06/20

Page: 1 of 1

Reviewer: [Signature]

2nd Reviewer: [Signature]

**METHOD:** GC/MS Volatiles (EPA SW 846 Method 8260<sup>C</sup>)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A, A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A, A	ICAL $\leq 20\%$ ICV $\leq 30\%$
IV.	Continuing calibration	A	CCV $\leq 20\%$
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	FB = FB002 TB = TB002
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	N	
IX.	Laboratory control samples	A	US / D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Results $< RL > MDL = 5$ det <sub>s</sub>
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	SW	

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB=Source blank  
OTHER:

	Client ID	Lab ID	Matrix	Date
1	DB002 (10-15) (Low level)	L2020812-04 LL	Soil	05/19/20
2	↓ (High level) (50X)	↓ HL	↓	↓
3				
4				
5				
6				
7				
8				
9				

Notes:

1	WG 1374132-5 Blank			
7	WG 1374132-5 ↓			

(C, S, AA, PPP, Q&amp;Q, J)

Method: Volatiles (EPA SW 846 Method 8260C)

Validation Area	Yes	No	NA	Findings/Comments
<b>I. Technical holding times</b>				
Were all technical holding times met?	/			
Was cooler temperature criteria met?	/			
<b>II. GC/MS Instrument performance check</b>				
Were the BFB performance results reviewed and found to be within the specified criteria?	/			
Were all samples analyzed within the 12 hour clock criteria?	/			
<b>IIIa. Initial calibration</b>				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) $\leq 20\%$ and relative response factors (RRF) within method criteria?	/			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of $\geq 0.990$ ?			/	
<b>IIIb. Initial Calibration Verification</b>				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	/			
Were all percent differences (%D) $\leq 30\%$ ?	/			
<b>IV. Continuing calibration</b>				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	/			
Were all percent differences (%D) $\leq 20\%$ and relative response factors (RRF) within method criteria?	/			
<b>V. Laboratory Blanks</b>				
Was a laboratory blank associated with every sample in this SDG?	/			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	/			
Was there contamination in the laboratory blanks?		/		
<b>VI. Field blanks</b>				
Were field blanks were identified in this SDG?	/			
Were target compounds detected in the field blanks?		/		
<b>VII. Surrogate spikes</b>				
Were all surrogate percent recovery (%R) within QC limits?	/			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			/	
<b>VIII. Matrix spike/Matrix spike duplicates</b>				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		/		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			/	

Validation Area	Yes	No	NA	Findings/Comments
<b>IX. Laboratory control samples</b>				
Was an LCS analyzed per analytical batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	/			
<b>X. Field duplicates</b>				
Were field duplicate pairs identified in this SDG?		/	/	
Were target compounds detected in the field duplicates?			/	
<b>XI. Internal standards</b>				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	/			
Were retention times within + 30 seconds of the associated calibration standard?	/			
<b>XII. Compound quantitation</b>				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	/			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	/			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
<b>XIII. Target compound identification</b>				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	/			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	/			
Were chromatogram peaks verified and accounted for?	/			
<b>XIV. System performance</b>				
System performance was found to be acceptable.	/			
<b>XV. Overall assessment of data</b>				
Overall assessment of data was found to be acceptable.	/			

# TARGET COMPOUND WORKSHEET

## METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene	A2.
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane	B2.
C. Vinyl chloride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane	C2.
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene	D2.
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11	E2.
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12	F2.
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113	G2.
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114	H2.
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane	I2.
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide	J2.
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane	K2.
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane	L2.
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane	M2.
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane	N2.
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO. 1,1-Difluoroethane	O1. 3-Methylpentane	O2.
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane	P2.
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane	Q2.
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3-Trimethylbutane	R2.
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane	S2.
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methylcyclohexane	T1. 2-Methylhexane	T2.
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal	U2.
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene	V2.
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol	W2.
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene	X2.
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1.	Y2.
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1.	Z2.

LDC #: 48381 Bla

## VALIDATION FINDINGS WORKSHEET

### Overall Assessment of Data

Page: 1 of 1

Reviewer: JVG

2nd Reviewer: [Signature]

**METHOD: GC/MS VOA (EPA SW 846 Method 8260C)**

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

All available information pertaining to the data were reviewed using professional judgement to compliment the determination of the overall quality of the data.

(Y/N N/A) Was the overall quality and usability of the data acceptable?

