FREDERICK PROPERTY

ONTARIO COUNTY

MANCHESTER, NEW YORK

Final Engineering Report

NYSDEC Site Number: B00131

Prepared for:

Village of Manchester

Clifton Street, Manchester, New York

Prepared by:

Day Engineering, P.C.

1563 Lyell Avenue, Rochester, NY

585-454-0210

JANUARY 2019

CERTIFICATIONS

I, Nathan Simon, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Investigation Work Plan dated April 2018 was implemented and that all construction activities were completed in substantial conformance with the Department-approved Investigation Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Investigation Work Plan dated April 2018 and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by the Department.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Nathan E. Simon, of 1563 Lyell Avenue, Rochester, New York, am certifying as Owner’s Designated Site Representative for the site.

	1/29/2019	
NYS Professional Engineer #	Date	Signature

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LIST OF ACRONYMS

Acronym	Definition
ALS	ALS Environmental
bgs	Below ground surface
CAMP	Community Air Monitoring Plan
CPL	Clark, Patterson Lee
CP-51	NYSDEC Commissioner's Policy-51/Soil Cleanup Guidance
DAY	Day Engineering, P.C.
DER-10	*DER-10, Technical Guidance for Site Investigation and Remediation* dated May 2010
EC	Engineering Control
ELAP	Environmental Laboratory Accreditation Program
eV	electron volt
Ft.	feet
FER	Final Engineering Report
HASP	Health and Safety Plan
Industrial Oil	Industrial Oil Tank Service Corporation in Oriskany, New York
IC	Institutional Control
IDW	Investigative Derived Waste
IRM	Interim Remedial Measure
IWP	Investigation Work Plan
N/A	Not applicable or not available
NYCRR	New York Codes, Rules and Regulations
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health
Paradigm	Paradigm Environmental, Inc.
PBS	Petroleum Bulk Storage
PCB	Polychlorinated biphenyl
PEL	Permissible Exposure Limit
PID	Photoionization Detector
ppb	Parts per billion
ppm	Parts per million
PVC	Polyvinyl chloride
RAO	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RWP	Remedial Work Plan
SCG	Standards, Criteria, Guidance
SCO	Soil Cleanup Objectives
SVOC	Semi-volatile organic compound
Site	Frederick Property, 147 State Street, Manchester, Ontario County, New York ERP Site #B00131

Acronym	Definition
SMP	Site Management Plan
Sun	Sun Environmental Corporation
SWP	Supplemental Work Plan
ft^2	Square feet
TICs	Tentatively Identified Compounds
UST	Underground Storage Tank
Village	Village of Manchester
VOC	Volatile Organic Compounds
$\mu g/m^3$	Micrograms per Cubic Meter

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

The Village of Manchester (Village) entered into the Environmental Restoration Program (ERP Site #B00131) with the New York State Department of Environmental Conservation (NYSDEC) in 1999, to investigate and remediate a 0.479 acre property located in at 147 State Street, Manchester, Ontario County, New York (the Site or the Fredrick Property). The property was remediated to restricted residential use standards, and it is currently vacant, grass/vegetation-covered land. Future use of the Site is unknown, but will likely remain vacant for the foreseeable future.

The Site is located in the County of Ontario, New York and is identified as Township VM 031.20 Block 1 and Lot 4.000 on the County of Ontario Tax Map # 31.20-1-4. The 0.479 acre Site is bound by State Street to the north, a Niagara Mohawk Power Corporation Utility Right-of-Way (ROW) to the south, residential properties to the east, and a residential property to the west (refer to Figure 1 for a project locus map and Figure 2 for general location plan showing the Site and adjacent properties). The boundaries of the Site are fully described on the Environmental Easement including Survey Map and Metes & Bounds Description included as Appendix B1 of the Final Engineering Report (FER) dated November 2010 (Revised November 2016) prepared by Clark Patterson Lee (the 2016 FER). A copy of the 2016 FER is included as Appendix A of this document.

Between the 1930s and 1960s, when operations ceased, the Frederick Property was used as an automobile repair, service and gasoline fueling facility. The Site was developed with an approximate 1,200 square foot concrete block structure that contained two hydraulic lifts with underground storage tanks (USTs) to the west of the building and a fuel pump island to the north of the building. A dry well was located south of the building, and drains in the building were connected to this dry well by buried pipes.

The Village of Manchester obtained ownership of the Frederick Property in 1999, and subsequently entered into the Environmental Restoration program (ERP) administered by the NYSDEC to evaluate and remediate the Site as necessary. Between 2000 and 2003, various studies were completed to characterize environmental conditions at the Site and to identify potential remedial actions. The studies completed and the findings/conclusions are summarized in a report titled *Site Investigation/Remedial Alternatives Report, Frederick Property Environmental Restoration Project, 147 State Street, NYSDEC Site*

B00131-8, Manchester, New York dated September 2003. In conjunction with the above studies, an Interim Remedial Measure (IRM) was conducted in 2000 and 2001 to remove the USTs and petroleum-impacted soil adjacent to the tanks.

The NYSDEC, in consultation with the New York State Department of Health (NYSDOH), selected a remedy for the Site. This remedy is described in a 2004 Record of Decision (ROD), and it included:

- Demolition of the building and the removal of the floor drainage piping, in-ground hydraulic lift units, and environmentally impacted soil;
- removal of the dry well and environmentally impacted soil;
- removal of soil containing concentrations of constituents that exceeded applicable Standards, Criteria, and Guidance (SCGs) to preclude adverse impacts (i.e., generally to achieve a Restricted Residential Use Soil Cleanup Objective (SCO)];
- development of a Site Management Plan (SMP) describing monitoring to document the effectiveness of the remediation and presenting procedures to address environmental impacts that could be encountered during future redevelopment or maintenance of the Site; and
- implementation of institutional controls to restrict the use of groundwater and prevent vapor intrusion into buildings constructed on the Site in the future.

In 2005, the building was demolished and removed from the Site although some features remained including the building foundation, the concrete slabs for the building and the pump island, the dry well and associated piping. In 2006 and 2007, the concrete pads, hydraulic lift system and dry well were removed. In conjunction with this work, contaminated soil was removed replaced with imported fill material.

To assess the effectiveness of the remediation completed at the Site, groundwater samples were collected from monitoring wells designated MW-2, MW-3, MW-4, MW-5, MW-6, RW-1, RW-2 and RW-3 (refer to Figure 3 for the location of these monitoring wells). The samples collected, and associated Quality Assurance/Quality Control (QA/QC) samples, were submitted to an analytical laboratory and tested for target compound list (TCL) plus CP-51 List volatile organic compounds (VOCs) and TCL plus CP-51 List semi-volatile organic compounds (SVOCs). As of the date of this report, groundwater samples have been collected from the above monitoring wells and tested on three occasions (i.e., August 22, 2007, December 22, 2009, and September 27, 2017).

Clark Patterson Lee (CPL) prepared a FER that was submitted to the NYSDEC in 2010. After addressing NYSDEC comments to the FER, CPL revised the document and submitted the 2016 FER. A copy of the 2016 FER is included as Appendix A of this document.

The NYSDEC issued a disapproval letter dated January 9, 2017 that identified various deficiencies in the 2016 FER, and required that supplemental studies be conducted at the Site. CPL prepared a Supplemental Work Plan dated February 2017 revised May 2017 (the 2017 SWP). The supplemental studies described in the 2017 SWP included the advancement of seven testing borings, testing of select soil samples retained from the test borings and sampling/testing of nine existing groundwater monitoring wells. This work was conducted in August/September 2017; the findings of the work completed are summarized in a report titled *Frederick Property Environmental Restoration Project, NYSDEC Site B00131-8, 147 State Street, Manchester, New York* prepared by Empire GeoServices, Inc. dated October 3, 2017. [Note: During this work, evidence of apparent petroleum impact was identified beginning at a depth of about 8 to 10 feet (ft.) below ground surface (bgs) (i.e., in proximity to the gasoline pump island that was removed in 2006).] A copy of the October 3, 2017 report prepared by Empire GeoServices, Inc. is included in Appendix B of this document.

The NYSDEC reviewed the findings of the 2017 studies and provided a letter dated November 16, 2017 stating that the apparent petroleum impact identified in August/September 2017 in proximity to the former gasoline pump island is indicative of 'grossly contaminated media' as defined in the NYSDEC document DER-10. The NYSDEC concluded that further delineation was required to assess the nature and extent of this apparent petroleum impact and the need for subsequent remediation. The November 16, 2017, NYSDEC letter further requested that a work plan pursuant to completing an investigation at the Site for the purposes of defining the extent of 'grossly contaminated media' and determine if additional remediation and/or monitoring are warranted. A copy of the November 16, 2017 issued by the NYSDEC is included in Appendix C of this document.

The Village of Manchester retained Day Engineering, P.C. (DAY) to complete the additional studies requested by the NYSDEC and to prepare a revised FER (i.e., revised FER or this document). DAY initially prepared an Investigation Work Plan (IWP) describing the proposed actins to evaluate the nature and extent of grossly contaminated media identified in 2017 studies (i.e., the 2018 IWP). The 2018 IWP was approved by the NYSDEC on May 21, 2018 (refer to the approval letter included in Appendix C), and

a supplemental investigation was conducted at the Site between June 20, 2018 and July 2, 2018. The results of the investigation were summarized in a document titled *NYSDEC Site #B00131 (Frederick Property), 147 State Street, Manchester, New York, Data Package for Supplementary Studies: June 2018* prepared by DAY (2018 Supplementary Studies Report), which was submitted to the NYSDEC on July 26, 2018. A copy of the June 26, 2018 report prepared by DAY is included in Appendix B of this document. The NYSDEC reviewed the findings of the 2018 studies and concluded in a letter dated September 5, 2018 that "further remediation at the Site is not needed at this time." A copy of the September 5, 2018 letter issued by the NYSDEC is included in Appendix C of this document. [Note: In lieu of additional remediation, a revised SMP that takes the 2017 and 2018 data into account was prepared for NYSDEC for review/approval.]

This document, prepared by DAY, summarizes relevant documentation collected by others prior to 2018 when DAY was retained by the Village of Manchester. The conclusions presented herein are contingent on the accuracy and completeness of the data provided and DAY's interpretation of this data.

An electronic copy of this revised FER with all supporting documentation is included as Appendix B.

2.0 SUMMARY OF SITE REMEDY

2.1 Remedial Action Objectives

As presented in Section 6 of the ROD, the following Remedial Action Objectives (RAOs) were identified for the Site.

2.1.1 Groundwater RAOs

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Restore groundwater aquifer, to the extent practicable, to pre-disposal/pre-release conditions.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

2.1.2 Soil RAOs

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure to, contaminants volatilizing from contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

- Prevent impacts to biota due to ingestion/direct contact with contaminated soil that would cause toxicity or bioaccumulation through the terrestrial food chain.

2.2 Description of Selected Remedy

The Site was remediated in accordance with the remedy selected by the NYSDEC in the ROD dated March 2004, and the November 16, 2017 letter from the NYSDEC to the Village detailing the need for additional work at the Site.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy as presented in the Site's ROD dated March 2004:

1. Development of a remedial design plan to provide the details necessary for the construction, operation, maintenance and monitoring of the remedial program.
2. Building demolition to access potentially contaminated areas beneath the building associated with the hydraulic lift units and floor drainage system. These areas were not adequately characterized during the investigation due to safety concerns associated with the compromised building integrity.
3. Closure of dry well area including excavation and removal of large stone fill used to construct the system and characterization of surrounding/underlying soils.
4. Excavation and off-site disposal of soil with contamination remaining above applicable SCGs. This was to include the known contaminated soils in proximity to the former USTs and pump island, as well as any contaminated soils associated with the dry well area.
5. Since the remedy will not immediately meet groundwater standards, a 5-year monitoring program was to be completed to evaluate the effectiveness of the selected remedy.
6. Development of a SMP that includes requirements to evaluate the potential for vapor intrusion for any buildings developed on the Site including provisions for mitigation of any impacts identified. This SMP should also identify any use restrictions associated with the Site (e.g., groundwater).

7. Annual certification prepared and submitted by a professional engineer or environmental professional acceptable to the NYSDEC. Certification to include that the institutional controls and engineering controls put in place are unchanged from the previous certification and nothing has occurred that will impair the ability of the control to protect the public health or environment or constitute a violation or failure to comply with any operation and maintenance or SMP.

