REMEDIAL INVESTIGATION/ALTERNATIVES ANALYSIS REPORT

February 23, 2022

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York
Site #C915344

Prepared For:
65 Lake Avenue LLC

Prepared By:

MATRIX
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CERTIFICATION STATEMENT

I, Christine M. Curtis, P.E., certify that I am currently a NYS Professional Engineer as defined in 6 NYCRR Part 375 and that this Remedial Investigation/Alternatives Analysis Report for the Lakeside Village Apartments site located at 65-67 Lake Avenue, Lancaster, New York was prepared in accordance with all applicable statutes and regulations and in substantial conformance with DER Technical Guidance for Site Investigation and Remediation (DER-10).

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Matrix Environmental Engineers, PLLC

2/23/2022
Date

SEAL

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

ABBREVIATIONS AND ACRONYMS

AA	Alternatives Analysis
BCP	Brownfield Cleanup Program
CAMP	Community Air Monitoring Plan
CLP	Contract Laboratory Protocol
COC	Certificate of Completion
CRZ	Contaminated Reduction Zone
DCE	Dichloroethene
DNAPL	Dense non-aqueous phase liquid
DO	Dissolved Oxygen
DUSR	Data Usability Summary Report
ELAP	Environmental Laboratory Approval Program
FEMA	Federal Emergency Management Agency
FER	Final Engineering Report
HASP	Health and Safety Plan
HDPE	High density polyethylene
ID	Inner Diameter
LDPE	Low density polyethylene
METI	Matrix Environmental Technologies Inc.
MNA	Monitored Natural Attenuation
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NYCRR	6 New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	Oxidation-Reduction Potential
OVM	Organic Vapor Meter
PCBs	Polychlorinated biphenyls
PCE	Tetrachloroethylene
PFAS	Per- and polyfluoroalkyl substances
PFC	Perfluorinated compound
PID	Photoionization Detector
PPE	Personal protective equipment
PTFE	Polytetrafluoroethylene
PVC	Polyvinyl chloride
QAPP	Quality Assurance Project Plan
QA/QC	Quality assurance/Quality control
RI	Remedial Investigation
SCG	Standards, criteria and guidance
SSD	Sub-Slab Depressurization
SVOC	Semivolatile Organic Compound
TAL	Target Analyte List
TIC	Tentatively Identified Compound
TCE	Trichloroethylene
TCL	Target Compound List
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VOC	Volatile Organic Compound

1.0 INTRODUCTION

This Remedial Investigation/Alternatives Analysis (RI/AA) Report has been prepared by Matrix Environmental Technologies Inc. (METI) on behalf of 65 Lake Avenue LLC for the Lakeside Village Apartments Site located at 65-67 Lake Avenue, Town of Lancaster, Erie County, New York (Site). Work is being completed under the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). Brownfield Cleanup Agreement (BCA) #C915344 was executed on December 16, 2019. The activities discussed in this report were completed under the approved *Remedial Investigation Work Plan* (METI, June 12, 2020).

1.1 Project Background

1.1.1 Property and Site Description

The Site is currently utilized as a residential apartment complex in a moderately developed residential area in the Town of Lancaster, Erie County, New York. The Site includes two parcels totaling approximately 1.18 acres of land: SBL #115.27-1-22.21 addressed as 65 Lake Avenue and SBL #115.27-1-23.11 addressed as 67 Lake Avenue. On-site structures include three (3) two-story townhomes constructed in 2006 (65 Lake Avenue) and a one-story apartment building constructed in 1903 (67 Lake Avenue). The Site is bordered by undeveloped land and apartment buildings to the south; residences to the north and west; and Lake Avenue to the east. Properties beyond those adjacent to the Site, including to the south, consist mostly of private residences. Cayuga Creek is located approximately 200 feet to the southwest. The location of the Site and the Site boundaries are shown on **Figures 1-3**.

Historically, the eastern portion of the Site was utilized as a dry cleaner from at least 1949. The former dry cleaning building was located on the eastern portion of 65 Lake Avenue and the northern portion of 67 Lake Avenue. The building was reportedly destroyed by a fire in the late 1970s and was removed or demolished by at least 1995. According to members of the Young family, who owned both properties from at least 1882 through 2005, historical use of the properties has remained residential since at least 1900 with the exception of the dry cleaner. Buildings utilized for vehicle storage were present in the current location of Building A and a private residence was located in the current vicinity of Buildings B and C. The storage buildings and the residence were reportedly demolished at approximately the same time as the dry cleaning building.

1.1.2 Previous Investigations

Subsurface investigations were completed at the Site in August 2005 and May 2018 by Lender Consulting Services, Inc. (LCS) and in February 2019 by METI. Chlorinated solvents were identified in soil and groundwater samples associated with past on-site dry cleaning operations during the 2018 and 2019 investigations. Soil samples collected in 2018 from one or more soil borings located near the approximate location of the former dry cleaning building identified acetone, cis-1,2-dichloroethene (cis-1,2-DCE), tetrachloroethene (PCE), and trichloroethene (TCE) in exceedance of NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) for unrestricted use. Concentrations of nine (9) volatile organic compounds (VOCs) and two (2) semi-volatile organic compounds (SVOCs) in groundwater samples collected from temporary monitoring wells installed in three (3) of the completed soil borings exceeded NYSDEC 6 NYCRR Part 703 Class GA Groundwater Criteria.

Laboratory analytical results from the 2019 investigation indicated that VOCs and SVOCs were non-detect or below unrestricted use SCOs in samples collected from soil borings across the Site at depths ranging from 4 to 18 feet below grade at an elevation of approximately 649 to 663 feet. Based on the results from the three (3) subsurface investigations, soil impacts were most elevated in shallow soils from 4 to 6 feet below grade (elevation of 662.5 to 664.5 feet) to in the approximate footprint of the former dry cleaner.

Due to the detections of chlorinated VOCs, vapor intrusion studies were completed in February and April 2019 within the four (4) residential buildings. Vapor intrusion testing results identified chlorinated solvents, specifically PCE and TCE, within both sub-slab and indoor air samples in Buildings 1 and A. Based on guidance from the New York State Department of Health (NYSDOH), the concentrations of these solvents required mitigation in Building A on 65 Lake Avenue and Building 1 on 67 Lake Avenue. Mitigation was not required in Building B or Building C. As a result, sub-slab depressurization (SSD) systems were installed within Building A and Building 1 in November and December 2019 to mitigate vapor intrusion.

A summary of historical soil and groundwater data is included in **Figures 4A** - **4B** and **Tables 1-2**.

1.2 Purpose and Scope

The specific objectives of the RI included the following:

- Define the nature and extent of on-site contamination in both soil and groundwater.
- Determine if contamination has migrated off-site and if so, fully investigate and characterize the nature and extent of the off-site contamination.
- Identify on-site source areas of contamination, if any.
- Collect data of sufficient quantity and quality to evaluate potential threats to public health and the environment.
- Collect data of sufficient quantity and quality to evaluate remedial alternatives.

2.0 INVESTIGATION METHODS

The proposed RI scope of work included investigation for potential contamination in fill, native soils, groundwater, and soil vapor at the Site as well as in sub-slab vapor and indoor air in residences immediately south of the Site and in soil vapor and groundwater at a nearby property to the east (1 Franklin Street).

The scope of work for the on-site investigation included completion of 13 soil borings, nine (9) of which were completed as permanent monitoring wells and one of which was utilized for soil vapor sampling, as well as the collection of nine (9) surface soil samples. Off Site sample locations included two soil borings, once of which was completed as a temporary well and one of which was utilized for soil vapor sampling. Sampling locations are included in **Figure 5-8** and a summary of the analytical testing program is included in **Table 3**.

The proposed scope of work for the off-site investigation also included the completion of vapor intrusion assessments in the two (2) apartment buildings located at 69 Lake Avenue. The assessments will be completed per NYSDOH guidance contingent upon site access from the property owner. To date, access to the property has not been granted.

2.1 Surface Soil Investigation

Grass and gravel/sand fill surface areas are present immediately around the apartment buildings. Nine (9) surface soil samples were collected from the grass and gravel/sand fill areas as shown in **Figure 5**.

Surface soil samples were collected from 0 to 2 inches below vegetative cover or gravel/sand fill, or from 0 to 6 inches for samples submitted for laboratory analysis of VOCs. The sampled depth interval was screened for VOCs with a calibrated organic vapor meter (OVM) equipped with a PID with an 11.7 eV lamp. OVM results and soil descriptions were recorded and are included in **Table 4.**

All surface soil samples were submitted for laboratory analysis for the following:

- Target Compound List (TCL) VOCs
- TCL SVOCs
- Target Analyte List (TAL) metals
- Polychlorinated biphenyls (PCBs)
- Pesticides and herbicides
- 1,4-Dioxane
- Per- and polyfluoroalkyl substances (PFAS)

The samples were collected using dedicated stainless-steel sampling tools. Select representative soil samples were placed in pre-cleaned laboratory-provided sample bottles, labeled and cooled to 4°C in the field, and transported under chain-of-custody to Hampton-Clarke, Inc. of Fairfield, New Jersey.

Surface soil sample collection procedure for PFAS were followed in accordance with NYSDEC protocol as detailed in Appendix B of "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs" (NYSDEC, January 2020).

2.2 Subsurface Soil Investigation

Previous investigations have identified the presence of VOCs, specifically chlorinated solvents, in Site soils and groundwater. Subsurface soil sampling included locations within the estimated footprint of the former dry cleaning building and in assumed upgradient, cross gradient and downgradient directions. Nine (9) of the soil boring locations were converted to groundwater monitoring wells. Soil boring locations are shown on **Figure 6**.

The soil boring locations were advanced using a drill rig capable of advancing hollow-stem augers for installing 2-inch inner diameter (ID) monitoring wells in select locations. The on-site borings were completed with continuous sampling to the top of competent bedrock, as assumed by auger refusal, at depths ranging from 14.5 to 20 feet below grade (an elevation of 645 to 653.5 feet).

Discrete subsurface soil samples were collected in approximate two-foot depth intervals and screened with a calibrated OVM equipped with a PID with an 11.7 eV lamp. Screening results and soil descriptions were recorded on the field soil boring logs included as **Appendix A**.

Soil samples were selected for laboratory analysis based on field screening results and visual and olfactory observations. The sample interval identified as the most impacted (i.e., highest PID reading, visual/olfactory evidence of odors, staining, or NAPL) were selected for analysis. In the event that no impacts were identified, samples from the bottom of the boring or from immediately above the confirmed confining layer were selected for analysis. Data collected in previous investigations suggested that perched groundwater conditions exist in the shallow overburden and the fine-grained soils may create a smear zone, and this zone may serve as a source of vapor intrusion in the on-site buildings.

From soil boring SB102 in the footprint of the former dry cleaner (source area), three (3) soil samples were submitted for laboratory analysis for vertical delineation of overburden soils. The sample depths included shallow fine-grained soils above the water table, soils that intercept the water table and weathered bedrock at the bottom of the boring. The depth-discrete data will be used to evaluate the need for remedial action in the source area and if necessary, for remedial design purposes.

Subsurface soil samples collected from the soil borings were submitted for analysis for the following:

- **Fourteen (14) soil samples for TCL VOCs:** One (1) sample per boring from SB101 and SB103-SB112; three (3) samples from SB102.
- **Four (4) soil samples for TCL SVOCs:** One (1) sample per boring from SB102, SB105, SB108, and SB109.
- **Four (4) soil samples for TAL metals:** One (1) sample per boring from SB101, SB105, SB108, and SB109.
- **Four (4) soil samples for PCBs:** One (1) sample per boring from SB101, SB105, SB108, and SB109.
- **Four (4) soil samples for pesticides and herbicides:** One (1) sample per boring from SB101, SB105, SB108, and SB109.
- **Four (4) samples for 1,4-dioxane:** One (1) sample per boring from SB101, SB105, SB108, and SB109.

- **Four (4) samples for PFAS:** One sample (1) per boring from SB101, SB105, SB108, and SB109.

Subsurface soil samples were collected using stainless-steel sampling tools. Select representative soil samples were placed in pre-cleaned laboratory-provided sample bottles, labeled and cooled to 4°C in the field, and transported under chain-of-custody to Hampton-Clarke, Inc. of Fairfield, New Jersey and Eurofins Test America of Amherst, New York.

Personnel and sampling equipment were decontaminated in a dedicated decontamination area between sampling locations. Equipment was decontaminated by steam cleaning or washing with a laboratory grade detergent (e.g. Alconox). All borings not completed as monitoring wells were decommissioned by tremie grouting with a slurry of Portland cement and bentonite.

Soil sample collection procedure for PFAS was completed in accordance with NYSDEC protocol as detailed in Appendix B of "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs" (NYSDEC, January 2020).

2.3 Groundwater Investigation

2.3.1 Monitoring Well Installation

Nine (9) soil boring locations were completed as permanent monitoring wells. The soil borings were advanced with a drill rig using hollow-stem augers capable of installing 2-inch ID monitoring wells. The wells are utilized for measurement of groundwater depth and collection of groundwater samples using low-flow sampling techniques. The monitoring well locations, as shown in **Figure 7A-7B,** were selected based on data from previous investigations and to evaluate plume migration in the overburden.

After completion of the soil borings to depths of approximately 14.5 to 20 feet below grade (elevation of 645 to 653.5 feet), a 2-inch ID schedule 40 PVC monitoring well was installed at each location. A 10 to 15-foot length of 0.010-inch machine slotted well screen was installed at each location to intercept the top of the water table followed by a riser pipe to the ground surface. The well screen depth was backfilled with silica sand filter pack (size #00) from the base to approximately 1 to 1.5 feet above the well screen. A 1-foot bentonite seal was placed above the sand and hydrated to prevent contamination from surface infiltration. The top of the well riser was cut just below the ground surface and completed with a locking J-plug. The wells were finished with a flush-mounted road box in a concrete pad. Refer to the attached Monitoring Well Construction Details, included as **Appendix B**.

2.3.2 Monitoring Well Development

Approximately 24-48 hours following installation on July 22-28, 2020 and August 17, 2021, the monitoring wells were developed via surge blocking. Development water and suspended sediments were removed with a bailer. Development water was containerized and sampled for future off-site disposal. Monitoring Well Development logs are included in **Appendix C**. Disposal documentation is included in **Appendix D**.

2.3.3 Groundwater Sampling

Well top of casing elevations were surveyed to a common vertical datum using a 16-foot fiberglass measuring rod and a Spectra LL300 Laser Level. The location of the vertical datum is the north side of the northwest corner of the porch at the 67 Lake Avenue apartment building (Building 1).

Prior to sample collection, static groundwater levels were measured at each of the monitoring wells with a water level indicator. Groundwater samples were collected using low flow sampling techniques (e.g. peristaltic pump with dedicated polyethylene tubing). The wells were purged and field measurements of pH, specific conductivity, temperature and turbidity were recorded and monitored for stabilization prior to sampling. Data was recorded in Groundwater Evaluation Sheets, included in **Appendix E.**

The nine (9) groundwater samples were analyzed for the following parameters:

- TCL VOCs

Groundwater samples collected from three (3) of the monitoring well locations (MW1, MW5, and MW7) were also analyzed for the following parameters:

- TCL SVOCs
- TAL metals (total)
- TAL metals (dissolved phase)
- PCBs
- Pesticides and herbicides
- 1,4-dioxane
- PFAS

Groundwater samples were placed in pre-cleaned laboratory-provided sample bottles, labeled and preserved in accordance with USEPA SW-846 methodology, and transported under chain-of-custody to Hampton-Clarke, Inc. of Fairfield, New Jersey and Eurofins Test America of Amherst, New York.

Groundwater sample collection procedure for PFAS was followed in accordance with NYSDEC protocol as detailed in Appendix B of "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs" (NYSDEC, January 2020).

2.4 Soil Vapor Investigation

Soil vapor samples were collected at 1 Franklin Street and on Site between Building 1 and the southern property boundary on August 17, 2021 as shown in **Figure 8**. Samples were collected 24 hours following after the installation of temporary probes in accordance with the procedures detailed in Section 2.7 of the New York State Department of Health "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (October 2006 and its updates). The temporary probes were installed to a depth of 4 feet below grade using a direct-push drill rig. One to three implant volumes (i.e., the volume of the sample probe and tube) were purged prior to collecting the samples. Flow rates for both purging and collecting did not exceed 0.2 liters per minute to minimize outdoor air infiltration

during sampling. A tracer gas was used to verify that an adequate surface seal was created. Samples were collected over a two-hour duration. Samples were submitted to Centek Laboratories of Syracuse, New York for analysis of Target Compound List (TCL) Volatile Organic Compounds (VOCs) by EPA Method TO-15.

2.5 Field Specific Quality Assurance/Quality Control Sampling

Field-specific quality assurance/quality control (QA/QC) samples were collected during soil and groundwater sampling activities. The samples were analyzed as summarized in **Table 3** to support the third-party data usability assessment effort. Site-specific QA/QC samples included a field duplicate (blind), matrix spike/matrix spike duplicate (MS/MSD), equipment rinsate blank, and trip blank.

2.6 Air Monitoring

Particulate and volatile organic vapor monitoring was performed in accordance with the Community Air Monitoring Plan (CAMP) to protect the community during the investigative activities. Instrument air monitoring data from field activities completed in 2020 is included in **Appendix F**. Instrument air monitoring data from field activities completed in 2021 was inadvertently destroyed prior to download and is unavailable; however, readings remained below the action levels outlined in the CAMP.

Particulate air monitoring data was recorded using TSI DustTrak™ II aerosol monitors. PM-10 particulate levels at the downwind monitoring location in exceedance of the action level of 100 $\mu g/m^3$ above background levels (as measured at the upwind monitoring location) were not observed. At the time of the first recorded reading at approximately 8:00 AM on July 27, 2020 PM-10 levels at the upwind and downwind monitoring locations were 101 $\mu g/m^3$ and 118 $\mu g/m^3$ respectively. At the next recorded interval 15 minutes later, PM-10 levels decreased to 38 $\mu g/m^3$ upwind and 47 $\mu g/m^3$ downwind.

VOC monitoring data was recorded using MiniRAE 3000 organic vapor meters equipped with a PID with an 11.7 eV lamp. Exceedances of action levels for VOCs in ambient air up to $2x10^6$ ppm were recorded by the PIDs beginning in the afternoon on July 21, 2020. The exceedances were due to false readings of the PIDs caused by high humidity and rain. All prior PID readings were less than 1 ppm. The PIDs were reset multiple times in a climate-controlled area but continued to record erroneously high readings. No odors or evidence of gross hydrocarbon impacts were observed at any point upwind of, downwind of, or within the work area.

2.7 Investigation-Derived Waste Management

Following the completion of soil borings, drill cuttings and other soil generated during the investigation were managed according to DER-10 Section 3.3(e)(1). Drill cuttings were containerized in 55-gallon drums for off-site disposal. The drums were stored temporarily in the northeastern portion of the parking lot in an area cordoned off using plastic construction fencing.

Groundwater generated during well development, purging and sampling activities was containerized in 55-gallon drums for testing and future off-site disposal. Disposal documentation is included in **Appendix D**.

2.8 Site Mapping

A Site base map was generated from surface and subsurface soil borings and monitoring well locations that were measured to on-site infrastructure. As referenced in Section 2.3, elevations of the top of well casings were measured for each monitoring well.

2.9 Personnel Decontamination

Decontamination procedures were carried out in such a manner as to avoid gross contamination of Site workers, personal protective equipment, machinery and equipment. Between sampling locations (or sometimes between samples at one sampling location), and upon the completion of the daily field activities, Site workers proceeded to the Contaminated Reduction Zone (CRZ) or mobile reduction zone area. This area was located in the northeastern portion of the parking lot in an area cordoned off using plastic construction fencing to restrict access.

Equipment (e.g., sampling tubes, shovels, tools, etc.) were decontaminated in this area. Due to the Site use as an apartment complex, CAMP monitoring occurred during all decontamination procedures in order to prevent potential migration of site impacts to off-site or occupied areas. Prior to leaving the Site for breaks, at the end of the work shift, or when PPE had been grossly contaminated, disposable boot covers, gloves, and suits were removed and placed in a drum designated for the disposal of these materials. After removing PPE, each Site worker washed with soap and fresh water prior to donning new PPE or leaving the Site for the day. All wash water and rinse water were collected and disposed of in accordance with appropriate regulations.

2.10 Decontamination of Equipment

Equipment decontamination efforts were conducted in the CRZ or mobile reduction zone areas, as described in Section 2.8, between borings and at the conclusion of drilling and sampling activities. Gross contamination was removed with plastic scrapers or other appropriate tools. The equipment was decontaminated at a temporary equipment decontamination pad in the CRZ via hand washing or pressure washing. Downhole tools and augers were hand washed and pressure washed. CAMP monitoring was completed during all decontamination activities.

The decontamination of the drilling rig was undertaken at the end of the workday. Heavy soils were removed prior to washing. Washing was completed by hand and pressured washer as needed. After the investigation was completed, the decontamination pad was removed for disposable and the decontamination area was deactivated. All fluids generated during decontamination activities were containerized for off-Site disposal.

2.11 Disposal of Contaminated Materials

Potentially contaminated materials (gloves, clothing, sample sleeves, etc.) were bagged and segregated for proper disposal. Investigation-derived waste was managed in accordance with NYSDEC regulations. All fluids collected during groundwater sampling and decontamination, and soils generated during drilling, were containerized in DOT rated drums for off-site disposal at American Recyclers Company in Tonawanda, NY. Waste manifests for the investigation-derived wastes in 2020 and 2021 are included in **Appendix D**.

3.0 SITE PHYSICAL CHARACTERISTICS

3.1 General Site Features and Site Topography

Cayuga Creek, a tributary of the Buffalo River which discharges into Lake Erie, is located approximately 200 feet southwest of the Site. The direction of flow in Cayuga Creek (closest to the Site) is to the west. The topographic elevation at the Site is approximately 668 feet above sea level. The elevation of Cayuga Creek closest to the Site is 644 feet above sea level. The Site is generally flat with a gentle slope to the west and southwest towards the Cayuga Creek floodplain. Ground elevations at each monitoring well location are included in **Table 5**.

The Site and surrounding area are serviced by municipal utilities. There are no known groundwater supply wells located within a one-mile radius of the Site.

The Site does not have state or federal wetlands within property limits, nor is the Site located in a floodplain. Nearby wetlands include the federal riverine wetland located along Cayuga Creek approximately 140 feet southwest of the Site. The adjacent property to the south, 69 Lake Avenue, is within a FEMA 100-year floodplain.

3.2 Geology and Hydrogeology

3.2.1 Overburden

According to the Surficial Geologic Map of New York, Niagara Sheet (1988) by Donald H. Cadwell and the U.S. Department of Agriculture Soil Conservation Service General Soil Map of Erie County, New York, soils underlying the Site consist of proglacial lake deposits, namely laminated clays and silts.

Characterization of soil samples collected during the remedial investigation depict the subsurface environment as:

- Surface to 4 to 5.5 feet below grade (elevation of 663-664.5 to 668.5 feet) – sand with gravel and silt (fill material)
- 4 to 11.3 feet below grade (elevation of 657.1 to 664.5 feet) – laminated clay and silt (lacustrine)
- 11.3 to 20 feet below grade (elevation of 648.5 to 657.1 feet) – silty sand with gravel (alluvium), occasional 2- to-3-inch lenses of dry, weathered limestone

The laminated clay and silt are proglacial lake sediments as indicated in the references described above. It is likely the silty sand with gravel is alluvium due to the proximity of Cayuga Creek. The two (2) northern-most borings (SB106 and SB110) showed the average bottom of clay and top of silty sand was deeper (13.75 feet below grade, or an elevation of approximately 654.8 feet) than the other borings (11.3 feet below grade, or an elevation of approximately 657 feet). SB106 and SB110 are furthest from the Cayuga Creek channel which is located to the south and west of the Site.

3.2.2 Bedrock

According to the Geologic Map of New York, 1970 (Richard and Fisher), the bedrock underlying the Site is shale and/or limestone of the Skaneateles Formation (Hamilton Group) from the Upper Devonian Period (383 to 358 million years ago). Weathered and dry to moist, 2 to 3-inch lenses of limestone were identified in several borings ranging from 16 to 20 feet below grade (elevation of 645 to 649 feet). Auger and sample refusal was also documented in that depth range suggesting the surface of competent bedrock begins at approximately 20 feet below grade (elevation of 645.16 to 653.42 feet).

3.2.3 Hydrogeology

During the groundwater sampling events in August 2020 and August 2021, the average depth to groundwater was 8.04 feet below grade and 7.89 feet below grade respectively (approximately 659 feet elevation). This is consistent with what was observed from soil sample characterization indicating the water table exists within the clay and silt lacustrine sediments. Groundwater elevation data show that the groundwater flow direction is generally to the west with components of flow to the west northwest and southwest. The gradient is moderate at 0.035. Between the Site and Cayuga Creek the gradient is estimated to be steeper (e.g. 0.1 feet) due to the difference in topographic elevation (28 feet).

Groundwater elevation data from August 10, 2020 and August 31, 2021 are included in **Table 6** and groundwater elevation contour maps are included as **Figure 9A-9B**.

4.0 INVESTIGATION RESULTS

4.1 Standards, Criteria, and Guidance

Applicable NYSDEC standards, criteria and guidance (SCG) values will be used for this project. These goals are applicable when considering remedial alternatives. For purposes of the RI, the following SCG will be utilized:

- 6 NYCRR Part 375-3 Brownfield Cleanup Program dated December 14, 2006.
- NYSDEC Policy CP-51/Soil Cleanup Guidance dated October 21, 2010.
- NYSDEC "DER-10 Technical Guidance for Investigation and Remediation" dated May 2010.
- NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) document "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" dated June 1998, amended January 1999 Errata Sheet, April 2000 Addendum and June 2004 Addendum.
- NYSDEC "Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs" dated January 2020.
- NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 and its addendums.

Sample analytical results are compared to SCOs for protection of groundwater (for PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride only) or restricted residential use under the BCP cleanup Track 2 as described in Section 7.1.

4.2 Surface Soil

Concentrations of VOCs, SVOCs, metals, pesticides, herbicides, PCBs, and cyanide in surface soil samples did not exceed the applicable 6 NYCRR Part 375 SCOs. Concentrations of PFAS in surface soil samples did not exceed NYSDEC guidance values.

Refer to **Tables 7-13** and **Figure 5** for surface soil sampling results. Laboratory analytical reports are included in **Appendix G**.

4.3 Subsurface Soil

Concentrations of VOCs, SVOCs, metals, pesticides, herbicides, PCBs, and cyanide in subsurface soil samples did not exceed the applicable 6 NYCRR Part 375 SCOs with the exception of PCE and cis-1,2-DCE in one (1) sample collected from SB102 in the source area. Concentrations of PFAS in subsurface soil samples did not exceed NYSDEC guidance values.

Refer to **Tables 7-13** and **Figure 6** for subsurface soil sampling results. Laboratory analytical reports are included in **Appendix G**.

4.4 Groundwater

Concentrations of one (1) or more chlorinated VOCs, including PCE, TCE, cis-1,2-DCE, trans-1,2-DCE and vinyl chloride, exceeded NYS TOGS 1.1.1 standards in MW1, MW2, MW3, and MW5 as summarized below in Table 4.1 and 4.2. Additionally, concentrations of sodium exceeded NYS TOGS 1.1.1 standards in MW1, MW5 and MW7.

Table 4.1. Groundwater VOCs Exceeding NYS TOGS 1.1.1 Standards (1st Sampling Event)

VOC	Standard (µg/L)	MW1 (µg/L)	MW1 Duplicate (µg/L)	MW2 (µg/L)	MW5 (µg/L)
PCE	5	180	150	2,200	480
TCE	5	not exceeded	not exceeded	160	not exceeded
cis-1,2-DCE	5	not exceeded	not exceeded	670	140
trans-1,2-DCE	5	not exceeded	not exceeded	11	5.3
Vinyl chloride	2	not exceeded	not exceeded	20	not exceeded

Table 4.2. Groundwater VOCs Exceeding NYS TOGS 1.1.1 Standards (2nd Sampling Event)

VOC	Standard (µg/L)	MW1 (µg/L)	MW2 (µg/L)	MW3 (µg/L)	MW3 Duplicate (µg/L)	MW5 (µg/L)
PCE	5	85	3,200	15	16	580
TCE	5	not exceeded	160	18	19	30
cis-1,2-DCE	5	not exceeded	830	23	24	56
trans-1,2-DCE	5	not exceeded	not exceeded	not exceeded	not exceeded	not exceeded
Vinyl chloride	2	not exceeded	not exceeded	not exceeded	not exceeded	not exceeded

The 5 µg/L standard for PCE was exceeded in these four wells, ranging from 15 µg/L in MW3 to 3,200 µg/L in MW2 in August 2021. The most elevated concentrations of the five target compounds were detected in MW2 located in the source area. Groundwater VOCs were non-detect in four wells located downgradient of the source area (MW4, MW6, MW7 and MW8) and the upgradient off-site well TW1. Two (2) chlorinated VOCs were detected below standards from MW9 located on the leading edge of the groundwater plume.

The groundwater plume is well defined with a two order of magnitude range in VOC concentrations and numerous non-detect samples. The footprint of the plume and magnitude of the VOC concentrations are similar in the two sampling events.

Refer to **Tables 14-20** and **Figures 7** and **10** for groundwater sampling results. Laboratory analytical reports are included in **Appendix G**.

4.5 Soil Vapor

Results of the soil vapor sampling event completed on August 17, 2021 are summarized in **Table 21** and **Figure 8**. A total of 24 compounds from the Target Compound List were detected at VP1 (1 Franklin Street) and 23 compounds were detected at VP2 (downgradient property boundary), the

source of which is not known. Concentrations were similar to or below background levels for indoor air. TCE, DCE, and VC were not detected at either sample location. PCE was detected at a concentration of 0.68 $\mu g/m^3$ in the sample collected from VP1 and was not detected in the sample collected from VP2.

4.6 Data Usability Summary

Laboratory analytical data were validated by Vali-Data of WNY. All data was found to be acceptable for use, although some results should be flagged as estimates based on QA/QC measurement performance criteria. Equipment blanks were non-detect for target analytes except for SVOC TICs. The trip blank was non-detect for VOCs. Field precision as indicated by field duplicate samples met the project quality assurance goals. Analytical results for QA/QC samples collected by METI are included in **Tables 14-20**.