[illegible]

Comments: \_\_\_\_\_

LDC #: 48381B1a

**VALIDATION FINDINGS WORKSHEET**  
**Initial Calibration Calculation Verification**

Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer:                     

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\%RSD = 100 * (S/X)$$

 $A_x$  = Area of Compound $C_x$  = Concentration of compound, $S$  = Standard deviation of the RRFs, $A_{is}$  = Area of associated internal standard $C_{is}$  = Concentration of internal standard $X$  = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 20 std)	Recalculated RRF (RRF 20 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL VOA 127	02/12/20	Trichloroethene (FB)	0.250	0.250	0.265	0.265	9.61	9.62
			Tetrachloroethene (CBZ)	0.372	0.372	0.377	0.377	4.79	4.77
2	ICAL VOA 100	05/12/20	Trichloroethene (FB)	0.221	0.221	0.216	0.216	7.07	7.06
			Tetrachloroethene (CBZ)	0.317	0.317	0.301	0.301	7.48	7.50

**VALIDATION FINDINGS WORKSHEET**  
**Continuing Calibration Results Verification**

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$
$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound,

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	V27200522A01 VOA 127	05/22/20	Trichloroethene (FB)	0.265	0.263	0.263	0.8	0.8
			Tetrachloroethene (CBZ)	0.377	0.347	0.347	8.0	8.0
2	V27200522A01 VOA 127	05/22/20	Trichloroethene (FB)	0.216	0.234	0.234	8.3	8.4
			Tetrachloroethene (CBZ)	0.301	0.341	0.341	13.3	13.3



LDC #: 4838 B10

# **VALIDATION FINDINGS WORKSHEET** **Surrogate Results Verification**

Page: 1 of 1Reviewer: JVG2nd reviewer: [Signature]**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery:  $SF/SS \times 100$ Where: SF = Surrogate Found  
SS = Surrogate SpikedSample ID: # 2 (High Level)

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	20.0	20.229	101	101	9
1,2-Dichloroethane-d4	1	21.689	108	108	1
Toluene-d8	1	19.119	96	96	1
Bromofluorobenzene	1	21.878	109	109	8

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

LDC #: 48381 B1A

**VALIDATION FINDINGS WORKSHEET**  
**Laboratory Control Sample Results Verification**

Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer: [Signature]

**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery =  $100 * \text{SSC} / \text{SA}$ 

Where: SSC = Spiked sample concentration  
SA = Spike added

 $\text{RPD} = | \text{LCSC} - \text{LCSDC} | * 2 / (\text{LCSC} + \text{LCSDC})$ 

LCSC = Laboratory control sample concentration    LCSDC = Laboratory control sample duplicate concentration

LCS ID: W G 137 d B2-3,4

Compound	Spike Added ( $\mu\text{g/kg}$ )		Spiked Sample Concentration ( $\mu\text{g/kg}$ )		LCS		LCSD		LCS/LCSD	
					Percent Recovery		Percent Recovery		RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene	2000	2000	1980	1844	95	99	92	92	7	7
Benzene										
Toluene										
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #:

## VALIDATION FINDINGS WORKSHEET

Page: 1 of 1

Reviewer: JVG

2nd reviewer: 

**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

(Y)N N/A

Were all reported results recalculated and verified for all level IV samples?

Y	N	N/A
---	---	-----

Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

$$\text{Concentration} = \frac{(A_s)(I_s)(V_p)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$$

$A_x$  = Area of the characteristic ion (EICP) for the compound to be measured

$A_{is}$  = Area of the characteristic ion (EICP) for the specific internal standard

$I_s$  = Amount of internal standard added in nanograms (ng)

RRF = Relative response factor of the calibration standard.

$V_o$  = Volume or weight of sample purged in milliliters (ml) or grams (g).

$$V_p = \text{Purge Volume}$$

%S = Percent solids, applicable to soils and solid matrices only.

Example:

Sample I.D. 2, PCE:

$$\text{Conc.} = \frac{(28701)(20)(5.938 \text{ mL})(50)}{(263025)(0.377)(5.84 \text{ g})(0.9325)}$$
$$= 278.8$$

$\approx 280 \text{ ng/kg}$

[illegible]

**Site:** MINMILT  
**Laboratory:** Alpha Analytical, Inc.  
**Report No.:** L2021006  
**Reviewer:** Josephine Go and Christina Rink/Laboratory Data Consultants for P.W. Grosser Consulting  
**Date:** July 7, 2020

**Samples Reviewed and Evaluation Summary**

FIELD ID	LAB ID	FRACTIONS VALIDATED
DB002 (165-170)	L2021006-13	VOC
DB002 (165-170)MS	L2021006-13MS	VOC
DB002 (165-170)MSD	L2021006-13MSD	VOC

**Associated QC Samples(s):**

**Field/Trip Blanks:** TB003, EB003  
**Field Duplicate pair:** None Associated

The above-listed soil samples were collected on May 20, 2020 and were analyzed for volatile organic compounds (VOCs) by SW-846 method 8260C. The data validation was performed in accordance with the USEPA Region 2 *Standard Operating Procedure for Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-Method 8260B and 8260C*, SOP HW-24, Revision 4 (October 2014) and the USEPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA 540-R-2017-002 (January 2017), modified as necessary to accommodate the non-CLP methodologies used.