8. Imposition of an institutional control in the form of an environmental easement that will require compliance with the approved SMP, restrict the use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the NYSDOH and require the property owner to complete and submit to the NYSDEC an annual certification.

3.0 INTERIM REMEDIAL MEASURES

This section summarizes the IRM completed in 2000 and 2001. The information and certifications made in the 2016 FER were relied upon to prepare this section.

As documented in the 2016 FER, the IRM included the removal of six USTs and gasoline-impacted soil surrounding the tanks. Specifically in 2000, two USTs used to store gasoline and one UST used to store waste oil were removed. The gasoline USTs were located west of the former building on the Site and the waste oil UST was located adjacent to the southwestern corner of the building. The gasoline tanks reportedly had capacities of 3,000 and 4,000 gallons, and the waste oil tank had a capacity of 500 gallons. In 2001, three 500-gallon USTs used to store gasoline located on adjoining property west of the Site (i.e., in proximity of the northern property line) were removed. Reportedly, these off-site tanks were associated with the fueling operations conducted at the Frederick Property. The former tank locations are depicted on Figure 5 of the 2016 FER (refer to Appendix A).

During the removal of the gasoline tanks in 2000, it was reported that approximately 280 tons of contaminated soil surrounding the tanks was removed and disposed off-site. Reportedly, no contaminated soil was evident in proximity of the waste oil tank. During the removal of the tanks located on the adjacent property, it was reported that approximately 14 tons of contaminated soil surrounding the tanks was removed and disposed off-site.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved *Remedial Work Plan, Frederick Property Environmental Restoration Project, 147 State Street, NYSDEC Site B00131-8, Manchester, New York* dated January 2005 (Revised July 2005) as modified by NYSDEC letter dated October 28, 2005; the *2017 Supplemental Work Plan, Fredrick Property Environmental Restoration Project, 147 State Street, NYSDEC Site B00131-8*, dated February 2017 (Revised May 2017); and the *Investigation Work Plan, 147 Manchester, New York, NYSDEC ERP Site #B00131* dated April 2018. Deviations from the Work Plans are noted below.

4.1 Governing Documents

Documents developed and utilized during the implementation of the Remedy for the Site are described below.

4.1.1 Site Specific Health & Safety Plan (HASP)

A site-specific Health and Safety Plan (HASP) was developed and a copy of this plan included in the RWP. Refer to the 2016 FER for HASP compliance for work completed between 2000 and 2006.

The HASP was updated in 2018 and included in the IWP, and followed during the fieldwork completed in July 2018. The investigative activities completed under the 2018 IWP were in compliance with known governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

4.1.2 Quality Assurance Project Plan (QAPP)

The QAPP was included as Section 4 of the Remedial Work Plan dated January 2005 (Revised July 2005), which was approved by the NYSDEC. The QAPP describes the specific policies, objectives, organization, functional activities and quality assurance/ quality control activities designed to achieve the project data quality objectives. Refer to the 2016 FER for QAPP measures completed.

The task specific QA/QC measures included in the NYSDEC-approved 2018 IWP were followed during implementation of the IWP completed in July 2018.

4.1.3 Community Air Monitoring Plan (CAMP)

A Community Air Monitoring Plan (CAMP) is included as part of the HASP that is part of the Remedial Work Plan dated January 2005 (Revised July 2005). CAMP monitoring results collected during the remedial activities conducted between 2000 and 2006 are included in the 2016 FER (refer to Appendix A).

A CAMP was also included as part of the revised HASP included in the 2018 IWP, and the CAMP was implemented during completion of the investigation activities that had the potential to disturb contaminated soil or fill material. The intent of the CAMP was to provide a measure of protection for the downwind community (i.e., off-site receptors including residences/businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of project activities. The CAMP included real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when activities with the potential to release VOCs or dust were in progress at the Site. This CAMP was based on the New York State Department of Health (NYSDOH) Generic CAMP included as Appendix 1A of the NYSDEC document titled *DER-10, Technical Guidance for Site Investigation and Remediation* dated May 2010 (DER-10). CAMP results are summarized in Section 4.2.5 of this report.

VOC monitoring was completed using a RAE Systems model *Mini RAE 2000* Photoionization Detector (PID) and a RAE systems model Mini RAE 3000 PID that utilizes a 10.7 eV bulb. Particulate monitoring was completed using a Thermo Scientific model *Personal DataRAM™ PDR-1000AN and a DustTrak II*. The following action levels and response measures were utilized during air monitoring activities completed under the IWP CAMP:

VOC Monitoring

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeded 5 parts per million (ppm) above background for the 15- minute average, work activities were to be temporarily halted and monitoring was to be continued. If the total organic vapor level readily

decreased (per instantaneous readings) below 5 ppm over background, work activities could resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persisted at levels in excess of 5 ppm over background but less than 25 ppm, work activities were to be halted, the source or vapors identified, corrective actions were to be taken to abate emissions, and monitoring continued. After these steps, work activities could resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever was less (but in no case less than 20 feet), were below 5 ppm over background for the 15-minute average.
- If the organic vapor level were above 25 ppm at the perimeter of the work area, activities were to be shutdown.

Particulate Monitoring

- If the downwind PM-10 (i.e., particulate matter less than 10 micrometers in size) particulate level was 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for a 15-minute period or if airborne dust was observed leaving the work area, then dust suppression techniques were to be employed. Work could continue with dust suppression techniques provided that downwind PM-10 particulate levels did not exceed 150 $\mu g/m^3$ above the upwind level and provided that no visible dust was migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels were greater than 150 $\mu g/m^3$ above the upwind level, work was to stop and a re-evaluation of activities to be initiated. Work could resume provided that dust suppression measures and other controls were successful in reducing the downwind PM-10 particulate concentration to within 150 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

4.2 Remedial Program Elements

This section describes remedial program elements completed in 2018 pursuant to the competion of the work described in the IWP. Remedial program elents completed during activities completed prior to 2018 are described in the 2016 FER (refer to Appendix A).

4.2.1 Contractors and Consultants

- DAY Engineering, P.C. of Rochester, New York - certifying engineer responsible for remedial design, monitoring and documenting work completed under the Investigation Work Plan dated April 2018, including soil characterization sampling and testing coordination, CAMP monitoring, and contractor coordination.
- Nothnagle Drilling, Inc. of Scottsville, New York (Nothnagle) - drilling contractor responsible for direct push drilling equipment operation and well installation.
- ALS Environmental Laboratory, Rochester, New York (ALS) - Analytical Laboratory testing of characterization and verification soil and groundwater samples

4.2.2 Site Preparation

Site preparation activities (e.g., pre-construction meetings, project coordination, setup, etc.) completed during remedial activities conducted between 2000 and 2006 are documented in the 2016 FER (refer to Appendix A). Project coordination and pre-investigation meetings for the work completed in 2018 were handled through phone calls, emails and letters. Prior to completing fieldwork on June 20, 2018, a temporary decontamination area was constructed and drilling equipment was cleaned as necessary at the start of the field work and between test borings. A representative of DAY and the NYSDEC were on the Site to review the work to be completed and to establish CAMP monitoring stations.

Nothnagle advanced ten test borings designated TB-201 through TB-206, TB-206A, TB-207, TB-208 and MW-A, and installed one monitoring well (i.e., designated MW-A) on June 20, 2018 in the approximate locations presented on Figure 3. The subsurface conditions observed at each location are documented on the test boring logs provided as Attachment A of the 2018 Supplementary Studies Report (refer to Appendix B). Select soil samples, and a groundwater sample from MW-A, retained during the 2018 studies were transported by a DAY representative to ALS for testing. The results of the testing

completed by ALS are presented in the 2018 Supplementary Studies Report (refer to Appendix B). In addition, the test results are discussed in Section 4.4 of this report.

Documentation of agency approvals for the work described in the 2018 IWP is included in Appendix C. Applicable SEQRA requirements and substantive compliance requirements for attainment of applicable natural resource or other permits were achieved during implementation of the 2018 IWP.

A NYSDEC-approved project sign was erected at the project entrance and remained in place during all phases of work described in the 2018 IWP.

4.2.3 General Site Controls

Refer to the 2016 FER (Appendix A) for general Site controls that were implemented during the work completed at the Site prior to 2018.

The following general site controls were used during the implementation of the 2018 IWP.

- **Site security** –The Site was vacant during the investigation program. Therefore, site security protocols were not necessary.
- **Job site record keeping** – During the implementation of the investigation program, a DAY representative maintained a daily field log (refer to Section 4.2.6) while at the Site to document activities.
- **Erosion and sedimentation controls** – Due to the limited areas of soil disturbed, the relatively flat topography of the Site and the immediate vicinity, the absence of storm drainage structures on the Site, and the distance of the Site to sensitive receptors, site-wide erosion and sedimentation controls were not needed during the implementation of the investigation actions.
- **Soil screening results** - DAY observed soil and conducted PID screening during test boring advancement and well installation. The results of this monitoring are recorded in the daily field log (refer to Section 4.2.6).
- **Stockpile methods** – Soil/fill was not excavated/removed from the Site as part of the investigative studies completed.
- **Problems encountered** – No problems that had an impact on the investigation actions with respect to Site controls were encountered during the implementation of investigative activities.

- **Truck routing, truck wash, and egress housekeeping** – Trucks delivering imported soil to the Site or transporting soils off-site were not utilized during the implementation of the IWP. Therefore, potentially impacted soil/fill was not transported around or off the Site.
- **Dust control** – The potential for dust generation during intrusive activities competed during the implementation of the investigative actions was monitored by DAY as part of the CAMP, and the results are discussed in Section 4.2.5. Dust concentrations recorded during intrusive activities completed at the Site (e.g., test boring advancement) did not exceed action levels that warranted the implementation of dust control measures.
- **Odor control** – nuisance odors were not encountered during the implementation of the investigative actions.
- **Responding to complaints** – No complaints were recorded during the implementation of the investigative actions.

4.2.4 Nuisance Controls

Refer to the 2016 FER for housekeeping, dust control, odor control, truck routing and responses to compliants for the remedial activities conducted between 2000 and 2006.

Nuisance controls were not warratned duirng the implementation of the 2018 IWP.

4.2.5 CAMP Results

The CAMP monitoring results for the remediation completed between 2000 and 2006 are included in the 2016 FER (refer to Appendix A).

CAMP monitoring was completed by DAY during investigative activities completed on June 20, 2018 (i.e., test boring advancement), which was the extent of the ground intrusive work completed under the 2018 IWP. CAMP monitoring occurred in exterior locations at or near the Site perimeter. The monitoring results, exceedance of action levels and response actions for CAMP monitoring completed at exterior locations on June 20, 2018 are summarized below:

Monitoring Results

- Particulate PM-10 measurements averaged over 15-minute periods ranged between 0 $\mu g/m^3$ and 22 $\mu g/m^3$ greater than background.
- VOC measurements averaged over 15-minute periods ranged between 0.0 ppm and 0.59 ppm greater than background. [Note: Elevated PID readings were recorded between 12:40 and 12:48 on June 20, 2018; however, absence of other

evidence of impacts to the soil that was being disturbed (i.e., odors, staining, etc.), it is suspected that the PID was not functioning properly during this time interval. After 12:48 the PID returned to functioning normally.]

Action Levels

- With the exception of the elevated PID readings recorded on June 20, 2018 (see above), CAMP action levels were not exceeded.

Response Actions

- Not Applicable

Copies of all field data sheets relating to the CAMP completed on June 20, 2018 are provided in in Appendix D.

4.2.6 Reporting

Documentation describing field observations made during the remedial activities completed between 2000 and 2006 is presented in Appendix C and Appendix H of the 2016 FER (refer to Appendix A of this document). A photographic log of remedial work completed in 2006 is included in Appendix D of the 2016 FER (refer to Appendix A of this document).

During implementation of the 2018 IWP, daily field notes documenting the progress of the investigative actions were prepared by a DAY. A copy of the daily field notes and a photographic log of the work completed are included in Appendix E.

4.3 Contaminated Materials Removal

The Village has not designated a specific future use for the Site, but the future use could include restricted residential, recreational, or commercial development. As such, an appropriate remedy for the Site is a Track 4: Restricted Use with site-specific soil cleanup objectives remedy. Specifically, the selected remedy is referred to as the Track 4 Restricted Residential Use Remedy via Soil Removal and Cover. Source areas of contamination were identified during the RI. Therefore, source area soil removal was part of the remedial program for the Site. The purpose of the material removals completed as part of the remedy was to eliminate or reduce to the extent practicable and achieve a soil

cleanup objective (SCO) of Restricted Residential Use. The intent of the selected remedy was to:

- Eliminate exposures of persons at or around the Site to VOCs and semi-volatile organic compounds (SVOCs) in soil and groundwater;
- preclude the release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and
- prevent the release of contaminants from subsurface soils and groundwater into indoor air through soil vapor.