Copies of the Data Summary Reports (DUSRs) provided by Vali-Data are included in **Appendix H**. A summary of the findings, grouped by Sample Development Group (SDG), is below:

- **Samples Collected July 20-21, 23, and 27-28, 2020 (SDG #AD18292, AD18350, AD18388, 18416):** The data are acceptable for use. All holding times and SOP and method criteria were met.
- **Samples Collected July 28 and August 11-12, 2020 (SDG #AD18416, AD18730):** The data are acceptable for use. All holding times and SOP and method criteria were met.
- **Samples Collected July 21, 2020 (SDG #AD18291):** The data are acceptable for use except where qualified in laboratory control samples, MS/MSD, surrogate spike recoveries, initial calibration and continuing calibration. Certain target analytes should be qualified as estimated, including (but not limited to):
  - TCE and cis-1,2-DCE in SB102 (4.5'-5.5') – MS/MSD percent recovery was outside limits, low.
  - Percent dilution for trans-1,2-DCE, TCE, was outside QC limits in SB101(5'-7'), SB102(4.5'-5.5') and SB102(19.6'-20.0'). Samples were diluted due to high target analyte concentration.

  All holding times were met. Refer to Data Usability Summary Report 10162020.
- **Samples Collected July 23, 2020 (SDG #AD18348):** The data are acceptable for use except where qualified in surrogate spike recoveries, laboratory control samples, method blank, internal standard, compound quantitation, initial calibration and continuing calibration. All holding times were met. Certain target analytes should be qualified as estimated, including (but not limited to):
  - Field duplicate: All criteria were met except that methylene chloride was detected in the field duplicate but was not detected in SS4. A TIC was detected in SS4 but was not detected in the field duplicate. Benzo(b)fluoranthene, chrysene, fluoranthene and pyrene were detected in the field duplicate but were not detected in SS4.
  - The RPD of 4,4'-DDT was outside QC limits in the field duplicate and SS4, and should be qualified as estimated.
- **Samples Collected July 22, 2020 (SDG #AD18313):** The data are acceptable for use except

where qualified below in the method blank, initial calibration and continuing calibration. All holding times were met.

- **Samples Collected July 27, 2020 (SDG #AD18396):** The data are acceptable for use except where qualified below in laboratory control samples, initial calibration and continuing calibration. All holding times were met. Certain target analytes should be qualified as estimated, including (but not limited to):
  - Several metals (Se, Cd, Co, Sb, Be, Tl, As, Ag, Na, Cu, Ni, Ag) concentrations in SB108 should be qualified as estimated high**.** Refer to Data Usability Summary Report 10222020.
- **Samples Collected July 28, 2020 (SDG #AD18415):** The data are acceptable for use except where qualified below in the method blank, MS/MSD laboratory control samples, initial calibration and continuing calibration. All holding times were met. Certain target analytes should be qualified as estimated, including (but not limited to):
  - Field duplicate: All criteria were met for VOCs except methylcyclohexane and three (3) TICs were detected in the SB109(14'-15') grab sample but one TIC was detected in the field duplicate subsurface grab. All criteria were met for SVOCs except 20 TICs were detected in the SB 109(14'-15') composite sample but six (6) TICs were detected in the field duplicate subsurface composite sample. Cr, Pb and K were detected in the SB 109(14'-15') composite but were not detected in the field duplicate subsurface composite sample.
- **Samples Collected July 20, 2020 (SDG #AD18267):** The data are acceptable for use except where qualified in laboratory control samples, surrogate spike recoveries, MS/MSD, serial dilution, initial calibration and continuing calibration. All holding times were met. Refer to Data Usability Summary Report 10162020. Certain target analytes should be qualified as estimated, including (but not limited to):
  - Percent recovery of Sb was outside QC limits, low in the SS1 MS/MSD and should be qualified as estimated. The RPD of As, Be and V was outside QC limits between SS1 and SS1 duplicate sample. These target analytes should be qualified as estimated in SS1.
  - Percent dilution of Sb, Se, Co and K were outside QC limits in SS1SD. These target analytes should be qualified as estimated in SS1.
- **Samples Collected August 10-12, 2020 (SDG #AD18701):** The data are acceptable for use except where qualified in laboratory control samples, MS/MSD, initial calibration and continuing calibration. Refer to Data Usability Summary Report 10292020. Certain target analytes should be qualified as estimated, including (but not limited to):
  - Percent recovery of several metals were outside QC limits and should be flagged as estimates (need to look into this further; match continuing calibration samples to batch and determine which of our samples are affected).
- **Samples Collected August 11, 2020 (SDG #AD18688):** The data are acceptable for use except where qualified in Data Usability Summary Report 10272020. Certain target analytes should be qualified as estimated, including (but not limited to):
  - Percent recovery of several metals were outside QC limits and should be flagged as estimates.
- **Samples Collected August 10-August 3, 2020 (SDG #AD18554):** The data are acceptable for use except where qualified in laboratory control samples, MS/MSD, initial

calibration and continuing calibration. Refer to Data Usability Summary Report 10262020. Certain target analytes should be qualified as estimated, including (but not limited to):

- Percent recovery of several metals were outside QC limits and should be flagged as estimates.

- **Samples Collected August 16, 2021 (SDG #480-188381-1):** The data are acceptable for use except where qualified. in laboratory control samples, MS/MSD, initial calibration and continuing calibration. Refer to Data Usability Summary Report 12052021.
- **Samples Collected August 31, 2021 (SDG #480-188962-1):** The data are acceptable for use except where qualified. in laboratory control samples, initial calibration and continuing calibration. Refer to Data Usability Summary Report 12052021.
- **Samples Collected August 17, 2021 (#C2108030):** The data are acceptable for use except where qualified. in laboratory control samples and continuing calibration. Refer to Data Usability Summary Report 12062021.

5.0 CONTAMINANT FATE AND TRANSPORT

The results of the RI identified an area of shallow soil VOC contamination above the water table in the former footprint of the dry cleaner. This "source area" includes soil and fill material from ground surface to a depth of approximately 5.5 feet below grade (664 feet elevation). Below the shallow soils are 6 to 7 feet of laminated silt and clay that has impeded the downward migration of VOCs. Soil samples collected above the top of bedrock in the groundwater plume were non-detect for VOCs and DNAPL was not found. Soil cross sections are included in **Figures 11-13**.

A groundwater plume of chlorinated VOCs has been delineated and samples from the four (4) down gradient wells and one (1) up gradient well were non-detect. The plume has migrated down gradient from the source area in a westerly direction in the alluvium soils located below the silt and clay layer. In the groundwater plume the alluvium soils are found from approximately 8 feet to the assumed bedrock surface at a depth of 18 to 20 feet. Currently the plume appears to be stable and there is no evidence of vertical migration into bedrock or off-site migration.

The chemical nature of the plume has changed over time due to the reductive dechlorination of PCE to TCE, DCE, and VC by bacteria under anaerobic conditions. The redox conditions in the plume as measured during the RI are aerobic and the ratios of the chlorinated VOCs are similar in the source area well and down gradient plume well. These results suggest that reductive dechlorination is inhibited, likely due to depletion and/or absence of electron donor, and the biodegradation of the VOC plume is slow. The footprint of the plume and magnitude of the VOC concentrations are similar in the 2020 and 2021 sampling events. This data indicates that the plume will persist in the absence of remediation.

Chlorinated VOCs have been detected in indoor air and vapor mitigation systems are operating in Buildings 1 and A. PCE was also detected in two (2) groundwater samples collected from sumps in Building A. Based on the elevation of the sumps and the observed water level of 7.12 feet below grade (approximately 660 feet in elevation), water is being recovered from above the laminated silt and clay layer. These buildings are located in close proximity to the source area and groundwater plume. Based on the findings of the RI, shallow soils in the source area and the groundwater plume are a source of vapor contamination to indoor air in the on-site buildings. Underground utilities installed through the source area to service Buildings A, B and C, and backfill material at the Site are considered preferential pathways for vapor migration as they provide a permeable pathway above the water table from the contaminated soils to the buildings impacted with vapor intrusion Given that these underground utility lines do not extend beyond the on-site buildings and the limited extents of the soil and groundwater plumes as defined by samples collected at the down gradient property boundary, preferential pathways for vapor migration to off-site properties, including 69 Lake Avenue, were not identified during the RI.

6.0 QUALITATIVE EXPOSURE ASSESSMENT

6.1 Potential Human Health Risks

The following assessment has been completed in accordance with the New York State Department of Health Qualitative Human Health Exposure Assessment (Appendix 3B of DER-10). The purpose of the exposure assessment is to evaluate how people might be exposed to Site-related contaminants and identify and characterize the potentially exposed population(s) now and under the reasonably anticipated future use of the Site. The exposure pathway elements discussed in Sections 6.1.1 through 6.1.5 are summarized in Table 6.1 below:

Table 6.1. Qualitative Exposure Assessment Summary

Environmental Media & Exposure Route	Timing of Exposure	Human Exposure Assessment
Direct contact with surface soils	Current, during remedial actions	People may come into contact where surface soils are not covered by pavement, vegetation, structures, etc.
Direct contact with subsurface soils	During remedial actions	People may come into contact if intrusive work is completed at the Site.
Direct contact with groundwater	Current, during remedial actions	People may come into contact with groundwater from the basement sumps or if intrusive work is completed at the Site.
Ingestion of groundwater	Current, during remedial actions	Contaminated water is not being used for drinking water as the area is served by public water supply. People may come into contact if private wells are installed on the Property and used for potable or non-potable purposes (e.g. irrigation). The use of groundwater will be restricted by an environmental easement post-remedy.
Inhalation of air	Current, during remedial actions, post-remedy	Sub-slab depressurization systems have been installed in two on-site buildings. Pending approval of the property owner a soil vapor intrusion assessment will be completed on the downgradient adjacent property. During intrusive remedial activities, air quality is monitored according to the CAMP.

6.1.1 Source of Contamination

Although the exact source of contamination is unknown, the source of impacts to soil and groundwater is assumed to be associated with historical use of the Site for dry cleaning operations. Products containing chlorinated VOCs may have been released through improper disposal or storage of chemicals.

6.1.2 Environmental Media and Transport Mechanisms

Affected media at the Site include soil, groundwater, and soil vapor. Shallow soil and fill material present from ground surface to approximately 5.5 feet bgs in the vicinity of the former dry cleaner serve as the primary source to impacts to groundwater. The groundwater plume has migrated down gradient from the source area in a westerly direction. Shallow soils in the source area and the groundwater plume are a source of vapors to indoor air in the apartment buildings. SSD systems have been installed in Building 1 and Building A to mitigate the effects of exposure to indoor air.

The plume appears to be stable, based on similar data from the two sampling events, and there is no evidence of vertical migration into bedrock. Data used to make this conclusion includes:

- Depth discrete soil samples from SB102 in the source area show decreasing concentrations of PCE and TCE with depth;
- Soil samples collected from 10 soil borings at depths ranging from 14 to 20 feet bgs were non-detect for chlorination VOCs; and
- DNAPL was not found in the any of the monitoring wells.

6.1.3 Point of Exposure

The primary potential points of exposure are direct contact with impacted soils and/or groundwater, and inhalation of soil vapor. Groundwater at the site is not used for consumption; however, impacted soil and/or groundwater may be encountered during intrusive work. Access to the sumps is currently restricted by a concrete cover that is sealed with silicone around the edges. A label reading "DO NOT DISCONNECT" is placed on the cover. Potential exposures are also addressed through air monitoring and by fencing off work areas to restrict access during intrusive work.

6.1.4 Route of Exposure

Routes of exposure includes direct contact, ingestion, and/or inhalation of impacted media. Surface soils may be contacted directly where not covered by asphalt, concrete, or buildings. As the current and anticipated future Site use is for residential apartment buildings, exposure can be minimized through restrictions prohibiting vegetable gardening, single-family housing, and active recreational uses. Exposure to groundwater via the basement sumps is limited by a sealed concrete cover. The SSD systems operating in Building 1 and Building A mitigate potential exposure via inhalation of indoor air.

6.1.5 Receptor Population

Receptor populations include residents and on-site workers conducting remedial work or construction activities.

6.2 Potential Ecological Risks

The Site is located in a developed residential and commercial area and is predominately covered by apartment buildings and a paved parking lot which provides little to no wildlife habitat or food value. Cayuga Creek is located approximately 200 feet to the southwest. Remedial work will be completed in

accordance with an approved CAMP as appropriate to minimize any short-term risks. Therefore, no unacceptable ecological risks are reasonably anticipated.

7.0 REMEDIAL ALTERNATIVES ANALYSIS

The purpose of remedy selection is to identify, evaluate, and select a remedy or alternative remedies to address the contamination identified in the RI. Remedy selection is in accordance with Section 4.2 of DER-10. The overall remedial goals are to prevent migration of the groundwater plume and to remediate the source(s) of vapors to indoor air in protection of human health.

7.1 Remedial Action Objectives (RAOs)

RAOs for the remedy selection process are established from the generic SCG values for protection of groundwater or restricted residential use applicable to the contaminants identified in the RI. In consideration of potential human exposures and environmental impacts resulting from contamination identified in groundwater, RAOs are established from the generic NYS Water Quality Standard or Guidance Value identified in TOGS 1.1.1.

The RAOs for the Site include:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil
- Prevent inhalation exposure to contaminants volatilizing from soil

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater contamination

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater

RAOs for Environmental Protection

- Restore the groundwater aquifer to pre-release conditions, to the extent practicable
- Remove the source of groundwater contamination

Soil vapor

RAOs for Public Health Protection

- Mitigate impacts to public health from existing, or the potential for, soil vapor intrusion into buildings

Surface water and sediment are not present at the Site and therefore RAOs are not applicable.

7.2 BCP Cleanup Track

Remedies in the BCP are selected from four cleanup tracks:

Track 1: no restrictions on the use of the property;

Track 2: restricted use with generic soil cleanup objectives (SCOs) based on the intended use of the property-residential, restricted residential (single family houses not allowed), commercial, or industrial;

Track 3: restricted use with modified SCOs based on the same uses described in Track 2 above;

Track 4: restricted use with site-specific soil cleanup objectives, where the shallow exposed soils must meet the generic SCOs used for Track 2 above.

The selected cleanup track and remedial action are evaluated based on the following criteria:

- Overall protection of public health and the environment
- Compliance with standards, criteria, and guidance (SCG)
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume of contamination with treatment
- Short-term impact and effectiveness
- Implementability
- Cost effectiveness
- Land use
- Community Acceptance

The Site has been developed with apartment buildings and engineering controls have already been implemented. The current and anticipated future land use is for residential apartment buildings. Although Cleanup Track 1 meets the criteria of protectiveness, compliance with SCG, long-term and short-term effectiveness, and reduction of toxicity, it is not considered practical as the removal and relocation of underground utilities servicing the apartment buildings would be required, as well as the demolition of one or more buildings for Site remediation and to eliminate exposure pathways.

Based on the plume characteristics and geologic conditions, modified (Track 3) or site-specific SCOs (Track 4) would not provide benefits over generic SCOs in achieving the RAOs. Therefore, Cleanup Track 2 based on intended restricted residential use is selected for the Site using generic SCOs for protection of groundwater and restricted residential use. This track fully satisfies the RAOs and is fully protective of human health and the environment.

7.3 Screening of Remedial Alternatives

Alternatives are evaluated using the criteria set forth in 6 NYCRR 375-1.8(f) and DER-10 Section 4.2(b) through 4.2(j). Remedial technologies were screened for applicability to the Site contaminants and geologic conditions, RAOs for protectiveness of public health and environment, and cost effectiveness.

No Action

Shallow soil in the source area and the groundwater plume are sources of VOC vapors to indoor air in Building 1 and Building A. Shallow soil is also an ongoing source of VOCs to groundwater. The groundwater plume appears stable and is not migrating off-site, and soil vapor data collected at the downgradient property boundary and the off-site property to the east suggest that the potential for vapor intrusion in off-site buildings is low. However, natural attenuation of the plume is a slow process and biodegradation appears to be inhibited. Engineering controls are currently in operation in two (2) on-site buildings and it is recommended that a vapor intrusion assessment be completed at two (2) off-site buildings. Based on these conditions, the RAOs for public health protection and environmental protection cannot be achieved with No Action and it is therefore not further evaluated as an alternative.

Institutional and Engineering Controls

Institutional controls applicable for the Site include deed restrictions to prevent the use of groundwater and to limit activities such as farming or vegetable gardening that would result in potential human exposure to contaminants. Engineering controls are currently in place at the Site, including the operation of SSD systems and associated annual indoor air monitoring in Buildings 1 and A. Pending an access agreement, vapor intrusion assessments will be completed at two (2) apartment buildings at 69 Lake Avenue. Groundwater monitoring using the network of nine groundwater monitoring wells is also applicable to the Site. Institutional and engineering controls can achieve some of the RAOs for public health protection but not for environmental protection.

Physical Remediation

Physical remediation alternatives include soil excavation and replacement with clean fill, extraction and treatment of subsurface soil vapors, and pumping and treatment of groundwater.

Soil excavation can achieve the soil RAOs for public health protection and environmental protection.

Soil vapor extraction (SVE) has limitations at the Site based on the geologic conditions. This technology would not be effective in the silt and clay soil above the water table and would have limited effectiveness in the fill material located in the source area.

Groundwater pumping and treatment would not be a cost-effective alternative to achieve the RAOs based on the long-term operation required to remediate the upper zone of the water table that is located in silt and clay soils. In addition, the groundwater plume appears stable, thus negating hydraulic control as a primary benefit of pumping.

In Situ *Remediation*

The groundwater plume in the overburden is 10 to 12 feet in thickness and extends from the top of the water table in the silt and clay layer to the bedrock surface at a depth of 18 to 20 feet. In the saturated zone conductivity is higher in the alluvium soils, described as silty sand with gravel, located between the silt and clay layer and the assumed bedrock surface. DNAPL was not found at the Site and the groundwater contaminants are soluble phase. Based on the Site contaminants and geologic

conditions, *in situ* remediation is applicable for the groundwater plume and can achieve the RAOs for public health protection and environmental protection. *In situ* remediation technologies screened for the Site include air sparging, bioremediation, and chemical remediation methods.

Air sparging is not applicable as vapor extraction is required to collect vapors above the water table, and as previously described, SVE would not be effective in the silt and clay soil. *In situ* bioremediation has limited potential for the Site. The primary Site contaminant, PCE, does not biodegrade under aerobic conditions and TCE degradation is limited. The lower chlorinated VOCs, DCE and VC, are biodegradable under aerobic conditions. Therefore, aerobic bioremediation would only be applicable following the removal or degradation of PCE and TCE.

Anaerobic bioremediation involves the injection of electron donor to stimulate reductive dechlorination. Electron donors are commonly referred to as organic substrates and when injected in groundwater stimulate bioremediation by providing a source of hydrogen for dechlorinating bacteria and enhancing anaerobic conditions by lowering the oxidation-reduction potential. The area of impacted groundwater exceeding NYS Water Quality Standards extends from MW2 in the source area to downgradient well MW5. The contaminant profiles in the wells on a concentration basis are nearly identical:

Table 7.1. Groundwater Contaminant Profiles

	MW2	MW5
PCE	72%	73%
TCE	5%	5%
DCE	22%	21%
VC	<1%	0%

Anaerobic biodegradation via reductive dechlorination has occurred but similar contaminant profiles throughout the plume indicate the process has become limited, most likely due to the depletion of electron donor. ORP levels and DO concentrations are higher in MW5 compared to MW2, and the data indicates aerobic conditions in the plume that are not ideal for reductive dechlorination. The rate limiting step is the complete transformation of PCE to non-chlorinated compounds without increasing the concentration of VC. Anaerobic bioremediation is not feasible as a stand-alone technology based on the potential for increasing VC in groundwater and indoor air. A remedial design involving the sequential use of anaerobic followed by aerobic bioremediation is evaluated further in Section 7.4.

In situ chemical remediation methods that are suitable for the Site geologic conditions and effective for chlorinated VOCs include chemical reduction (ISCR) and chemical oxidation (ISCO). ISCR is often used as a barrier technology to intercept a migrating groundwater plume and is most effective at sites with high contaminant concentrations and/or DNAPL. ISCO is feasible for remediation of an entire groundwater plume and is effective at degrading soluble phase contaminants including VC. Although both chemical remediation methods are applicable to achieve groundwater RAOs, the VOC plume characteristics at the Site are more suitable for ISCO.

7.4 Evaluation of Remedial Alternatives for Cleanup Track 2

Alternative #1: Institutional and Engineering Controls

Engineering controls have been implemented at the Site. This includes SSD systems in Building 1 and Building A and monitoring of indoor air in all four (4) buildings. Additional engineering controls to be implemented include completing a vapor intrusion assessment of the apartment buildings at 69 Lake Avenue, potential installation and operation of SSD systems at 69 Lake Avenue, and development of a Groundwater Monitoring Plan for the long-term monitoring of the groundwater plume.

Institutional controls for the Site include future deed restrictions on the use of groundwater and activities including farming or vegetable gardening. Once fully implemented, Alternative #1 would achieve all RAOs for public health protection but would not achieve soil and groundwater RAOs for environmental protection.

Alternative #1 has been partially implemented and is an important part of achieving goals and compliance with SCGs. It provides both short-term impact and long-term effectiveness within the current and future land use of the Site. The selected remedy for the Site will includes the continued operation of the SSD systems in Buildings 1 and A. The systems will remain functional until the selected remedy is completed and indoor air testing indicates that vapor intrusion is no longer occurring.

The estimated capital and annual costs are listed below with ranges based on the results of the vapor intrusion assessments at the two (2) off-site apartment buildings.

Estimated capital cost……..$25,000 to $40,000
Estimated annual cost (Year 1-30)……... $10,000 to $15,000

Alternative #2: Physical Remediation - Soil Excavation

Soils will be excavated and loaded directly on to trucks (no staging) for off-site disposal at an approved facility. Clean backfill material and topsoil will be transported from an off-site location, in compliance with DER-10 regulations for importing backfill and soil cover. The backfill will be compacted to prevent settling and the surface finished with asphalt and/or topsoil based on location at the Site. Soil excavation would achieve all soil RAOs but result in potential short term human exposure to particulates and VOC vapors during Site work. Therefore, a community air monitoring plan (CAMP) would be implemented during Site work and the work area fenced to prevent access by the public.

The overburden soils at the Site are found in three distinct depth intervals as described in Section 3.2.1. The most impacted interval is from ground surface to a depth of 5.5 feet. As described in Section 5.0 this is considered the source area and is an on-going source of chlorinated VOCs to groundwater and indoor air. This depth interval is a priority for remediation based on the soil RAOs and would provide the highest level of long-term effectiveness and permanence. Once excavated and replaced with clean backfill, the source area would be removed from the Site providing a significant short-term impact, including the removal of approximately 8.5 pounds of VOCs and the attainment of SCOs for the protection of groundwater for the target chlorinated VOCs.

Excavation of the silt and clay interval is much less of a priority based on the low soil VOC analytical results and would be completed at substantial cost with a minimal increase in effectiveness. The deepest interval consisting of alluvium soils to the assumed bedrock surface, does not meet criteria for excavation as soil samples measured non-detect for VOCs and DNAPL was not found. This depth interval is located in the groundwater plume and would more effectively treated with *in situ* remediation. Implementing Alternative #2 in each depth interval is described as follows:

Ground surface to top of water table

An area of shallow soil contamination above the water table has been identified in the former footprint of the dry cleaner. This source area includes soil and fill material from ground surface to a depth of approximately 5.5 feet below grade. Below the shallow soils are 6 to 7 feet of laminated silt and clay that has impeded the downward migration of VOCs. Excavation of the VOC-impacted soils above the silt and clay would remove the ongoing source of VOCs to groundwater, reduce the source of vapors to indoor air, and reduce the time required to remediate the groundwater plume.

Additional soil borings in the source area are required to delineate the areal extents of the excavation and collect samples for the approval process with off-site disposal at a landfill. The depth to the water table was measured at or just below the bottom of the shallow soil interval. Excavation of soil to the top of the water table, or slightly into the water table, would result in an excavation depth of 6 to 8 feet. This would improve the effectiveness of soil excavation and prevent leaving a thin layer of silt and clay soil above the water table that would be difficult to remediate. Based on current data the area for soil excavation is estimated at 20 feet by 75 feet with a volume of 400 cubic yards as shown in **Figure 14**. A more detailed figure showing all elements of the proposed remedy (i.e. groundwater treatment area, SSD systems, parcels subject to easement(s), etc.) will be provided in the RAWP.

The estimated capital cost includes surface restoration. There is no annual cost associated with this alternative.

Estimated capital cost……..…….$77,000
Estimated annual cost……..$0

Silt and clay soil below the water table

Excavation of the silt and clay soils below the water table would follow excavation of the shallow soils with a total excavation depth of approximately 12 feet. The water table is at a depth of 6 to 8 feet therefore dewatering is required and based on the total depth of the excavation shoring is required. Both shoring and dewatering would significantly increase the construction work space at the Site and time needed to complete the work. As previously described, excavation of this depth interval would provide a minimal increase in effectiveness and excavation of the shallow source area soils includes the silt and clay soil above the water table.

The estimated capital cost includes shoring, dewatering with treatment or disposal and surface restoration. There is no annual cost associated with this alternative.

Estimated capital cost……..……$208,000

Estimated annual cost……..$0

Alluvium soil to bedrock surface

Excavation of the alluvium soils would result in the removal of all overburden soil to the assumed bedrock surface at a depth of approximately 20 feet. Excavation to this depth is not necessary based on the soil analytical results and is not cost effective. Implementability would be significantly more difficult and require shoring socketed into bedrock, larger construction equipment for soil removal and frac tanks for dewatering. The disturbance to the public including noise and vibration from driving shoring would likely not meet community acceptance.

The estimated capital cost includes shoring, dewatering with treatment or disposal and surface restoration. There is no annual cost associated with this alternative.

Estimated capital cost…….…….....$360,000
Estimated annual cost……..$0

Alternative #3: **In Situ** ***Bioremediation***

This alternative is a groundwater remediation method that includes anaerobic bioremediation to transform PCE and TCE to lower chlorinated VOCs which are then biodegraded to non-toxic end products under aerobic conditions. It is a slower process compared to ISCO and is best suited for stable or shrinking groundwater plumes. Bioremediation of chlorinated VOCs can be cost effective if a longer time frame is compatible with the Site use and SCOs, and for dilute groundwater plumes that do not require a more aggressive remedial method. Remediation of the source area soils above the water table must be completed before implementing bioremediation. Also, bioremediation can follow ISCO as part of a long-term remedial plan. The major limitation of bioremediation for the Site is the potential to increase VC in the groundwater plume which can then migrate to indoor air. VC is a human carcinogen with lower regulatory standards for both groundwater and indoor air compared to PCE and TCE.

To effectively remediate the groundwater plume, an estimated five years of bioremediation followed by five years of MNA is required. The first two years would involve annual injections of electron donor in approximately 15 soil borings to remove PCE and TCE from the plume. This would be followed by periodic injections of an electron acceptor to increase dissolved oxygen concentrations and maintain aerobic conditions in the plume to biodegrade the remaining lower chlorinated VOCs. This phase of aerobic bioremediation would take approximately three years to effectively reduce DCE and VC to below groundwater quality standards. A number of commercially available injection products are available for both the electron donor and electron acceptor.

Due to the longer time frame to implement this alternative and risk of increasing VC to above regulatory standards, community acceptance may be low for this alternative. It does have long-term effectiveness, but the short-term impact is low and as previously discussed, there may be a short-term increase in toxicity of the plume due to an increase in VC. However, the risk of VC exposure to residents in Buildings 1 and A is minimal due to the operation of the SSD systems.

The estimated cost over 10 years is $282,500 as summarized below:

Table 7.2. Projected Costs for *In Situ* Bioremediation

	Year 1	Year 2	Year 3	Year 4	Year 5	Annual Cost Year 6-10
Anaerobic Bio Injections	$105,000	$52,500	$0	$0	$0	$0
Aerobic Bio Injections	$0	$0	$25,000	$25,000	$25,000	$0
MNA	$0	$0	$0	$0	$0	$10,000
Total	$105,000	$52,500	$25,000	$25,000	$25,000	$40,000

Alternative #4: In Situ *Chemical Oxidation (ISCO)*

ISCO is feasible for remediation of an entire groundwater plume and is effective at degrading soluble phase contaminants including VC. Major factors that determine the effectiveness of an ISCO application include reaction kinetics, which are influenced by several variables including pH, contaminant concentrations, catalysts, reaction byproducts, natural organic matter and oxidant scavengers, and delivery technique. The VOC plume characteristics at the Site are suitable for ISCO and oxidants are evaluated below.

Hydrogen Peroxide/Fenton's Reagant

With its high reaction and decomposition rates, hydrogen peroxide is not likely to address contaminants found in low permeability soil. Fenton's reagent or modified Fenton's reagent uses hydrogen peroxide in the presence of ferrous sulfate to generate hydroxyl radicals, increasing the oxidative strength of the peroxide. This alternative would be effective in the lower portion of the plume located in the alluvium soils but would have limited effectiveness in the upper portion of the plume located in the silt and clay soils. Therefore, Hydrogen Peroxide/Fenton's Reagant is not an effective oxidant for the Site, but design considerations and estimated costs are provided for comparison to the other oxidants.

Approximately 20 dual nested injection wells would be installed at the top of bedrock and top of the water table in the silt and clay layer. The oxidant would be gravity fed to the injection wells on a quarterly basis. Maintenance of the wells, including development and periodic repair or replacement of flush mounted curb boxes, is required. Five years of MNA would follow the injection events to monitor the plume conditions and determine if additional injections are needed. In addition to the limitation of this oxidant for the Site conditions, community acceptance may also be limited for conducting injections into 20 wells each quarter for five years.

The estimated cost over 10 years is $235,000 as summarized below:

Table 7.3. Projected Costs for Hydrogen Peroxide ISCO

	Capital Cost	Annual Cost Year 1-5	Annual Cost Year 6-10
Injection Wells	$60,000	$5,000	$0
QTR Injection Events	$0	$20,000	$0
MNA	$0	$0	$10,000
Total	$60,000	$25,000	$10,000

Sodium/Potassium Permanganate

There are two common forms of permanganate: potassium permanganate, which is available as a solid with a solubility of approximately 6 percent, and sodium permanganate, which is available as an aqueous solution that is relatively more soluble (40 percent). For a design that requires high oxidant mass over a limited pore volume, sodium permanganate use may be appropriate based on its solubility. Both forms of permanganate are strong oxidizing agents with an affinity for oxidizing organic compounds containing carbon-carbon double bonds such as PCE, aldehyde groups, and/or hydroxyl groups. Permanganate is applicable under a wide range of environmental conditions and tends to persist in the subsurface, allowing for more contaminant contact.