The organic data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Moisture Content
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

### **Overall Evaluation of Data and Potential Usability Issues**

All results are usable as reported or usable with minor qualification due to sample matrix.

The validation findings were based on the following information.

### **Data Completeness**

The data package was complete as defined under the requirements for the NYSDEC ASP category B laboratory deliverables.

### **Holding Times and Sample Preservation**

All criteria were met.

### **GC/MS Tunes**

All criteria were met.

### **Initial and Continuing Calibrations**

All criteria were met.

### **Blanks**

Contamination was not detected in the method blanks.

No positive results were found in the trip blank sample TB003 and equipment blank sample EB003 for VOC analysis.

### **Surrogate Recoveries**

All criteria were met.

### **MS/MSD Results**

MS/MSD analyses were performed on sample DB001 (90-95) for VOC analysis. The following table lists the MS/MSD percent recoveries (%R) outside of control limits in the VOC analysis and the resulting validation actions.

MS ID	Compound	MS %R (Limits)	MS/D %R (Limits)	Affected Sample	Validation Action
DB002 (165-170)MS/MSD	Tetrachloroethene	66 (70-130)	-	DB002 (165-170)	UJ nondetects

- Within control limits

The tetrachloroethene result may be biased low due to low MS/MSD percent recovery. The result can be used for project objectives as a nondetects with an estimated quantitation limit (UJ) which may have a minor impact on the data usability.

The following table lists the MS/MSD relative percent differences (RPD) outside of control limits in the VOC analysis and the resulting validation actions.

MS ID	Compound	RPD (Limits)	Affected Sample	Validation Action
DB002 (165-170)MS/MSD	Tetrachloroethene	37 ( $\leq 30$ )	DB002 (165-170)	None

Validation action was not required for tetrachloroethene due to MS/MSD relative percent difference exceedance as positive results only are affected and this compound was not detected in the associated sample.

### **LCS Results**

All criteria were met.

### **Internal Standards**

All criteria were met.

### **Field Duplicate Results**

A field duplicate pair was not associated with this sample set. Validation action was not required on this basis.

### **Moisture Content**

All criteria were met.

### **Quantitation Limits and Data Assessment**

Results were reported which were below the reporting limit (RL) and above the method detection limit (MDL) in the VOC analysis. These results were qualified as estimated (J) by the laboratory.

Dilutions were not required for VOC analysis.

### **Sample Quantitation and Compound Identification**

Calculations were spot-checked; no discrepancies were noted.

## DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- JN - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

# Results Summary

## Form 1

### Volatile Organics by EPA 5035

Client	: P. W. Grosser	Lab Number	: L2021006
Project Name	: MINMILT	Project Number	: MIN2002
Lab ID	: L2021006-13	Date Collected	: 05/20/20 12:40
Client ID	: DB002 (165-170)	Date Received	: 05/21/20
Sample Location	: 540 SMITH STREET, FARMINGDALE	Date Analyzed	: 05/28/20 00:33
Sample Matrix	: SOIL	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: JC
Lab File ID	: V23200527N18	Instrument ID	: VOA123
Sample Amount	: 5.8 g	GC Column	: RTX-VMS
Level	: LOW	%Solids	: 87
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/Kg			Qualifier
		Results	RL	MDL	
127-18-4	Tetrachloroethene	ND	0.50	0.20	U <i>UJ</i>
75-01-4	Vinyl chloride	ND	1.0	0.34	U <i>U</i>
156-60-5	trans-1,2-Dichloroethene	ND	1.5	0.14	U <i>U</i>
79-01-6	Trichloroethene	0.32	0.50	0.14	J <i>J</i>
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.18	U <i>U</i>
540-59-0	1,2-Dichloroethene, Total	ND	1.0	0.14	U <i>U</i>

JUL 08 2020

Initials: *CR*





LDC #: 48381C1a **VALIDATION COMPLETENESS WORKSHEET**  
 SDG #: L2021006 Category B  
 Laboratory: Alpha Analytical, Inc.