The sections below describe the removal, handling, and disposal of materials from the Site during the implementation of remedial actions.

The SCOs for the contaminants of concern for this project are included on Table 3 through Table 8 (i.e., tables summarizing the detected constituents measured in confirmatory soil and groundwater samples). [Note: A summary of the analytical laboratory testing program completed is provided on Table 1 (Confirmatory Soil Samples) and Table 2 (Groundwater Samples).

The location of original source areas and where excavations were performed to remove these source areas is presented as Figure 4. The cross sections shown on Figure 5 and Figure 6 depict the vertical extent of source removal areas. In addition, documentation of the remedial activities completed to address source areas is provided in the 2016 FER included in Appendix A.

4.3.1 Subsurface Structures and Contaminated Soil Removal

Significant components of the selected remedy are documented in the 2016 FER attached as Appendix A of this document. In addition to the work completed as an IRM, the following components of the selected remedy are certified in the 2016 FER:

1. Decommissioning and removal of two hydraulic lifts located in the floor of the former building. During this removal, approximately 16 cubic yards of contaminated soil, defined as soil exceeding 5 ppm as measured in the field using a PID, were removed and disposed off-site.
2. Removal of the dry well and associated underground piping. Soils exceeding 5 ppm as measured in the field using a PID were not identified during dry well

and piping removal. As such soil surrounding these infrastructure components was not removed for remedial purposes.

3. Approximately 1,200 square feet of concrete floor slab (e.g., former building slab) and associated building footers were removed and disposed off-site. Soils exceeding 5 ppm as measured in the field using a PID were not identified during slab and footer removal. As such, soil in contact with the slab and footers was not removed for remedial purposes.

4. Removal of concrete gasoline pump island and associated underground piping. The surrounding soils exceeding 5 ppm as measured in the field using a PID were removed and disposed off-site. This remedial action resulted in removal and off-site disposal of approximately 445 cubic yards of contaminated soil in proximity to the former pump island.

5. Excavated areas were backfilled with granular fill and compacted in twelve inch lifts. Remedial work areas were also covered with a minimum of three inches of topsoil and reseeded. No documentation of the fill and topsoil source was provided in the 2016 FER. [Note: Sampling and testing was completed during studies undertaken in 2017 and 2018 to assess the nature and extent of the backfill placed during the earlier remedial actions. The findings of these additional studies are discussed in this document.]

During implementation of the 2018 IWP investigative derived waste (IDW) was the only contaminated media removed from the Site. The IDW consisted of soil/fill samples and drill spoil generated during the supplementary test borings completed between August 30, 2017 and September 5, 2017 and on June 20, 2018, and purge water generated during the sampling of monitoring wells completed on September 27, 2017. Based on available site records included in the 2016 FER and the investigative results of the supplementary studies completed in 2017 and 2018, the areal extent of the soil removed is depicted on Figure 4 and the vertical extent of soil removed and the nature and extent of the backfill placed in the areas of soil removal is depicted on Figure 5 and Figure 6.

4.3.2 Disposal Details

Section 4.0 of the 2016 FER describes the remedial actions completed between 2000 and 2006, and provides information about the disposal of materials removed during this work. [Note: The 2016 FER indicates that the hydraulic lift units were transported to Alpco Recycling in Macedon, New York for disposal, and the concrete that was removed was taken to Dolomite in Penfield, New York for recycling. The fate of the other materials

removed is not specifically identified other than a statement that it was "…transported to a permitted waste disposal facility." According to disposal documentation provided in Appendix F of the 2016 FER, contaminated soil removed was transported to the Ontario County Landfill.] Manifests and bills of lading for remedial activities completed between 2000 and 2006 are included in Appendix F of the 2016 FER.

Two 55-gallon drums containing IDW generated during supplementary studies completed in 2017 and 2018 were removed from the Site by Sun Environmental Corporation (Sun) and transported to Industrial Oil Tank Service Corporation in Oriskany, New York (Industrial Oil) on August 2, 2018 for disposal. A copy of the IDW waste disposal manifest is included in Appendix F.

4.3.3 On-Site Reuse

Based on information included in the 2016 FER, soil and other material excavated/removed during the remedial work completed between 2000 and 2006, was not reused on Site. Rather this material (i.e., USTs, in-ground hydraulic lift system, concrete and contaminated soil) was removed from the Site and material was imported and placed to backfill the excavated areas.

4.4 Remedial Performance/Documentation Sampling

The confirmatory sampling/analytical laboratory testing of the soil samples completed following the removal of USTs, the dry well, hydraulic lifts and contaminated soil during the remedial activities completed between 2000 and 2006 is described in the 2016 FER. In addition to copies of the analytical laboratory reports for the soil samples collected/tested and associated quality assurance/quality control (QA/QC) samples tested, copies of data usability summary reports (DUSRs) generated are provided in the 2016 FER.

A summary of the analytical laboratory testing program completed for the confirmatory samples collected during the remedial activities completed between 2000 and 2006 and the supplementary studies completed in 2017 and 2018 is presented on Table 1. The analytical laboratory testing program for the groundwater samples collected on August, 22, 2017, December 22, 2009, and September 27, 20017 is provided on Table 2. The following tables present a summary of the detected constituents measured in the confirmatory soil samples collected between 2000 and 2006, and soil samples collected during the supplementary studies completed in 2017 and 2018. For comparative purposes, these tables also include the Unrestricted Use and Restricted Residential Use SCO for the constituents detected.

- Table 3 Summary of Detected VOCs: Confirmatory UST Removal IRMs completed in November 2000 and September 2001; and Site Remediation completed in September 2006

- Table 3A Summary of Detected VOCs: Soil Samples collected during Supplementary Studies completed in 2017 and 2018

- Table 4 Summary of Detected SVOCs: Confirmatory UST Removal IRMs completed in November 2000 and September 2001; and Site Remediation completed in September 2006

- Table 4A Summary of Detected SVOCs: Soil Samples collected during Supplementary Studies completed in 2017 and 2018

- Table 5: Summary of Detected Metals: Confirmatory UST Removal IRMs completed in November 2000 and September 2001; and Site Remediation completed in September 2006

- Table 5A: Summary of Detected Metals: Soil Samples collected during Supplementary Studies completed in 2017 and 2018

- Table 6 Summary of Detected Pesticides and PCBs: Confirmatory UST Removal IRMs completed in November 2000 and September 2001; and Site Remediation completed in September 2006

- Table 6A: Summary of Detected Pesticides and PCBs: Soil Samples collected during Supplementary Studies completed in 2017 and 2018

- Table 7 Summary of Detected VOCs plus Tentatively Identified Compounds (TICs): Groundwater Samples

- Table 8 Summary of Detected SVOCs plus TICs: Groundwater samples

Copies of the analytical laboratory reports prepared for the soil and groundwater samples collected in 2017 and 2018, and the DUSRs prepared for these samples are included in Appendix G.

4.5 Imported Backfill

The 2016 FER provides a description of the volume and locations where imported backfill was placed during the remedial activities completed between 2000 and 2006. However, no documentation citing the source or chemical nature of the backfill materials placed was provided in the 2016 FER. As such, per the request of the NYSDEC, a goal of the supplementary studies completed in 2017 was to collect/test samples of the backfill material. These studies, and the supplementary studies completed in 2018, determined the backfill material placed between 2000 and 2006 did not contain VOCs, SVOCs or metals at concentrations exceeding the Unrestricted Use SCO (refer to Tables 3A, 4A, and 5A, respectively). As shown on Table 6, with the exception of soil samples SB-7 (2"-12"), SB-7 (12"-24"), SB-6 (0"-2"), and SB-6 (12"-24"), none of the apparent backfill samples tested contained pesticide concentrations that exceeded the Unrestricted Use SCO. As presented on Figure 5 and Figure 6, the imported backfill placed following the soil removal completed between 2000 and 2007 is generally characterized as a fine to coarse sand with a trace to little gravel. In some locations, the backfill contained clayey silt. The fill material is typical of a 'bank run gravel' deposit.

4.6 Contamination Remaining at the Site

The following sections describe contamination identified during the post-remediation, which remains at the Site subsequent to the completion of the implementation of remedial activities. The remaining contamination is discussed by media in which it was encountered.

4.6.1 Soil/fill

Based upon the testing completed subsequent to the remedial activities completed between 2000 and 2006 and the samples collected/tested during the supplementary studies completed in 2017 and 2018, no constituents were measured at concentrations that exceeded Restricted Residential Use SCO. The following confirmatory soil samples contained concentrations of select constituents that exceed the Unrestricted Use SCO:

- Gas Tank Excavation West Wall-South: acetone (refer to 2016 FER for sample location and Table 3 for test results)

- Gas Tank Excavation East Wall-South: acetone (refer to 2016 FER for sample location and Table 3 for test results)

- Gas Tank Excavation East Wall-North: m,p-xylenes and o-xylene (refer to 2016 FER for sample location and Table 3 for test results)
- SB-3 (10'-12'): ethylbenzene, m,p-xylenes, and o-xylene (refer to Figure 3 for sample location and Table 3A for test results)
- TB-206A (10'-11'): m,p-xylenes, and o-xylene (refer to Figure 3 for sample location and Table 3A for test results)
- TB-207: 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, toluene, m,p-xylenes, and n-propylbenzene (refer to Figure 3 for sample location and Table 3A for test results)
- SB-7 (2"-12") and SB-7 (12"-24"): 4,4'-DDD and 4,4'-DDT (refer to Figure 3 for sample location and Table 6 for test results)
- SB-6 (o-2") and SB-6 (12"-24"): 4,4'-DDT (refer to Figure 3 for sample location and Table 3A for test results)

Note: Each of the confirmatory soil samples collected following the soil removal completed in 2006 contained a selenium concentration that exceeds the Unrestricted Use SCO (refer to Table 5). However, selenium was not detected at concentrations exceeding the Unrestricted Use in any of the other samples tested. Therefore it is not known if the selenium concentrations reported are incorrect or attributable to natural conditions.

A demarcation layer was not installed following the removal of contaminated material that was completed between 2000 and 2006. As such, the locations where concentrations of VOCs and pesticides remain that exceed the Unrestricted SCO are not known. However, 4,4'-DDE and 4,4'-DDT may be present at concentration in excess of the Unrestricted Use SCO in proximity of test borings SB-6 and SB-7 (i.e., most likely between the ground surface and 24-inches bgs). The testing completed in 2017 and 2018 suggests that soil below approximately 10 ft. in proximity of SB-3, TB-206A and TB-207 likely contains concentrations of select VOCs that exceed the Unrestricted Use SCO.

4.6.2 Groundwater

Evidence of free product was reportedly encountered on the groundwater surface (i.e., at a depth of 10.5 ft. bgs) during the advancement of test boring SB-3. Free product not encountered during the advancement of test borings completed on June 20, 2018 (i.e., located in proximity of test boring SB-3) or within monitoring well MW-A, which was

installed in the reported location of SB-3. However, as presented on Table 7 and Table 8 a sample collected from MW-A on July 2, 2018 contained various VOCs, and the SVOC naphthalene that exceed the NYSDEC standard and/or guidance values presented in NYSDEC TOGS 1.1.1 dated June 1998 as amended in January 1999, April 2000, and June 2004 (i.e., TOGs 1.1.1).

Since some contaminated soil and groundwater remains beneath the Site after completion of the Remedial Action, Institutional and Engineering and Institutional Controls (ECs/ICs) are required to protect human health and the environment. These ECs/ICs are described in the following sections. Long-term management of these EC/ICs and residual contamination will be performed under the SMP approved by the NYSDEC.

4.7 Soil Cover System

Following the removal of structures associated with former operations conducted at the Site (e.g., USTs, in-ground hydraulic lifts, a dry well, concrete pads and footers) and contaminated soil, 'clean' backfill was placed and compacted (refer to 2016 FER). Subsequently, a minimum of three inches of topsoil was reportedly placed above the backfill and grass seed, fertilizer and mulch was added. In June 2018, the Site was observed to be entirely covered with grass with filed grass/weeds near the southern boundary. As such, exposure to remaining contamination in soil/fill at the Site is prevented by this soil cover system.