Permanganate injections would be completed through direct-push batch injections using a Geoprobe® and injection tooling to disperse the oxidant into the formation. An estimated eight to ten borings spaced 15 feet in the groundwater plume are required. Injection using the "bottom-up" method is recommended from the bedrock surface to the top of the water table. It is assumed that approximately 5,000 pounds of remediation-grade permanganate will be injected into the formation during the first injection event. Based on stoichiometric calculations and prior experience at similar sites, it is estimated that 70% to 80% of the source of VOCs to indoor air in the on-site buildings would be eliminated following excavation of shallow soils and the initial permanganate injection event.

A second injection event would likely be required. It is assumed that injection rates and dosing will remain unchanged but that the plume footprint will be reduced by 50% from the first injection. Following evaluation of the second injection event, the groundwater conditions will be monitored under the Groundwater Monitoring Plan.

The estimated cost over two years is $54,000 as summarized below:

Table 7.4. Projected Costs for Permanganate ISCO

	Year 1	Year 2
1st Injection Event	$36,000	$0
2nd Injection Event	$0	$18,000
Total	$36,000	$18,000

Sodium Persulfate

Persulfate is a strong oxidant with a higher oxidation potential than hydrogen peroxide and a potentially lower soil oxidant demand (SOD) than permanganate or peroxide. Persulfate reaction is slow unless placed in the presence of a catalyst, such as ferrous iron, or heated to produce sulfate free radicals that are highly reactive and capable of degrading many organic compounds.

Persulfate injections would be completed through direct-push batch injections using a Geoprobe® and injection tooling to disperse the oxidant into the formation. An estimated eight to ten borings spaced 15 feet in the groundwater plume are required. Injection using the "bottom-up" method is recommended from the bedrock surface to the top of the water table. It is assumed that approximately 5,000 pounds of sodium persulfate will be injected into the formation during the first injection event.

A second and third injection event are assumed using the same injection rates but with the plume footprint reduced from the previous injection. Following evaluation of the third injection event, the groundwater conditions will be monitored under the Groundwater Monitoring Plan.

The estimated cost over two years is $126,000 as summarized below:

Table 7.5. Projected Costs for Persulfate ISCO

	Year 1	Year 2
1st Injection Event	$56,000	$0
2nd Injection Event	$0	$42,000
3rd Injection Event	$0	$28,000
Total	$56,000	$70,000

7.5 Recommended Remedial Measures

A combined remedy of shallow soil excavation in the source area (Alternative #2) and groundwater remediation with ISCO (Alternative #4) along with the continued operation of the SSD systems (Alternative #1) is the recommended remedial measure as described below. This approach will remove subsurface contamination from the Site and reduce human exposure from vapor migration in the shortest time frame while meeting the Remedial Action Objectives and BCP Cleanup Track 2 criteria. Final design for Alternative #2 and #4 will follow additional data collection in the source area. This additional work will be described in a Work Plan and will include soil borings to define the limits of soil excavation, collection of additional depth discrete soil data (< 15' bgs) to support a Track 2 remedy and laboratory analysis of select soil samples to calculate chemical oxidant dosing.

- Continued operation of the SSD systems in Buildings 1 and A.
- Excavation of impacted shallow source area soils to the top of the water table followed by remediation of the groundwater plume using ISCO is recommended for the Site.
- Soil borings to delineate the extents of soil excavation and an ISCO pilot test to determine the radius of influence and oxidant dosing are recommended for remedial design.
- ISCO of the groundwater plume would immediately follow soil excavation and be completed before surface restoration. The remedial work would be completed on an accelerated schedule of approximately two (2) weeks to minimize disturbance at the Site. It is estimated that

approximately 70% to 80% of the source of VOCs to indoor air in the on-site buildings would be removed following the excavation and first injection.

- The recommended remedial measures result in attainment of the project RAOs.
- The recommended remedial measures achieve the project goals in the shortest timeframe, remove the source of VOC impacts to groundwater and soil vapor (i.e. have long-term effectiveness and permanence), and include aggressive remediation of the groundwater VOC plume (i.e. have short-term impact and effectiveness).
- The timeframe for engineering controls is reduced.
- The recommended remedial measure is cost effective.
- Soil excavation will be managed to minimize disturbance at the Site and protect the public from exposure to contaminants through CAMP monitoring and limiting access to the work area.
- The benefits of the recommended remedial measures are most likely to be met with community acceptance. Community acceptance will be assessed during the public comment period on the proposed remedy.

8.0 SUMMARY AND CONCLUSIONS

The Site is currently utilized as a residential apartment complex in a moderately developed residential area in the Town of Lancaster, Erie County, New York. Due to the detections of chlorinated VOCs, vapor intrusion studies were completed in 2019 within the four (4) apartment buildings. Vapor intrusion testing results identified chlorinated solvents, specifically PCE and TCE, within both sub-slab and indoor air samples. Based on guidance from the New York State Department of Health (NYSDOH), the concentrations of these solvents required mitigation in Building A on 65 Lake Avenue and Building 1 on 67 Lake Avenue. Mitigation was not required in Building B or Building C. As a result, sub-slab depressurization systems (SSDS) were installed within Building A and Building 1 in November and December 2019 to mitigate vapor intrusion.

The remedial investigation included nine (9) surface soil samples, eleven (11) soil borings from ground surface to the top of bedrock and the installation of eight (8) groundwater monitoring wells. Sample analytical results are compared to SCOs for protection of groundwater (select chlorinated VOCs only) or restricted residential use under the BCP cleanup Track 2. Concentrations of SVOCs, metals, pesticides, herbicides, PCBs, and cyanide in surface and subsurface soil samples did not exceed 6 NYCRR Part 375 SCOs for restricted residential use and concentrations of PFAS did not exceed NYSDEC guidance values. Concentrations of VOCs in surface soil samples did not exceed 6 NYCRR Part 375 SCOs and in subsurface soil only one sample, located in the source area at a depth of 4.5 to 5.5 feet, exceeded the SCOs for PCE and cis-1,2-DCE.

Concentrations of one or more chlorinated VOCs exceeded NYS TOGS 1.1.1 groundwater standards in MW1, MW2, MW3, and MW5. Concentrations of sodium exceeded NYS TOGS 1.1.1 standards in all monitoring wells. The groundwater VOC plume has migrated down gradient from the source area in a westerly direction. The plume appears to be stable and there is no evidence of vertical migration into bedrock or off-site migration.

The overall remedial goals are to prevent migration of the groundwater plume and to remediate the source(s) of vapors to indoor air in protection of human health. Shallow soils in the source area and the groundwater plume, including the preferential pathways, are sources of vapor contamination to indoor air in the apartment buildings. Excavation of impacted shallow source area soils followed by *in situ* remediation of the groundwater plume using chemical oxidation (ISCO) is recommended for the Site. Soil borings to delineate the excavation extents and collect data for remedial design are recommended.

ISCO of the groundwater plume would immediately follow soil excavation and be completed before surface restoration. The remedial work would be completed on an accelerated schedule of approximately two (2) weeks to minimize disturbance at the Site. Remedial work would continue during the subsequent year with a second ISCO injection event followed by implementation of the Groundwater Management Plan. The SSD systems will continue to operate until the selected remedy is completed and indoor air testing indicates that vapor intrusion is no longer occurring. A figure showing all elements of the proposed remedy (i.e. groundwater treatment area, SSD systems, parcels subject to easement(s), etc.) is included as **Figure 15**. Details of the remedy may be revised in future work plans as additional data is collected.

A project schedule to complete the requirements of the BCP is included as **Table 22.**

9.0 REFERENCES

Matrix Environmental Technologies Inc. *Remedial Investigation Work Plan*. June 2020.

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

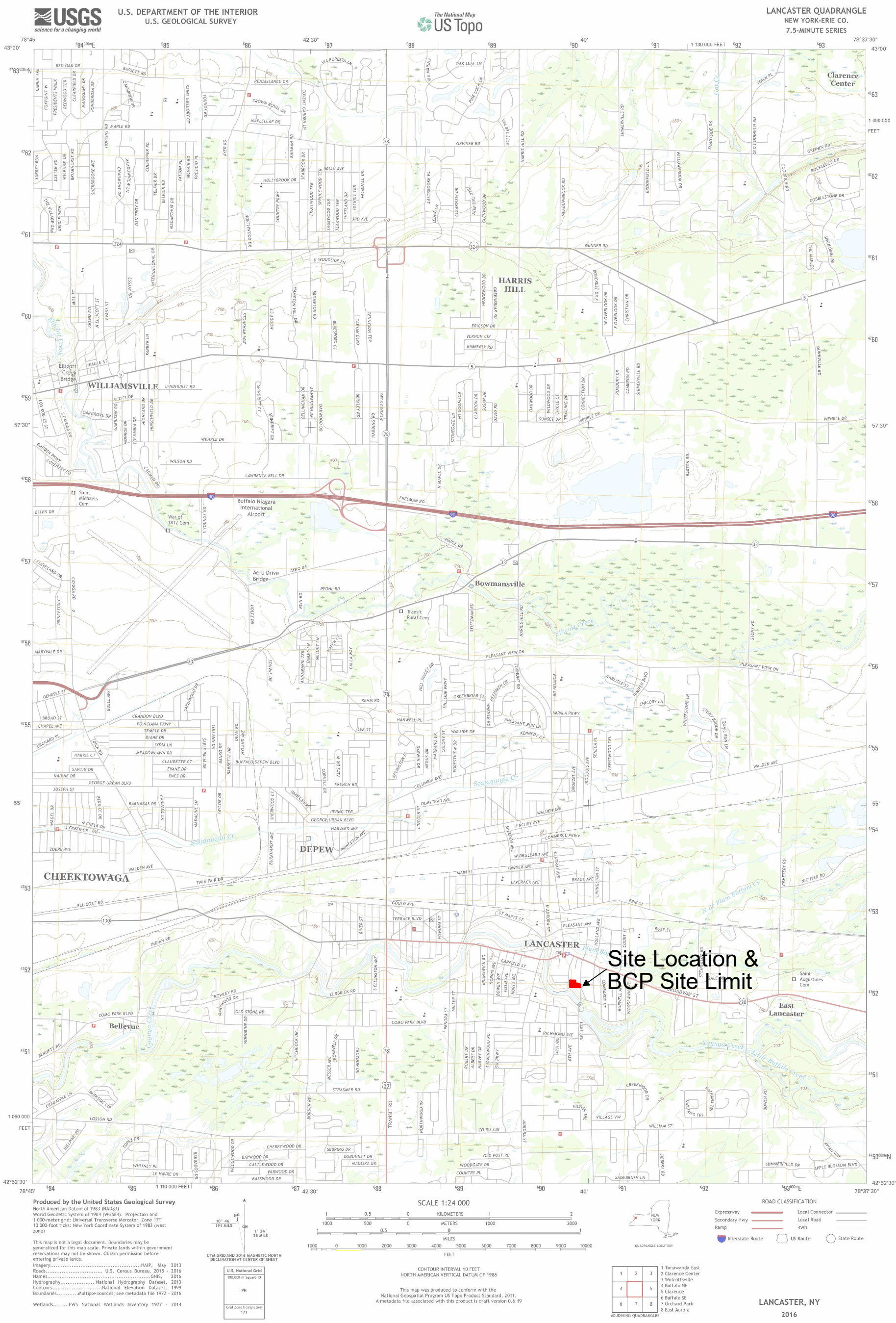
New York State Department of Environmental Conservation. *Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs*. January 2020.

New York State Department of Health. *Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York*. October 2006.

United States Department of Agriculture (USDA), Soil Conservation Service. *Soil Survey of Erie County, New York*. December 1986.

FIGURES

FIGURE:	TITLE:	PROJECT NAME / LOCATION:	REVISION		PROJECT MGR:	PREPARED FOR:	PREPARED BY:
1	Site Location Map	Lakeside Village Apartments 65-67 Lake Avenue Lancaster, New York BCP Site No. C915344	BY	DATE	SLM	65 Lake Avenue LLC	MATRIX ENVIRONMENTAL TECHNOLOGIES INC. 3730 California Road P.O. Box 427 Orchard Park, NY 14127 p:716.662.0745 www.matrixbiotech.com
DATE: N/A			CMC	5/16/19	DESIGNED BY: CMC		
PROJECT NO.: 18-046			CMC	1/23/20	REVIEWED BY: MMW		
					DRAWN BY: CMC		
			SCALE IN FEET: AS NOTED 0				



Produced by the United States Geological Survey

North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid: Universal Transverse Mercator, Zone 17T
10 000-foot ticks: New York Coordinate System of 1983 (west zone)

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, May 2013
Roads..... U.S. Census Bureau, 2015 - 2016
Names.....GNIS, 2016
Hydrography.....National Hydrography Dataset, 2013
Contours.....National Elevation Dataset, 1999
Boundaries.....Multiple sources; see metadata file 1972 - 2016

Wetlands.....FWS National Wetlands Inventory 1977 - 2014

UTM GRID AND 2016 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
PH
Grid Zone Designation
17T

SCALE 1:24 000

1 KILOMETERS 0.5 0 1 2
1000 METERS 500 0 1000 2000
1 MILES 0.5 0 1
1000 FEET 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.19

QUADRANGLE LOCATION

ADJOINING QUADRANGLES
1 Tonawanda East
2 Clarence Center
3 Wolcottsville
4 Buffalo NE
5 Clarence
6 Buffalo SE
7 Orchard Park
8 East Aurora

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

LANCASTER, NY
2016

NSN 7643016386844
NGA REF NO. USGSX24K24847

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

Notes:

1. Base maps adapted from Erie County Department of Environment Planning Office of GIS
2. Site boundaries correspond with tax boundaries for SBL #115.27-1-22.21 at 65 Lake Ave. and #115.27-1-23.11 at 67 Lake Ave.

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION

BY	DATE
CMC	1/23/20

SCALE IN FEET: NOT TO SCALE

0

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

BCP Site Limits

DATE: NA

PROJECT NO.: 18-046

FIGURE: 2

PREPARED BY:

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REVISION

BY	DATE
CMC	3/19/20

SCALE IN FEET: NOT TO SCALE

0

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Aerial View
Site Plan

DATE: NA

PROJECT NO.: 18-046

FIGURE: 3

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

Boring ID
Sample Interval (ft. below grade)
Total VOCs
Total SVOCs
PCE
TCE
1,2-DCE (Total)
Acetone

February 2019 Soil Sampling Location

May 2018 Sampling Location

NOTES:

All concentrations shown in µg/kg.

Gold shaded values indicate analyte exceeds Part 375 Residental SCOs.

Yellow shaded values indicate analyte exceeds Part 375 Unrestricted Use SCOs.

SB5
10'-12'
27.6
24.4
ND
ND
ND
27.6

BH5
10'-12'
130
588
110
2.44
1.64
ND

SB2
16'-18'
10.3
136.4
ND
ND
ND
10.3

SB1
14'-15.8'
16.8
154.8
ND
ND
ND
16.8

FORMER DRY CLEANER (APPROXIMATE)

SB8
4'-6'
ND
ND
ND
ND
ND
ND

SB7
12'-14'
19.2
55.6
ND
ND
ND
19.2

SB4
8'-10'
117.7
32.3
ND
ND
87.9
29.8

BH6
12'-14'
47.4
ND
2.71
1.19
2.03
18.3

SB6
6'-8'
ND
ND
ND
ND
ND
ND

BH4	
4'-6'	8'-10'
1,557	135
7,160	434
118	20.4
241	6.68
733	7.28
417	44.7

SB3
12'-13.5'
22.5
9.8
ND
ND
ND
12.7

BH1
4'-6'
24,025
408.9
13,000
8,260
2,693
ND

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION

BY	DATE

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Historical Soil Data Summary

DATE: AS NOTED

PROJECT NO.: 18-046

FIGURE: 4A

SAMPLE LOCATION
PCE
TCE
cis-1,2-DCE
Vinyl Chloride
Benzene
Toluene
m,p-Xylene
o-Xylene
1,2,4-Trimethylbenzene
Benzo(a)anthracene
Benzo(b)fluoranthene

Temporary Monitoring Well Location (May 2018)

Basement Sump Sample Location (February 2019)

NOTES:

All concentrations shown in µg/L.

ND = Not Detected

Yellow shaded values indicate analyte exceeds NYSDEC Groundwater Criteria (Class GA).

TPMW3
116
<3.98
11.2
<2.59
19.5
40.8
20.3
8.82
5.3
0.400
0.416

A2
4.0
ND
ND
ND
ND
ND
ND
ND
ND
ND

A4
11.9
ND
ND
ND
ND
ND
ND
ND
ND
ND

BUILDING B

FORMER DRY CLEANER (APPROXIMATE)

TPMW4

TPMW2
4.45
<0.796
6.76
10.7
<0.662
<0.824
<1.44
<0.682
<0.746
0.200
0.132

TPMW1
1,860
72.8
168
0.666
<0.331
<0.412
<0.719
<0.341
<0.373
<0.108
<0.994

BUILDING A

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

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PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION	
BY	DATE

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Historical Groundwater Data Summary

DATE: AS NOTED

PROJECT NO.: 18-046

FIGURE: 4B

LEGEND

Shallow Soil Sample Location

Sample ID
Total VOC Concentration (mg/kg)
PCE Concentration (mg/kg)
TCE Concentration (mg/kg)
cis-1,2-DCE Concentration (mg/kg)
trans-1,2-DCE Concentration (mg/kg)
Vinyl Chloride Concentration (mg/kg)
Total SVOC Concentration (mg/kg)

ND = Not Detected
NOTE: Samples were collected from 0-6 inches below grade (VOCs only) and 0-2 inches below grade (all other analytes).

SS2
ND
ND
ND
ND
ND
ND
0.229

SS1
0.0069
ND
ND
ND
ND
ND
ND
3.55

SS3
ND
ND
ND
ND
ND
ND
ND
0.081

SS4 / SS4 DUP	
ND	0.034
ND	ND
ND	ND
ND	ND
ND	ND
ND	ND
ND	0.218

SS5
ND
ND
ND
ND
ND
ND
ND
0.240

SS6
0.040
0.040
ND
ND
ND
ND
ND
1.94

SS7
ND
ND
ND
ND
ND
ND
ND
ND

SS8
ND
ND
ND
ND
ND
ND
ND
1.40

SS9
ND
ND
ND
ND
ND
ND
ND
1.21

59 Lake Ave
67 Lake Ave
Building C
Building B
Building A
Building 1
FORMER DRY CLEANER (APPR
ELECTRIC UTILITY
Concrete Berm
BCP Site Limit
Lake Ave

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

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PREPARED FOR:
65 Lake Avenue LLC

PROJECT MGR: SLM
DESIGNED BY: CMC
REVIEWED BY: SRC
DRAWN BY: CMC

REVISION	
BY	DATE
CMC	3/5/21

SCALE IN FEET: 1" = 20'
0 20

PROJECT NAME / LOCATION:
Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:
Remedial Investigation
Surface Soil Sampling
VOC and SVOC Results

DATE: July 20-August 3, 2020
PROJECT NO.: 18-046
FIGURE: 5

LEGEND

- Soil Boring & Overburden Monitoring Well Location (2020-2021)
- Soil Boring Location (2020-2021)

Sample ID
Sample Depth (ft below grade)
Total VOC Concentration (mg/kg)
PCE Concentration (mg/kg)
TCE Concentration (mg/kg)
cis-1,2-DCE Concentration (mg/kg)
trans-1,2-DCE Concentration (mg/kg)
Vinyl Chloride Concentration (mg/kg)
Total SVOC Concentration (mg/kg)

ND = Not Detected NA = Not Analyzed

NOTE: Data from SB101 through SB111 collected 7/21/20-7/28/20. Data from SB112 collected 8/16/21.

SB110
(14.0'-15.0')
ND
ND
ND
ND
ND
ND
NA

SB106
(19.5'-20.0')
0.0110
ND
ND
ND
ND
ND
NA

SB102		
(4.5'-5.5')	(9.8'-10.5')	(19.6'-20.0')
5.4	0.164	ND
3.4	0.035	ND
0.34	0.011	ND
1.3	0.086	ND
ND	0.0022	ND
ND	ND	ND
NA	NA	NA

SB101
(5.0'-7.0')
0.75
0.75
ND
ND
ND
ND
0.023

SB107
(18.0'-18.5')
0.0163
ND
ND
ND
ND
ND
NA

SB112
(5.7')
0.410
ND
ND
ND
ND
ND
NA

SB105
(15.5'-17.0')
0.0035
ND
ND
ND
ND
ND
ND

SB108
(17.0-18.0')
0.0015
ND
ND
ND
ND
ND
ND

SB109 / SB109 DUP	
(14.0'-15.0')	(14.0'-15.0')
0.0021	ND
ND	ND
ND	ND
ND	ND
ND	ND
ND	ND
ND	ND

SB103
(19.5')
0.010
ND
ND
ND
ND
ND
NA

SB104
(16.0'-16.5')
0.027
ND
ND
ND
ND
ND
NA

SB111
(17.5')
0.0024
ND
ND
ND
ND
ND
NA

Building C
Building B
Building A
Building 1
59 Lake Ave
65 Lake Ave
69 Lake
Lake Ave
FORMER DRY CLEANER (APPROXIMATE)
OVERHEAD E
BCP Site Limit
Concrete Berm
N

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

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PROJECT MGR: SLM
DESIGNED BY: CMC
REVIEWED BY: SRC
DRAWN BY: CMC

REVISION

BY	DATE
CMC	3/5/21

SCALE IN FEET: 1" = 20'
0 20

PROJECT NAME / LOCATION:
Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:
Remedial Investigation
Subsurface Soil Sampling
VOC and SVOC Results

DATE: AS NOTED
PROJECT NO.: 18-046
FIGURE: 6

LEGEND

Monitoring Well Location

Sample ID
Total VOC Concentration (ug/L)
PCE Concentration (ug/L)
TCE Concentration (ug/L)
cis-1,2-DCE Concentration (ug/L)
trans-1,2-DCE Concentration (ug/L)
Vinyl Chloride Concentration (ug/L)

ND = Not Detected NA = Not Analyzed

Shading indicates that concentration exceeds NYS TOGS 1.1.1 Water Quality Standard.

MW6
ND
ND
ND
ND
ND
ND

MW1 / MW1 DUP	
182	152
180	150
2.3	2.2
ND	ND
ND	ND
ND	ND

MW5
658
480
33
140
5.3
ND

MW7
ND
ND
ND
ND
ND
ND

MW3
4.1
2.9
1.2
ND
ND
ND

MW4
ND
ND
ND
ND
ND
ND

MW2
3,061
2,200
160
670
11
20

MW8
ND
ND
ND
ND
ND
ND

Building C

Building B

Building A

Building 1

59 Lake Ave

65 Lake Ave

67 Lake Ave

69 Lake Ave

Lake Ave

OVERHEAD ELECTRIC UTILITY

FORMER DRY CLEANER (APPROXIMATE)

BCP Site Limit

Concrete Berm

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

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65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION	
BY	DATE
CMC	12/15/21

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Remedial Investigation
Groundwater VOC
Results

DATE: August 10-11. 2020

PROJECT NO.: 18-046

FIGURE: 7A

LEGEND

Monitoring Well Location

Temporary Well Location

Sample ID
Total VOC Concentration (ug/L)
PCE Concentration (ug/L)
TCE Concentration (ug/L)
cis-1,2-DCE Concentration (ug/L)
trans-1,2-DCE Concentration (ug/L)
Vinyl Chloride Concentration (ug/L)

ND = Not Detected NA = Not Analyzed

Shading indicates that concentration exceeds NYS TOGS 1.1.1 Water Quality Standard.

MW6
4.1
ND
ND
ND
ND
ND

MW9
1.5
ND
ND
1.3
ND
ND

MW5
666
580
30
56
ND
ND

MW1
86
85
0.93
ND
ND
ND

TW1
16
ND
ND
ND
ND
ND

MW7
ND
ND
ND
ND
ND
ND

MW3 / MW3 DUP	
62	62
15	16
18	19
23	24
1.3	1.3
1.7	1.9

MW2
4,190
3,200
160
830
ND
ND

MW4
ND
ND
ND
ND
ND
ND

MW8
ND
ND
ND
ND
ND
ND
ND

Building C

Building B

Building A

Building 1

59 Lake Ave

67 Lake Ave

65 Lake Ave

69 Lake Ave

Lake Ave

OVERHEAD ELECTRIC UTILITY

FORMER DRY CLEANER (APPROXIMATE)

Concrete Berm

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

MATRIX ENVIRONMENTAL TECHNOLOGIES INC.
3730 California Road
P.O. Box 427
Orchard Park, NY 14127
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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION

BY	DATE
CMC	12/15/21

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Remedial Investigation
Groundwater VOC
Results

DATE: August 31, 2021

PROJECT NO.: 18-046

FIGURE: 7B

LEGEND

- Monitoring Well Location
- Temporary Well Location
- Soil Vapor Sampling Location

Sample ID
PCE Concentration (ug/m^3)
TCE Concentration (ug/m^3)
cis-1,2-DCE Concentration (ug/m^3)
trans-1,2-DCE Concentration (ug/m^3)
Vinyl Chloride Concentration (ug/m^3)
1,1-DCE Concentraion (ug/m^3)
Carbon Tetrachloride Concentration (ug/m^3)
1,1,1-TCA Concentration (ug/m^3)
Methylene Chloride Concentration (ug/m^3)

Building C

MW6

59 Lake Ave

OVERHEAD ELECTRIC UTILITY

MW9

MW1

MW5

Building B

TW1
VP1

FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

MW2

MW3

VP2
ND
ND
ND
ND
ND
ND
ND
ND
ND
0.49

VP1
0.68
ND
ND
ND
ND
ND
ND
ND
0.45

Lake Ave

MW7

Building A

65 Lake Ave

Building 1

MW4

VP2

MW8

BCP Site Limit

Concrete Berm

69 Lake Ave

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION

BY	DATE
CMC	2/17/22

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Soil Vapor
Sampling Results

DATE: August 17, 2021

PROJECT NO.: 18-046

FIGURE: 8

LEGEND

Monitoring Well Location

662.96 Groundwater Elevation (ft)

Groundwater Elevation Isocontour (ft) - dashed where inferred

Groundwater Flow Direction

Building C

MW6
656.89

OVERHEAD ELECTRIC UTILITY

59 Lake Ave

657

659

661

Building B

MW5
659.01

MW1
662.96

FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

MW2
662.42

MW3
659.10

Lake Ave

MW7
655.93

Building A

65 Lake Ave

Building 1

MW4
657.36

BCP Site Limit

MW8
659.70

Concrete Berm

69 Lake Ave

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION

BY	DATE
CMC	1/6/22

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Groundwater Elevation Contour Map

DATE: August 10, 2020

PROJECT NO.: 18-046

FIGURE: 9A

LEGEND

- Monitoring Well Location
- Temporary Well Location
- 662.96 Groundwater Elevation (ft)
- Groundwater Elevation Isocontour (ft) - dashed where inferred
- Groundwater Flow Direction

Building C

MW6
656.80

OVERHEAD ELECTRIC UTILITY

658

59 Lake Ave

660

662

MW9
658.09

MW1
663.04

Building B

MW5
660.60

TW1
661.73

FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

MW2
662.90

MW3
659.47

Lake Ave

MW7
656.01

Building A

65 Lake Ave

Building 1

MW4
656.54

BCP Site Limit

MW8
659.69

Concrete Berm

69 Lake Ave

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION	
BY	DATE
CMC	1/6/22

SCALE IN FEET: 1" = 20'
0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Groundwater Elevation Contour Map

DATE: August 31, 2021

PROJECT NO.: 18-046

FIGURE: 9B

LEGEND

- Monitoring Well Location
- 658 Total VOC Concentration (ug/L)
- VOC* Isoconcentration Contour - dashed where inferred

ND = Not Detected

*refers to the sum of PCE, TCE, DCE, and VC

Building C

MW6
ND

59 Lake Ave

OVERHEAD ELECTRIC UTILITY

Building B

ND

500

1,000

MW1
182

MW5
658

FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

MW2
3,061

MW3
4.1

Lake Ave

MW7
ND

65 Lake Ave

Building A

Building 1

MW4
ND

BCP Site Limit

MW8
ND

Concrete Berm

69 Lake Ave

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

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MATRIX ENVIRONMENTAL TECHNOLOGIES INC.
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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION	
BY	DATE
CMC	3/5/21

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Total VOCs
Isoconcentration Map

DATE: August 10-11. 2020

PROJECT NO.: 18-046

FIGURE: 10A

LEGEND

- Monitoring Well Location
- 658 Total VOC Concentration (ug/L)
- VOC* Isoconcentration Contour - dashed where inferred

ND = Not Detected

*refers to the sum of PCE, TCE, DCE, and VC

Building C

MW6
ND

OVERHEAD ELECTRIC UTILITY

59 Lake Ave

MW9
1.5

MW1
86

Building B

MW5
666

TW1
ND

FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

MW2
4,190

1,000

500

MW3
62

Lake Ave

ND

MW7
ND

65 Lake Ave

Building A

Building 1

MW4
ND

MW8
ND

BCP Site Limit

Concrete Berm

69 Lake Ave

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION	
BY	DATE
CMC	12/15/21

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Total VOCs
Isoconcentration Map

DATE: August 31, 2021

PROJECT NO.: 18-046

FIGURE: 10B

LEGEND

- Soil Boring & Overburden Monitoring Well Location
- Soil Boring Location

SB110

Building C

SB106/MW6

B

59 Lake Ave

SB107

SB105/MW5

Building B

SB101/MW1

A'

FORMER DRY CLEANER (APPROXIMATE)

67 Lake Ave

SB102/MW2

SB103/MW3

Lake Ave

SB108/MW7

Building A

B'

65 Lake Ave

Building 1

SB109

A

SB104/MW4

SB111/MW8

BCP Site Limit

Concrete Berm

69 Lake Ave

N

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: S. Marchetti

DESIGNED BY: C. Zink

REVIEWED BY: C. Zink

DRAWN BY: C. Curtis

REVISION

BY	DATE

SCALE IN FEET: 1" = 20'

0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site #C915344

TITLE:

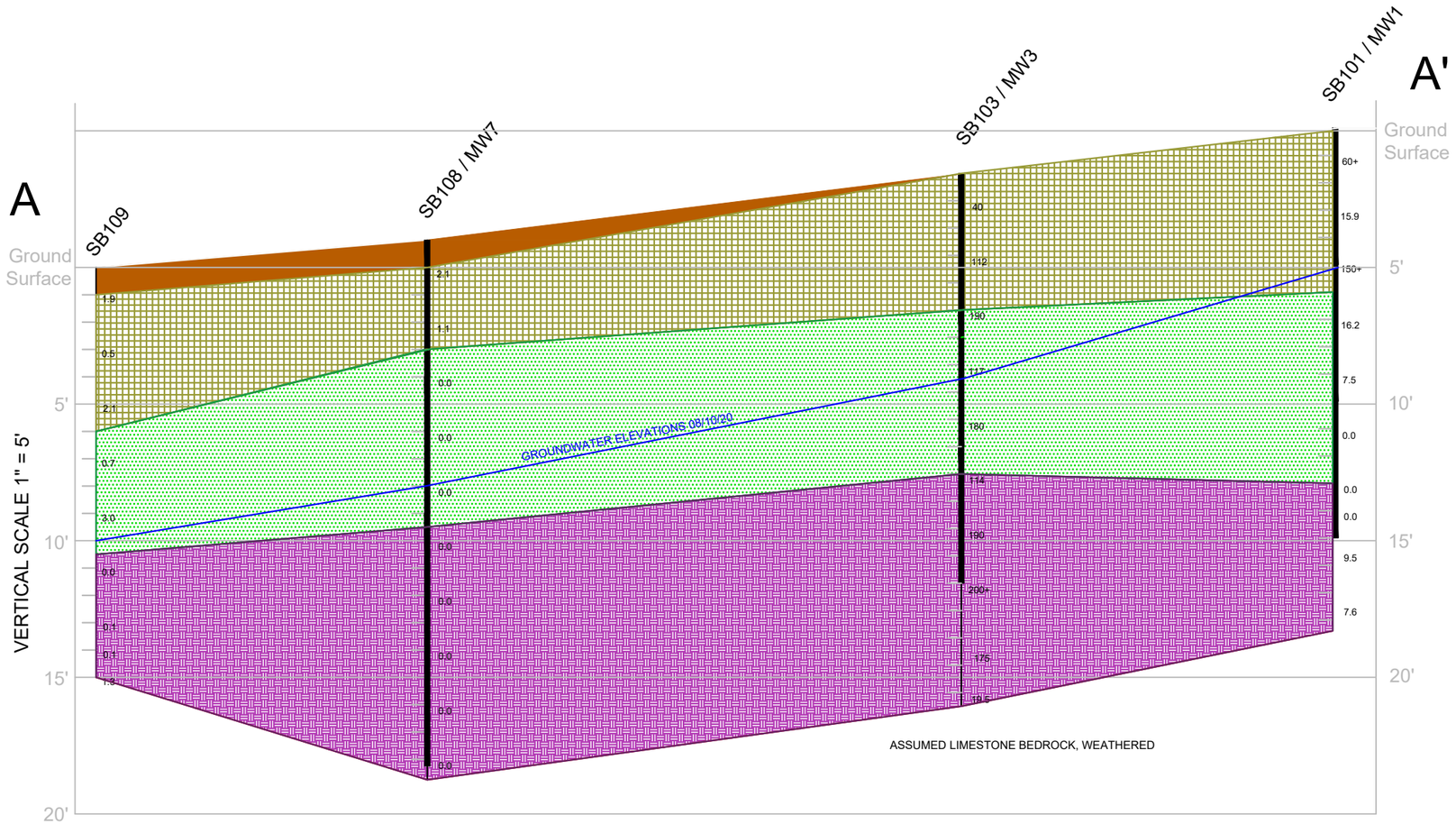
CROSS SECTIONAL REFERENCES

DATE: N/A

PROJECT NO.: 18-046

FIGURE: 11

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021



LEGEND

= TOPSOIL

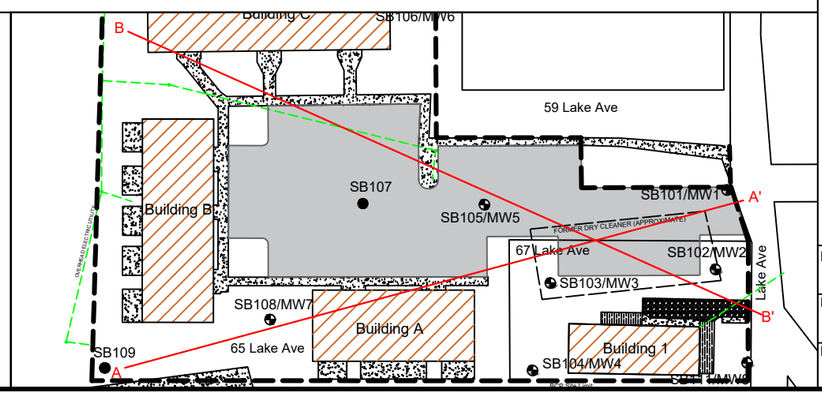
= CLAY AND SILT (LAMINATED, LACUSTRINE)

= SILTY SAND WITH GRAVEL (FILL)

= SILTY SAND WITH GRAVEL (ALLUVIUM)

0.0 = PID Measurements (ppm)

For detailed soil descriptions, see soil boring logs.