Date: 07/06/20  
 Page: 1 of 1  
 Reviewer: SW  
 2nd Reviewer: [Signature]

**METHOD:** GC/MS Volatiles (EPA SW 846 Method 8260<sup>C</sup><sub>B</sub>)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A, A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A, A	ICAL ≤ 20%      ICAL ≤ 30%
IV.	Continuing calibration	A	COV ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB = EB007      TB = TB003 (Same SDG)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	SW	
IX.	Laboratory control samples	A	LCs / D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Result < RL > MDL = J dets
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable  
 N = Not provided/applicable  
 SW = See worksheet

ND = No compounds detected  
 R = Rinsate  
 FB = Field blank

D = Duplicate  
 TB = Trip blank  
 EB = Equipment blank

SB=Source blank  
 OTHER:

	Client ID	Lab ID	Matrix	Date
1	DB002 (165-170)	L2021006-13	Soil	05/20/20
2	DB002 (165-170)MS	L2021006-13MS	Soil	05/20/20
3	DB002 (165-170)MSD	L2021006-13MSD	Soil	05/20/20
4				
5				
6				
7				
8				
9				

Notes:


(C, S, AA, PPP, AQR, J)

LDC #: 48389 CIA

## VALIDATION FINDINGS CHECKLIST

Page: 1 of 2  
Reviewer: JVG  
2nd Reviewer: [Signature]

Method: Volatiles (EPA SW 846 Method 8260C)

Validation Area	Yes	No	NA	Findings/Comments
<b>I. Technical holding times</b>				
Were all technical holding times met?	/			
Was cooler temperature criteria met?	/			
<b>II. GC/MS Instrument performance check</b>				
Were the BFB performance results reviewed and found to be within the specified criteria?	/			
Were all samples analyzed within the 12 hour clock criteria?	/			
<b>IIIa. Initial calibration</b>				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) $\leq$ 20% and relative response factors (RRF) within method criteria?	/			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of $\geq$ 0.990?			/	
<b>IIIb. Initial Calibration Verification</b>				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	/			
Were all percent differences (%D) $\leq$ 30%?	/			
<b>IV. Continuing calibration</b>				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	/			
Were all percent differences (%D) $\leq$ 20% and relative response factors (RRF) within method criteria?	/			
<b>V. Laboratory Blanks</b>				
Was a laboratory blank associated with every sample in this SDG?	/			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	/			
Was there contamination in the laboratory blanks?		/		
<b>VI. Field blanks</b>				
Were field blanks were identified in this SDG?	/			
Were target compounds detected in the field blanks?		/		
<b>VII. Surrogate spikes</b>				
Were all surrogate percent recovery (%R) within QC limits?	/			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			/	
<b>VIII. Matrix spike/Matrix spike duplicates</b>				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	/	/		JVG
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	/	/		

LDC #: 48981 CIA

## VALIDATION FINDINGS CHECKLIST

Page: 2 of 2  
Reviewer: JVG  
2nd Reviewer: [Signature]

Validation Area	Yes	No	NA	Findings/Comments
<b>IX. Laboratory control samples</b>				
Was an LCS analyzed per analytical batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	/			
<b>X. Field duplicates</b>				
Were field duplicate pairs identified in this SDG?		/		
Were target compounds detected in the field duplicates?			/	
<b>XI. Internal standards</b>				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	/			
Were retention times within + 30 seconds of the associated calibration standard?	/			
<b>XII. Compound quantitation</b>				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	/			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	/			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
<b>XIII. Target compound identification</b>				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	/			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	/			
Were chromatogram peaks verified and accounted for?	/			
<b>XIV. System performance</b>				
System performance was found to be acceptable.	/			
<b>XV. Overall assessment of data</b>				
Overall assessment of data was found to be acceptable.	/			

# TARGET COMPOUND WORKSHEET

## METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene	A2.
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane	B2.
C. Vinyl chloride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane	C2.
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene	D2.
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11	E2.
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12	F2.
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113	G2.
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114	H2.
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane	I2.
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide	J2.
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane	K2.
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane	L2.
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane	M2.
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane	N2.
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO. 1,1-Difluoroethane	O1. 3-Methylpentane	O2.
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane	P2.
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane	Q2.
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3-Trimethylbutane	R2.
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane	S2.
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methylcyclohexane	T1. 2-Methylhexane	T2.
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal	U2.
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene	V2.
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol	W2.
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene	X2.
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1.	Y2.
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1.	Z2.