Based on testing completed as part of the supplementary studies conducted in 2017, near surface soil (i.e., between about 2 inches and 24 inches bgs) in proximity of test borings SB-6 and SB-7 (refer to Figure 3 for location) contain concentrations of 4,4'-DDE and/or4,4'-DDT that exceed the Unrestricted Use SCO. In addition, as discussed in Section 4.6 some potentially contaminated soil and groundwater remains at the Site. Therefore in the event the cover system is comprised precautions outlined in the SMP, including the Excavation Work Plan, must be implemented.

4.8 Other Engineering Controls

The remedy for the Site did not require the construction of any other engineering control systems. However, since remaining contaminated soil and groundwater exists beneath the Site, if future development includes construction of on-site buildings a soil vapor intrusion evaluation will be required to determine the need for installation of a vapor mitigation system.

4.9 Institutional Controls

The Site remedy requires that an environmental easement be placed on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to restricted residential or commercial uses only.

The environmental easement for the Site was executed by the Department on October 14, 2009, and filed with the Ontario County Clerk on December 29, 2009. The County Recording Identifier number for this filing is C302654. A copy of the easement and proof of filing is provided in Appendix B1 of the 2016 FER.

4.10 Deviations from the Remedial Action Work Plan

Refer to the 2016 FER for deviations from the RWP dated January 2005 (revised July 2005). Deviations from the 2017 SWP and the 2018 IWP were not necessary to complete the NYSDEC-approved scope-of-work.

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Appendix A: Final Engineering Report dated November 2010 (Revised November 2016) prepared by Clark Patterson Lee (provided on the enclosed compact disk).

Appendix B: Digital Copy of the FER (provided on the enclosed compact disk) and Supporting Documentation

- *Frederick Property Environmental Restoration Project, NYSDEC Site B00131-8, 147 State Street, Manchester, New York* prepared by Empire GeoServices, Inc. dated October 3, 2017
- *NYSDEC Site #B00131 (Frederick Property), 147 State Street, Manchester, New York, Data Package for Supplementary Studies: June 2018* prepared by DAY

Appendix C: Agency Approval Documentation

Appendix D: CAMP Monitoring Results: June 20, 2018

Appendix E: 2018 Field Notes and Photographic Log

Appendix F: IDW Disposal Documentation

Appendix G: 2017 and 2018 Analytical laboratory results and DUSR

TABLES

TABLE 1
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131

ANALYTICAL LABORATORY TESTING PROGRAM
CONFIRMATORY AND SUPPLEMENTARY SOIL SAMPLES

Sample Designation	Matrix	Date	Test Parameters
Waste Oil Tank Exc., Bottom	Soil	11/1/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Waste Oil Tank Exc., Sidewall Comp.	Soil	11/1/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Gas Tank Exc. West Wall-South	Soil	11/2/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Gas Tank Exc. East Wall-South	Soil	11/2/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Gas Tank Exc. South Wall	Soil	11/2/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Gas Tank Exc. East Wall-North	Soil	11/3/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Gas Tank Exc. NorthWall	Soil	11/3/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Gas Tank Exc. West Wall-North	Soil	11/3/2000	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, TAL Metals
Bottom South Tank	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
Bottom Middle Tank	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
South Wall	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
North Wall	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
Bottom North Tank	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
East Wall-South	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
East Wall-North	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
West Wall-North	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
West Wall-South	Soil	9/26/2001	TCL/STARS VOCs, TCL/STARS SVOCs, PCBs, Lead
South 8'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
South-Dry Well 6'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
North 7.5'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Dry Well North 7'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
East 7.5'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Dry Well East 6'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
West 8'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Dry Well West 6'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Bottom 10'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Dry Well Bottom 7.5'	Soil	9/22/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Parking NW 7'	Soil	9/27/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Parking East 7'	Soil	9/27/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Parking N Wall 6'	Soil	9/27/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Parking Bottom 9'	Soil	9/27/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Parking NE Corner 7'	Soil	9/27/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
Parking W Sidewall 6'	Soil	9/27/2006	STARS VOCs, STARS SVOCs, PCBs, TAL Metals
South Building	Soil	2/1/2007	TCL VOCs, TCL SVOCs
North East	Soil	2/1/2007	TCL VOCs, TCL SVOCs
North West	Soil	2/1/2007	TCL VOCs, TCL SVOCs
West	Soil	2/1/2007	TCL VOCs, TCL SVOCs
Lift	Soil	2/1/2007	TCL VOCs, TCL SVOCs, PCBs
Dry Well	Soil	2/1/2007	TCL VOCs, TCL SVOCs, PCBs
SB-1 (0-2")	Soil	8/31/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-1 (2-12")	Soil	8/31/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-1 (12-24")	Soil	8/31/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-3	Soil	8/31/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-1A (12-24")	Soil	8/31/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-2	Soil	9/1/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-4	Soil	9/1/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-7 (0-2")	Soil	9/1/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-7 (2-12")	Soil	9/1/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-7 (12-24")	Soil	9/1/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-7	Soil	9/1/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-6 (0-2")	Soil	9/5/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-6 (2-12")	Soil	9/5/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-6 (12-24")	Soil	9/5/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-6	Soil	9/5/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-5	Soil	9/5/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
SB-1B	Soil	9/5/2017	TCL VOCs, TCL SVOCs, Pesticides, PCBs, TAL Metals
TB-202 (12')	Soil	6/20/2018	TCL/CP-51 VOCs plus TICs, TCL/CP-51 SVOCs plus TICs
TB-204 (8'-9')	Soil	6/20/2018	TCL/CP-51 VOCs plus TICs, TCL/CP-51 SVOCs plus TICs
TB-206A (10'-11')	Soil	6/20/2018	TCL/CP-51 VOCs plus TICs, TCL/CP-51 SVOCs plus TICs
TB-207 (10'-11')	Soil	6/20/2018	TCL/CP-51 VOCs plus TICs, TCL/CP-51 SVOCs plus TICs
TB-208 (9')	Soil	6/20/2018	TCL/CP-51 VOCs plus TICs, TCL/CP-51 SVOCs plus TICs

NOTES

TCL/STARS VOCs = USEPA Target Compound List and NYSDEC Spills Technology and Remediation Series (STARS) List Volatile Organic Compounds by USEPA Method 8260B

STARS SVOCs = STARS List Semi-Volatile Organic Compounds by USEPA Method 8270C

TAL Metals = USEPA Target Analyate List Metals by various USEPA Methods

PCBs = Polychlorinated Biphenyls by USEPA Method 8082

Total Lead = Lead by USEPA Method 6010

TCL/CP-51 VOCs = USEPA Target Compound List and NYSDEC Commissioner Policy List Volatile Organic Compounds by USEPA Method 8260B

TCL/CP-51 List SVOCs = USEPA Target Compound List and NYSDEC Commissioner Policy List Semi-Volatile Organic Compounds by USEPA Method 8270C

TICs = Tentatively Identified Compounds

TABLE 2
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131

ANALYTICAL LABORATORY TESTING PROGRAM
GROUNDWATER SAMPLES

Monitoring Well	Date	Test Parameters
MW-2	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-3	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-4	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-5	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-6	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
RW-1	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
RW-2	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
RW-3	8/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-2	12/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-3	12/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-4	12/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-5	12/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-6	12/22/2007	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
RW-1	9/27/2017	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
RW-2	9/27/2017	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
RW-3	9/27/2017	TCL and CP-51 VOCs, TCL and CP-51 SVOCs
MW-A	7/2/2018	TCL and CP-51 VOCs plus TICs, TCL and CP-51 SVOCs plus TICs

NOTES

TCL/CP-51 VOCs = USEPA Target Compound List and NYSDEC Commissioner Policy List Volatile Organic Compounds by USEPA Method 8260B

TCL/CP-51 List SVOCs = USEPA Target Compound List and NYSDEC Commissioner Policy List Semi-Volatile Organic Compounds by USEPA Method 8270C

TICs = Tentatively Identified Compounds

TABLE 3
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131

SUMMARY OF DETECTED VOCS: CONFIRMATORY SOIL SAMPLES
UST REMOVAL IRMs COMPLETED IN 11/00 and 9/01
and SITE REMEDIATION COMPLETED IN 9/06

Compound	Unrestricted Use SCO[1]	Restricted Residential Use SCO[2]	Sample Designation and Date															
			Waste Oil Tank Exc., Bottom	Waste Oil Tank Exc., Sidewall Comp.	Gas Tank Exc. West Wall-South	Gas Tank Exc. East Wall-South	Gas Tank Exc. South Wall	Gas Tank Exc. East Wall-North	Gas Tank Exc. NorthWall	Gas Tank Exc. West Wall-North	Bottom South Tank	Bottom Middle Tank	South Wall	North Wall	Bottom North Tank	East Wall-South	East Wall-North	West Wall-North	West Wall-South
			11/1/2000	11/1/2000	11/2/2000	11/2/2000	11/2/2000	11/3/2000	11/3/2000	11/3/2000	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001
Acetone	0.05	100	ND	ND	**0.116**	**0.0746**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	52	ND	ND	ND	ND	ND	3.27	0.0263	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	8.4	52	ND	ND	ND	ND	ND	1.14	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
4-Isopropyltoluene	NS	NS	ND	ND	ND	ND	ND	0.201	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
Ethylbenzene	1	41	ND	ND	ND	ND	ND	0.217	ND	ND	ND	ND	ND	ND	0.0123	ND	ND	ND	ND
Isopropylbenzene	2.3	NS	ND	ND	ND	ND	ND	0.121	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
m,p-Xylenes*	0.26	100	ND	ND	ND	ND	ND	**1.65**	ND	ND	ND	ND	ND	ND	0.0375	ND	ND	ND	ND
n-Butylbenzene	12	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	3.9	100	ND	ND	ND	ND	ND	0.304	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	12	100	ND	ND	ND	ND	ND	0.275	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
o-Xylene*	0.26	100	ND	ND	ND	ND	ND	**0.278**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	11	100	ND	ND	ND	ND	ND	0.0684	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
tert-Butylbenzene	5.9	100	ND	ND	ND	ND	ND	0.337	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT

Compound	Unrestricted Use SCO[1]	Restricted Residential Use SCO[2]	Sample Designation and Date														
			South 8'	South-Dry Well 6'	North 7.5'	Dry Well North 7'	East 7.5'	Dry Well East 6'	West 8'	Dry Well West 6'	Bottom 10'	Dry Well Bottom 7.5'	Parking NW 7'	Parking East 7'	Parking N Wall 6'	Parking Bottom 9'	Parking NE Corner 7'	Parking W Sidewall 6'
			9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006
Acetone	0.05	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	3.6	52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	ND	0.34
1,3,5-Trimethylbenzene	8.4	52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04	ND	ND	ND	ND	ND
4-Isopropyltoluene	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.056	ND	ND	ND	ND	ND
Ethylbenzene	1	41	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	2.3	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.013	ND	ND	ND	ND	ND
m,p-Xylenes*	0.26	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	12	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.028	ND	ND	ND	ND	ND
n-Propylbenzene	3.9	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.024	ND	ND	ND	ND	ND
Naphthalene	12	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.029	ND	ND	ND	ND	0.34
o-Xylene*	0.26	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	11	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.017	ND	ND	ND	ND	ND
tert-Butylbenzene	5.9	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

Results and SCOs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(2) = Soil Cleanup Objective (SCO) for Restricted Residential Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

VOCs = Volatile Organic Compounds

IRM = Interim remedial measure

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

NT = Not Tested J = Estimated Concentration

* SCO for mixed xylenes, including the sum of m,p-xylenes and o-xylene

Highlighted value exceeds the Unrestricted Use SCO *Highlighted value exceeds the Restricted Residential Use SCO*

TABLE 3A
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED VOCS PLUS TICS: SOIL SAMPLES
COLLECTED DURING SUPPLEMENTARY STUDIES COMPLETED ON FEBRUARY 1, 2007 AND BETWEEN AUGUST 2017 AND JUNE 2018