30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: S. Marchetti

DESIGNED BY: C. Zink

REVIEWED BY: C. Zink

DRAWN BY: C. Curtis

REVISION

BY	DATE

SCALE IN FEET: AS NOTED

0

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

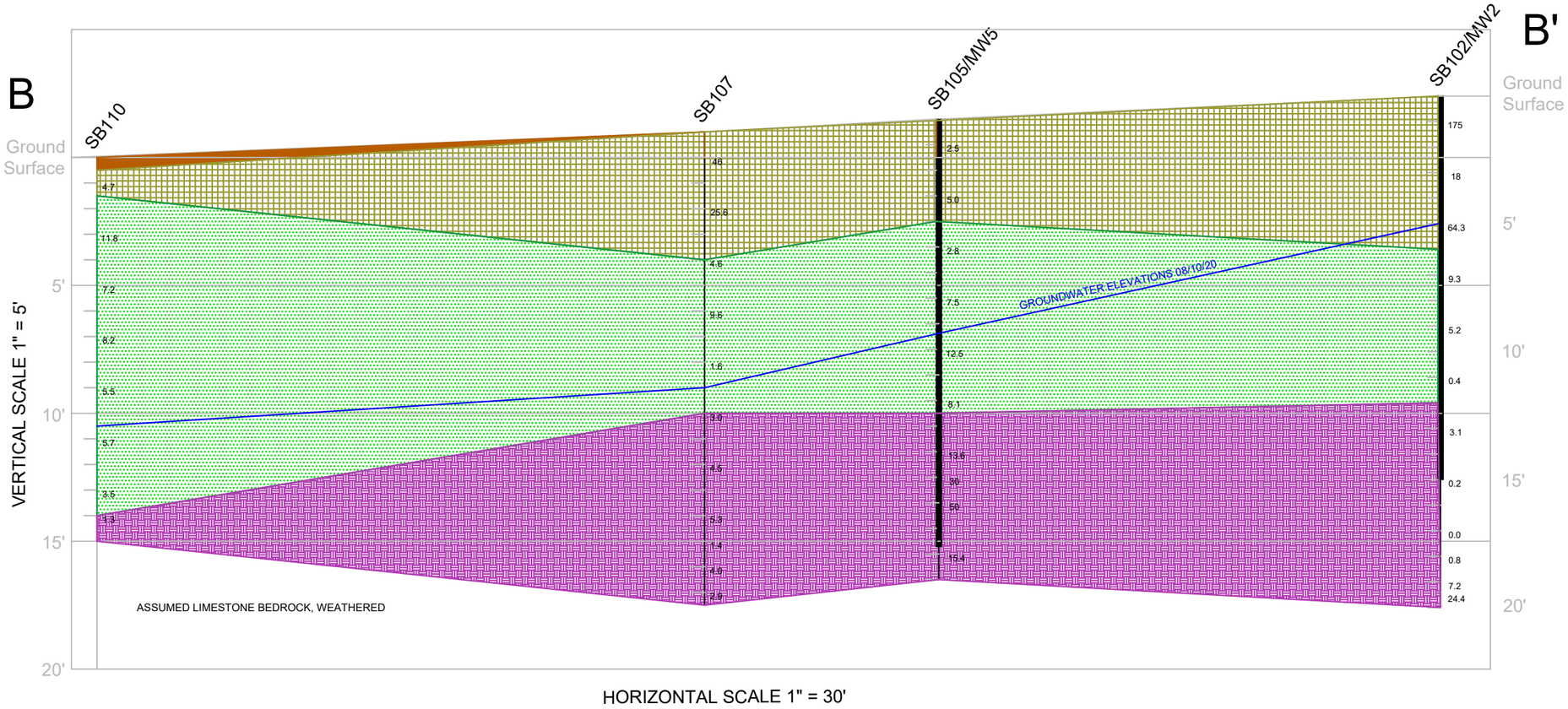
TITLE:

Cross Section A-A'

DATE: N/A

PROJECT NO.: 18-046

FIGURE: 12



LEGEND

= TOPSOIL

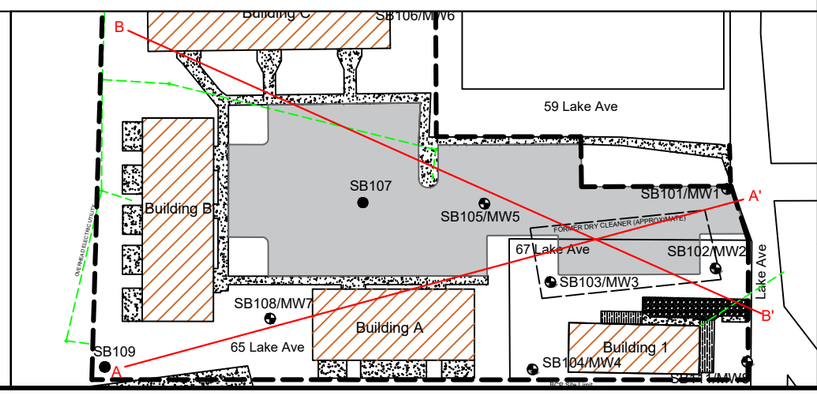
= CLAY AND SILT (LAMINATED, LACUSTRINE)

= SILTY SAND WITH GRAVEL (FILL)

= SILTY SAND WITH GRAVEL (ALLUVIUM)

0.0 = PID Measurements (ppm)

For detailed soil descriptions, see soil boring logs.



30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: S. Marchetti

DESIGNED BY: C. Zink

REVIEWED BY: C. Zink

DRAWN BY: C. Curtis

REVISION	
BY	DATE

SCALE IN FEET: AS NOTED

0

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:

Cross Section B-B'

DATE: N/A

PROJECT NO.: 18-046

FIGURE: 13

LEGEND

- Soil Boring & Overburden Monitoring Well Location (2020-2021)
- Soil Boring Location (2020-2021)
- February 2019 Soil Sampling Location
- May 2018 Sampling Location
- Proposed Soil Excavation Extents (approximate)

SB110
SB106/MW6
Building C
OVERHEAD ELECTRIC UTILITY
59 Lake Ave
SB112/MW9
SB5
SB101/MW1
SB107
SB105/MW5
SB1
SB2
Building B
UNDERGROUND UTILITY (approximate)
SB7
SB4
BH5/TPMW3
FORMER DRY CLEANER (APPROXIMATE)
UNDERGROUND UTILITY (approximate)
67 Lake Ave
BH2
SB3
SB102/MW2
SB103/MW3
BH3
BH1/TPMW1
BH6/TPMW4
BH4/TPMW2
SB108/MW7
Building A
SB8
65 Lake Ave
Lake Ave
SB109
SB6
Building 1
SB104/MW4
SB111/MW8
BCP Site Limit
Concrete Berm
69 Lake Ave

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

PREPARED BY:

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PREPARED FOR:

65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION

BY	DATE
CMC	2/16/22

SCALE IN FEET: 1" = 20'
0 20

PROJECT NAME / LOCATION:

Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

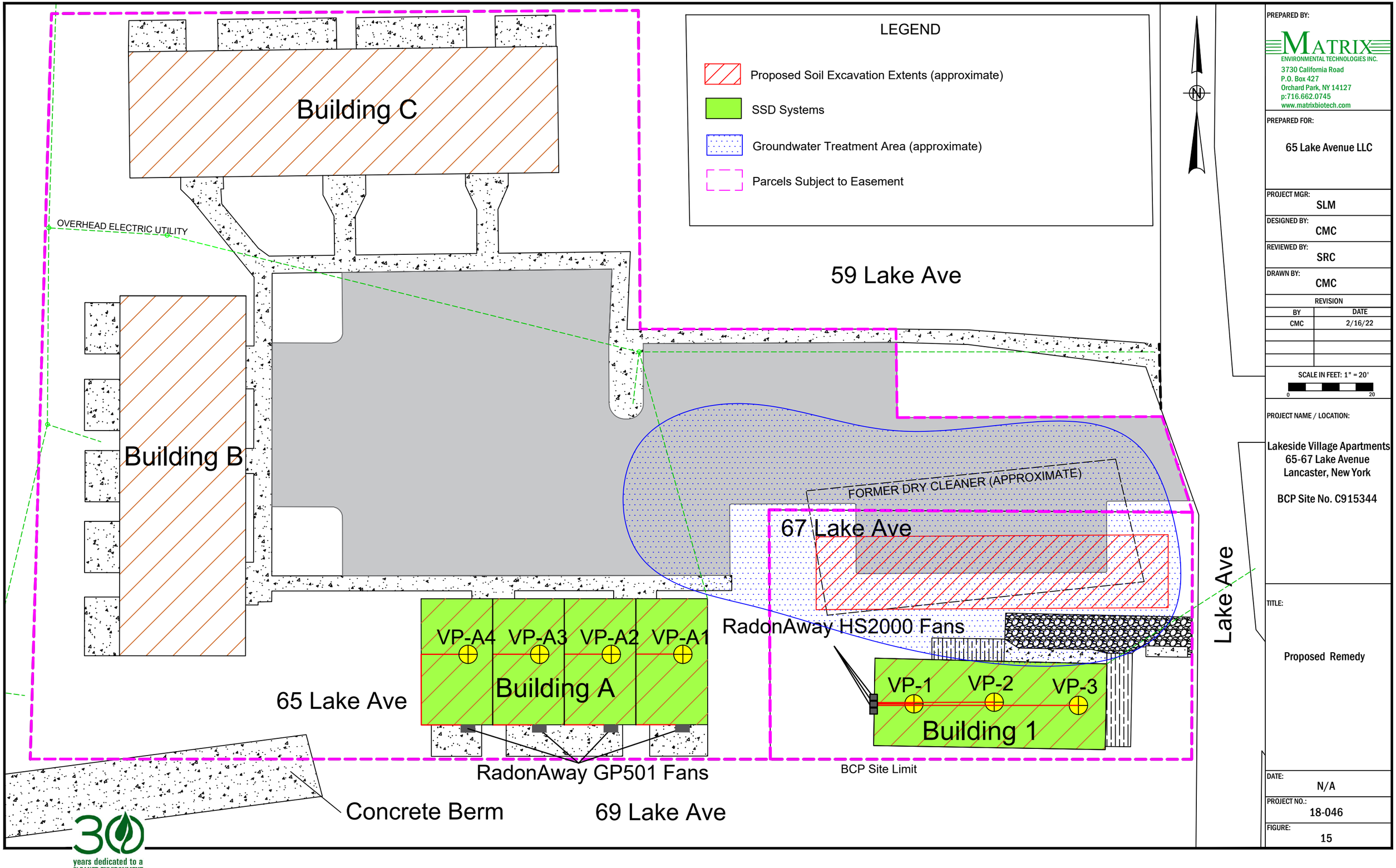
TITLE:

Proposed Soil Excavation Extents

DATE: N/A

PROJECT NO.: 18-046

FIGURE: 14



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PREPARED FOR:
65 Lake Avenue LLC

PROJECT MGR: SLM

DESIGNED BY: CMC

REVIEWED BY: SRC

DRAWN BY: CMC

REVISION

BY	DATE
CMC	2/16/22

SCALE IN FEET: 1" = 20'
0 20

PROJECT NAME / LOCATION:
Lakeside Village Apartments
65-67 Lake Avenue
Lancaster, New York

BCP Site No. C915344

TITLE:
Proposed Remedy

DATE: N/A

PROJECT NO.: 18-046

FIGURE: 15

30 years dedicated to a CLEANER ENVIRONMENT 1991-2021

TABLES

TABLE 1
Historical Soil Data Summary

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, NY
NYSDEC Brownfield Cleanup Program Site #C915344

Target Compound List (TCL) VOCs	BH1 4'-6'	BH4 4'-6'	BH4 8'-10'	BH5 10'-12'	BH6 12'-14'	SB1 14-15.8'	SB2 16-18'	SB3 12-13.5'	SB4 8-10'	SB5 10-12'	SB6 6-8'	SB7 12-14'	SB8 4-6'
Sampling Date	*5/1/2018*	*5/1/2018*	*5/1/2018*	*5/1/2018*	*5/1/2018*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*
1,1-Dichloroethane	3.47	1.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	2.4J	2.22 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	18.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	417	44.7	ND	18.3 J	16.8	10.3	12.7	29.8	27.6	ND	19.2	ND
Benzene	0.975 J	2.44	2.47	ND	0.864 J	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	3.67	5.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	ND	ND	1.79 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-butyl ether	1.03 J	0.898 J	0.893 J	0.905 J	1.21 J	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	13,000	118	20.4	110	2.71 J	ND	ND	9.8	ND	ND	ND	ND	ND
Toluene	2.05 J	5.6 J	4.52 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	8,260	241	6.68	2.44	1.19 J	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	3.6	2.54 J	ND	0.998 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	2,690	733	7.28	1.64 J	2.03 J	ND	ND	ND	81.7	ND	ND	ND	ND
m&p-Xylene	ND	5.5	5.08 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	ND	2.64 J	4.72 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	ND	1.32 J	1.95 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	3.07J	ND	ND	ND	ND	ND	ND	ND	6.2	ND	ND	ND	ND

Target Compound List (TCL) SVOCs	BH1 4'-6'	BH4 4'-6'	BH4 8'-10'	BH5 10'-12'	BH6 12'-14'	SB1 14-15.8'	SB2 16-18'	SB3 12-13.5'	SB4 8-10'	SB5 10-12'	SB6 6-8'	SB7 12-14'	SB8 4-6'
Sampling Date	*5/1/2018*	*5/1/2018*	*5/1/2018*	*5/1/2018*	*5/1/2018*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*	*2/11/2019*
Acenaphthene	ND	68.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	69.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	13.8 J	216	20.6 J	13.1 J	ND	ND	11	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	22.0 J	475	29.3 J	33.2 J	ND	8.6	ND	9.9	ND	ND	ND	ND	ND
Benzo(a)pyrene	18.9 J	506	27.5 J	27.9 J	ND	ND	ND	10.8	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	32.6 J	739	43.5	44.1	ND	14	ND	20.4	ND	ND	ND	7.7	ND
Benzo(g,h,i)perylene	22.8 J	440	23.2 J	29.3 J	ND	ND	ND	11.1	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	11.7 J	212	16.0 J	16.5 J	ND	12.7	ND	ND	ND	ND	ND	ND	ND
Chrysene	45.6	634	51.8	48.9	ND	25.0	52.1	32.3	32.3	14.4	ND	18.8	ND
Dibenz(a,h)anthracene	ND	61.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	90.1	1,300	93.8	164	ND	25.7	ND	22	ND	ND	ND	11.1	ND
Fluorene	ND	126	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	14.6 J	375	17.0 J	19.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	247	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	69.3	808	26.1 J	78.7	ND	34.9	59.6	11	ND	ND	ND	7.5	ND
Pyrene	67.5	882	85.3	113	ND	33.9	13.7	21.6	ND	10	ND	10.5	ND

NOTES:

1. Results present in ug/kg.
2. ND = Not Detected
3. Results are shown for detected compounds only.

TABLE 2
Historical Groundwater Data Summary

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, NY
NYSDEC Brownfield Cleanup Program Site #C915344

Target Compound List (TCL) VOCs	TPMW1	TPMW2	TPMW3	TPMW4	Sump A2	Sump A4
Sampling Date	*5/11/2028*	*5/11/2018*	*5/11/2018*	*5/11/2018*	*2/11/2019*	*2/11/2019*
1,2,4-Trimethylbenzene	ND	ND	5.3 J	ND	ND	ND
Benzene	ND	ND	19.5	ND	ND	ND
Chloroform	0.742 J	ND	ND	ND	ND	ND
Tetrachloroethene	1,860	4.45	116	ND	4.0	11.9
Toluene	ND	ND	40.8	ND	ND	ND
Trichloroethene	72.8	ND	ND	ND	ND	ND
Vinyl chloride	0.666 J	10.7	ND	ND	ND	ND
cis-1,2-Dichloroethene	168	6.76	11.2	ND	ND	ND
m&p-Xylene	ND	ND	20.3	ND	ND	ND
o-Xylene	ND	ND	8.82	ND	ND	ND
trans-1,2-Dichloroethene	3.85	ND	ND	ND	ND	ND

Target Compound List (TCL) SVOCs	TPMW1	TPMW2	TPMW3	TPMW4	Sump A2	Sump A4
Sampling Date	*5/11/2028*	*5/11/2018*	*5/11/2018*	*5/11/2018*	*2/11/2019*	*2/11/2019*
Benzo(a)anthracene	ND	0.200 J	0.400 J	ND	ND	ND
Benzo(a)pyrene	ND	0.132 J	0.416 J	ND	ND	ND
Fluoranthene	ND	0.655 J	1.71 J	ND	ND	ND
Naphthalene	ND	0.0672 J	ND	ND	ND	ND
Phenanthrene	ND	ND	0.855 J	ND	ND	ND
Pyrene	ND	0.476 J	1.08 J	ND	ND	ND

NOTES:

1. Results present in ug/L.
2. ND = Not Detected
3. Results are shown for detected compounds only.

TABLE 3
Analytical Testing Program Summary

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, NY
NYSDEC Brownfield Cleanup Program Site #C915344

Location	Number of Proposed Locations	Matrix	TCL VOCS	TCL SVOCs	TAL Metals (Total)	TAL Metals (Dissolved)	TCL PCBs	Pesticides/ Herbicides	1,4-dioxane	PFAS
	EPA Method	**Soil**	**8260**	**8270**	**6010, 7470**	**6010, 7470**	**8082**	**8081/8151**	**8270-SIM**	**537M**
	EPA Method	**Water/ Groundwater**	**8260C**	**8270D**	**6010C, 7471A**	**6010C, 7471A**	**8082A**	**8081/8151**	**8270-SIM**	**537M**
	EPA Method	**Air**	**TO-15**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Surface Soil Samples										
Surface Soil Sample	9	Soil	9	9	9	-	9	9	9	9
Field Duplicate		Soil	1	1	1	-	1	1	1	1
MS/MSD		Soil	2	2	2	-	2	2	2	2
Equipment Blank		Water	1	1	1	-	1	1	1	1
Total			***13***	***13***	***13***	***0***	***13***	***13***	***13***	***13***
Soil Borings - Subsurface Samples										
Soil Borings	13	Soil	14	4	4	-	4	4	4	4
Field Duplicate		Soil	1	1	1	-	1	1	1	1
MS/MSD		Soil	2	2	2	-	2	2	2	2
Equipment Blank		Water	1	1	1	-	1	1	1	1
Total			***18***	***8***	***8***	***0***	***8***	***8***	***8***	***8***
Soil Borings - Soil Vapor Samples										
Soil Vapor Samples	2	Air	2	-	-	-	-	-	-	-
Total			***2***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Monitoring Wells - 1st Event										
Monitoring Well	8	Groundwater	8	3	3	3	3	3	3	3
Field Duplicate		Groundwater	1	1	1	1	1	1	1	1
MS/MSD		Groundwater	2	2	2	2	2	2	2	2
Equipment Blank		Water	1	1	1	1	1	1	1	1
Trip Blank		Water	1	-	-	-	-	-	-	-
Total			***13***	***7***	***7***	***7***	***7***	***7***	***7***	***7***
Monitoring Wells - 2nd Event										
Monitoring Well	10	Groundwater	10	-	-	-	-	-	-	-
Field Duplicate		Groundwater	1	-	-	-	-	-	-	-
MS/MSD		Groundwater	-	-	-	-	-	-	-	-
Equipment Blank		Water	-	-	-	-	-	-	-	-
Trip Blank		Water	1	-	-	-	-	-	-	-
Total			***12***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
TOTAL SOIL SAMPLES			**29**	**19**	**19**	**0**	**19**	**19**	**19**	**19**
TOTAL AIR SAMPLES			**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL WATER SAMPLES			**27**	**9**	**9**	**7**	**9**	**9**	**9**	**9**

Notes:

TCL VOCs - Target Compound List Volatile Organic Compounds.
TCL SVOCs - Target Compound List Semi-volatile Organic Compounds.
TAL Metals - Target Analyte List Metals.
TCL PCBs - Target Compound List Polychlorinated Biphenyls.
PFAS - Polyfluoroalkyl Substances
MS/MSD - Matrix Spike/Matrix Spike Duplicate

Table 4
Surface Soil Sample Descriptions

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

July 20 - August 3, 2020

Surface Soil Sample Designation	Material at Surface	Sample Depth (ft. below grade)	Soil Description	USCS Group Symbol	OVM Reading (ppm)
SS1	grass/sod	0.25 to 0.42	POORLY GRADED SAND WITH SILT AND GRAVEL, dry, loose to medium dense	SP-SM	0.0
SS2	gravel, sand overlying synthetic fabric	0.25 to 0.42	POORLY GRADED SAND WITH SILT AND GRAVEL, dry to moist, medium dense	SP-SM	0.0
SS3	grass/sod	0.25 to 0.42	POORLY GRADED GRAVEL WITH SAND, dry, medium dense	GP	0.0
SS4	gravel, sand overlying synthetic fabric	0.25 to 0.42	POORLY GRADED SAND WITH SILT AND GRAVEL, dry to moist, medium dense	SP-SM	0.0
SS5	grass/sod	0.25 to 0.42	POORLY GRADED SAND WITH SILT AND GRAVEL, dry, medium dense	SP-SM	0.0
SS6	gravel, sand overlying synthetic fabric	0.25 to 0.42	POORLY GRADED GRAVEL WITH SAND, dry, medium dense	GP	0.0
SS7	grass/sod	0.25 to 0.42	SILT WITH SAND, dry to moist, medium dense	ML	0.0
SS8	grass/sod	0.25 to 0.42	SILTY SAND WITH GRAVEL, dry to moist, loose to medium dense	SM	0.0
SS9	grass/sod	0.25 to 0.42	SILTY SAND, trace gravel, dry to moist, loose to medium dense	SM	0.0

Table 5
Monitoring Well Locations and Ground Surface Elevations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

Well ID	Latitude (°N)	Longitude (°W)	Casing Elevation (ft)	Ground Surface Elevation (ft)
MW1	42.89664117	78.66792550	668.47	668.93
MW2	42.89657217	78.66796733	667.97	668.47
MW3	42.89654717	78.66821483	666.81	667.16
MW4	42.89643383	78.66833550	667.44	667.88
MW5	42.89662517	78.66834900	667.06	667.33
MW6	42.89693833	78.66852017	668.09	668.55
MW7	42.89651733	78.66875300	664.37	664.91
MW8	42.89643550	78.66787517	667.48	667.92
MW9	42.89671950	78.66845833	666.47	666.97
TW1	42.89660333	78.66763583	668.85	669.28
Sump A4			658.74	658.74

Table 6
Groundwater Elevations Summary (feet)

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

August 10, 2020

Well ID	Casing Elevation	Depth to Product	Depth to Water	Product Thickness	Adj. Depth to Water	Groundwater Elevations
MW1	668.47	-	5.51	-	5.51	662.96
MW2	667.97	-	5.55	-	5.55	662.42
MW3	666.81	-	7.71	-	7.71	659.10
MW4	667.44	-	10.08	-	10.08	657.36
MW5	667.06	-	8.05	-	8.05	659.01
MW6	668.09	-	11.20	-	11.20	656.89
MW7	664.37	-	8.44	-	8.44	655.93
MW8	667.48	-	7.78	-	7.78	659.70

August 31, 2021

Well ID	Casing Elevation	Depth to Product	Depth to Water	Product Thickness	Adj. Depth to Water	Groundwater Elevations
MW1	668.47	-	5.43	-	5.43	663.04
MW2	667.97	-	5.07	-	5.07	662.90
MW3	666.81	-	7.34	-	7.34	659.47
MW4	667.44	-	10.90	-	10.90	656.54
MW5	667.06	-	6.46	-	6.46	660.60
MW6	668.09	-	11.29	-	11.29	656.80
MW7	664.37	-	8.36	-	8.36	656.01
MW8	667.48	-	7.79	-	7.79	659.69
MW9	666.47	-	8.38	-	8.38	658.09
TW1	668.85	-	7.12	-	7.12	661.73

Table 7
Remedial Investigation Soil VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Protection of Groundwater SCO	Restricted-Residential Use SCO	SS1	SS2	SS3	SS4	SS4 DUP
		Sampling Date	7/20/2020	8/3/2020	7/20/2020	7/23/2020	7/23/2020
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	ND	ND	ND	ND	ND
2-Butanone	0.3	**100**	ND	ND	ND	ND	ND
Acetone	0.05	**100**	ND	ND	ND	ND	ND
Chloroform	0.37	**49**	**0.0069**	ND	ND	ND	ND
cis-1,2-Dichloroethene	**0.25**	100	ND	ND	ND	ND	ND
Cyclohexane	NA	NA	ND	ND	ND	ND	ND
Isopropylbenzene	NA	NA	ND	ND	ND	ND	ND
m&p-Xylenes	NA	**100**	ND	ND	ND	ND	ND
Methyl Acetate	NA	NA	ND	ND	ND	ND	ND
Methylcyclohexane	NA	NA	ND	ND	ND	ND	ND
Methylene chloride	0.05	**100**	ND	ND	ND	ND	**0.0034**
Tetrachloroethene	**1.3**	19	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	**0.19**	100	ND	ND	ND	ND	ND
Trichloroethene	**0.47**	21	ND	ND	ND	ND	ND
Vinyl chloride	**0.02**	0.9	ND	ND	ND	ND	ND
Xylenes (Total)	1.6	**100**	ND	ND	ND	ND	ND
		Total	**0.0069**	ND	ND	ND	**0.0034**
Tentatively Identified Compounds (TICs)			ND	ND	ND	**0.0056J**	ND

NOTES:

1. Analytical testing for VOCs via EPA Method 8260C by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected; NA = Not Applicable
4. Regulatory standards and results are shown for detected compounds only. Vinyl chloride is also shown.
5. Soil Cleanup Objectives (SCOs) from NYCRR Part 375
6. "J" = estimated value
7. The applicable SCO (Protection of Groundwater or Restricted Residential) for each compound is shaded.
8. Yellow highlighted values exceed the applicable Protection of Groundwater SCO or Restricted Residential SCO.