LDC #: 48381

## VALIDATION FINDINGS WORKSHEET

### Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1

Reviewer: JVG

2nd Reviewer:                     

**METHOD :** GC/MS VOA (EPA SW 846 Method 8260C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A	Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?
-----------	--

[illegible]

LDC #: 48381C1a

**VALIDATION FINDINGS WORKSHEET**  
**Initial Calibration Calculation Verification**

Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer:                     

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\%RSD = 100 * (S/X)$$

 $A_x$  = Area of Compound $C_x$  = Concentration of compound, $S$  = Standard deviation of the RRFs, $A_{is}$  = Area of associated internal standard $C_{is}$  = Concentration of internal standard $X$  = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 20 std)	Recalculated RRF (RRF 20 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL VOA 123	05/19/20	Trichloroethene (FB)	0.355	0.355	0.385	0.385	7.61	7.61
			Tetrachloroethene (CBZ)	0.497	0.497	0.533	0.533	12.08	12.06

**VALIDATION FINDINGS WORKSHEET**  
**Continuing Calibration Results Verification**

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$
$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound,

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	V23200527N01 VOA 123	05/27/20	Trichloroethene (FB)	0.385	0.437	0.437	13.5	13.5
			Tetrachloroethene (CBZ)	0.533	0.595	0.595	11.6	11.6

LDC #: 48381 CIA

# **VALIDATION FINDINGS WORKSHEET** **Surrogate Results Verification**

Page: 1 of 1Reviewer: JVG2nd reviewer: [Signature]**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS \* 100

Where: SF = Surrogate Found

SS = Surrogate Spiked

Sample ID: # 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	20.0	19.803	99	99	0
1,2-Dichloroethane-d4	1	20.778	104	104	1
Toluene-d8	1	19.793	99	99	1
Bromofluorobenzene	1	21.237	106	106	1

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					



LDC #: 48781 CA

# **VALIDATION FINDINGS WORKSHEET** **Matrix Spike/Matrix Spike Duplicates Results Verification**

Page: 1 of 1Reviewer: JVG2nd Reviewer: [Signature]**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery =  $100 * (SSC - SC) / SA$ Where: SSC = Spiked sample concentration  
SA = Spike added

SC = Sample concentration

RPD =  $|MSC - MSC| * 2 / (MSC + MSDC)$ 

MSC = Matrix spike concentration

MSDC = Matrix spike duplicate concentration

MS/MSD sample: 2/3

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike		Matrix Spike Duplicate		MS/MSD	
						Percent Recovery		Percent Recovery		RPD	
	MS	MSD		MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene											
Trichloroethene	106	114	0.32 (2R2) (not sub tracked)	94.48	123.82	89	89	109	109	27	27
Benzene											
Toluene											
Chlorobenzene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 48381 C1a

**VALIDATION FINDINGS WORKSHEET**  
**Laboratory Control Sample Results Verification**

Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer: [Signature]

**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery =  $100 * SSC/SA$ 

Where: SSC = Spiked sample concentration  
SA = Spike added

 $RPD = |LCSC - LCSDC| * 2 / (LCSC + LCSDC)$ 

LCSC = Laboratory control sample concentration    LCSDC = Laboratory control sample duplicate concentration

LCS ID: W-1375252-3,4

Compound	Spike Added ( $\mu\text{g/kg}$ )		Spiked Sample Concentration ( $\mu\text{g/kg}$ )		LCS		LCSD		LCS/LCSD	
					Percent Recovery		Percent Recovery		RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene	40	40	45.381	43.206	113	113	108	108	5	5
Benzene										
Toluene										
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.



**Site:** MINMILT  
**Laboratory:** Alpha Analytical, Inc.  
**Report No.:** L2021318  
**Reviewer:** Josephine Go and Christina Rink/Laboratory Data Consultants for P.W. Grosser Consulting  
**Date:** July 7, 2020

**Samples Reviewed and Evaluation Summary**

FIELD ID	LAB ID	FRACTIONS VALIDATED
DB003 (175-180)	L2021318-15	VOC
DB003 (175-180)MS	L2021318-15MS	VOC
DB003 (175-180)MSD	L2021318-15MSD	VOC

**Associated QC Samples(s):**

Field/Trip Blanks: TB004, EB004  
Field Duplicate pair: DB003 (175-180) and DUP003

The above-listed soil samples were collected on May 21, 2020 and were analyzed for volatile organic compounds (VOCs) by SW-846 method 8260C. The data validation was performed in accordance with the USEPA Region 2 *Standard Operating Procedure for Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-Method 8260B and 8260C*, SOP HW-24, Revision 4 (October 2014) and the USEPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA 540-R-2017-002 (January 2017), modified as necessary to accommodate the non-CLP methodologies used.