Compound	Unrestricted Use SCO[1]	Restricted Residential Use SCO[2]	Sample Designation and Date													
			South Building (4')	North East (4')	North West (4')	West (4')	Lift (4')	Dry Well (4')	SB-1 (0-2")	SB-1 (2-12")	SB-1 (12-24")	SB-3 (10'-12')	SB-1A (12-24")	SB-2 (8'-9.9')	SB-4 (8'-10')	SB-7 (0-2")
			02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	08/31/17	08/31/17	08/31/17	08/31/17	08/31/17	09/01/17	09/01/17	09/01/17
Acetone	0.05	100	0.0069 J	0.0028 J	0.0051 J	0.0035 J	ND	0.0037 J	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	8.4	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.06	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.045 J	ND	ND
Carbon disulfide	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1 J	ND	ND	ND	ND
Cyclohexane	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	15 J	ND	ND	ND	ND
Ethylbenzene	1	41	ND	ND	ND	ND	ND	ND	ND	ND	ND	**17**	ND	0.11	ND	ND
Isopropylbenzene	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.5**	ND	0.031 J	ND	ND
Methylcyclohexane	NS	NS	ND	ND	0.0006 J	ND	ND	0.00037 J	ND	ND	ND	18	ND	0.26	ND	ND
Methylene Chloride	0.05	100	0.00053 J	0.00044 J	0.00051 J	ND	ND	0.0006 J	ND	ND	ND	ND	ND	ND	0.002 J	ND
Toluene	0.7	100	ND	0.00056 J	0.00042 J	0.0006 J	ND	0.00093 J	ND	ND	ND	0.65 J	ND	ND	ND	ND
m,p-Xylenes	0.26*	100*	ND	ND	ND	ND	ND	0.0013 J	ND	ND	ND	**68**	0.00042 J	0.13	ND	ND
n-Butylbenzene	12	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	3.9	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	0.26*	100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6.1**	ND	ND	ND	ND
sec-Butylbenzene	11	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	5.9	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.047	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0007 J	0.00079 J
Total TICs	NS	NS	NT	NT	NT	NT	NT	NT				306.1				

Compound	Unrestricted Use SCO[1]	Restricted Residential Use SCO[2]	Sample Designation and Date													
			SB-7 (2-12")	SB-7 (12-24")	SB-7 (6'-8')	SB-6 (0-2")	SB-6 (2-12")	SB-6 (12-24")	SB-6 (4'-6.9')	SB-5 (4'-6')	SB-1B (12"-24")	TB-202 (12')	TB-204 (8'-9')	TB-206A (10'-11')	TB-207 (10'-11')	TB-208 (9')
			09/01/17	09/01/17	09/01/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	06/20/18	06/20/18	06/20/18	06/20/18	06/20/18
Acetone	0.05	100	ND	ND	ND	ND	ND	ND	ND	ND	0.0056 J	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3.6	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.044	0.0095	1.90 D	**45 D**	0.0019 J
1,3,5-Trimethylbenzene	8.4	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.004	0.0057	0.093	**14 D**	0.003
4-Isopropyltoluene	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.006	0.0036 J	0.0046	0.620 D	0.0009 J
Benzene	0.06	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0013 J	ND	0.0038	ND	0.00064 J
Bromomethane	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00076J
Cyclohexane	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.091	0.360 D	0.110	30 D	0.036
Ethylbenzene	1	41	ND	0.00017 J	ND	ND	ND	ND	ND	ND	ND	0.0011 J	0.0041	0.004	**15 D**	ND
Isopropylbenzene	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.016	0.030	0.076	2 D	0.0017 J
Methylcyclohexane	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.071	0.190	0.084	17 D	0.041
Methylene Chloride	0.05	100	ND	ND	0.0014 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.7	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0012 J	0.00081 J	0.0039	ND	0.0024 J
m,p-Xylenes	0.26*	100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0065 J	0.017	**0.750 D**	**26 D**	0.0023 J
n-Butylbenzene	12	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.021	0.044	0.0085	1.5 D	0.0051
n-Propylbenzene	3.9	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.056	0.096	0.430	**6.9 D**	0.007
o-Xylene	0.26*	100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00081 J	0.0044	0.0095	ND	0.00052 J
sec-Butylbenzene	11	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.014	0.018	0.01	0.85 D	0.0045
tert-Butylbenzene	5.9	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0006 J	0.0011 J	0.010	ND	0.00067 J
Trichloroethene	0.047	21	0.00084 J	0.00061 J	0.00032 J	0.00042 J	0.00036 J	ND	ND	0.00041 J	ND	ND	ND	ND	ND	ND
Total TICs	NS	NS										ND	3.162	2.553	296.4	1.355

NOTES

Results, SCOs and SCLs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(2) = Soil Cleanup Objective (SCO) for Restricted Residential Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

VOCs = Volatile Organic Compounds

TICs = Tentatively Identified Compounds

*SCL and SCO for mixed xylenes, including the sum of m,p-xylenes and o-xylene

Highlighted value exceeds the Unrestricted Use SCO

NS = No Standard

D = Concentration following sample dilution

J = Estimated Concentration

Highlighted value exceeds the Restricted Residential Us

TABLE 4
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED SVOCS: CONFIRMATORY SOIL SAMPLES
UST REMOVAL IRMs COMPLETED IN NOVEMBER 2000 and SEPTEMBER 2001 and
SITE REMEDIATION COMPLETED IN SEPTEMBER 2006

Compound	Unrestricted Use SCO[1]	Restricted Residential Use SCO[2]	Sample Designation and Date																
			Waste Oil Tank Exc., Bottom	Waste Oil Tank Exc., Sidewall Comp.	Gas Tank Exc. West Wall-South	Gas Tank Exc. East Wall-South	Gas Tank Exc. South Wall	Gas Tank Exc. East Wall-North	Gas Tank Exc. NorthWall	Gas Tank Exc. West Wall-North	Bottom South Tank	Bottom Middle Tank	South Wall	North Wall	Bottom North Tank	East Wall-South	East Wall-North	West Wall-North	West Wall-South
			11/1/2000	11/1/2000	11/2/2000	11/2/2000	11/2/2000	11/3/2000	11/3/2000	11/3/2000	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001
Isophrone	NS	NS	ND	ND	0.801	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	NS	NS	ND	ND	ND	ND	ND	1.604	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	12	100	ND	ND	ND	ND	ND	1.432	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Compound	Unrestricted Use SCO[1]	Restricted Residential Use SCO[2]	Sample Designation and Date														
			South 8'	South-Dry Well 6'	North 7.5'	Dry Well North 7'	East 7.5'	Dry Well East 6'	West 8'	Dry Well West 6'	Bottom 10'	Dry Well Bottom 7.5'	Parking NW 7'	Parking East 7'	Parking N Wall 6'	Parking Bottom 9'	Parking NE Corner 7'	Parking W Sidewall 6'
			9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006
Isophrone	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Methylnaphthalene	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	12	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

Results and SCOs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(3) = Soil Cleanup Objective (SCO) for Restricted Residential Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

SVOCs = Semi-Volatile Organic Compounds

IRM = Interim remedial measure

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

NT = Not Tested J = Estimated Concentration

Highlighted value exceeds the Unrestricted Use SCO

Highlighted value exceeds the Restricted Residential Use SCO

TABLE 4A
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED NYSDEC SVOCS PLUS TICS : SOIL SAMPLES
COLLECTED DURING SUPPLEMENTARY STUDIES COMPLETED BETWEEN AUGUST 2017 AND JUNE 2018

Compound	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date													
			South Building	North East	North West	West	Lift	Dry Well	SB-1 (0-2")	SB-1 (2-12")	SB-1 (12-24")	SB-3 (10'-12')	SB-1A (12-24")	SB-2 (8'-9.9')	SB-4 (8'-10')	SB-7 (0-2")
			02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	08/31/17	08/31/17	08/31/17	08/31/17	08/31/17	09/01/17	09/01/17	09/01/17
2-Methylnaphthalene	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	0.034 J	ND	ND
Acenaphthene	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	NS	NS	ND	ND	ND	ND	ND	ND	0.060 J	ND	ND	ND	ND	ND	ND	0.2 J
Benzo(a)anthracene	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.022 J
Benzo(a)pyrene	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.034 J
Benzo(ghi)perylene	1	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.020 J
Di-n-butylphthalate	NS	NS	ND	0.047 J	0.049 J	0.043 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	0.33	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	100	100	ND	ND	ND	ND	ND	ND	0.021 J	ND	ND	ND	ND	ND	ND	0.027 J
Fluorene	30	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	12	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	0.045 J	ND	ND
Phenanthrene	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	100	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.024 J
Total TICs	NS	NS										54.53				

Compound	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date													
			SB-7 (2-12")	SB-7 (12-24")	SB-7 (6'-8')	SB-6 (0-2")	SB-6 (2-12")	SB-6 (12-24")	SB-6 (4'-6.9')	SB-5 (4'-6')	SB-1B (12"-24")	TB-202 (12')	TB-204 (8'-9')	TB-206A (10'-11')	TB-207 (10'-11')	TB-208 (9')
			09/01/17	09/01/17	09/01/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	06/20/18	06/20/18	06/20/18	06/20/18	06/20/18
2-Methylnaphthalene	NS	NS	0.022 J	ND	ND	ND	ND	ND	ND	ND	ND	0.120 J	ND	ND	0.56	ND
Acenaphthene	100	100	0.029 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	100	100	0.071 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	NS	NS	0.089 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	1	1	0.49	0.085 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	1	1	0.57	0.088 J	ND	0.062 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	1	1	0.73	0.13	ND	0.061 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(ghi)perylene	1	100	0.28	0.05 J	ND	0.048 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	1	1	0.24	0.043 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	NS	NS	0.022 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	1	1	0.43	0.076 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	0.33	0.33	0.08 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	100	100	0.6	0.11	ND	ND	0.024 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	30	100	0.021 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.34	0.059 J	ND	0.054 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	12	100	0.033 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.56	ND
Phenanthrene	100	100	0.24	0.035 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	100	100	0.51	0.093 J	ND	ND	0.022 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total TICs	NS	NS										ND	ND	ND	ND	ND

NOTES

Results, SCOs and SCLs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(2) = Soil Cleanup Objective (SCO) for Restricted Residential Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

Highlighted value exceeds the Unrestricted Use SCO

SVOCs = Semi Volatile Organic Compounds

TICs = Tentatively Identified Compounds

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

Highlighted value exceeds the Restricted Residential Use SCO

NS = No Standard

J = Estimated Concentration

TABLE 5
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED TAL METALS: CONFIRMATORY SOIL SAMPLES
UST REMOVAL IRMs: COMPLETED IN NOVEMBER 2000 AND SEPTEMBER 2001 and
SITE REMEDIATION COMPLETED IN SEPTEMBER 2006

Analyte	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date																
			Waste Oil Tank Exc., Bottom	Waste Oil Tank Exc., Sidewall Comp.	Gas Tank Exc. West Wall-South	Gas Tank Exc. East Wall-South	Gas Tank Exc. South Wall	Gas Tank Exc. East Wall-North	Gas Tank Exc. NorthWall	Gas Tank Exc. West Wall-North	Bottom South Tank	Bottom Middle Tank	South Wall	North Wall	Bottom North Tank	East Wall-South	East Wall-North	West Wall-North	West Wall-South
			11/1/2000	11/1/2000	11/2/2000	11/2/2000	11/2/2000	11/3/2000	11/3/2000	11/3/2000	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001	9/26/2001
Aluminum	NS	NS	17,170	21,871	19,136	7,332	7,138	9,540	5,399	6,558	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic	13	16	**13.3**	12.4	8.33	5.08	2.37	2.76	2.19	2.23	NT	NT	NT	NT	NT	NT	NT	NT	NT
Barium	350	400	115	156	94.4	27.4	39.7	74.3	42.4	53.1	NT	NT	NT	NT	NT	NT	NT	NT	NT
Beryllium	7.2	72	ND	ND	0.521	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
Calcium	NS	NS	9,565	3,706	5,210	76,626	72,503	62,102	74,445	76,254	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chromium	30	110	21	25.2	22.8	10.9	10.2	13.1	8.64	9.6	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cobalt	NS	NS	10.4	12.4	9.3	5.27	4.44	6.69	4.07	4.54	NT	NT	NT	NT	NT	NT	NT	NT	NT
Copper	50	270	28.9	36.2	34.7	17.1	10.5	15.7	9.45	13	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron	NA	NS	26,844	32,442	28,272	15,105	11,897	16,883	9,644	11,444	NT	NT	NT	NT	NT	NT	NT	NT	NT
Lead	63	400	59.9	20.7	15.6	9.87	6.28	30.2	4.64	4.72	ND	ND	ND	ND	23.8	ND	31.4	ND	ND
Magnesium	NS	NS	8,440	6,294	6,728	40,463	30,752	28,099	31,999	30,700	NT	NT	NT	NT	NT	NT	NT	NT	NT
Manganese	1,600	2,000	644	712	354	638	355	452	323	352	NT	NT	NT	NT	NT	NT	NT	NT	NT
Mercury	0.18	0.81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	30	310	22.1	26.9	25.1	11	9.51	14.5	8.37	9.52	NT	NT	NT	NT	NT	NT	NT	NT	NT
Potassium	NS	NS	3,120	3,645	3,457	2,558	2,772	2,562	1,913	2,344	NT	NT	NT	NT	NT	NT	NT	NT	NT
Selenium	3.9	180	ND	ND	ND	0.708	0.487	ND	0.711	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
Silver	2	180	1.41	1.81	1.3	1.02	0.779	ND	ND	0.841	NT	NT	NT	NT	NT	NT	NT	NT	NT
Sodium	NS	NS	ND	ND	165	114	85.9	295	224	132	NT	NT	NT	NT	NT	NT	NT	NT	NT
Thallium	NS	NS	1.14	2.16	1.78	1.06	ND	ND	ND	1	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vanadium	NS	NS	33.3	38.8	35.1	20.9	17.5	21.1	13.6	15.7	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc	109	10,000	85.9	88.8	92.7	43.8	24	36.1	19.9	19.8	NT	NT	NT	NT	NT	NT	NT	NT	NT