Table 7 (Continued)
Remedial Investigation Soil VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Protection of Groundwater SCO	Restricted-Residential Use SCO	SS5	SS6	SS7	SS8	SS9
		Sampling Date	**7/21/2020**	**7/21/2020**	**7/20/2020**	**7/20/2020**	**7/20/2020**
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	ND	ND	ND	ND	ND
2-Butanone	0.3	**100**	ND	ND	ND	ND	ND
Acetone	0.05	**100**	ND	ND	ND	ND	ND
Chloroform	0.37	**49**	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	**0.25**	100	ND	ND	ND	ND	ND
Cyclohexane	NA	NA	ND	ND	ND	ND	ND
Isopropylbenzene	NA	NA	ND	ND	ND	ND	ND
m&p-Xylenes	NA	**100**	ND	ND	ND	ND	ND
Methyl Acetate	NA	NA	ND	ND	ND	ND	ND
Methylcyclohexane	NA	NA	ND	ND	ND	ND	ND
Methylene chloride	0.05	**100**	ND	ND	ND	ND	ND
Tetrachloroethene	**1.3**	19	ND	**0.040**	ND	ND	ND
trans-1,2-Dichloroethene	**0.19**	100	ND	ND	ND	ND	ND
Trichloroethene	**0.47**	21	ND	ND	ND	ND	ND
Vinyl chloride	**0.02**	0.9	ND	ND	ND	ND	ND
Xylenes (Total)	1.6	**100**	ND	ND	ND	ND	ND
		Total	ND	**0.040**	ND	ND	ND
Tentatively Identified Compounds (TICs)			ND	**0.0027J**	ND	ND	ND

NOTES:

1. Analytical testing for VOCs via EPA Method 8260C by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected; NA = Not Applicable
4. Regulatory standards and results are shown for detected compounds only. Vinyl chloride is also shown.
5. Soil Cleanup Objectives (SCOs) from NYCRR Part 375
6. "J" = estimated value
7. The applicable SCO (Protection of Groundwater or Restricted Residential) for each compound is shaded.
8. Yellow highlighted values exceed the applicable Protection of Groundwater SCO or Restricted Residential SCO.

Table 7 (Continued)
Remedial Investigation Soil VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Protection of Groundwater SCO	Restricted-Residential Use SCO	SB101 (5.0'-7.0')	SB102 (4.5'-5.5')	SB102 (9.8'-10.5')	SB102 (19.6'-20.0')	SB103 (19.5')
		Sampling Date	7/21/2020	7/21/2020	7/21/2020	7/21/2020	7/22/2020
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	ND	**0.37**	ND	ND	ND
2-Butanone	0.3	**100**	ND	ND	ND	ND	ND
Acetone	0.05	**100**	ND	ND	**0.024**	ND	ND
Chloroform	0.37	**49**	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	**0.25**	100	ND	**1.3**	**0.086**	ND	ND
Cyclohexane	NA	NA	ND	ND	ND	ND	ND
Isopropylbenzene	NA	NA	ND	ND	ND	ND	ND
m&p-Xylenes	NA	**100**	ND	ND	ND	ND	ND
Methyl Acetate	NA	NA	ND	ND	**0.0057**	ND	ND
Methylcyclohexane	NA	NA	ND	ND	ND	ND	ND
Methylene chloride	0.05	**100**	ND	ND	ND	ND	**0.010**
Tetrachloroethene	**1.3**	19	**0.75**	**3.4**	**0.035**	ND	ND
trans-1,2-Dichloroethene	**0.19**	100	ND	ND	**0.0022**	ND	ND
Trichloroethene	**0.47**	21	ND	**0.34**	**0.011**	ND	ND
Vinyl chloride	**0.02**	0.9	ND	ND	ND	ND	ND
Xylenes (Total)	1.6	**100**	ND	ND	ND	ND	ND
		Total	**0.75**	**5.4**	**0.164**	ND	**0.010**

Tentatively Identified Compounds (TICs)			**2.2J**	ND	**0.0043J**	**55J**	**0.11J**

NOTES:

1. Analytical testing for VOCs via EPA Method 8260C by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected; NA = Not Applicable
4. Regulatory standards and results are shown for detected compounds only. Vinyl chloride is also shown.
5. Soil Cleanup Objectives (SCOs) from NYCRR Part 375
6. "J" = estimated value
7. The applicable SCO (Protection of Groundwater or Restricted Residential) for each compound is shaded.
8. Yellow highlighted values exceed the applicable Protection of Groundwater SCO or Restricted Residential SCO.

Table 7 (Continued)
Remedial Investigation Soil VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Protection of Groundwater SCO	Restricted-Residential Use SCO	SB104 (16.0'-16.5')	SB105 (15.5'-17.0')	SB106 (19.5'-20.0')	SB107 (18.0'-18.5')	SB108 (17.0'-18.0')
		Sampling Date	7/23/2020	7/23/2020	7/27/2020	7/28/2020	7/27/2020
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	ND	ND	ND	ND	ND
2-Butanone	0.3	**100**	ND	ND	ND	ND	ND
Acetone	0.05	**100**	**0.019**	ND	ND	ND	ND
Chloroform	0.37	**49**	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	**0.25**	100	ND	ND	ND	ND	ND
Cyclohexane	NA	NA	ND	ND	ND	**0.0037**	ND
Isopropylbenzene	NA	NA	ND	ND	**0.0048**	ND	ND
m&p-Xylenes	NA	**100**	ND	ND	ND	**0.0012**	ND
Methyl Acetate	NA	NA	ND	ND	ND	ND	ND
Methylcyclohexane	NA	NA	ND	ND	ND	**0.0036**	**0.0015**
Methylene chloride	0.05	**100**	**0.0080**	**0.0035**	**0.0062**	**0.0066**	ND
Tetrachloroethene	**1.3**	19	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	**0.19**	100	ND	ND	ND	ND	ND
Trichloroethene	**0.47**	21	ND	ND	ND	ND	ND
Vinyl chloride	**0.02**	0.9	ND	ND	ND	ND	ND
Xylenes (Total)	1.6	**100**	ND	ND	ND	**0.0012**	ND
		Total	**0.027**	**0.0035**	**0.0110**	**0.0163**	**0.0015**

Tentatively Identified Compounds (TICs)			**0.0025J**	ND	**0.73J**	**0.019J**	**0.0036J**

NOTES:

1. Analytical testing for VOCs via EPA Method 8260C by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected; NA = Not Applicable
4. Regulatory standards and results are shown for detected compounds only. Vinyl chloride is also shown.
5. Soil Cleanup Objectives (SCOs) from NYCRR Part 375
6. "J" = estimated value
7. The applicable SCO (Protection of Groundwater or Restricted Residential) for each compound is shaded.
8. Yellow highlighted values exceed the applicable Protection of Groundwater SCO or Restricted Residential SCO.

Table 7 (Continued)
Remedial Investigation Soil VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Protection of Groundwater SCO	Restricted-Residential Use SCO	SB109 (14.0'-15.0')	SB109 (14.0'-15.0') DUP	SB110 (14.0'-15.0')	SB111 (17.5')	SB112 (5.7')
		Sampling Date	7/28/2020	7/28/2020	7/28/2020	7/22/2020	8/16/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	NA	ND	ND	ND	ND	ND
2-Butanone	0.3	**100**	ND	ND	ND	ND	**0.410J**
Acetone	0.05	**100**	ND	ND	ND	ND	ND
Chloroform	0.37	**49**	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	**0.25**	100	ND	ND	ND	ND	ND
Cyclohexane	NA	NA	ND	ND	ND	ND	ND
Isopropylbenzene	NA	NA	ND	ND	ND	ND	ND
m&p-Xylenes	NA	**100**	ND	ND	ND	ND	ND
Methyl Acetate	NA	NA	ND	ND	ND	ND	ND
Methylcyclohexane	NA	NA	**0.0021**	ND	ND	ND	ND
Methylene chloride	0.05	**100**	ND	ND	ND	**0.0024**	ND
Tetrachloroethene	**1.3**	19	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	**0.19**	100	ND	ND	ND	ND	ND
Trichloroethene	**0.47**	21	ND	ND	ND	ND	ND
Vinyl chloride	**0.02**	0.9	ND	ND	ND	ND	ND
Xylenes (Total)	1.6	**100**	ND	ND	ND	ND	ND
		Total	**0.0021**	ND	ND	**0.0024**	**0.410**

Tentatively Identified Compounds (TICs)	**0.0095J**	**0.0075J**	ND	**0.003J**	

NOTES:

1. Analytical testing for VOCs via EPA Method 8260C by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected; NA = Not Applicable
4. Regulatory standards and results are shown for detected compounds only. Vinyl chloride is also shown.
5. Soil Cleanup Objectives (SCOs) from NYCRR Part 375
6. "J" = estimated value
7. The applicable SCO (Protection of Groundwater or Restricted Residential) for each compound is shaded.
8. Yellow highlighted values exceed the applicable Protection of Groundwater SCO or Restricted Residential SCO.

Table 8
Remedial Investigation Soil SVOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Restricted-Residential Use SCO	SS1	SS2	SS3	SS4	SS4 DUP	SS5	SS6	SS7
Sampling Date		**7/20/2020**	**8/3/2020**	**7/20/2020**	**7/23/2020**	**7/23/2020**	**7/21/2020**	**7/21/2020**	**7/20/2020**
Benzo[a]anthracene	1	**0.22**	ND	ND	ND	ND	ND	**0.16**	ND
Benzo[a]pyrene	1	**0.27**	ND	ND	ND	ND	ND	**0.17**	ND
Benzo[b]fluoranthene	1	**0.39**	**0.059**	ND	ND	**0.053**	**0.069**	**0.25**	ND
Benzo[g,h,i]perylene	100	**0.22**	ND	ND	ND	ND	ND	**0.12**	ND
Benzo[k]fluoranthene	3.9	**0.15**	ND	ND	ND	ND	ND	**0.089**	ND
bis(2-Ethylhexyl)phthalate	NA	ND	ND	ND	ND	ND	ND	**0.10**	ND
Carbazole	NA	**0.041**	ND	ND	ND	ND	ND	ND	ND
Chrysene	3.9	**0.330**	**0.046**	ND	ND	**0.042**	**0.044**	**0.19**	ND
Dibenzo[a,h]anthracene	0.33	**0.045**	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	NA	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	100	**0.73**	**0.063**	**0.042**	ND	**0.065**	**0.066**	**0.31**	ND
Indeno[1,2,3-cd]pyrene	0.5	**0.19**	ND	ND	ND	ND	ND	**0.10**	ND
Naphthalene	100	ND	ND	ND	ND	ND	ND	**0.010**	ND
Phenanthrene	100	**0.34**	ND	ND	ND	ND	ND	**0.15**	ND
Pyrene	100	**0.62**	**0.061**	**0.039**	ND	**0.058**	**0.061**	**0.29**	ND
Total		**3.55**	**0.229**	**0.081**	ND	**0.218**	**0.240**	**1.94**	ND
Tentatively Identified Compounds (TICs)		**8.8J**	**6.0J**	**7.2J**	**8J**	**8.4J**	**9.0J**	**7.5J**	**4.1J**

NOTES:
1. Analytical testing for SVOCs via EPA Method 8270D by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected
4. NA = Not Applicable
5. Regulatory standards and results are shown for detected compounds only.
6. Soil Cleanup Objectives (SCOs) from NYCRR Part 375
7. "J" = estimated value

Table 8 (Continued)
Remedial Investigation Soil SVOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Restricted-Residential Use SCO	SS8	SS9	SB101 (5.0'-7.0')	SB105 (15.5'-17.0')	SB108 (17.0'-18.0')	SB109 (14.0'-15.0')	SB109 (14.0'-15.0') DUP
Sampling Date		**7/20/2020**	**7/20/2020**	**7/21/2020**	**7/23/2020**	**7/27/2020**	**7/28/2020**	**7/28/2020**
Benzo[a]anthracene	1	**0.099**	**0.10**	ND	ND	ND	ND	ND
Benzo[a]pyrene	1	**0.11**	**0.11**	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	1	**0.18**	**0.17**	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	100	**0.097**	**0.081**	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	3.9	**0.056**	**0.049**	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	NA	**0.07**	**0.066**	ND	ND	ND	ND	ND
Carbazole	NA	ND	ND	ND	ND	ND	ND	ND
Chrysene	3.9	**0.13**	**0.12**	ND	ND	ND	ND	ND
Dibenzo[a,h]anthracene	0.33	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	NA	ND	ND	**0.023**	ND	ND	ND	ND
Fluoranthene	100	**0.24**	**0.19**	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	0.5	**0.08**	**0.071**	ND	ND	ND	ND	ND
Naphthalene	100	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	100	**0.12**	**0.073**	ND	ND	ND	ND	ND
Pyrene	100	**0.22**	**0.18**	ND	ND	ND	ND	ND
Total		**1.40**	**1.21**	**0.023**	ND	ND	ND	ND
Tentatively Identified Compounds (TICs)		**7.1J**	**7.7J**	**6.2J**	**11J**	**13J**	**8.9J**	**5.3J**

NOTES:
1. Analytical testing for SVOCs via EPA Method 82
2. Results present in mg/kg.
3. ND = Not Detected
4. NA = Not Applicable
5. Regulatory standards and results are showr
6. Soil Cleanup Objectives (SCOs) from NYCF
7. "J" = estimated value

Table 9
Remedial Investigation Soil Inorganics Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Analytical Method	Restricted-Residential Use SCO	SS1	SS2	SS3	SS4	SS4 DUP	SS5	SS6	SS7
		Sampling Date	7/20/2020	8/3/2020	7/20/2020	7/23/2020	7/23/2020	7/21/2020	7/21/2020	7/20/2020
Cr (Hexavalent)	7196A	110	ND	ND	ND	ND	ND	ND	ND	ND
CR(Trivalent)	CALC	180	**12**	**13**	**11**	**11**	**13**	**14**	**16**	**13**
Mercury	7471B	0.81	ND	ND	ND	ND	ND	ND	**0.17**	ND
Aluminum	6010D	NA	**8,600**	**8,400**	**7,000**	**8,300**	**9,300**	**9,500**	**7,500**	**7,700**
Barium	6010D	400	**54**	**56**	**41**	**52**	**57**	**58**	**49**	**66**
Calcium	6010D	NA	**13,000**	**22,000**	**55,000**	**3,400**	**4,900**	**8,400**	**11,000**	**64,000**
Cobalt	6010D	NA	**6.1**	**7.6**	**6.7**	**7.5**	**8.0**	**10**	**5.6**	**7.1**
Copper	6010D	270	**20**	**22**	**17**	**14**	**17**	**17**	**25**	**16**
Iron	6010D	NA	**18,000**	**18,000**	**17,000**	**16,000**	**19,000**	**25,000**	**20,000**	**17,000**
Lead	6010D	400	**64**	**47**	**33**	**37**	**42**	**40**	**76**	**20**
Magnesium	6010D	NA	**4,900**	**5,400**	**7,200**	**3,400**	**4,200**	**4,100**	**3,200**	**21,000**
Manganese	6010D	2,000	**340**	**430**	**310**	**560**	**450**	**580**	**400**	**460**
Nickel	6010D	310	**16**	**20**	**18**	**15**	**16**	**18**	**16**	**16**
Potassium	6010D	NA	**860**	**910**	**900**	**920**	**1100**	**870**	**730**	**1,400**
Sodium	6010D	NA	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	6010D	10,000	**100**	**88**	**65**	**82**	**83**	**74**	**160**	**100**
Antimony	6020B	NA	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	6020B	16	**5.5**	**5.7**	**7.1**	**5.9**	**7.2**	**7.4**	**5.1**	**3.1**
Beryllium	6020B	72	**0.34**	**0.31**	**0.35**	**0.38**	**0.39**	**0.45**	**0.40**	**0.29**
Cadmium	6020B	4.3	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	6020B	180	ND	ND	ND	ND	ND	ND	ND	ND
Silver	6020B	180	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	6020B	NA	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	6020B	NA	**14**	**14**	**15**	**17**	**18**	**18**	**16**	**13**

NOTES:
1. Analytical testing via EPA Methods 6010D, 6020B, 7471B, 7196A by Hampton Clarke as noted.
2. Results present in mg/kg.
3. ND = Not Detected
4. NA = Not Applicable
5. Soil Cleanup Objectives (SCOs) from NYCRR Part 375

Table 9 (Continued)
Remedial Investigation Soil Inorganics Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Analytical Method	Restricted-Residential Use SCO	SS8	SS9	SB101 (5.0'-7.0')	SB105 (15.5'-17.0')	SB108 (17.0'-18.0')	SB109 (14.0'-15.0')	SB109 (14.0'-15.0') DUP
		Sampling Date	7/20/2020	7/20/2020	7/21/2020	7/23/2020	7/27/2020	7/28/2020	7/28/2020
Cr (Hexavalent)	7196A	110	ND	ND	ND	ND	ND	ND	ND
CR(Trivalent)	CALC	180	**23**	**12**	**6.8**	ND	**6.7**	**8.2**	ND
Mercury	7471B	0.81	ND	**0.16**	ND	ND	ND	ND	ND
Aluminum	6010D	NA	**8,000**	**6,500**	**5,300**	**2,300**	**3,200**	**3,600**	**2,400**
Barium	6010D	400	**80**	**68**	**38**	**27**	**19**	**31**	**18**
Calcium	6010D	NA	**54,000**	**5,000**	**24,000**	**120,000**	**100,000**	**92,000**	**120,000**
Cobalt	6010D	NA	**6.2**	**6.7**	**4.6**	**4.2**	**4.6**	**6.9**	**3.3**
Copper	6010D	270	**30**	**28**	**17**	**11**	**17**	**17**	**7.8**
Iron	6010D	NA	**16,000**	**16,000**	**14,000**	**8,500**	**9,500**	**12,000**	**8,500**
Lead	6010D	400	**100**	**300**	**290**	ND	ND	**6.1**	ND
Magnesium	6010D	NA	**13,000**	**3,000**	**3,600**	**25,000**	**21,000**	**14,000**	**20,000**
Manganese	6010D	2,000	**340**	**370**	**470**	**220**	**150**	**190**	**200**
Nickel	6010D	310	**17**	**20**	**16**	**16**	**16**	**24**	**12**
Potassium	6010D	NA	**730**	ND	ND	**640**	**670**	**840**	ND
Sodium	6010D	NA	ND	ND	ND	ND	ND	ND	ND
Zinc	6010D	10,000	**170**	**140**	**55**	**29**	**37**	**46**	**35**
Antimony	6020B	NA	ND	ND	ND	ND	ND	ND	ND
Arsenic	6020B	16	**7.4**	**9.7**	**5.2**	**3.2**	**3.3**	**3.9**	**2.4**
Beryllium	6020B	72	**0.40**	**0.48**	**0.30**	ND	ND	ND	ND
Cadmium	6020B	4.3	**0.49**	**0.86**	ND	ND	ND	ND	ND
Selenium	6020B	180	ND	ND	ND	ND	ND	ND	ND
Silver	6020B	180	**0.36**	ND	ND	ND	ND	ND	ND
Thallium	6020B	NA	ND	ND	ND	ND	ND	ND	ND
Vanadium	6020B	NA	**11**	**15**	**12**	**8.0**	**8.0**	**7.6**	**7.4**

NOTES:
1. Analytical testing via EPA Methods 6010D, 6020B, 7471E
2. Results present in mg/kg.
3. ND = Not Detected
4. NA = Not Applicable
5. Soil Cleanup Objectives (SCOs) from NYCRR Part

Table 10
Remedial Investigation Soil Herbicides and Pesticides Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Restricted-Residential Use SCO	SS1	SS2	SS3	SS4	SS4 Field DUP	SS5	SS6	SS7	SS8	SS9
Sampling Date		**7/20/2020**	**8/3/2020**	**7/20/2020**	**7/23/2020**	**7/23/2020**	**7/21/2020**	**7/21/2020**	**7/20/2020**	**7/20/2020**	**7/20/2020**
Herbicides											
2,4,5-T	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-D	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dicamba	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silvex	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides											
a-Chlordane	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	0.097	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-BHC	0.48	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
beta-BHC	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane (Total)	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
delta-BHC	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p'-DDD	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p'-DDE	8.9	**0.0075**	**0.0080**	ND	**0.0065**	**0.0068**	ND	ND	ND	**0.0037**	**0.17**
p,p'-DDT	7.9	ND	ND	ND	**0.0038d**	**0.0037d**	ND	ND	ND	**0.0095**	**0.073**
Toxaphene	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
y-Chlordane	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for herbicides via EPA Method 8151A and for pesticides via EPA Method 8081B by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected
4. NA = Not Applicable
5. Soil Cleanup Objectives (SCOs) from NYCRR Part 375
6. "d" = result was obtained from the analysis of a dilution

Table 10 (Continued)
Remedial Investigation Soil Herbicides and Pesticides Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Restricted-Residential Use SCO	SB101 (5.0'-7.0')	SB105 (15.5'-17.0')	SB108 (17.0'-18.0')	SB109 (14.0'-15.0')	SB109 (14.0'-15.0') DUP
Sampling Date		**7/21/2020**	**7/23/2020**	**7/27/2020**	**7/28/2020**	**7/28/2020**
Herbicides						
2,4,5-T	NA	ND	ND	ND	ND	ND
2,4-D	NA	ND	ND	ND	ND	ND
Dicamba	NA	ND	ND	ND	ND	ND
Silvex	100	ND	ND	ND	ND	ND
Pesticides						
a-Chlordane	4.2	ND	ND	ND	ND	ND
Aldrin	0.097	ND	ND	ND	ND	ND
Alpha-BHC	0.48	ND	ND	ND	ND	ND
beta-BHC	0.36	ND	ND	ND	ND	ND
Chlordane (Total)	4.2	ND	ND	ND	ND	ND
delta-BHC	100	ND	ND	ND	ND	ND
Dieldrin	0.2	ND	ND	ND	ND	ND
Endosulfan I	24	ND	ND	ND	ND	ND
Endosulfan II	24	ND	ND	ND	ND	ND
Endosulfan Sulfate	24	ND	ND	ND	ND	ND
Endrin	11	ND	ND	ND	ND	ND
Endrin Aldehyde	NA	ND	ND	ND	ND	ND
Endrin Ketone	NA	ND	ND	ND	ND	ND
gamma-BHC	1.3	ND	ND	ND	ND	ND
Heptachlor	2.1	ND	ND	ND	ND	ND
Heptachlor Epoxide	NA	ND	ND	ND	ND	ND
Methoxychlor	NA	ND	ND	ND	ND	ND
p,p'-DDD	13	ND	ND	ND	ND	ND
p,p'-DDE	8.9	ND	ND	ND	ND	ND
p,p'-DDT	7.9	ND	ND	ND	ND	ND
Toxaphene	NA	ND	ND	ND	ND	ND
y-Chlordane	4.2	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for herbicides via EPA Metho
2. Results present in mg/kg.
3. ND = Not Detected
4. NA = Not Applicable
5. Soil Cleanup Objectives (SCOs) from NYC
6. "d" = result was obtained from the analysis

Table 11
Remedial Investigation Soil PCB Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Restricted-Residential Use SCO	SS1	SS2	SS3	SS4	SS4 DUP	SS5	SS6	SS7	SS8
Sampling Date		7/20/2020	8/3/2020	7/20/2020	7/23/2020	7/23/2020	7/21/2020	7/21/2020	7/20/2020	7/20/2020
Aroclor (Total)	1	ND	ND	ND	ND	ND	ND	**0.062**	ND	ND
Aroclor-1016	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	1	ND	ND	ND	ND	ND	ND	**0.062**	ND	ND
Aroclor-1260	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1262	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aroclor-1268	1	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for PCBs via EPA Method 8082A by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected
4. Soil Cleanup Objectives (SCOs) from NYCRR Part 375

Table 11 (Continued)
Remedial Investigation Soil PCB Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Restricted-Residential Use SCO	SS9	SB101 (5.0'-7.0')	SB105 (15.5'-17.0')	SB108 (17.0'-18.0')	SB109 (14.0'-15.0')	SB109 (14.0'-15.0') DUP
Sampling Date		7/20/2020	7/21/2020	7/23/2020	7/27/2020	7/28/2020	7/28/2020
Aroclor (Total)	1	ND	ND	ND	ND	ND	ND
Aroclor-1016	1	ND	ND	ND	ND	ND	ND
Aroclor-1221	1	ND	ND	ND	ND	ND	ND
Aroclor-1232	1	ND	ND	ND	ND	ND	ND
Aroclor-1242	1	ND	ND	ND	ND	ND	ND
Aroclor-1248	1	ND	ND	ND	ND	ND	ND
Aroclor-1254	1	ND	ND	ND	ND	ND	ND
Aroclor-1260	1	ND	ND	ND	ND	ND	ND
Aroclor-1262	1	ND	ND	ND	ND	ND	ND
Aroclor-1268	1	ND	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for PCBs via EPA Me
2. Results present in mg/kg.
3. ND = Not Detected
4. Soil Cleanup Objectives (SCOs) fro

Table 12
Remedial Investigation Soil Cyanide Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

Restricted-Residential Use SCO	SS1	SS2	SS3	SS4	SS4 Field Duplicate	SS5	SS6	SS7	SS8	SS9	SB101 (5.0'-7.0')
	7/20/2020	8/3/2020	7/20/2020	7/23/2020	7/23/2020	7/21/2020	7/21/2020	7/20/2020	7/20/2020	7/20/2020	7/21/2020
27	ND	ND	ND	ND	ND	ND	**0.52**	ND	ND	ND	ND

Restricted-Residential Use SCO	SB105 (15.5'-17.0')	SB108 (17.0'-18.0')	SB109 (14.0'-15.0')	SB109 (14.0'-15.0') DUP
	7/23/2020	7/27/2020	7/28/2020	7/28/2020
27	ND	ND	ND	ND

NOTES:
1. Analytical testing for cyanide via EPA Method 9012B by Hampton Clarke.
2. Results present in mg/kg.
3. ND = Not Detected
4. Soil Cleanup Objectives (SCOs) from NYCRR Part 375

Table 13
Remedial Investigation Soil PFAS Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	Restricted Residential Use Guidance Value	SS1	SS2	SS3	SS4	SS4 Field Duplicate	SS5	SS6	SS7
	Sampling Date	7/20/2020	8/3/2020	7/20/2020	7/23/2020	7/23/2020	7/21/2020	7/21/2020	7/20/2020
Perfluorooctanoic acid	33	**0.40**	**0.65**	ND<0.56	ND<0.63	ND<0.66	ND<0.60	ND<0.59	ND<0.49
Perfluorooctanesulfonic acid	44	**0.61**	**0.34**	**0.30**	**0.42**	**0.39**	ND<0.60	**0.53**	ND<0.49

PARAMETER	Restricted Residential Use Guidance Value	SS8	SS9	SB101 (5.0'-7.0')	SB105 (15.5'-17.0')	SB108 (17.0'-18.0')	SB109 (14.0'-15.0')	SB109 (14.0'-15.0') DUP
	Sampling Date	7/20/2020	7/20/2020	7/21/2020	7/23/2020	7/27/2020	7/28/2020	7/28/2020
Perfluorooctanoic acid	33	**0.76**	**0.34**	ND<0.68	ND<0.48	ND<0.52	ND<0.45	ND<0.53
Perfluorooctanesulfonic acid	44	**1.5**	**0.98**	ND<0.68	ND<0.48	ND<0.52	ND<0.45	ND<0.53

NOTES:
1. Analytical testing for PFOA/PFOS via EPA Method
2. Results present in ug/kg.
3. ND = Not Detected
4. NYSDEC Guidance Values from *Guidelines for Sampling and Analysis of PFAS Under NYSDEC's Part 375 Remedial Programs*, January 2021.

Table 14
Remedial Investigation Groundwater VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	MW1	MW1 Duplicate	MW2	MW3	MW4	MW5	MW6	MW7	MW8
	Sampling Date	8/11/2020	8/11/2020	8/10/2020	8/11/2020	8/10/2020	8/11/2020	8/12/2020	8/12/2020	8/10/2020
cis-1,2-Dichloroethene	5	ND	ND	**670**	ND	ND	**140**	ND	ND	ND
Tetrachloroethene	5	**180**	**150**	**2,200**	**2.9**	ND	**480**	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	**11**	ND	ND	**5.3**	ND	ND	ND
Trichloroethene	5	**2.3**	**2.2**	**160**	**1.2**	ND	**33**	ND	ND	ND
Vinyl chloride	2	ND	ND	**20**	ND	ND	ND	ND	ND	ND
	Total	**182**	**152**	**3061**	**4.1**	ND	**658**	ND	ND	ND
Tentatively Identified Compounds (TICs)		ND	ND	ND	**34J**	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for VOCs via EPA Method 8260 by Hampton Clarke.
2. Results present in ug/L.
3. ND = Not Detected
4. Results and regulatory stanards are shown for detected compounds only.
5. NA = Not Applicable
6. Yellow highlighting indicates exceedance of NYS Ambient Water Quality Standard (TOGS 1.1.1) for Class GA waters.

Table 14 (Continued)
Remedial Investigation Groundwater VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	Equipment Blank (Subsurface Soil)	Equipment Blank (Surface Soil)	Equipment Blank (Groundwater)	Trip Blank
	Sampling Date	**7/22/2020**	**7/23/2020**	**8/12/2020**	**8/12/2020**
cis-1,2-Dichloroethene	5	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND
Total		ND	ND	ND	ND

Tentatively Identified Compounds (TICs)	ND	ND	ND	ND

NOTES:
1. Analytical testing for VOCs via EPA Method 8260 by Hampton Cl
2. Results present in ug/L.
3. ND = Not Detected
4. Results and regulatory stanards are shown for detected co
5. NA = Not Applicable
6. Yellow highlighting indicates exceedance of NYS Ambient

Table 14 (Continued)
Remedial Investigation Groundwater VOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	MW1	MW2	MW3	MW3 Duplicate	MW4	MW5	MW6	MW7	MW8	MW9	TW1	Trip Blank
	Sampling Date	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021	8/31/2021
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.21**	ND	ND
Acetone	NA	ND	ND	**3.0**	ND	ND	ND	**4.1**	ND	ND	ND	16	ND
cis-1,2-Dichloroethene	5	ND	**830**	**23**	**24**	ND	**56**	ND	ND	ND	**1.3**	ND	ND
Tetrachloroethene	5	**85**	**3,200**	**15**	**16**	ND	**580**	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	**1.3**	**1.3**	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	**0.93**	**160**	**18**	**19**	ND	**30**	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	**1.7**	**1.9**	ND	ND	ND	ND	ND	ND	ND	ND
	Total	**86**	**4,190**	**62**	**62**	ND	**666**	**4.1**	ND	ND	**1.5**	**16**	ND

NOTES:
1. Analytical testing for VOCs via EPA Method 8260 by eurofins Test America in Buffalo, NY.
2. Results present in ug/L.
3. ND = Not Detected
4. Results and regulatory stanards are shown for detected compounds only.
5. NA = Not Applicable
6. Yellow highlighting indicates exceedance of NYS Ambient Water Quality Standard (TOGS 1.1.1) for Class GA waters.