The organic data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
- Initial and Continuing Calibrations
- Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Control Sample (LCS) Results
- Internal Standards
- Field Duplicate Results
- Moisture Content
- Quantitation Limits and Data Assessment
- Sample Quantitation and Compound Identification

### **Overall Evaluation of Data and Potential Usability Issues**

All results are usable as reported.

The validation findings were based on the following information.

### **Data Completeness**

The data package was complete as defined under the requirements for the NYSDEC ASP category B laboratory deliverables.

### **Holding Times and Sample Preservation**

All criteria were met.

### **GC/MS Tunes**

All criteria were met.

### **Initial and Continuing Calibrations**

All criteria were met.

### **Blanks**

Contamination was not detected in the method blanks.

No positive results were found in the trip blank sample TB004 and equipment blank sample EB004 for VOC analysis.

### **Surrogate Recoveries**

All criteria were met.

### **MS/MSD Results**

MS/MSD analyses were performed on sample DB003 (175-180) for VOC analysis. All criteria were met.

### **LCS Results**

All criteria were met.

### **Internal Standards**

All criteria were met.

**Field Duplicate Results**

Samples DB003 (175-180) and DUP003 were submitted as the field duplicate pair with this sample group. The following table summarizes the concentrations.

Compound	Concentration (ug/Kg)		RPD
	DB003 (175-180)	DUP003	
Tetrachloroethene	1.5	1.8	18
Trichloroethene	13	19	38
cis-1,2-Dichloroethene	0.24	0.29	19
1,2-Dichloroethene, total	0.24	0.29	19

**Moisture Content**

All criteria were met.

**Quantitation Limits and Data Assessment**

Results were reported which were below the reporting limit (RL) and above the method detection limit (MDL) in the VOC analysis. These results were qualified as estimated (J) by the laboratory.

Dilutions were not required for VOC analysis.

**Sample Quantitation and Compound Identification**

Calculations were spot-checked; no discrepancies were noted.

## DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- JN - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

# Results Summary

## Form 1

### Volatile Organics by EPA 5035

Client : P. W. Grosser  
 Project Name : MINMILT  
 Lab ID : L2021318-15  
 Client ID : DB003 (175-180)  
 Sample Location : 540 SMITH STREET, FARMINGDALE  
 Sample Matrix : SOIL  
 Analytical Method : 1,8260C  
 Lab File ID : VC200530B12  
 Sample Amount : 6.7 g  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2021318  
 Project Number : MIN2002  
 Date Collected : 05/21/20 17:30  
 Date Received : 05/22/20  
 Date Analyzed : 05/30/20 15:45  
 Dilution Factor : 1  
 Analyst : MV  
 Instrument ID : CHARLIE  
 GC Column : RTX-VMS  
 %Solids : 84  
 Injection Volume : N/A

CAS NO.	Parameter	ug/Kg			Qualifier	
		Results	RL	MDL		
127-18-4	Tetrachloroethene	1.5	0.45	0.18		
75-01-4	Vinyl chloride	ND	0.90	0.30	U	U
156-60-5	trans-1,2-Dichloroethene	ND	1.3	0.12	U	U
79-01-6	Trichloroethene	13	0.45	0.12		
156-59-2	cis-1,2-Dichloroethene	0.24	0.90	0.16	J	J
540-59-0	1,2-Dichloroethene, Total	0.24	0.90	0.12	J	J

JUL 08 2020

Initials: *CR*





LDC #: 48381D1a **VALIDATION COMPLETENESS WORKSHEET**  
SDG #: L2021318 Category B  
Laboratory: Alpha Analytical, Inc.

Date: 07/06/20  
Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer: [Signature]

**METHOD:** GC/MS Volatiles (EPA SW 846 Method 8260B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	ICAL $\leq 20\%$ ICV $\leq 30\%$
IV.	Continuing calibration	A	CCV $\leq 20\%$
V.	Laboratory Blanks	A	
VI.	Field blanks	ND	EB = EB004 TB = TB004 (same SDG)
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	SW	2 RPD NA - spike amts not comparable
IX.	Laboratory control samples	A	LCS 10
X.	Field duplicates	SW	D = 1 / DUP003
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	Results $< RL > MDL = Jdebs$
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable  
N = Not provided/applicable  
SW = See worksheet

ND = No compounds detected  
R = Rinsate  
FB = Field blank

D = Duplicate  
TB = Trip blank  
EB = Equipment blank

SB=Source blank  
OTHER:

	Client ID	Lab ID	Matrix	Date
1	DB003 (175-180)	L2021318-15	Soil	05/21/20
2	DB003 (175-180)MS	L2021318-15MS	Soil	05/21/20
3	DB003 (175-180)MSD	L2021318-15MSD	Soil	05/21/20
4				
5				
6				
7				
8				
9				