Analyte	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date																
			South 8'	South-Dry Well 6'	North 7.5'	Dry Well North 7'	East 7.5'	Dry Well East 6'	West 8'	Dry Well West 6'	Bottom 10'	Dry Well Bottom 7.5'	Parking NW 7'	Parking East 7'	Parking N Wall 6'	Parking Bottom 9'	Parking NE Corner 7'	Parking W Sidewall 6'	
			9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/22/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006	9/27/2006	
Aluminum	NS	NS	2,100	3,400	3,400	3,300	6,000	34,000	5,900	38,000	3,900	3,300	4,000	4,100	3,200	4,300	4,700	6,000	
Arsenic	13	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Barium	350	400	33	23	42	40	53	38	51	34	45	43	27	39	ND	40	39	43	
Beryllium	7.2	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Calcium	NS	NS	63,000	80,000	84,000	85,000	75,000	76,000	36,000	79,000	84,000	73,000	72,000	68,000	76,000	78,000	98,000	56,000	
Chromium	30	110	3.1	4.6	4.6	4.6	7.2	5	7.1	5.8	5.4	4.7	5.2	5.9	4.7	5.9	6.5	6.6	
Cobalt	NS	NS	2.1	3.4	3.1	3.2	4.5	3.5	4.9	4.3	2.8	3.5	4.3	4	3.6	4	4.6	4.5	
Copper	50	270	7.8	8.6	7.5	9.2	12	11	12	11	7.4	10	13	12	13	7	13	13	
Iron	NA	NS	5,100	6,200	6,900	6,400	10,000	6,400	9,500	7,000	7,400	6,600	7,000	8,600	6,800	7,600	8,700	9,900	
Lead	63	400	5.5	9	7.8	25	11	8.7	15	9	8.5	8	7.3	11	11	6.9	10	15	
Magnesium	NS	NS	27,000	36,000	37,000	41,000	28,000	35,000	16,000	31,000	42,000	32,000	34,000	34,000	40,000	40,000	52,000	19,000	
Manganese	1,600	2,000	300	350	320	310	340	300	280	440	340	300	310	250	330	280	440	440	
Mercury	0.18	0.81	0.024	ND	0.026	0.035	ND	0.036	0.04	ND	ND	0.028	ND	ND	ND	ND	ND	ND	
Nickel	30	310	3.6	7	6.6	6.2	10	7.2	11	8.1	6.2	7.4	8.3	8.5	7.5	7.4	8.4	8.4	
Potassium	NS	NS	530	520	560	480	690	580	840	600	800	550	720	860	580	960	920	830	
Selenium	3.9	180	**11**	**6.3**	**7.4**	**8.5**	**8.3**	**5.6**	**6.7**	**5**	**13**	**8.9**	**5.4**	**9.5**	**7.8**	**8.5**	**7.3**	**6.5**	
Silver	2	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Sodium	NS	NS	300	250	390	260	300	250	380	290	420	250	420	440	350	430	470	490	
Thallium	NS	NS	21	26	27	31	22	26	18	26	39	25	22	24	26	27	32	18	
Vanadium	NS	NS	4	4.3	5.8	4.9	7.8	5	8.2	6.1	5.4	4.9	5.2	6.1	5	6.2	6.4	7.7	
Zinc	109	10,000	19	27	160	31	45	34	45	26	80	27	34	36	63	28	41	56	

NOTES

Results and SCOs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(3) = Soil Cleanup Objective (SCO) for Restricted Residential Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

IRM = Interim remedial measure

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

NT = Not Tested

J = Estimated Concentration

Highlighted value exceeds the Unrestricted Use SCO

Highlighted value exceeds the Restricted Residential Use SCO

TABLE 5A
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED TAL METALS: SOIL SAMPLES
COLLECTED DURING SUPPLEMENTAL STUDIES COMPLETED BETWEEN AUGUST 2017 AND JUNE 2018

Compound	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date													
			South Building	North East	North West	West	Lift	Dry Well	SB-1 (0-2")	SB-1 (2-12")	SB-1 (12-24")	SB-3	SB-1A (12-24")	SB-2	SB-4	SB-7 (0-2")
			02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	08/31/17	08/31/17	08/31/17	08/31/17	08/31/17	09/01/17	09/01/17	09/01/17
Aluminum	NS	NS	NT	NT	NT	NT	NT	NT	6,150	3,760	2,380	2,860	2,500	3,410	3,510	5,020
Antimony	NS	NS	NT	NT	NT	NT	NT	NT	0.411	0.358 J	ND	ND	ND	ND	ND	ND
Arsenic	13	16	NT	NT	NT	NT	NT	NT	2.88 J	2.04	1.5	1.82	1.52	2.72	2.68	3.37
Barium	350	400	NT	NT	NT	NT	NT	NT	45.9	23.4	12.1	46.3	13.5	51.8	41.3	37.6
Beryllium	7.2	72	NT	NT	NT	NT	NT	NT	0.286 J	0.187 J	0.108 J	0.137 J	0.116 J	0.183 J	0.154 J	0.274 J
Cadmium	2.5	4.3	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	0.225 J	0.231 J	0.425 J
Calcium	NS	NS	NT	NT	NT	NT	NT	NT	8,930	26,800	26,500	81,800	30,800	69,600	63,800	7,450
Chromium	30	180	NT	NT	NT	NT	NT	NT	8.71	5.68	4.1	5.46	3.94	6.51	6.48	6.55
Cobalt	NS	NS	NT	NT	NT	NT	NT	NT	4.18	2.81	2.09	2.88	2.11	3.27	3.38	3.41
Copper	50	270	NT	NT	NT	NT	NT	NT	11.5	10	9.39	8.78	10.4	9.5	9.2	9.63
Iron	NS	NS	NT	NT	NT	NT	NT	NT	11,300	7,950	6,050	7,110	6,490	8,020	8,140	8,930
Lead	63	400	NT	NT	NT	NT	NT	NT	9.12	5.37	3.75 J	6.97	4.03 J	4.88	4.58	22.1
Magnesium	NS	NS	NT	NT	NT	NT	NT	NT	4,830	12,300	13,400	34,200	16,300	30,300	23,600	4,340
Manganese	1,600	2,000	NT	NT	NT	NT	NT	NT	464	289	236	281	277	313	293	325
Mercury	0.18	0.81	NT	NT	NT	NT	NT	NT	0.03 J	0.02 J	ND	0.03 J	ND	0.02 J	ND	0.02 J
Nickel	30	310	NT	NT	NT	NT	NT	NT	8.08	5.9	4.25	6.55	4.32	7.44	7.68	6.56
Potassium	NS	NS	NT	NT	NT	NT	NT	NT	542	369	241	440	272	528	522	384
Selenium	3.9	180	NT	NT	NT	NT	NT	NT	0.429 J	0.22 J	0.234 J	0.514 J	0.33 J	ND	ND	ND
Sodium	NS	NS	NT	NT	NT	NT	NT	NT	29.4 J	46.4 J	47.1 J	116 J	50 J	126 J	114 J	35.7 J
Thallium	NS	NS	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	0.275 J	ND	ND
Vanadium	NS	NS	NT	NT	NT	NT	NT	NT	13.4	9.23	6.76	8.06	6.97	9.58	9.73	11.1
Zinc	109	10,000	NT	NT	NT	NT	NT	NT	42	29.7	23.4	21.7	25.2	83.6	24.5	43.8

Compound	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date													
			SB-7 (2-12")	SB-7 (12-24")	SB-7	SB-6 (0-2")	SB-6 (2-12")	SB-6 (12-24")	SB-6	SB-5	SB-1B	TB-202 (12')	TB-204 (8'-9')	TB-206A (10'-11')	TB-207 (10'-11')	TB-208 (9')
			09/01/17	09/01/17	09/01/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	06/20/18	06/20/18	06/20/18	06/20/18	06/20/18
Aluminum	NS	NS	5,560	6,840	3,340	3,980	3,970	9,390	8,640	7,530	3,820	NT	NT	NT	NT	NT
Antimony	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT
Arsenic	13	16	5.01	5.09	3.32	3.22	3.54	6.01	5.58	4.81	3.12	NT	NT	NT	NT	NT
Barium	350	400	54.4	54.4	44.3	27.3	41.5	69	64	60	24.3	NT	NT	NT	NT	NT
Beryllium	7.2	72	0.296 J	0.354 J	0.188 J	0.209 J	0.199 J	0.459	0.408 J	0.386 J	0.18 J	NT	NT	NT	NT	NT
Cadmium	2.5	4.3	0.521 J	0.522 J	0.214 J	0.279 J	0.338 J	0.569 J	0.512 J	0.462 J	0.288 J	NT	NT	NT	NT	NT
Calcium	NS	NS	6,990	21,100	76,300	27,200	49,400	18,400	25,800	42,700	45,100	NT	NT	NT	NT	NT
Chromium	30	180	8.4	9.36	6.75	5.53	5.68	12.1	11.6	11.6	6.08	NT	NT	NT	NT	NT
Cobalt	NS	NS	3.79	5.14	3.19	3.02	2.8	6.46	5.62	4.81	3.07	NT	NT	NT	NT	NT
Copper	50	270	12.9	13.7	10.1	12.5	12.7	19.6	14.8	12.4	9.73	NT	NT	NT	NT	NT
Iron	NS	NS	10,100	12,500	7,950	8,390	8,160	15,600	14,000	13,400	8,050	NT	NT	NT	NT	NT
Lead	63	400	52.3	31.3	7.1	6.56	14.9	30.5	48.2	5.84	6.55	NT	NT	NT	NT	NT
Magnesium	NS	NS	4,030	11,300	34,800	11,000	12,900	9,280	12,100	20,200	13,800	NT	NT	NT	NT	NT
Manganese	1,600	2,000	357	353	301	347	350	605	378	303	305	NT	NT	NT	NT	NT
Mercury	0.18	0.81	0.02 J	0.02 J	0.02 J	ND	ND	0.02 J	0.02 J	ND	ND	NT	NT	NT	NT	NT
Nickel	30	310	7.58	10.8	7.84	6.82	6.3	14	12.8	11.7	6.72	NT	NT	NT	NT	NT
Potassium	NS	NS	357	586	595	417	421	807	771	833	400	NT	NT	NT	NT	NT
Selenium	3.9	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT
Sodium	NS	NS	28.3 J	53.2 J	116 J	50.1 J	74 J	126 J	148 J	105 J	88.9 J	NT	NT	NT	NT	NT
Thallium	NS	NS	ND	ND	ND	0.305 J	ND	0.432 J	ND	ND	ND	NT	NT	NT	NT	NT
Vanadium	NS	NS	12.1	14.7	9.03	8.98	9.09	17.8	16.5	15.3	9.75	NT	NT	NT	NT	NT
Zinc	109	10,000	67	56.7	20.5	32.3	43.1	54.5	48.7	52.1	32.8	NT	NT	NT	NT	NT

NOTES

Results and SCOs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(3) = Soil Cleanup Objective (SCO) for Restricted Residential Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

NT = Not Tested J = Estimated Concentration IRM = Interim remedial measure

Highlighted value exceeds the Unrestricted Use SCO

Highlighted value exceeds the Restricted Residential Use SCO

TABLE 6
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED PESTICIDES AND PCBs: SOIL SAMPLES
COLLECTED DURING SUPPLEMENTAL STUDIES COMPLETED BETWEEN AUGUST 2017 AND JUNE 2018