Table 15
Remedial Investigation Groundwater SVOC Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	MW1	MW1 Duplicate	MW5	MW7	Equipment Blank (Subsurface Soil)	Equipment Blank (Surface Soil)	Equipment Blank (Groundwater)
	Sampling Date	8/11/2020	8/11/2020	8/11/2020	8/12/2020	7/22/2020	7/23/2020	8/12/2020
1,1'-Biphenyl	5	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	5	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	1.0	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	NA	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	1	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	1	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	1	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	1	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	1	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	5	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	5	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	NA	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	1	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	NA	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	1	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	1	ND	ND	ND	ND	ND	ND	ND
3&4-Methylphenol	1	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	5	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	NA	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	1	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	5	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	NA	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	5	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	1	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	20	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	NA	ND	ND	ND	ND	ND	ND	ND
Acetophenone	NA	ND	ND	ND	ND	ND	ND	ND
Anthracene	50	ND	ND	ND	ND	ND	ND	ND
Atrazine	7.5	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	NA	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	NA	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethoxy)methane	5	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	1	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroisopropyl)ether	5	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	5	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	NA	ND	ND	ND	ND	ND	ND	ND
Caprolactam	NA	ND	ND	ND	ND	ND	ND	ND
Carbazole	NA	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.002	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	NA	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	NA	ND	ND	ND	ND	ND	ND	ND
Dimethylphthalate	NA	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	50	ND	ND	ND	ND	ND	ND	ND
Di-n-octylphthalate	NA	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	5	ND	ND	ND	ND	ND	ND	ND
Isophorone	NA	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	0.4	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	NA	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	NA	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	50	ND	ND	ND	ND	ND	ND	ND
Phenol	1	ND	ND	ND	ND	ND	ND	ND
Pyrene	50	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	1	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	NA	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	0.002	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	0.002	ND	ND	ND	ND	ND	ND	ND
Dibenzo[a,h]anthracene	NA	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.04	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.5	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	5	ND	ND	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	0.002	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	NA	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1	ND	ND	ND	ND	ND	ND	ND
Total		ND	ND	ND	ND	ND	ND	ND
Tentatively Identified Compounds (TICs)		**58J**	**77J**	**140J**	ND	ND	**53J**	ND

NOTES:
1. Analytical testing for SVOCs via EPA Method 8270 by Hampton Clarke.
2. Results present in ug/L.
3. ND = Not Detected
4. NA = Not Applicable

Table 16
Remedial Investigation Groundwater Inorganics Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	MW1		MW1 Duplicate		MW5	
	Sampling Date	8/11/2020	8/11/2020	8/11/2020	8/11/2020	8/11/2020	8/11/2020
	Total/Dissolved	T	D	T	D	T	D
Cr (Hexavalent)	50	ND		ND		ND	
Mercury	0.7	ND	ND	ND	ND	ND	ND
Aluminum	NA	ND	ND	ND	ND	ND	ND
Barium	1,000	**74**	**75**	**74**	**75**	**91**	**85**
Calcium	NA	**180,000**	**190,000**	**180,000**	**180,000**	**120,000**	**110,000**
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	200	ND	ND	ND	ND	ND	ND
Copper	300	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	ND	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	NA	**18,000**	**18,000**	**18,000**	**18,000**	**15,000**	**15,000**
Manganese	300	ND	ND	ND	ND	**46**	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NA	**15,000**	**15,000**	**15,000**	**14,000**	**24,000**	**22,000**
Sodium	20,000	**190,000**	**190,000**	**190,000**	**190,000**	**110,000**	**110,000**
Zinc	2,000	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NA	ND	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for metals via EPA Methods 6010, 6020 by Hampton Clarke.
2. Results present in ug/L.
3. ND = Not Detected
4. NA = Not Applicable
5. Yellow highlighting indicates exceedance of NYS Ambient Water Quality Standard (TOGS 1.1.1) for Class GA waters.
6. T= Total; D = Dissolved

Table 16 (Continued)
Remedial Investigation Groundwater Inorganics Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	MW7		Equipment Blank (Subsurface Soil)	Equipment Blank (Surface Soil)	Equipment Blank (Groundwater)	
	Sampling Date	8/12/2020	8/12/2020	7/22/2020	7/23/2020	8/12/2020	8/12/2020
	Total/Dissolved	T	D	T	T	T	D
Cr (Hexavalent)	50	ND		ND	ND		
Mercury	0.7	ND	ND	ND	ND	ND	ND
Aluminum	NA	ND	ND	ND	ND	ND	ND
Barium	1,000	**71**	**75**	ND	ND	ND	ND
Calcium	NA	**150,000**	**160,000**	ND	ND	ND	ND
Chromium	50	ND	ND	ND	ND	ND	ND
Cobalt	200	ND	ND	ND	ND	ND	ND
Copper	300	ND	ND	ND	ND	ND	ND
Iron	300	ND	ND	ND	ND	ND	ND
Lead	25	ND	ND	ND	ND	ND	ND
Magnesium	NA	**28,000**	**31,000**	ND	ND	ND	ND
Manganese	300	**74**	**76**	ND	ND	ND	ND
Nickel	100	ND	ND	ND	ND	ND	ND
Potassium	NA	**12,000**	**11,000**	ND	ND	ND	ND
Sodium	20,000	**88,000**	**86,000**	ND	ND	ND	ND
Zinc	2,000	ND	ND	ND	ND	ND	ND
Antimony	3	ND	ND	ND	ND	ND	ND
Arsenic	25	ND	ND	ND	ND	ND	ND
Beryllium	3	ND	ND	ND	ND	ND	ND
Cadmium	5	ND	ND	ND	ND	ND	ND
Selenium	10	ND	ND	ND	ND	ND	ND
Silver	50	ND	ND	ND	ND	ND	ND
Thallium	0.5	ND	ND	ND	ND	ND	ND
Vanadium	NA	ND	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for metals via EPA Methods 6010, 6020 by Han
2. Results present in ug/L.
3. ND = Not Detected
4. NA = Not Applicable
5. Yellow highlighting indicates exceedance of NYS Ambient
6. T= Total; D = Dissolved

Table 17
Remedial Investigation Groundwater Pesticides Herbicides Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	MW1	MW1 Duplicate	MW5	MW7	Equipment Blank (Subsurface Soil)	Equipment Blank (Surface Soil)	Equipment Blank (Groundwater)
	Sampling Date	**8/11/2020**	**8/11/2020**	**8/11/2020**	**8/12/2020**	**7/22/2020**	**7/23/2020**	**8/12/2020**
Herbicides								
2,4,5-T	35	ND	ND	ND	ND	ND	ND	ND
2,4-D	50	ND	ND	ND	ND	ND	ND	ND
Dicamba	0.44	ND	ND	ND	ND	ND	ND	ND
Silvex	0.26	ND	ND	ND	ND	ND	ND	ND
Pesticides								
a-Chlordane	0.05	ND	ND	ND	ND	ND	ND	ND
Aldrin	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-BHC	0.01	ND	ND	ND	ND	ND	ND	ND
beta-BHC	0.04	ND	ND	ND	ND	ND	ND	ND
Chlordane (Total)	0.05	ND	ND	ND	ND	ND	ND	ND
delta-BHC	0.04	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.004	ND	ND	ND	ND	ND	ND	ND
Endosulfan I	NA	ND	ND	ND	ND	ND	ND	ND
Endosulfan II	NA	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	NA	ND	ND	ND	ND	ND	ND	ND
Endrin	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	5	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone	5	ND	ND	ND	ND	ND	ND	ND
gamma-BHC	0.05	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.04	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.03	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	35	ND	ND	ND	ND	ND	ND	ND
p,p'-DDD	0.3	ND	ND	ND	ND	ND	ND	ND
p,p'-DDE	0.2	ND	ND	ND	ND	ND	ND	ND
p,p'-DDT	0.2	ND	ND	ND	ND	ND	ND	ND
Toxaphene	0.06	ND	ND	ND	ND	ND	ND	ND
y-Chlordane	0.05	ND	ND	ND	ND	ND	ND	ND

NOTES:

1. Analytical testing for herbicides via EPA Method 8151 and for pesticides via EPA Method 8081 by Hampton Clarke.

2. Results present in ug/L.
3. ND = Not Detected
4. NA = Not Applicable

Table 18
Remedial Investigation Groundwater PCBs Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYS Water Quality Standard or Guidance Value	MW1	MW1 Duplicate	MW5	MW7	Equipment Blank (Subsurface Soil)	Equipment Blank (Surface Soil)	Equipment Blank (Groundwater)
	Sampling Date	**8/11/2020**	**8/11/2020**	**8/11/2020**	**8/12/2020**	**7/22/2020**	**7/23/2020**	**8/12/2020**
Aroclor (Total)	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1221	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1232	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1242	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1260	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1262	0.09	ND	ND	ND	ND	ND	ND	ND
Aroclor-1268	0.09	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for PCBs via EPA Method 8082 by Hampton Clarke.
2. Results present in ug/L.
3. ND = Not Detected
4. NA = Not Applicable

Table 19
Remedial Investigation Groundwater Cyanide Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

NY TOGS WaterQualStds	MW1	MW1 Duplicate	MW5	MW7	Equipment Blank (Subsurface Soil)	Equipment Blank (Surface Soil)	Equipment Blank (Groundwater)
	8/11/2020	8/11/2020	8/11/2020	8/11/2020	7/22/2020	7/23/2020	8/12/2020
200	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. Analytical testing for cyanide via EPA Method 9012 by Hampton Clarke.
2. Results present in ug/L.
3. ND = Not Detected

Table 20
Remedial Investigation Groundwater PFAS Concentrations

Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, New York
BCP Site No. C915344

PARAMETER	NYSDEC Water Quality Standard	MW1	MW1 Duplicate	MW5	MW7	Equipment Blank
	Sampling Date	8/11/2020	8/11/2020	8/11/2020	8/12/2020	8/12/2020
Perfluorobutanoic acid		**3.6 (J)**	**3.6 (J)**	**2.7 (J)**	ND<7.4	ND<7.4
Perfluoropentanoic acid		ND<3.7	ND<3.7	**2.7 (J)**	ND<3.7	ND<3.7
Perfluorohexanoic acid		**1.0 (J)**	ND<3.7	**1.3 (J)**	ND<3.7	ND<3.7
Perfluoroheptanoic acid		**1.4 (J)**	**1.3 (J)**	ND<1.9	ND<1.9	ND<1.9
Perfluorooctanoic acid	10	**4.6**	**4.4**	**2.0**	ND<1.9	ND<1.9
Perfluorobutanesulfonic acid		**5.0**	**5.5**	**2.8**	ND<1.9	ND<1.9
Perfluorooctanesulfonic acid	10	**2.6**	**2.6**	**5.9**	ND<1.9	ND<1.9

NOTES:
1. Analytical testing for PFOA/PFOS via EPA Method 537M by SGS North America Inc.
2. Results present in ng/L.
3. ND = Not Detected
4. Results shown for detected compounds only. For a full list of analytes, refer to the analytical report.

Table 21
Remedial Investigation Soil Vapor Analytical Results

August 17, 2021

PARAMETER	1 Franklin Street VP1	Property Line VP2
1,2,4-Trimethylbenzene	9.3	10
1,3,5-Trimethylbenzene	4.4	3.8
2,2,4-trimethylpentane	6.9	1.7
4-ethyltoluene	3.4	2.9
Acetone	42	22
Benzene	6.7	3.1
Carbon disulfide	2.7	1.7
Chloroform	2.0	ND
Chloromethane	0.97	0.87
Cyclohexane	7.9	8.6
Ethyl acetate	ND	1.2
Ethylbenzene	5.2	3.3
Freon 11	4.0	3.0
Freon 12	3.0	3.0
Heptane	19	8.6
Hexane	18	21
Isopropyl alcohol	19	7.4
m&p-Xylene	18	12
Methyl Ethyl Ketone	27	25
Methyl Isobutyl Ketone	3.2	1.5
Methylene chloride	0.45	0.49
o-Xylene	8.5	5.7
Styrene	1.2	0.85
Tetrachloroethylene	0.68	ND
Toluene	26	57

NOTES:

1. Analytical testing for VOCs via EPA Method TO-15 by Centek
2. Results present in $\mu g/m^3$ (microgram per cubic meter).
3. ND = Not Detected
4. Compounds detected in one or more samples are included in this table. For a list of all compounds, refer to the attached analytical report.

TABLE 22
Project Schedule
Lakeside Village Apartments
65-67 Lake Avenue, Lancaster, NY
NYSDEC Brownfield Cleanup Program Site #C915344

Task	2022																																																			
	January					February				March				April				May					June				July				August					September				October					November				December			
	3	10	17	24	31	7	14	21	28	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26
III. Remedial Investigation/ Alternatives Analysis (RI/AA) Report																																																				
RI/AA Report Comments and Revisions																																																				
NYSDEC Review																																																				
RI/AA Report Approval																																																				
IV. Remedial Action Work Plan (RAWP)																																																				
Submittal of Work Plan																																																				
NYSDEC Review of Work Plan																																																				
Soil Borings/Data Collection																																																				
Submittal of RAWP																																																				
NYSDEC Review																																																				
45 Day Public Comment Period																																																				
RAWP Comments and Revisions																																																				
NYSDEC Review																																																				
RAWP Approval																																																				
V. Cleanup Action																																																				
VI. Site Management Plan (SMP) & Final Engineering Report (FER)																																																				
Submittal of SMP																																																				
NYSDEC Review of SMP																																																				
SMP Comments and Revisions																																																				
NYSDEC Review of SMP																																																				
SMP Approval																																																				
Submittal of FER																																																				
NYSDEC Review of FER																																																				

APPENDIX A

Soil Boring Logs

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB101 / MW1**
START DATE:	7/21/2020	COMPLETION DATE: 7/21/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	Approx. 7' DRILLING	GROUNDWATER DEPTH AFTER COMPLETION:	NA
WEATHER:	Sunny 75 - 80°	CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**		29	GP	Asphalt over gray, POORLY GRADED GRAVEL (cf) WITH SAND (cf), loose, dry, Quaternary Fill
1			60 +		SM	Brown SILTY SAND (mf) WITH GRAVEL (cf), medium dense, moist, Quaternary Fill
2						
3			15.9			
4			150 +			
5	**2**	**5.0-10.0**		50	SP-SM	Brown POORLY GRADED SAND WITH SILT AND GRAVEL (cf), moist, medium dense, Quaterny Fill or Colluvium
6			16.2			
7					CL,ML	Brown CLAY and gray SILT, laminated, wet, dense, Lacustrine
8			7.5			
9						
10	**3**	**10.0-15.0**		60		
11			0.0		CL, ML	As above
12			0.0			
13					ML	Gray SANDY SILT WITH GRAVEL (cf, sa to a), saturated, soft, Alluvium
14			0.0		ML	Gray SILTY SAND, trace f Gravel, dry, medium dense, Alluvium
15	**4**	**15.0-20.0**		38		
16			9.5		ML	Dark gray SILT WITH SAND, trace Gravel (f, a), wet, very dense, Alluvium.
17			7.6			
18						
19						

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Bottom of borehole 18.4'. Sample from 5' - 7' submitted for laboratory analysis. Monitoring well installed in boring (2" dia.).

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION: **65-67 Lake Ave., Lancaster, NY** PROJECT No. **18-046**
CLIENT: **65 Lake Avenue LLC** WELL/BORING ID: **SB102 / MW2**
START DATE: 7/21/2020 COMPLETION DATE: 7/21/2020 RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING: Approx. 6.5' GROUNDWATER DEPTH AFTER DRILLING COMPLETION: not measured
WEATHER: Sunny 75 - 80° CONTRACTOR/DRILLERS: Matrix Environmental Technologies / P. Bliek
DRILL RIG: Geoprobe 6620 DT DRILL SIZE & TYPE: Direct Push 2 1/2" NPT HAMMER Type: Hydraulic
Sampler Type: macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**		32	GP	Asphalt over gravel fill over sand and gravel fill.
1			175 +		GP	Gray POORLY GRADED GRAVEL (cf) WITH SAND (cf), loose, dry, odor of asphalt, Quaternary Fill
2					CL	Reddish brown SILTY CLAY, very stiff, moist, Quaternary Fill
3			18		SP	Brown and gray POORLY GRADED SAND WITH SILT AND GRAVEL, medium dense, moist, Quaternary Fill or Colluvium.
4						
5	**2**	**5.0-10.0**	64.3	60	SW	Brown, tan and brownish gray, WELL GRADED SAND WITH GRAVEL (mf, sr), trace Silt, medium dense, moist, Quaternary Fill or Colluvium.
6			9.3		CL, ML	Reddish brown and olive brown laminated SILTY CLAY, moist to wet, stiff, (6"), overlying olive brown CLAYEY SILT, medium stiff, wet, Lacustrine.
7						
8			5.2		CL,ML	Reddish brown CLAY laminated with Gray SILT, stiff, saturated, Lacustine.
9						
10	**3**	**10.0-15.0**		48		
11			0.4			
12					MH	Gray SILT WITH GRAVEL (cf, sr), trace Sand (f), saturated, medium stiff, Alluvium, sand increases with depth.
13			3.1			
14						
15	**4**	**15.0-20.0**	0.2	60		
16					SM	Gray SILTY SAND (mf) WITH GRAVEL (mf, sa to a), saturated, medium dense, Alluvium.
17			0.0		ML	Dark gray SILT WITH SAND, wet, very dense, Alluvium.
18			0.8			
19			7.2			
			24.4			

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Bottom of borehole 20'. Soil samples from 4.5'-5.5', 9.8'-10.5' and 19.6'-20.0' submitted for laboratory analysis. Monitoring well installed in boring (2" dia.).

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB103 / MW3**
START DATE:	7/22/2020	COMPLETION DATE: 7/22/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	Approx. 9'	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Raining on/off, cloudy, hot, humid	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**		46		
1			40		OL/OH, CL	4 inches ORGANIC SOIL (topsoil) over 16 inches reddish brown CLAY, dry, stiff, Quaternary Fill
2						
3			112		OL/OH, CL	Dark brown GRAVELLY ORGANIC SOIL WITH SAND, moist, overy lying 3 inches of reddish brown CLAY overlying 6 inches of bricks with silt and sand, dry, medium dense, Quaternary Fill
4			190			
5	**2**	**5.0-10.0**		57		
6			117		ML, CL	Gray CLAYEY SILT laminated with Brown CLAY, moist, occasional fine Sand lenses (1/8"), density varies from medium stiff in 5' to 6' and where there is sand to very stiff, Lacustrine
7						
8			180			
9					ML, CL	Gray CLAYEY SILT, bedded with brown CLAY, moist to wet, stiff to very stiff, Lacustrine
10	**3**	**10.0-15.0**		60	ML, CL	Grayish brown SILTY CLAY, saturated, stiff, Lacustrine
11			114			
12					ML	Gray SANDY SILT WITH GRAVEL (cf, SA to SR), saturated, stiff, Alluvium
13			190			
14						
			200+		SP	Gray POORLY GRADED SAND WITH GRAVEL, trace (+) Silt, moist to wet, dense, Alluvium
15	**4**	**15.0-20.0**		52		
16					ML	19 " resample over Dark gray SANDY SILT WITH GRAVEL (mf, SA to A), moist, stiff to very stiff (3 inch SILTY SAND (cf) lenses at 16' and 16'5"), Alluvium
17			175			
18					SM	Gray SILTY SAND WITH GRAVEL (cf, sa), moist, dense, more gravel or weathered limestone (saprolite) in bottom of sample, Alluvium
19						
			19.5			

Notes

PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Bottom of borehole 19.5'. Sample from 19.5' submitted for laboratory analysis. Monitoring well installed in boring (2" dia.). Difficult well installation due to running sands.

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION: **65-67 Lake Ave., Lancaster, NY** PROJECT No. **18-046**
CLIENT: **65 Lake Avenue LLC** WELL/BORING ID: **SB104 / MW4**
START DATE: 7/23/2020 COMPLETION DATE: 7/23/2020 RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING: approx. 7.5' GROUNDWATER DEPTH AFTER COMPLETION: not measured
WEATHER: Sunny, 80° CONTRACTOR/DRILLERS: Matrix Environmental Technologies / P. Bliek
DRILL RIG: Geoprobe 6620 DT DRILL SIZE & TYPE: Direct Push 2 1/2" NPT HAMMER Type: Hydraulic
Sampler Type: macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS (Unified Soil Classification System; f-fine m-medium c-coarse; sr - subrounded, r - rounded, sa - subangular, a - angular)
	1	0.0-5.0		26		
1			2.3		OL, SM, SP-SM	Topsoil over 9 inches Brown SILTY SAND (cf), with roots, loose, dry over brownish gray POORLY GRADED SAND (mf) with SILT and GRAVEL (mf, a), loose, dry, Quaternary Fill.
2						
3						
4						
5	2	5.0-10.0	0.0	52	SM	6" resample over Brown SILTY SAND (f), medium dense, moist, Quaternary Fill
6			1.5		SM, CL	Brown SILTY SAND (mf) WITH GRAVEL, medium dense, moist, occasional 2" lenses of reddish brown CLAY, Lacustine
7						
8			2.1		CL, ML	Brown CLAY, varved, stiff, wet, lense of brown SANDY SILT, stiff at 9.7-9.9', Lacustrine
9						
10	3	10.0-15.0		58	ML, CL	6" resample over Gray SILT laminated with reddish brown CLAY, very stiff, medium plasticity, saturated, Lacustine
11			1.4		ML	Gray SILT, trace CLAY, trace GRAVEL (f), stiff, non-plastic, saturated, Lacustrine
12						
13			5.3		ML	Gray SANDY SILT WITH GRAVEL (cf, a to sa, black), trace CLAY, medium stiff, saturated, Alluvium
14			9.2			
15	4	15.0-20.0	6.6	52	SM	18" resample over Gray SILTY SAND (mf) WITH GRAVEL (cf, a to sa, black), trace CLAY, medium stiff, saturated, Alluvium.
16			12.6			
17						
18						
19						

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample and borehole refusal at 16.5'. Sample from 16' - 16.5' submitted for laboratory analysis. Monitoring well installed in boring (2" dia.).

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB105 / MW5**
START DATE:	7/23/2020	COMPLETION DATE: 7/23/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	approx. 8' DRILLING	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Rain, 80°, humid	CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS (Unified Soil Classification System; f-fine m-medium c-coarse; sr - subrounded, r - rounded, sa - subangular, a - angular)
	1	**0.0-5.0**		36		
1			2.5		SP	Asphalt over sand and gravel fill overlying tan POORLY GRADED SAND, wet, loose to medium dense, Quaternary Fill.
2					SW	Brown WELL GRADED SAND (cf) WITH GRAVEL, trace Silt, moist, loose, Quaternary Fill.
3			5.0		SW	Grayish Brown WELL GRADED SAND WITH GRAVEL (mf, sr), moist, medium dense, Quaternary Fill or Colluvium.
4					CL	Tan CLAY, dry to moist, very stiff, Lacustrine
			2.8			
5	**2**	**5.0-10.0**		55	CL, ML	10 inches of resample over Reddish brown CLAY laminated with gray SILT, wet, Lacustrine, laminations (1/32" to 1/2") get thicker with depth, some mottling also
6			7.5+			
7						
8			12.5+			
9						
10	**3**	**10.0-15.0**		53	ML, CL	Brown CLAYEY SILT, wet, medium stiff, Lacustine
11			8.1			
12					SW-SM	Gray WELL GRADED SAND WITH SILT AND GRAVEL, saturated, loose, Alluvium
13			13.6			
14					SP-SM	3 inches of gray SANDY SILT, wet, medium dense, over 8 inches gray POORLY GRADED SAND WITH SILT, trace Gravel (mf, sa), Alluvium
			30+			
15	**4**	**15.0-20.0**		26	ML	Gray SILT WITH SAND, trace Gravel (cf), wet, Alluvium
			50+			
16			15.4			
17						
18						
19						

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample refusal 17', borehole refusal 18'. Sample from 15.5' - 17' submitted for laboratory analysis. Monitoring well installed in boring (2" dia.).

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB106 / MW6**
START DATE:	7/27/2020	COMPLETION DATE: 7/27/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	approx. 9'	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Partly cloudy, hot, humid, 80+	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**		44	OL	Grass over brown ORGANIC SOIL (topsoil), dry
1			3.5		SP	Brown POORLY GRADED SAND WITH GRAVEL, trace Silt, moist, soft to medium dense, Quaternary Fill
					SM	Brown SILTY SAND, moist, medium dense, Quaternary Fill
2			38			Orangish brown SILTY SAND, trace Gravel (mf), moist, Quaternary Fill
					SW	Brown WELL GRADED SAND WITH GRAVEL (cf, sr to sa), moist, Quaternary Fill.
3					CL, ML	Brown CLAY laminated with SILT (1/32"), moist, Lacustrine.
4			0.0			
5	**2**	**5.0-10.0**		64	CL, ML	Gray and reddish brown CLAY with laminations of 1/8", bottom 2' of sample has 1/32" laminations of gray SILT, dry to moist, very stiff, Lacustrine
6			1.1			
7						
8			2.5			
9 oi						
	3	**10.0-15.0**		52	CL, ML	7 inches of resample overyling Reddish brown CLAY with gray SILT laminations (1/2"), wet, medium dense, Lacustrine
11			0.1			
12			2.3			as above, moist, stiff, Lacustrine
13						
14			0.4		SM	Gray POORLY GRADED SILTY SAND WITH GRAVEL (cf, sr to sa), wet, medium dense, Alluvium
15	**4**	**15.0-20.0**		62	SM	6 inches resample then AS ABOVE, wet, loose to mediium dense, Alluvium
16			5.1		SP-SM	Gray POORLY GRADED SAND WITH SILT, saturated, loose, Alluvium
17					SM	Gray POORLY GRADED SILTY SAND WITH GRAVEL (mf, sa to a), dry to moist (4") then dry, very dense, Alluvium
18			5.2			
19						

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample refusal 20', borehole refusal 18.5'. Sample from 19.5' - 20' submitted for laboratory analysis.

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB107**
START DATE:	7/28/2020	COMPLETION DATE: 7/28/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:		GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Partly cloudy, hot, humid, 80+	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**	46	36	SP, SM, SP-SM	Asphalt over 12 inches brownish gray POORLY GRADED SAND WITH GRAVEL over 6 inches dark brown SILTY SAND (f) over orangeish brown POORLY GRADED SAND (f) WITH SILT, medium dense, moist, Quaternary Fill.
1						
2			25.6			
3						
4			4.6			
					CL	Reddish brown and brown CLAY (mottled, some laminations), moist, medium stiff, gravel (cf) noted in sample 4.5 to 4.8', Lacustine
5	**2**	**5.0-10.0**		49	SP, ML, CL	6 inches of resample, Olive POORLY GRADED SAND (f) thinnly bedded with reddish brown CLAY, grades to olive brown CLAYEY SILT thinnly bedded with reddish brown CLAY, medium dense, moist to wet, medium dense to dense, Lacustrine
6			9.6			
7						
8			1.6			
9					CL	Brownish olive CLAY thinly bedded with reddish brown CLAY, medium stiff, wet, Lacustrine
	3	**10.0-15.0**	3.0	38	CL	As above, saturated, loose and soft
11					SM	Gray SILTY SAND (f) WITH GRAVEL (sr to sa), medium stiff, saturated, Alluvium
12			4.5		SP	Gray POORLY GRADED SAND (f), trace Silt, wet, loose to medium dense, Alluvium
13						Gray POOLY GRADED SAND (f) WITH GRAVEL (mf, sa to a), wet, very dense, Alluvium
14			5.3			
15	**4**	**15.0-20.0**		58	SP-SM	Gray POORLY GRADED SAND (f) WITH SILT, trace Gravel (f, sr), saturated, soft, overlying 2" weathered limestone, Alluvium
16			1.4		SM	Gray SILTY SAND (mf) WITH GRAVEL (mf, sa to a), wet, medium dense, Alluvium
17			4.0		SP	Light gray POORLY GRADED SAND (mf), trace Silt, trace Gravel (cf, sa to a), occasional lense of silt (1/16"), moist to wet except 3" dry section where there is weathered limestone, medium dense, Alluvium
18			2.9			
19						

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample and borehole refusal 18.5'. Sample from 18.0' - 18.5' submitted for laboratory analysis.

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB108 / MW7**
START DATE:	7/27/2020	COMPLETION DATE: 7/27/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	Approx. 9'	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Partly cloudy, hot, humid, 80+	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**		51		
1			2.1		OL, SP-SM	ORGANIC SOIL (Topsoil, 6") overyling 24 inches of Brown, grayish brown and dark brown POORLY GRADED SAND WITH SILT, trace Gravel (cf, sr), dry, medium dense, Quaternary Fill
2			1.1			
3					ML	Brown SANDY SILT, moist, dense, Quaternary Fill
4			0.0			
5	**2**	**5.0-10.0**		57	ML, CL	12" resample overlying Olive brown CLAYEY SILT thinly bedded with reddish brown CLAY, dense, moist, Lacustrine
6			0.0			
7					CL	Olive brown CLAY thinly bedded with reddish brown CLAY, moist, medium stiff
8			0.0		SM, CL	Olive brown SILTY SAND (mf) interbedded with and sometimes mottled with Reddish brown CLAY WITH GRAVEL (cf, sr to sa), moist, soft, Lacustrine
9						
	3	**10.0-15.0**	0.0	60	SM, CL	As above
11					SM	Gray SILTY SAND WITH GRAVEL (sr to sa), medium dense, saturated, Alluvium
12			0.0		SM, ML	Gray SILTY SAND WITH GRAVEL © bedded with gray SANDY SILT WITH GRAVEL (f, a to sa), varies from soft to dense, wet, Alluvium; lense of SAND (2" to 3", mf) at 13' 5"
13						
14			0.0			
15	**4**	**15.0-20.0**		60	SP-SM	Gray POOLY GRADED SAND WITH SILT, trace Gravel (mf), saturated, soft in first 12" then medium dense, Alluvium
16			0.0			
17					SM	Gray SILTY SAND WITH GRAVEL (cf, a to sa), occasional weathered limestone lense, dry to moist, dense to very dense, Alluvium
18			0.0			
19						

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample refusal 18', borehole refusal 19'9". Sample from 17' - 18' submitted for laboratory analysis. Matrix spike and matrix spike duplicate samples also collected at this location. Monitoring well installed in boring (2" dia.).