Notes:

-	WG13761895 blank			

LDC #: 48381 DIA

## VALIDATION FINDINGS CHECKLIST

Page: 1 of 2  
Reviewer: JVG  
2nd Reviewer: [Signature]

Method: Volatiles (EPA SW 846 Method 8260C)

Validation Area	Yes	No	NA	Findings/Comments
<b>I. Technical holding times</b>				
Were all technical holding times met?	/			
Was cooler temperature criteria met?	/			
<b>II. GC/MS Instrument performance check</b>				
Were the BFB performance results reviewed and found to be within the specified criteria?	/			
Were all samples analyzed within the 12 hour clock criteria?	/			
<b>IIIa. Initial calibration</b>				
Did the laboratory perform a 5 point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) $\leq 20\%$ and relative response factors (RRF) within method criteria?	/			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of $\geq 0.990$ ?			/	
<b>IIIb. Initial Calibration Verification</b>				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	/			
Were all percent differences (%D) $\leq 30\%$ ?	/			
<b>IV. Continuing calibration</b>				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	/			
Were all percent differences (%D) $\leq 20\%$ and relative response factors (RRF) within method criteria?	/			
<b>V. Laboratory Blanks</b>				
Was a laboratory blank associated with every sample in this SDG?	/			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	/			
Was there contamination in the laboratory blanks?			/	
<b>VI. Field blanks</b>				
Were field blanks were identified in this SDG?	/			
Were target compounds detected in the field blanks?			/	
<b>VII. Surrogate spikes</b>				
Were all surrogate percent recovery (%R) within QC limits?	/			
If the percent recovery (%R) for one or more surrogates was out of QC limits, was a reanalysis performed to confirm samples with %R outside of criteria?			/	
<b>VIII. Matrix spike/Matrix spike duplicates</b>				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	/			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?		/		

LDC #: 48381 B1a

## VALIDATION FINDINGS CHECKLIST

Page: 2 of 2  
Reviewer: JVG  
2nd Reviewer: [Signature]

Validation Area	Yes	No	NA	Findings/Comments
<b>IX. Laboratory control samples</b>				
Was an LCS analyzed per analytical batch?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	/			
<b>X. Field duplicates</b>				
Were field duplicate pairs identified in this SDG?				
Were target compounds detected in the field duplicates?				
<b>XI. Internal standards</b>				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	/			
Were retention times within + 30 seconds of the associated calibration standard?	/			
<b>XII. Compound quantitation</b>				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	/			
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	/			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	/			
<b>XIII. Target compound identification</b>				
Were relative retention times (RRT's) within + 0.06 RRT units of the standard?	/			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	/			
Were chromatogram peaks verified and accounted for?	/			
<b>XIV. System performance</b>				
System performance was found to be acceptable.	/			
<b>XV. Overall assessment of data</b>				
Overall assessment of data was found to be acceptable.	/			

# TARGET COMPOUND WORKSHEET

## METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene	A2.
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane	B2.
C. Vinyl chloride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane	C2.
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene	D2.
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11	E2.
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12	F2.
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113	G2.
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114	H2.
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane	I2.
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide	J2.
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane	K2.
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane	L2.
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane	M2.
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane	N2.
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO. 1,1-Difluoroethane	O1. 3-Methylpentane	O2.
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane	P2.
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane	Q2.
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3-Trimethylbutane	R2.
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane	S2.
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methylcyclohexane	T1. 2-Methylhexane	T2.
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal	U2.
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene	V2.
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWWW. Ethyl methacrylate	W1. Methanol	W2.
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene	X2.
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1.	Y2.
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1.	Z2.

LDC#: 48381D1a

**VALIDATION FINDINGS WORKSHEET**  
**Field Duplicates**

Page: 1 of 1

Reviewer: JVG

2nd Reviewer: 

**METHOD:** GCMS VOA (EPA SW 846 Method 8260C)

Y N NA Were field duplicate pairs identified in this SDG?