Compound	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date													
			South Building	North East	North West	West	Lift	Dry Well	SB-1 (0-2")	SB-1 (2-12")	SB-1 (12-24")	SB-3	SB-1A (12-24")	SB-2	SB-4	SB-7 (0-2")
			02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	02/01/07	08/31/17	08/31/17	08/31/17	08/31/17	08/31/17	09/01/17	09/01/17	09/01/17
4,4'-DDD	0.0033	13	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.0033	8.9	NT	NT	NT	NT	NT	NT	0.000626 J	ND	ND	ND	ND	ND	ND	0.00266
4,4'-DDT	0.0033	7.9	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	0.00205 J
Delta-BHC	0.04	100	NT	NT	NT	NT	NT	NT	ND	ND	ND	0.000908 J	ND	ND	ND	ND
Dieldrin	0.005	0.2	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	0.000644 J
Endrin	0.014	11	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND
cis-Chlordane	0.094	4.2	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND
trans-Chlordane	0.094	4.2	NT	NT	NT	NT	NT	NT	ND	ND	ND	ND	0.000957 J	ND	ND	ND
Total PCBs	0.1	1	NT	NT	NT	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00426 J

Compound	Unrestricted Use SCO[(1)]	Restricted Residential Use SCO[(2)]	Sample Designation and Date													
			SB-7 (2-12")	SB-7 (12-24")	SB-7	SB-6 (0-2")	SB-6 (2-12")	SB-6 (12-24")	SB-6	SB-5	SB-1B	TB-202 (12')	TB-204 (8'-9')	TB-206A (10'-11')	TB-207 (10'-11')	TB-208 (9')
			09/01/17	09/01/17	09/01/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	09/05/17	06/20/18	06/20/18	06/20/18	06/20/18	06/20/18
4,4'-DDD	0.0033	13	ND	ND	ND	ND	ND	0.00083 J	ND	ND	ND	NT	NT	NT	NT	NT
4,4'-DDE	0.0033	8.9	**0.00707**	**0.00962**	ND	0.000445 J	0.000948 J	0.00114 J	ND	ND	ND	NT	NT	NT	NT	NT
4,4'-DDT	0.0033	7.9	**0.00461**	**0.00684**	ND	ND	**0.00372**	**0.00375 P**	ND	ND	ND	NT	NT	NT	NT	NT
Delta-BHC	0.04	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	NT	NT	NT	NT	NT
Dieldrin	0.005	0.2	ND	ND	ND	ND	0.000702 J	0.00133 P	ND	ND	ND	NT	NT	NT	NT	NT
Endrin	0.014	11	ND	ND	ND	ND	ND	0.000591 J	ND	ND	ND	NT	NT	NT	NT	NT
cis-Chlordane	0.094	4.2	ND	ND	ND	ND	ND	0.000993 J	ND	ND	ND	NT	NT	NT	NT	NT
trans-Chlordane	0.094	4.2	ND	ND	ND	ND	0.000942 J	0.00122 J	ND	ND	ND	NT	NT	NT	NT	NT
Total PCBs	0.1	1	0.00639 J	0.0108 J	ND	0.00519 J	0.0185 J	0.0462 J	0.0121 J	ND	ND	NT	NT	NT	NT	NT

NOTES

Results and SCOs are presented in milligrams per kilogram (mg/kg) or parts per million (ppm).

(1) = Soil Cleanup Objective (SCO) for Unrestricted Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

(3) = Soil Cleanup Objective (SCO) for Restricted Residential Use as referenced in 6 NYCRR Part 375 dated 12/14/06.

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

NT = Not Tested

IRM = Interim remedial measure

J = Estimated Concentration

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

Highlighted value exceeds the Unrestricted Use SCO

Highlighted value exceeds the Restricted Residential Use SCO

TABLE 7
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED VOCS PLUS TICS: GROUNDWATER SAMPLES

Compound	NYSDEC Standard or Guidance Value[(1)]	Sample Designation and Date																
		MW-2			MW-3			MW-4			MW-5			MW-6			MW-7	
		8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	12/22/09	9/27/17
1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	NS	ND	NT	ND	ND	NT	ND	ND	NT	ND	ND	NT	ND	ND	NT	ND	NT	NT
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	NS	ND	NT	ND	ND	NT	ND	ND	NT	ND	ND	NT	ND	ND	NT	ND	NT	NT
Methylene chloride	5	1.4	ND	ND	1.5	ND	ND	1.6	ND	ND	1.8	ND	ND	2.2	ND	ND	ND	ND
Toluene	5	ND	ND	ND	1.6	ND	ND	1.8	ND	ND	260	ND	ND	140	ND	ND	ND	ND
m,p-Xylenes	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOC TICs	NS																	

Compound	NYSDEC Standard or Guidance Value[(1)]	Sample Designation and Date												
		RW-1			RW-2				RW-3					MW-A
		8/22/07	12/22/09	9/27/17	8/22/07	8/22/07 - DUP	12/22/09	9/27/17	8/22/07	12/22/09	12/22/2009-DUP	9/27/17	9/27/2017-DUP	07/02/18
1,2-Dichloroethene	5	7.1	4.86	ND	4.2	4.4	2.29	ND	5.8	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,400**
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**670**
2-Butanone (MEK)	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30 J
4-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14 J**
Acetone	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**72 J**
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**35 J**
Cyclohexane	NS	ND	NT	ND	ND	ND	NT	ND	ND	NT	NT	ND	ND	280
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,600**
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**99 J**
Methylcyclohexane	NS	ND	NT	ND	ND	ND	NT	ND	ND	NT	NT	ND	ND	220 J
Methylene chloride	5	1.6	ND	ND	1.6	2.4	ND	ND	1.7	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	9.3	8.9	ND	ND	ND	ND	ND	ND	ND	**490**
m,p-Xylenes	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**6,300**
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**29J**
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**270**
o-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,200**
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**16 J**
Tetrachloroethene	5	28	22	2.45	2.4	2.6	3.1	ND	22	2.71	2.0	ND	ND	ND
Trichloroethene	5	9.8	8.44	ND	4.3	4.4	ND	ND	7.6	ND	ND	ND	ND	ND
Total VOC TICs	NS													11,744

NOTES

Results and groundwater standards/guidance values are in micrograms per liter (µg/l) or parts per billion (ppb)

(1) = Groundwater standard or guidance value as referenced in NYSDEC TOGS 1.1.1 dated June 1998 as amended in January 1999, April 2000,and June 2004.

VOCs = Volatile Organic Compounds

TICs = Tentatively Identified Compounds

NS = No Standard/Guidance Value

J = Estimated Concentration

Highlighted value exceeds the groundwater standard or guidance value

TABLE 8
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER NEW YORK
NYSDEC SITE # B00131
SUMMARY OF DETECTED SVOCS PLUS TICS: GROUNDWATER SAMPLES

Compound	NYSDEC Guidance Value[(1)]	Sample Designation and Date																
		MW-2			MW-3			MW-4			MW-5			MW-6			MW-7	
		8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	8/22/07	12/22/09	9/27/17	12/22/09	9/27/17
2-Methylnaphthalene	NS	NT	ND	ND	ND	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	NT	ND	ND	ND	ND	ND	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total SVOC TICs	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Compound	NYSDEC Standard or Guidance Value[(1)]	Sample Designation and Date												
		RW-1			RW-2				RW-3					MW-A
		8/22/07	12/22/09	9/27/17	8/22/07	8/22/07 - DUP	12/22/09	9/27/17	8/22/07	12/22/09	12/22/2009-DUP	9/27/17	9/27/2017-DUP	07/02/18
2-Methylnaphthalene	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	230
Naphthalene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**390**
Total SVOC TICs	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,414

NOTES

Results and groundwater standards/guidance values are in micrograms per liter (µg/l) or parts per billion (ppb)

(1) = Groundwater standard or guidance value as referenced in NYSDEC TOGS 1.1.1 dated June 1998 as amended in January 1999, April 2000,and June 2004.

SVOCs = Semi-Volatile Organic Compounds

TICs = Tentatively Identified Compounds

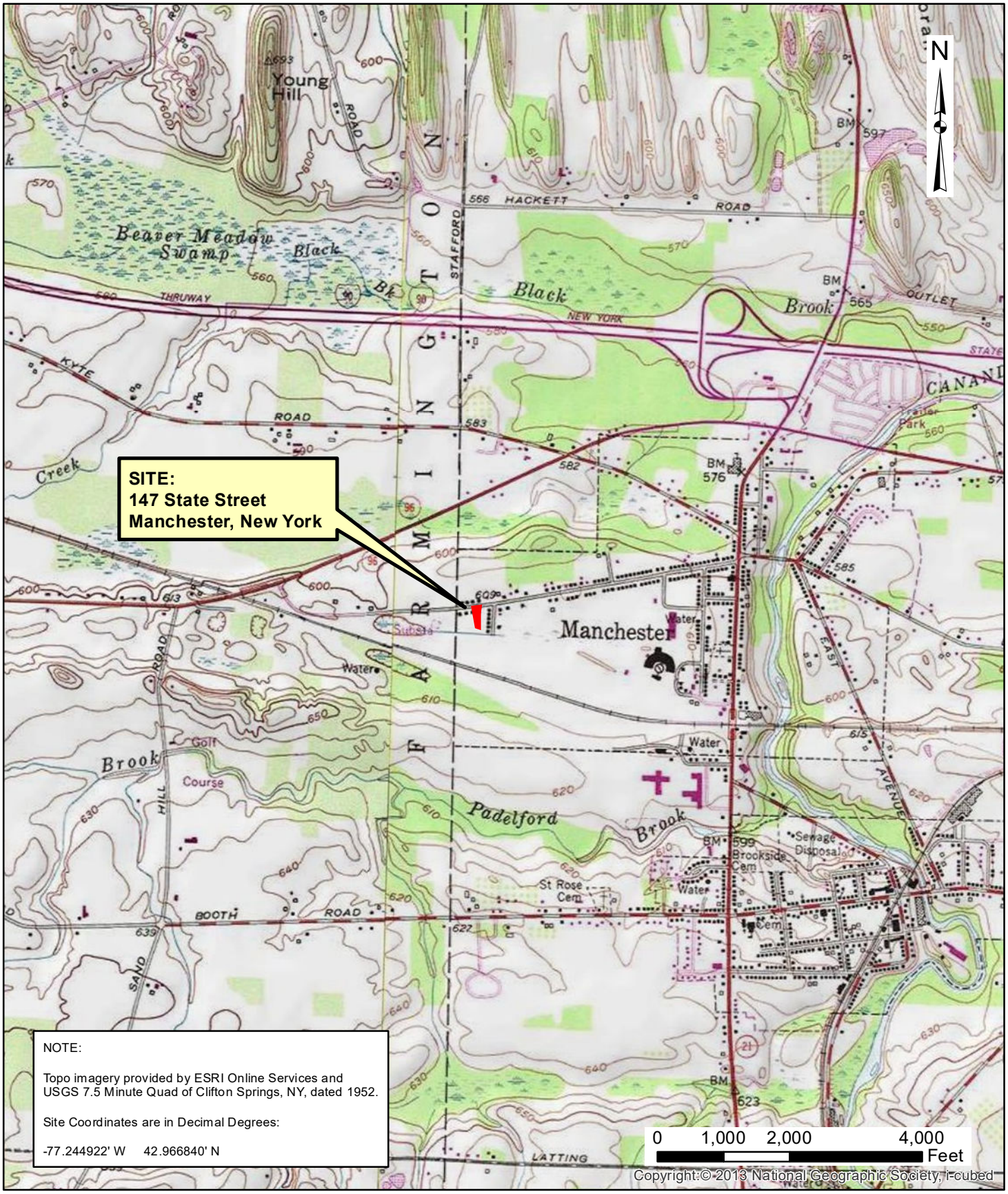
NS = No Standard/Guidance Value

ND = Not Detected at a concentration greater than the detection limit reported by the analytical laboratory

NA = Not Applicable

Highlighted value exceeds the groundwater guidance value

FIGURES



Document Path: E:\GIS Mapping\5474S-18Manche\Final Engineering Report\5474S-05-FER - Locus Map.mxd