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB109**
START DATE:	7/28/2020	COMPLETION DATE: 7/28/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	Approx. 9.5'	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Sunny, 75	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**	1.9	46	OL	ORGANIC SOIL WITH SAND, moist, medium dense, roots
1					SP-SM	Brown POORLY GRADED SAND WITH SILT, trace Gravel (f), moist, medium dense, Quaternary Fill
2			0.5			
3					SM	Dark Brown SILTY SAND, trace Gravel, moist, medium dense, Quaternary Fill
4			2.1			
5	**2**	**5.0-10.0**		44	SP-SM	Brown POORLY GRADED SAND WITH SILT, trace Gravel (f), wet, medium dense, Quaternary Fill or Colluvium
6			0.7		ML, CL	Reddish brown SILTY CLAY laminated with gray SILT, moist, dense, Lacustrine
7					ML	Brown SANDY SILT WITH GRAVEL (mf, sa), moist, Lacustrine
8			3.0		ML, CL	Reddish brown SILTY CLAY, trace Gravel (f), trace Sand (f), dry to moist, dense, Lacustrine
9						
	3	**10.0-15.0**	0.0	52	ML, CL	As above, saturated, soft
11					SM	Brown SILTY SAND WITH GRAVEL (mf, sa to a), saturated, medium dense, Alluvium
12			0.1		SM	Brown SILTY SAND WITH GRAVEL (mf, sa to a), saturated except for last 5" which is moist, dense, Alluvium
13						
14			0.1			
			1.3			

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample and borehole refusal 15'. Sample from 14.0' - 15.0' submitted for laboratory analysis.

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB110**
START DATE:	7/28/2020	COMPLETION DATE: 7/28/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	Approx. 9.5'	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Partly cloudy, hot, humid, 80+	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**		44	OL, SM	8" Brown Organic Soil overlying Brown SILTY SAND (cf) WITH GRAVEL (f), dry to moist, medium dense
1			4.7			
2					ML, CL	Reddish brown CLAY (varved) bedded with gray SILT, dry to moist, Lacustrine
3			11.8			
4						
5	**2**	**5.0-10.0**	7.2	62	ML, CL	Brown, reddish brown and grayish brown CLAY and SILT (laminated) with very thin (1/32") sand lenses, moist, very dense, Lacustrine
6			8.2			
7						
8			5.5			
9						
	3	**10.0-15.0**		62	ML, CL, SP-SM	As above, overlying 4" brown POORLY GRADED SAND WITH SILT, moist to wet, medium dense, Lacustrine
11			5.7			
12					ML, CL	Reddish brown CLAY laminated with grayish brown SILT, trace Sand, moist to wet, dense, Lacustrine
13			3.5			
14			1.3		ML	Gray SANDY SILT WITH GRAVEL (cf), wet, very dense, Alluvium

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample and borehole refusal 15.0'. Sample from 14.0' - 15.0' submitted for laboratory analysis.

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**65 Lake Avenue LLC**	WELL/BORING ID:	**SB111 / MW8**
START DATE:	7/22/2020	COMPLETION DATE: 7/22/2020	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	Approx. 9.5'	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Raining on/off, humid, hot	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**	134	39	OL/SM	Brown ORGANIC SOIL (topsoil), moist, medium dense overlying 9" Brown SILTY SAND, trace Gravel (mc), moist, loose, Quaternary Fill
1					OL	Brown ORGANIC SOIL (with roots), trace Sand (f), moist, soft, Quaternary Fill
2			49		SW	Brown WELL GRADED SAND WITH GRAVEL, moist, loose, Quaternary Fill
3						
4			2.4			
5	**2**	**5.0-10.0**		60	SW	As above
6			3.1		ML, CL	Reddish brown CLAY, gray SILT and gray SILTY CLAY, laminated in some sections, not in others, wet, stiff to very stiff, Lacustine
7						
8			1.3			
9						
	3	**10.0-15.0**	33	60	ML, CL	Gray SILTY CLAY, wet, soft to medium stiff, Lacustine
11					SW, ML, CL	3" Brown WELL GRADED SAND WITH GRAVEL (cf, sa to sr) trace Silt, wet, loose to medium dense, overlying brown then gray CLAYEY SILT WITH SAND, trace Gravel (cf), wet soft to medium dense, Alluvium
12			47			
13					SP-SM	Gray POORLY GRADED SAND WITH SILT AND GRAVEL, trace Clay, wet, dense to very dense, Alluvium
14			50+			
15	**4**	**15.0-20.0**		60	SP-SM	30 " of resample overlying Gray POORLY GRADED SAND WITH GRAVEL (cf, sa to a) AND SILT, moist, dense to very dense, Allluvium
16			100+			
17						
18						
19						

Notes: PID reading may have been affected by moisture in sample headspace caused by humid weather conditions. Sample refusal 17.5', borehole refusal 14.5'. Sample from 17.5' submitted for laboratory analysis. Monitoring well installed in boring (2" dia.).

Matrix Environmental Technologies Inc. — SUBSURFACE LOG

PROJECT & LOCATION:	**65-67 Lake Ave., Lancaster, NY**	PROJECT No.	**18-046**
CLIENT:	**Aquino**	WELL/BORING ID:	**SB112 / MW9**
START DATE:	8/16/2021	COMPLETION DATE: 8/16/2021	RECORDED BY: C. Zink
GROUNDWATER DEPTH WHILE DRILLING:	5.5'	GROUNDWATER DEPTH AFTER COMPLETION:	not measured
WEATHER:	Cloudy, moderate winds, 75° F	DRILLING CONTRACTOR/DRILLERS:	Matrix Environmental Technologies / P. Bliek
DRILL RIG:	Geoprobe 6620 DT	DRILL SIZE & TYPE: Direct Push 2 1/2" NPT	HAMMER Type: Hydraulic
		Sampler Type:	macrocore (L=60", OD=2.125")

Sample Depth (ft)	Sample No.	Sample Interval (feet)	OVM Reading (ppm)	Recovery (inches)	USCS Group Symbol	SOIL DESCRIPTION AND DRILLING COMMENTS Unified Soil Classification System f-fine m-medium c-coarse sr - subrounded, r - rounded, sa - subangular, a - angular
	1	**0.0-5.0**	0	36	SW	Grayish brown POORLY GRADED SAND WITH GRAVEL, dry, loose, Quaternary Fill.
1			0		SP	Brown POORLY GRADED SAND, trace Silt, trace Gravel (mf, sf), moist, medium dense, Quaternary Fill.
2			0		CL, ML	Brown, reddish brown and gray CLAY, very thin laminations (1/16 to 1/32"), occasional lense of yellowish brown Silt laminations (1/32"), moist, dense, Lacustrine.
3						
4						
5	**2**	**5.0-10.0**		60	SP, CL, ML	Olive POORLY GRADED SAND (f), thinnly bedded with reddish brown CLAY, grades to olive brown CLAYEY SILT thinnly bedded with reddish brown CLAY, moist, medium dense, Lacustrine
6			0			
7			0		CL, ML	Gray SILTY CLAY laminated with reddish brown CLAY (1/4 to 1/2" laminations), moist, very stiff, Lacustine.
8						
9			0		CL	Gray CLAY laminated with reddish brown CLAY, moist, hard (fine laminations 1/32"), Lacustine
	3	**10.0-15.0**		60	ML	3" resample over Gray SANDY SILT WITH GRAVEL (mf, sa to a), wet, stiff, Alluvium.
11			0			
12			0		SM	Gray SILTY SAND WITH GRAVEL (mf, sr to sa), wet, dense, Alluvium.
13					SP	Gray POORLY GRADED SAND (f), trace Silt, trace f Gravel (a to sa), wet, medium dense, Alluvium.
14			0			
15	**4**	**15.0-20.0**		54	ML	3" resample over Gray SILT WITH SAND (mf), trace f Gravel (a), wet, stiff, Alluvium.
16			0			
17			0		SW	Gray WELL GRADED SAND WITH GRAVEL (mf, sa to a), trace silt, wet, med. dense, Alluvium.
					SM	Gray SILTY SAND, trace f Gravel (sa to a), moist to wet, medium dense, Alluvium.
18					SP	Gray POORLY GRADED SAND WITH GRAVEL, (f,a), trace (+) Silt, moist to wet, cemented, very dense, occasional 1" lenses of weathered dolomite, last 4" is weathered dolomite, Alluvium over Bedrock.
19			0			
20	**5**	**20.0-25.0**				
21						
22						

Notes: Sample and borehole refusal 19.5'. Sample from 5' - 7' submitted for laboratory analysis. Monitoring well installed in boring (2" dia.).

APPENDIX B

Monitoring Well Construction Details

MATRIX
Environmental Technologies

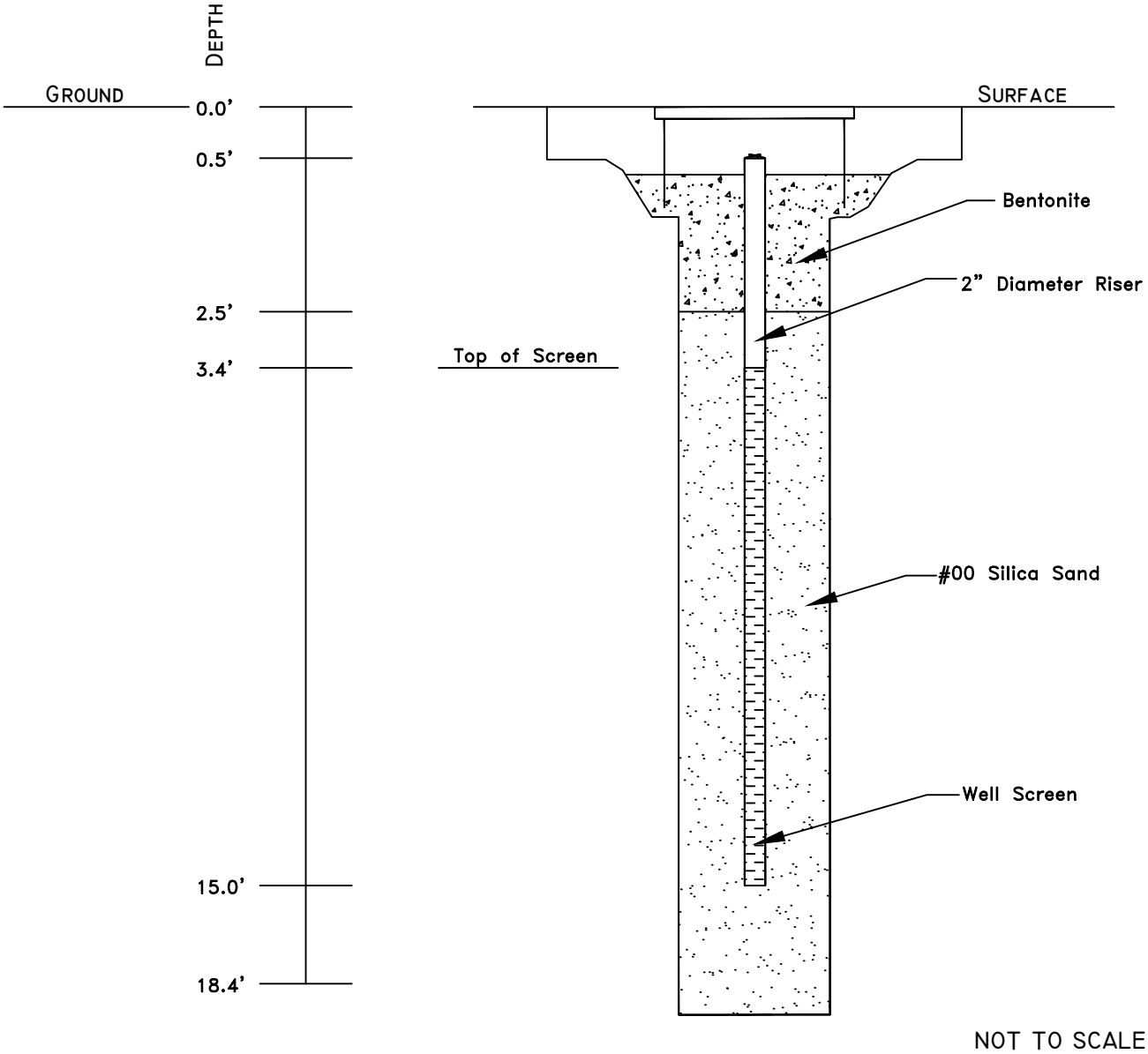
MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York
WELL NUMBER: MW1

DATE COMPLETED: 07/21/2020
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC
DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC
BOREHOLE SIZE: 6" Diameter



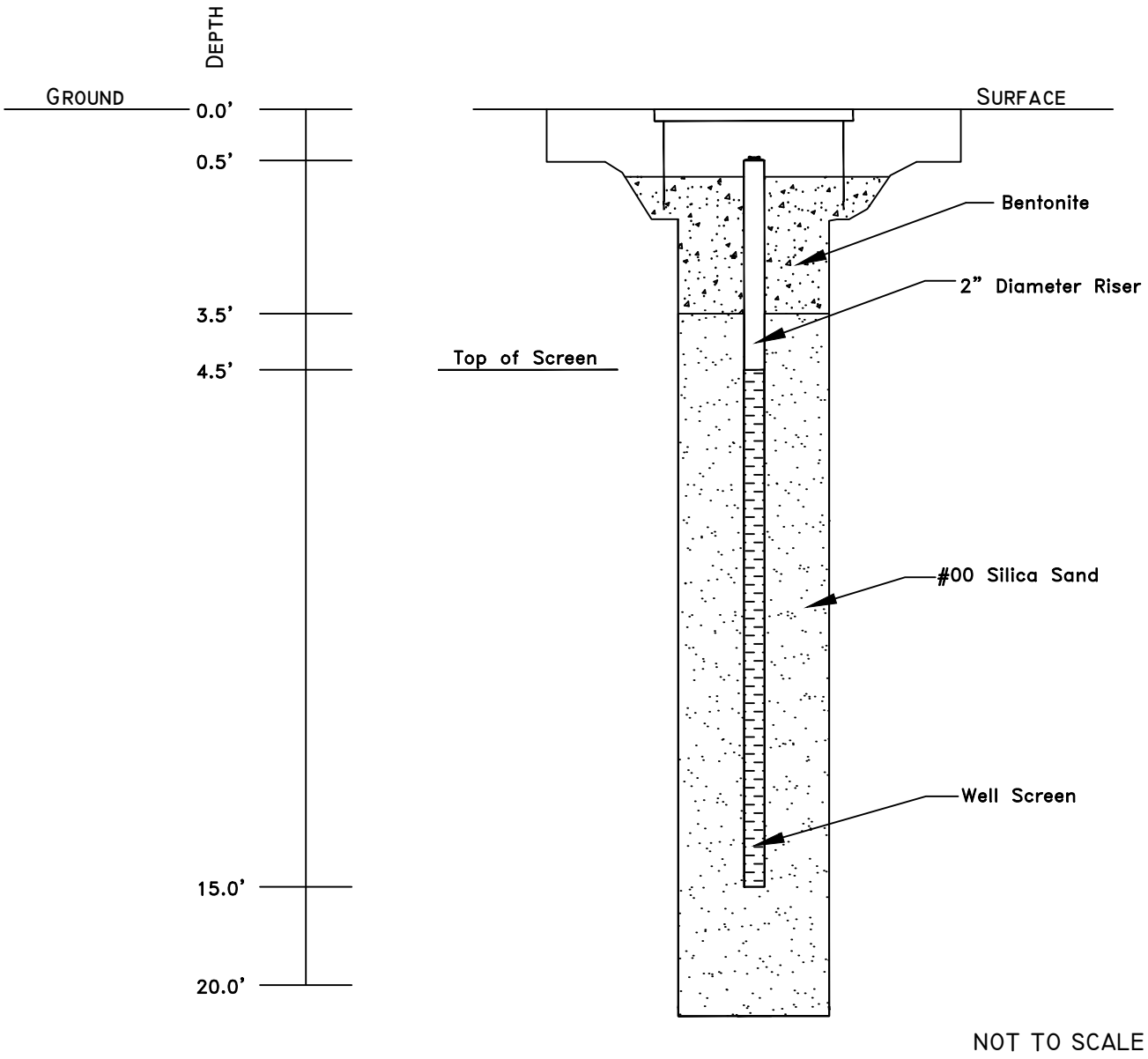
NOT TO SCALE

MATRIX
Environmental Technologies

MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York
WELL NUMBER: MW2
DATE COMPLETED: 07/21/2020
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC
DRILLING COMPANY: Matrix Environmental Technologies Inc.
SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC
BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

MATRIX
Environmental Technologies

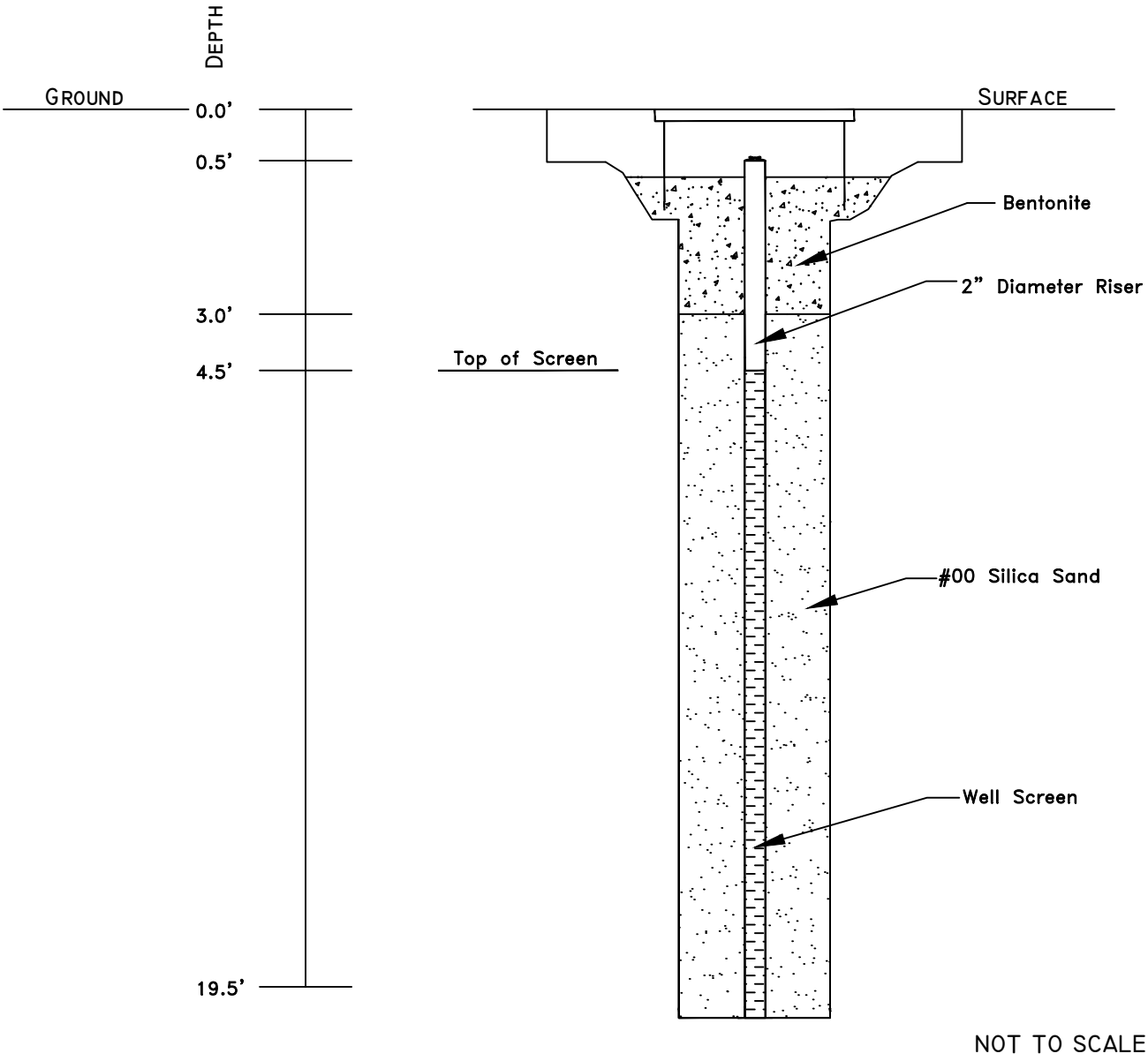
MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York
WELL NUMBER: MW3

DATE COMPLETED: 07/22/2020
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC
DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC
BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

MATRIX
Environmental Technologies

MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York

WELL NUMBER: MW4

DATE COMPLETED: 07/23/2020

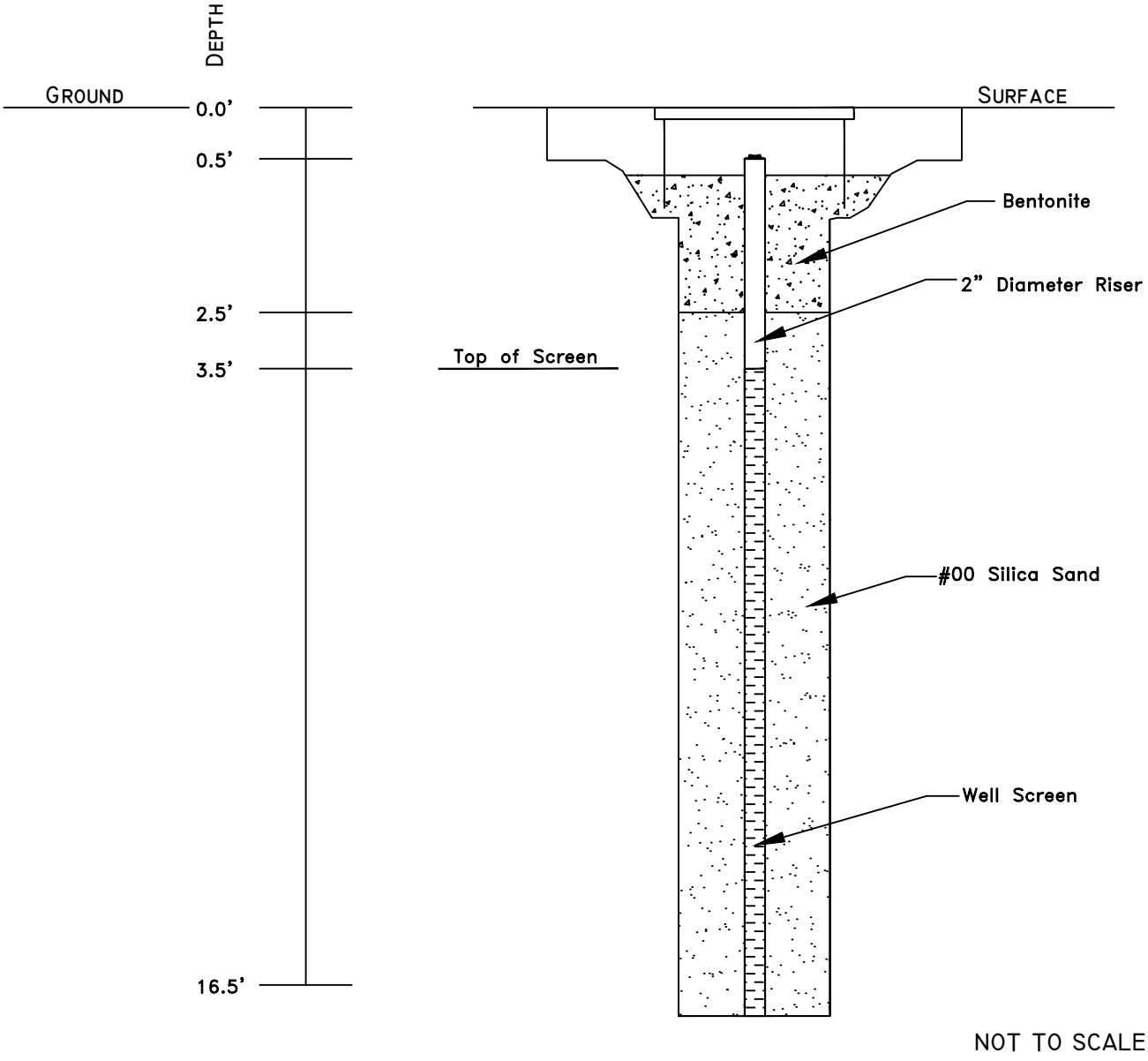
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC

DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC

BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

MATRIX
Environmental Technologies

MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York

WELL NUMBER: MW5

DATE COMPLETED: 07/23/2020

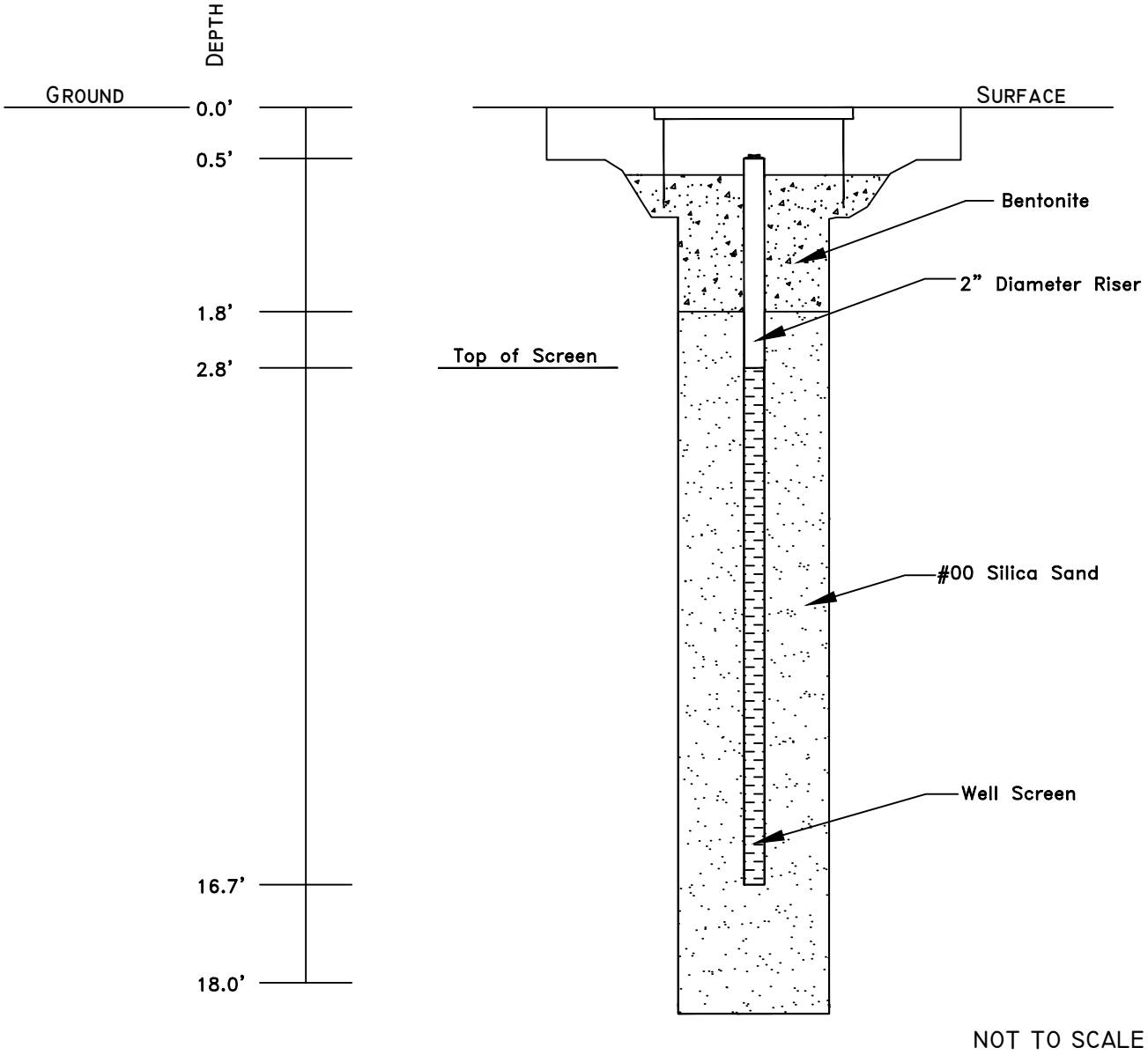
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC

DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC

BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

MATRIX
Environmental Technologies

MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York

WELL NUMBER: MW6

DATE COMPLETED: 07/27/2020

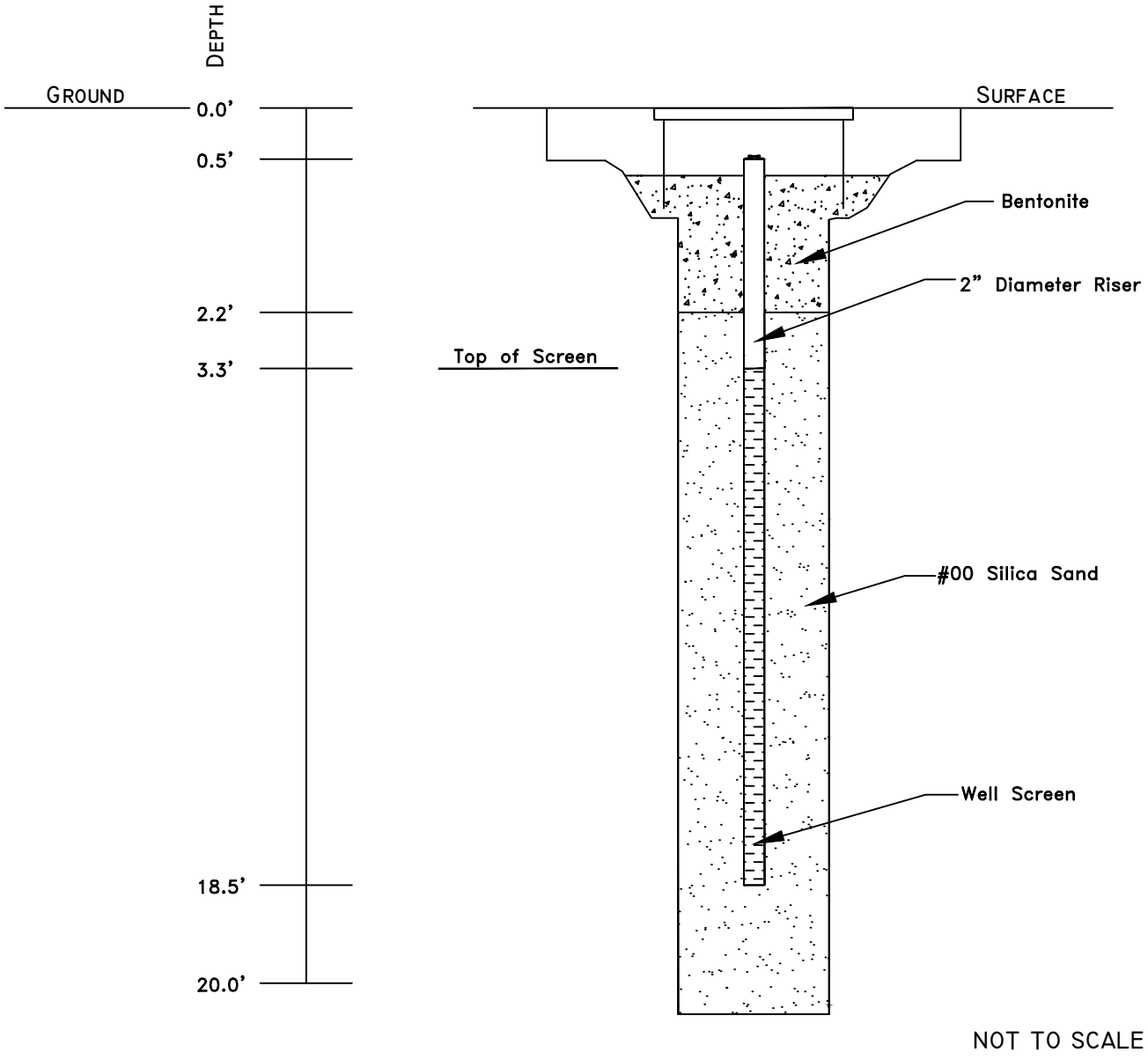
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC

DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC

BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

MATRIX
Environmental Technologies

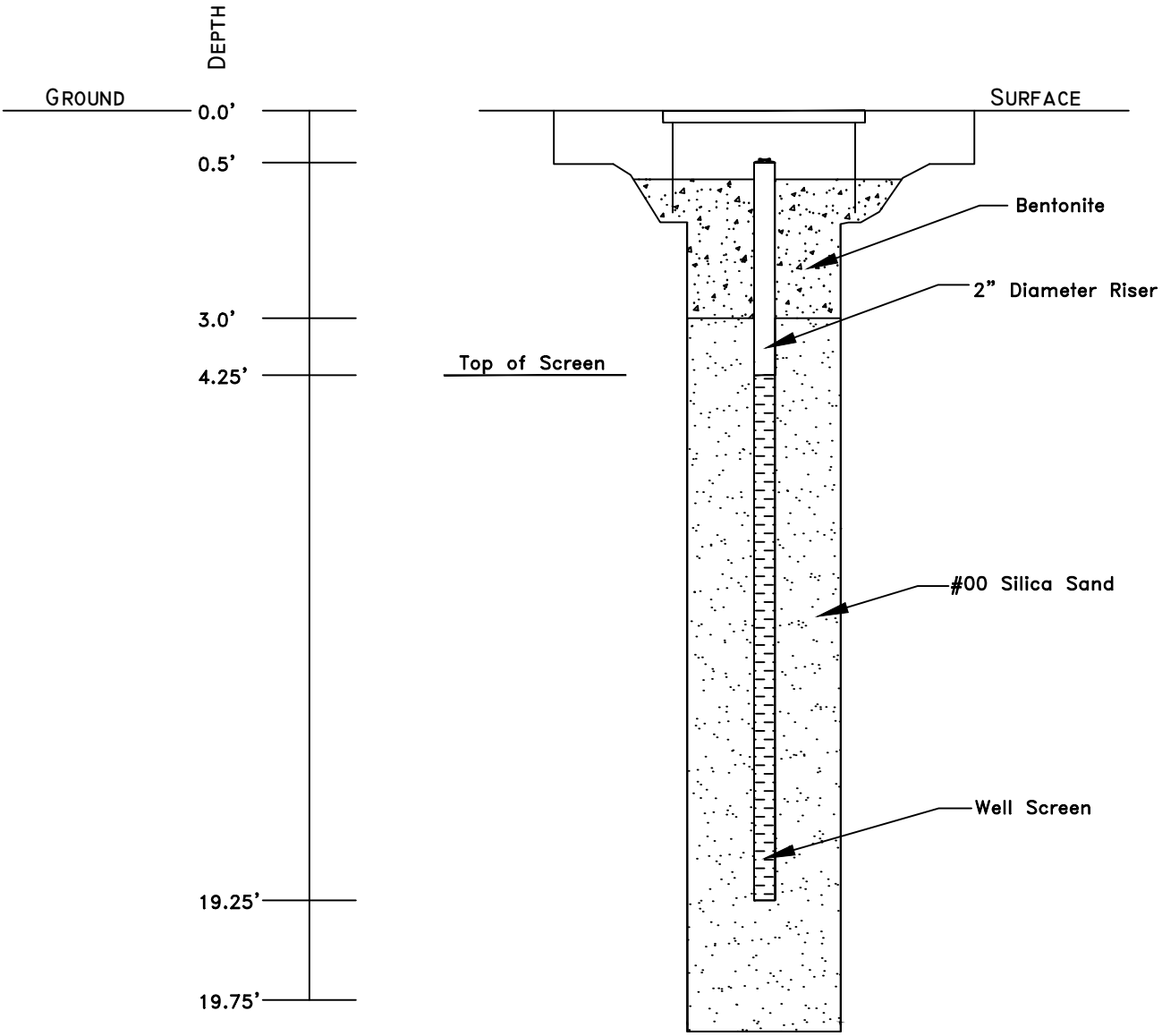
MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York
WELL NUMBER: MW7

DATE COMPLETED: 07/27/2020
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC
DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC
BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

MATRIX
Environmental Technologies

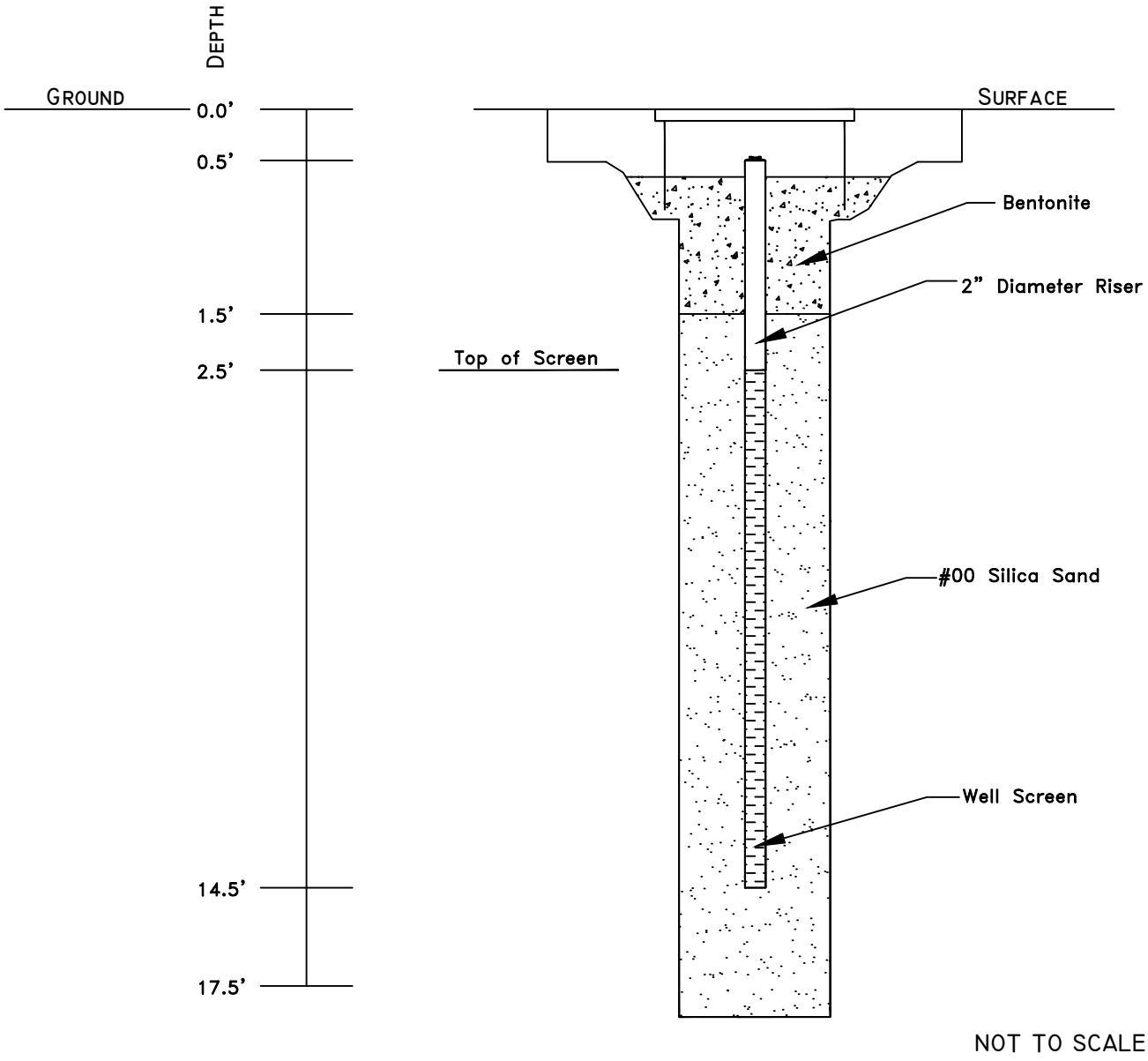
MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York
WELL NUMBER: MW8

DATE COMPLETED: 07/22/2020
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC
DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC
BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

MATRIX
Environmental Technologies

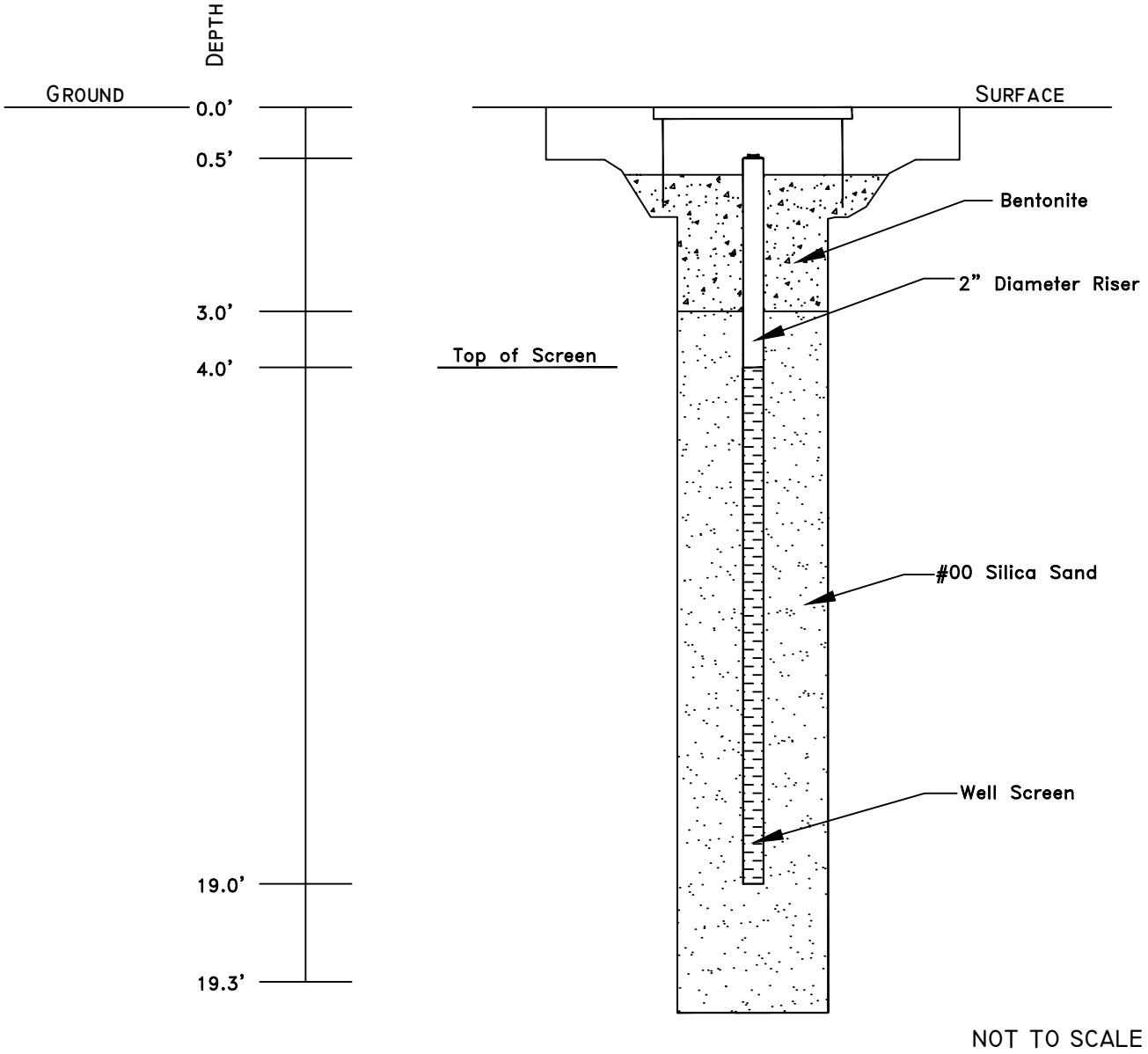
MONITORING WELL CONSTRUCTION DETAIL

PROJECT LOCATION: 65-67 Lake Avenue, Lancaster, New York
WELL NUMBER: MW9

DATE COMPLETED: 08/16/2021
SUPERVISED BY: C. Zink

POINT SIZE AND TYPE: 2" ID SCH 40 PVC
DRILLING COMPANY: Matrix Environmental Technologies Inc.

SCREEN SIZE AND TYPE: 0.010" Slot SCH 40 PVC
BOREHOLE SIZE: 6" Diameter



NOT TO SCALE

APPENDIX C

Well Development Logs

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW1
DATE DEVELOPED:	7/22/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	15.0 ft
Static Depth to Groundwater:	not recorded
Screen Length:	11.6 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <1.89 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	18.7

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW2
DATE DEVELOPED:	7/22/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	15.0 ft
Static Depth to Groundwater:	not recorded
Screen Length:	10.5 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <1.71 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	16.1

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW3
DATE DEVELOPED:	7/23/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	19.5 ft
Static Depth to Groundwater:	not recorded
Screen Length:	15.0 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <2.45 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	13.4

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW4
DATE DEVELOPED:	7/24/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	16.5 ft
Static Depth to Groundwater:	not recorded
Screen Length:	13.0 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <2.12 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	17.4

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW5
DATE DEVELOPED:	7/24/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	18.0 ft
Static Depth to Groundwater:	not recorded
Screen Length:	15.2 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <2.48 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	21.4

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW6
DATE DEVELOPED:	7/28/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	18.3 ft
Static Depth to Groundwater:	not recorded
Screen Length:	15.0 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <2.45 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	16.1

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW7
DATE DEVELOPED:	7/28/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	19.25 ft
Static Depth to Groundwater:	not recorded
Screen Length:	15.0 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <2.45 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	16.1

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW8
DATE DEVELOPED:	7/23/20
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	14.5 ft
Static Depth to Groundwater:	not recorded
Screen Length:	12.5 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <2.04 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	16.1

GROUNDWATER MONITORING WELL DEVELOPMENT LOG

PROJECT:	Lakeside Village Apartments
PROJECT NUMBER:	18-046
SITE LOCATION:	65-67 Lake Avenue, Lancaster NY
WELL ID:	MW9
DATE DEVELOPED:	8/17/21
DEVELOPED BY:	C. Zink/S. Marchetti/P. Bliek

MONITORING WELL INFORMATION

Total Depth:	19.0 ft
Static Depth to Groundwater:	not recorded
Screen Length:	15.0 ft
Height of Water Column (H):	not recorded

CALCULATION OF ONE WELL VOLUME

- ☑ 2" Well (H x 0.163 gal/ft) = <2.45 gal
- ☐ 4" Well (H x 0.653 gal/ft) =

METHOD OF DEVELOPMENT

- ☐ Peristaltic pump
- ☐ Low-flow submersible pump
- ☑ Bailer – dedicated or disposable

DEVELOPENT PARAMETERS

Time	Flow Rate	Turbidity	DTW	Vol. Purged
hr:min	mL/min	NTU	feet	gal
not recorded	not recorded	not recorded	not recorded	16.1

APPENDIX D

Disposal Documentation

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 35715

5. Generator's Name and Mailing Address
NYSDEC Site # C915344
65-67 Lake Ave
Lancaster, NY 14086
Generator's Phone:

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Environmental Service Group, Inc 716.695.6720 — U.S. EPA ID Number: NYD986903904

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
American Recyclers Company
177 Wales Avenue
Tonawanda, NY 14150
Facility's Phone: 716.695.6720 — U.S. EPA ID Number: NYR000030809

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
4	1. Non RCRA Non DOT Regulated , (Ground water)	3 004	DM	~~220~~ 165 4	G ~~Drums~~
12	2. Non RCRA Non DOT Regulated , (Soil Cuttings)	012	DM	8400 12	P Drums Estimate
	3.				
	4.				

13. Special Handling Instructions and Additional Information

ERG:	Approval #:	Handling Codes:
1 -	1 - H-17211IN	1 - None
2 -	2 - A-17210L	2 - None
3 -	3 -	3 -
4 -	4 -	4 -

24 Hour Emergency Contact: INFOTRAC (Caller Must ID ESG)

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: MARK AQUINO — Signature — Month 8 Day 31 Year 20

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Jim Olander — Signature — Month 08 Day 31 Year 20

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Justin Rainville — Signature — Month 08 Day 31 Year 2020

DESIGNATED FACILITY TO GENERATOR

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone 800-535-5053	4. Waste Tracking Number 40220

5. Generator's Name and Mailing Address
NYSDEC Site # C915344
65-67 Lake Ave
Lancaster, NY 14086

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: Environmental Service Group, Inc 716.695.6720 — U.S. EPA ID Number: NYD986903904

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
American Recyclers Compan
177 Wales Avenue
Tonawanda, NY 14150
Facility's Phone: 716.695.6720 — U.S. EPA ID Number: NYR000030809

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	Non RCRA Non DOT Regulated , (Ground water)	001	DM	55	P	
	Non RCRA Non DOT Regulated , (Soil Cuttings)	001	DM	500	P	EST
	3.					
	4.					

13. Special Handling Instructions and Additional Information

ERG:
1 -
2 -
3 -
4 -

Approval #:
1 - H-17211IN
2 - A-17210L
3 -
4 -

Handling Codes:
1 - None
2 - None
3 -
4 -

24 Hour Emergency Contact:
INFOTRAC (Caller Must ID ESG)

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Justin Rainville (As Agent) — Signature — Month 09 Day 23 Year 21

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Richard EVERAGE — Signature — Month 9 Day 23 Year 21

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Julian Mastropoll — Signature — Month 09 Day 23 Year 21

DESIGNATED FACILITY TO GENERATOR

APPENDIX E

Groundwater Sampling Water Quality Data

GROUNDWATER EVALUATION SHEET Initial gauging all wells

Date Work Performed: 8-10-20

Project No. _____ Project Name: 65-67 Lake Ave Performed By: CDZ & SLM

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Sampled
MW1	12:12pm	-	5.51					
MW2	12:15pm	-	5.55					
MW3	12:25	-	7.71					
MW4	12:29	-	10.08					
MW5	12:36	-	9.05					
MW6	12:43	-	11.20					
MW7	12:47	-	8.44					
MW8	12:20	-	7.78					

Notes: MW1, MW5, MW7 get all parameters analyzed

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GROUNDWATER EVALUATION SHEET - MW2 initial sampling

Date Work Performed: 8-10-20

Project No. _____ Project Name: 65-67 Lake Ave. Performed By: CDZ SCM (MTG)

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Conductivity Sampled	
MW2	12:57	~	5.57	2.93	-37	7.01	31	1.726	12.58
	1:02	~	5.94	0.66	-38.2	6.95	21.96	1.590	4.86
	1:07	~	6.01	0.54	-44.6	6.96	21.1	1.601	5.09
	1:14	~	6.37	0.53	-9.5	6.96	20.6	1.596	5.79
	1:19	~	6.57	0.46	0.2	6.97	20.4	1.587	9.40
	1:26	~	6.81	0.43	-0.8	6.98	20.3	1.578	~~9.8~~
	Sampled at 1:29 pm								
	volume removed = 6 liters								

Notes:

Units for conductivity = MS/cm

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GROUNDWATER EVALUATION SHEET

Date Work Performed: 8-10-20

Project No. 18-046 Project Name: 65-67 Lake Ave. Performed By: CBZ + SLM

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Conductivity ~~Sampled~~	NTU
MW4	2:51	—	10.04	5.66	+104	7.16	19.7	0.923	4.13
	2:58	—	10.64	4.04	17.2	7.14	16.0	0.900	10.6
	3:07	—	10.88	4.14	19.8	7.08	16.4	0.896	25.13
	3:16	—	11.19	4.22	22.5	7.05	16.2	0.904	33.51
	3:25	—	11.36	4.09	18.6	7.05	16.4	0.907	30.1

Notes: Sampled at 3:28 pm
Total volume removed = 65 liters

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GROUNDWATER EVALUATION SHEET

MW8 - initial GW sampling event

Date Work Performed: 8-10-20

Project No. 18-046 Project Name: 65-67 Lake Ave. Performed By: CDR & SLM

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	~~Sampled~~ Cond/Conductivity	NTU Turbid
MW8	1:54	—	7.76	5.81	+69.1	6.97	24.0	~~1.3~~ 1.134	101.4
	2:02	—	8.17	4.80	+35.4	6.86	20.0	1.126	31.39
	2:09	—	8.47	4.65	+36.0	6.86	20.3	1.119	24.65
2:19 →	~~8.27~~	—	8.70	4.47	+26.3	6.85	19.9	1.132	46.47
	2:26	—	8.88	4.42	+35.1	6.86	19.9	1.145	49.33
	sampled at 2:28 pm.								
	Removed 6 liters from well before sampling								

Notes: Total depth of well 14. Cond Conductivity units is mS/cm

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MW1 initial sampling

GROUNDWATER EVALUATION SHEET

Date Work Performed: 8-11-20

Project No. _____ Project Name: 65-67 Lake Ave. Performed By: CD2

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Conductivity ~~Sampled~~	NTU
MW1	8:10	—	5.52	5.55	+97.7	7.26	20.2	1.734	19.01
"	8:19	—	5.63	3.61	+137.8	6.87	18.8	1.759	4.43
	8:27	—	5.64	3.58	+144.4	6.87	18.7	1.762	2.90
	8:35		5.65	3.58	+148.4	6.87	19.2	1.765	3.81
	8:49		5.65	3.56	+149.6	6.87	19.3	1.764	3.82
	Sampled at 8:51 AM								
	Field duplicate collected from								
	this Well.								
	Returned to get sample for Hexavalent Chromium at 2:43pm								

Notes: 7 Liters of Purge Water Removed.

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GROUNDWATER EVALUATION SHEET

MW3 initial sampling

Date Work Performed: 8-11-20

Project No. _____ Project Name: 65-67 Lake Ave Performed By: SZM

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Conduct Sampled	NH4
MW3	12:31	—	7.72	2.71	-99.8	7.58	20.0	1.027	31.66
	12:48	—	9.21	0.28	-64.4	7.29	17.5	0.941	9.36
	12:54	-	9.37	0.23	-68.0	7.28	17.3	0.956	8.87
	1:07	-	9.41	0.21	-69.8	7.28	17.6	0.960	7.01
	Sampled at 1:08								

Notes: Volume removed during purging = 5 Liters

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GROUNDWATER EVALUATION SHEET

MW5 in field sampling

Date Work Performed: 8-11-20

Project No. _____ Project Name: 65-67 Lake Ave Performed By: CDZ

Well ID	Time	DTP	DTW	DO	ORP	PH	~~Temp~~ °C	Conduct ~~Sampled~~	NTU
MW5	10:51	—	5.36	3.11	+108.9	7.37	22.3	1.142	1482
	10:58	-9.06		1.69	+124.4	7.06	21.6	1.119	82.18
	11:09	/	9.27	1.43	+122.6	7.07	21.5	1.121	53.57
	11:16	/	9.36	1.21	+111.6	7.07	21.5	1.127	36.25
	11:26	/	9.39	1.20	+111.8	7.07	21.5	1.124	34.6
	Bgn Samply at 11:30								
	went back to MW5 to get sample for Hexavalent Chromium at 2:13 pm								

Notes: Removed 8 liters of water during sampling.

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GROUNDWATER EVALUATION SHEET

Date Work Performed: 8-12-20 Initial Sampling MW 6

Project No. 18-046 Project Name: 65-67 Lake Ave Performed By: SLM / CJR

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Conduct Sampled	NTU
MW 6	1:12	—	11.43	6.28	+61.3	7.24	24.9	1.085	15.76
	1:19	—	11.95	5.17	+65.2	6.82	18.9	1.018	12.47
	1:25	—	12.25	4.89	+59.0	6.88	18.9	1.014	36.41
	1:33	—	12.56	4.79	+56.2	6.91	18.7	1.008	18.32
	1:41		12.68	4.71	+57.7	6.90	19.0	1.005	18.01

Notes: Sample time = 1:45

Amount removed during sampling = 6 Liters

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GROUNDWATER EVALUATION SHEET MW7 initial sampling

Date Work Performed: 8-12-20

Project No. _____ Project Name: 65-67 Lake Ave. Performed By: SLM/CDZ

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Conductivity Sampled	NTU
MW7	8:58	—	8.60	Before pumping					
	8:58	—	8.62	1.80	+60.2	7.35	15.9	1.364	269.15
	9:09	—	8.85	0.42	+35.0	6.90	15.3	1.321	43.67
	9:22	—	8.93	0.37	+28.9	6.88	15.3	1.295	38.18
	9:28	—	8.97	0.36	+41.0	6.88	15.6	1.274	32.69
	9:33	—	8.99	0.36	+40.2	6.87	15.5	1.268	33.81

Notes: Well sampled at : 9:35

Amount of purge water removed = 6 Liters

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GROUNDWATER EVALUATION SHEET

Equipment Blank for Groundwater Sampling

Date Work Performed: 8-12-20

Project No. 18-046 Project Name: 65-67 Lake Ave Performed By: SLM/CDR

Well ID	Time	DTP	DTW	DO	ORP	PH	°C	Sampled

Notes: Sample time = 12:24pm

Sampled using down well tubing (HDPE) using Parastaltic Pump. Put Tubing directly into DI water bottles provided by Lab. and discharged into Lab Bottles.

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Aquino Lancaster 8-31-21

	Time	DTW	°C	DO	Cond	PH	ORP	Turb
MW5	8:35	6.46	24.8	4.92	0.918	7.20	94.8	20.21
	8:41	7.10	24.8	4.41	0.899	7.19	98.5	15.87
	8:46	7.30	25.0	4.37	0.899	7.19	99.1	10.40
	8:51	7.48	25.0	4.40	0.904	7.19	99.7	10.38
Sampled at 8:51								
1/2 gallon Purge								
	9:08	5.56	17.9	4.06	2.001	6.99	102	9.29
MW1	9:13	5.53	18.7	3.41	1.969	6.94	101.1	4.89
	9:18	5.53	19.6	3.30	1.967	6.94	97.7	2.84
	9:23	5.53	19.5	3.33	1.964	6.94	96.9	2.96
Sampled at 9:23								
1/2 gallon Purge								
MW2	9:34	5.29	18.5	3.07	1.753	7.04	86	3.52
	9:39	5.45	17.3	0.74	1.753	6.97	85.5	2.86
	9:44	5.62	17.9	0.55	1.739	6.97	82.6	2.81
	9:49	5.72	18.0	0.52	1.730	6.97	80.1	2.90
Sampled at 9:49								
1/2 gallon								

Aqua-Lancaster 8-3-21

	Time	DTW	°C	DO	Cond	PH	ORP	Temp
MW 8	10:02	8.04	21.7	4.71	1.261	6.99	92.3	3.03
	10:07	8.23	18.3	3.53	1.208	6.91	96.4	5.06
	10:12	8.40	18.4	3.15	1.192	6.92	48.1	3.81
	10:17	8.50	18.4	2.41	1.177	6.95	3.6	2.75
	10:22	8.62	18.7	2.39	1.176	6.95	3.5	2.71
Sampled at 1/2 gallon	10:22							
TW1	-	7.12	12.2	2.48	1.891	7.15	-83	27.86
Sampled	10:42							
MW4	10:58	11:26	15.9	2.41	0.764	7.15	57.9	7.36
	11:03	11:27	17.1	4.26	0.757	6.99	77.2	7.07
	11:08	11:35	17.1	5.69	0.773	6.97	86.3	9.22
	11:13	11:46	16.5	5.68	0.771	6.98	87.1	9.24
Sampled at 11:13								
MW3	11:32	8.00	17.8	2.11	0.730	7.30	-0.4	41.83
	11:37	8.48	16.9	0.73	0.719	7.24	-28	55.90
	11:42	8.84	16.4	0.59	0.718	7.23	-32	24.61
	11:47	9.09	17.3	0.48	0.714	7.23	-25	22.58
	11:52	9.17	17.4	0.47	0.711	7.24	-23	21.57
Sampled at 11:52								

Aquifer Lancaster 8-31-21

	Time	DTW	°C	DO	Cond	PH	ORP	Turb
MW9	12:40	8.77	18.5	3.88	1.658	7.29	47	1765
	12:45	8.80	19.6	3.44	1.663	7.27	49	391
1/2 gal/min	12:50	8.84	20.1	3.13	1.661	7.27	54.6	215
	12:55	8.87	20.2	3.12	1.645	7.26	58.5	192.4
Sampled at 1:00	1:00	8.91	20.4	2.94	1.657	7.26	61	193.0
MW6	1:13	11.51	23.6	1.15	1.015	6.93	83.4	19.45
	1:18	11.68	20.2	0.57	1.051	7.00	80.4	14.65
	1:23	11.83	20.4	0.60	1.050	6.99	81.1	14.35
Sampled at 1:23								
MW7	1:33	8.53	18.3	1.31	1.288	7.07	65.6	57.83
	1:38	8.63	18.7	0.66	1.267	6.98	45.8	46.27
1/2 gal/min	1:43	8.70	19.5	0.53	1.258	6.97	34.7	21.38
	1:48	8.79	19.0	0.48	1.265	6.98	31.1	21.41
Sampled at 1:48								

APPENDIX F

CAMP DATA

APPENDIX G

LABORATORY ANALYTICAL REPORTS

APPENDIX H

DATA USABILITY SUMMARY REPORTS