Y N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (ug/Kg)		RPD
	1	DUP003	
AA	1.5	1.8	18
S	13	19	38
QQQ	0.24	0.29	19
J	0.24	0.29	19

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LDC #: 48381D1a

**VALIDATION FINDINGS WORKSHEET**  
**Initial Calibration Calculation Verification**

Page: 1 of 1  
Reviewer: JVG  
2nd Reviewer:                     

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$$RRF = (A_x)(C_{is}) / (A_{is})(C_x)$$

average RRF = sum of the RRFs/number of standards

$$\%RSD = 100 * (S/X)$$

 $A_x$  = Area of Compound $C_x$  = Concentration of compound, $S$  = Standard deviation of the RRFs, $A_{is}$  = Area of associated internal standard $C_{is}$  = Concentration of internal standard $X$  = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (IS)	Reported RRF (RRF 20 std)	Recalculated RRF (RRF 20 std)	Reported Average RRF (Initial)	Recalculated Average RRF (Initial)	Reported %RSD	Recalculated %RSD
1	ICAL Charlie	04/07/20	Trichloroethene (FB)	0.383	0.383	0.370	0.370	7.93	7.94
			Tetrachloroethene (CBZ)	0.515	0.515	0.478	0.477	8.66	8.68

**VALIDATION FINDINGS WORKSHEET**  
**Continuing Calibration Results Verification**

METHOD: GC/MS VOA (EPA SW 846 Method 8260C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

$$\% \text{ Difference} = 100 * (\text{ave. RRF} - \text{RRF}) / \text{ave. RRF}$$
$$\text{RRF} = (\text{Ax})(\text{Cis}) / (\text{Ais})(\text{Cx})$$

Where:

ave. RRF = initial calibration average RRF

RRF = continuing calibration RRF

Ax = Area of compound,

Cx = Concentration of compound,

Ais = Area of associated internal standard

Cis = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (IS)	Average RRF (Initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported % D	Recalculated %D
1	VC200530B01 CHARLIE	05/30/20	Trichloroethene (FB)	0.370	0.400	0.400	8.1	8.1
			Tetrachloroethene (CBZ)	0.478	0.560	0.560	17.2	17.2

LDC #: 48381 D1K

# **VALIDATION FINDINGS WORKSHEET** **Surrogate Results Verification**

Page: 1 of 1Reviewer: JVG2nd reviewer: **METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery:  $SF/SS \times 100$ Where: SF = Surrogate Found  
SS = Surrogate SpikedSample ID: # 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane	20.0	20.564	103	103	0
1,2-Dichloroethane-d4		17.987	90 <del>103</del>	90	
Toluene-d8		20.510	103	103	
Bromofluorobenzene		20.216	101	101	

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					

Sample ID: \_\_\_\_\_

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Dibromofluoromethane					
1,2-Dichloroethane-d4					
Toluene-d8					
Bromofluorobenzene					



LDC #: 48381 D1A

**VALIDATION FINDINGS WORKSHEET**  
**Matrix Spike/Matrix Spike Duplicates Results Verification**

Page: 1 of 1Reviewer: JVG2nd Reviewer: [Signature]**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the matrix spike and matrix spike duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery =  $100 * (SSC - SC) / SA$ Where: SSC = Spiked sample concentration  
SA = Spike added

SC = Sample concentration

RPD =  $|MSC - MSC1| * 2 / (MSC + MSC1)$ 

MSC = Matrix spike concentration

MSDC = Matrix spike duplicate concentration

MS/MSD sample: 2/3

Compound	Spike Added (ug/kg)		Sample Concentration (ug/kg)	Spiked Sample Concentration (ug/kg)		Matrix Spike		Matrix Spike Duplicate		MS/MSD	
						Percent Recovery		Percent Recovery		RPD	
	MS	MSD		MS	MSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
1,1-Dichloroethene											
Trichloroethene	96	121	13	108.02	167.9	99	99	128	128	43	26
Benzene											
Toluene											
Chlorobenzene											

Comments: Refer to Matrix Spike/Matrix Spike Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

RPD recalc based on %R, spike amts not comparable

LDC #: 48381 D1a

# **VALIDATION FINDINGS WORKSHEET** **Laboratory Control Sample Results Verification**

Page: 1 of 1  
 Reviewer: JVG  
 2nd Reviewer: [Signature]

**METHOD:** GC/MS VOA (EPA SW 846 Method 8260C)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate (if applicable) were recalculated for the compounds identified below using the following calculation:

% Recovery =  $100 * \text{SSC} / \text{SA}$ 

Where: SSC = Spiked sample concentration  
 SA = Spike added

RPD =  $| \text{LCSC} - \text{LCSDC} | * 2 / (\text{LCSC} + \text{LCSDC})$ 

LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS ID: WG1376189-3,4

Compound	Spike Added (ug/kg)		Spiked Sample Concentration (ug/kg)		LCS		LCSD		LCS/LCSD	
					Percent Recovery		Percent Recovery		RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc.	Reported	Recalc.	Reported	Recalculated
1,1-Dichloroethene										
Trichloroethene	40	40	43.275	43.664	108	108	108	108	0	0
Benzene										
Toluene										
Chlorobenzene										

Comments: Refer to Laboratory Control Sample findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