Last Date Saved: 29 Jan 2019

Date: 04-12-2018 Drawn By: CAH Scale: AS NOTED	**DAY ENGINEERING, P.C.** Environmental Engineering Consultants Rochester, New York 14606 New York, New York 10170	Project Title: FREDERICK PROPERTY 147 STATE STREET MANCHESTER, NEW YORK NYSDEC SITE: B00131-8 FINAL ENGINEERING REPORT Drawing Title: Project Locus Map	Project No. 5474S-18 FIGURE 1

Last Date Saved: 29 Jan 2019 Document Path: E:\GIS Mapping\5474S-18Manche\Final Engineering Report\5474S-02-FER - SitePlan Adj Properties.mxd

FIGURE 2

Project No. 5474S-18

Project Title
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER, NEW YORK
NYSDEC SITE: B00131-8
FINAL ENGINEERING REPORT

Drawing Title
Site Plan with Adjacent Properties

day
DAY ENGINEERING, P.C.
Environmental Engineering Consultants
Rochester, New York 14606
New York, New York 10170

DESIGNED BY	DATE
RLK	01-2019
DRAWN BY	DATE DRAWN
CPS	01-2019
SCALE	DATE ISSUED
AS NOTED	01-21-2019

Last Date Saved: 29 Jan 2019 Document Path: E:\GIS Mapping\5474S-18Manche\Final Engineering Report\5474S-04-FER - SamplePlan.mxd

FIGURE 3

Project No. 5474S-18

Project Title
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER, NEW YORK
NYSDEC SITE: B00131-8
FINAL ENGINEERING REPORT

Drawing Title
Site Plan with 2017/2018 Samples Locations

day
DAY ENGINEERING, P.C.
Environmental Engineering Consultants
Rochester, New York 14606
New York, New York 10170

DESIGNED BY	DATE
RLK	01-2019
DRAWN BY	DATE DRAWN
CPS	01-2019
SCALE	DATE ISSUED
AS NOTED	01-07-2019

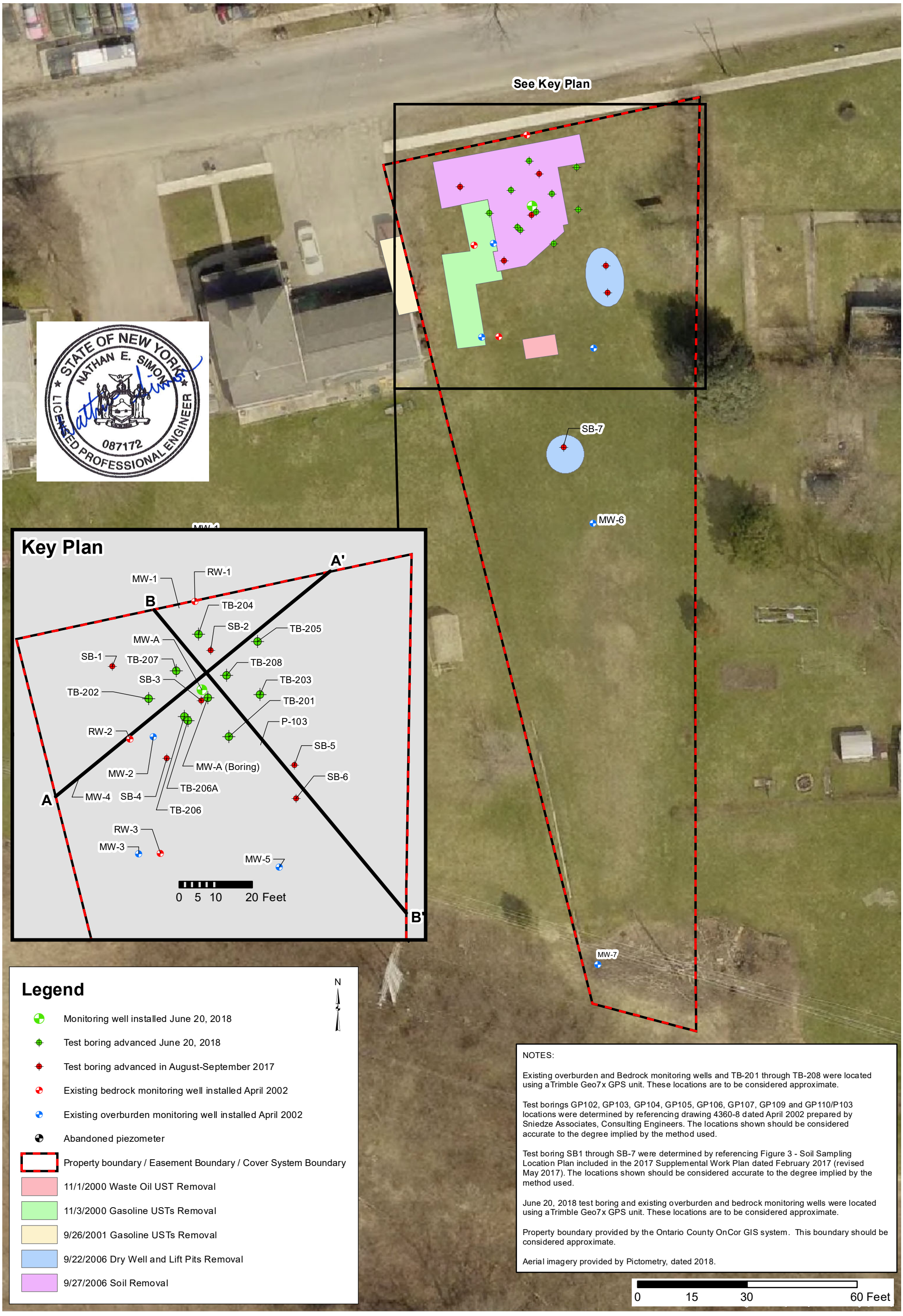


FIGURE 4

Project No. 5474S-18

Project Title
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER, NEW YORK
NYSDEC SITE: B00131-8
FINAL ENGINEERING REPORT

Drawing Title
Site Plan Depicting Soil Remvoal Areas and Cross Section Lines A-A' and B-B'

DAY ENGINEERING, P.C.
Environmental Engineering Consultants
Rochester, New York 14606
New York, New York 10170

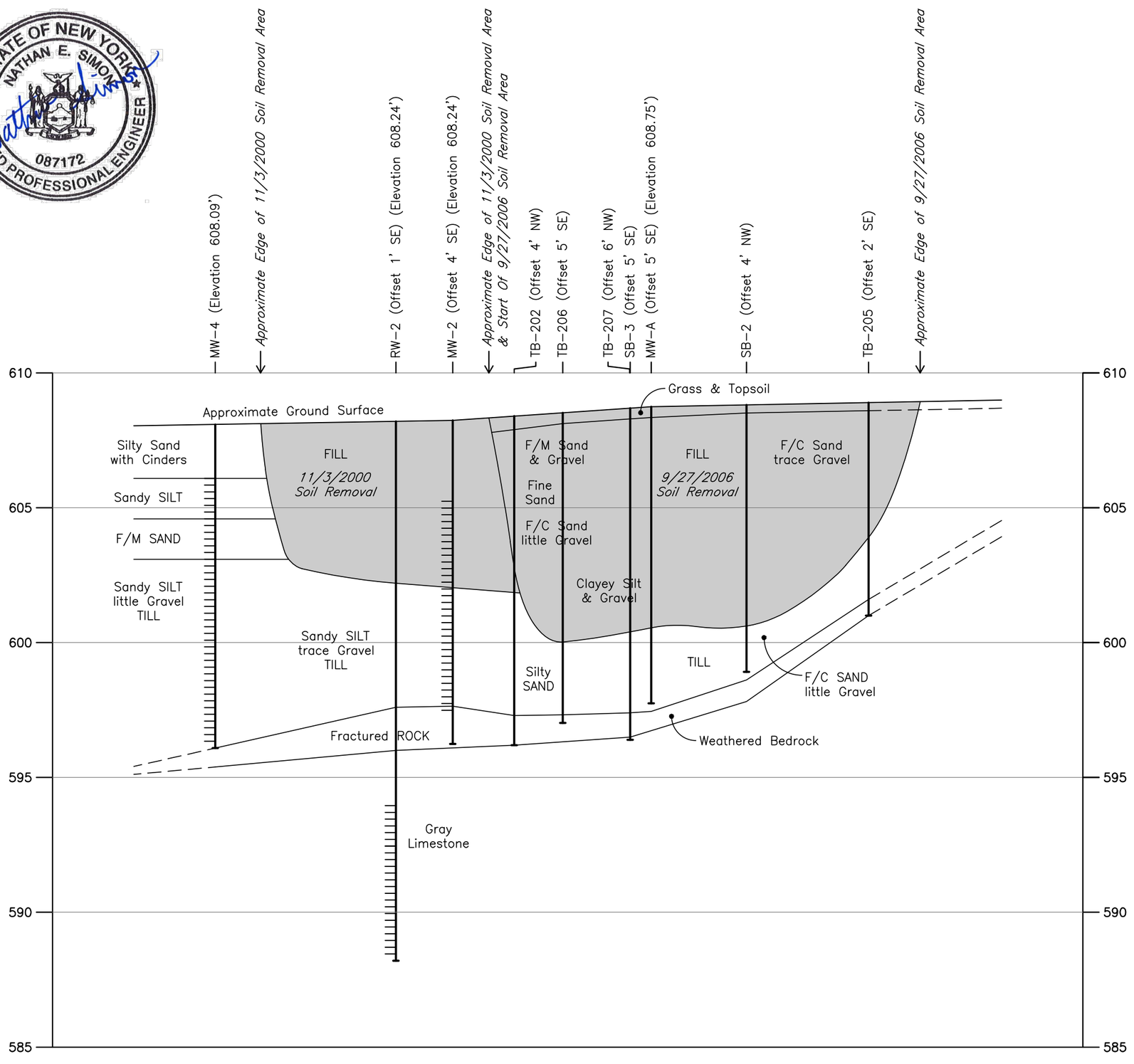
DESIGNED BY	DATE
RLK	12-2018
DRAWN BY	DATE DRAWN
CPS	12-2018
SCALE	DATE ISSUED
AS NOTED	12-17-2018

1 Fig 5 SUBSURFACE CROSS SECTION A–A'

1" = 10' Horizontal
1" = 4" Vertical

0' 10' 20' 30'

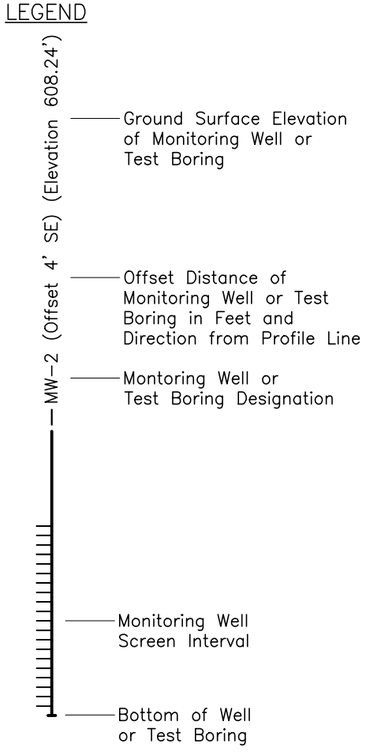
0' 4' 8' 12'



NOTES:

1. Test borings TB–202, TB–206, TB–207, SB–3, MW–A, SB–2 and TB–205 were completed in 2017 and 2018 (i.e., subsequent to the soil removal and backfilling completed in 2000 and 2006).
2. The areal and vertical extent of the soil removal completed in 2000 and 2006 is based on the "Final Engineering Report for the Frederick Property Environmental Restoration Project", submitted by the Village of Manchester, NY, with date last revised November 2016; and the findings of test borings advanced in 2017 and 2018. The limits shown should be considered approximate and accurate to the degree implied by the methods used.

LEGEND



FIELD VERIFIED BY	DATE	DRAWN BY	DATE DRAWN	SCALE	DATE ISSUED
CAH	12/2018	RJM/Tw	12/12/2018	As Noted	1/29/2019

DAY ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERING CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

PROJECT TITLE
FREDERICK PROPERTY 147 STATE STREET
MANCHESTER, NEW YORK
NYSDEC SITE B00131-8
FINAL ENGINEERING REPORT

DRAWING TITLE
Subsurface Cross Section A-A'

PROJECT NO.
5474S-18

FIGURE 5

Reference Files Attached:
REF1: Subsurface Cross Section A–A.dwg
REF2:
REF3:
REF4:

File Name: P:\Drawings\Manchester\Subsurface Cross Section Plot Sheet.dwg
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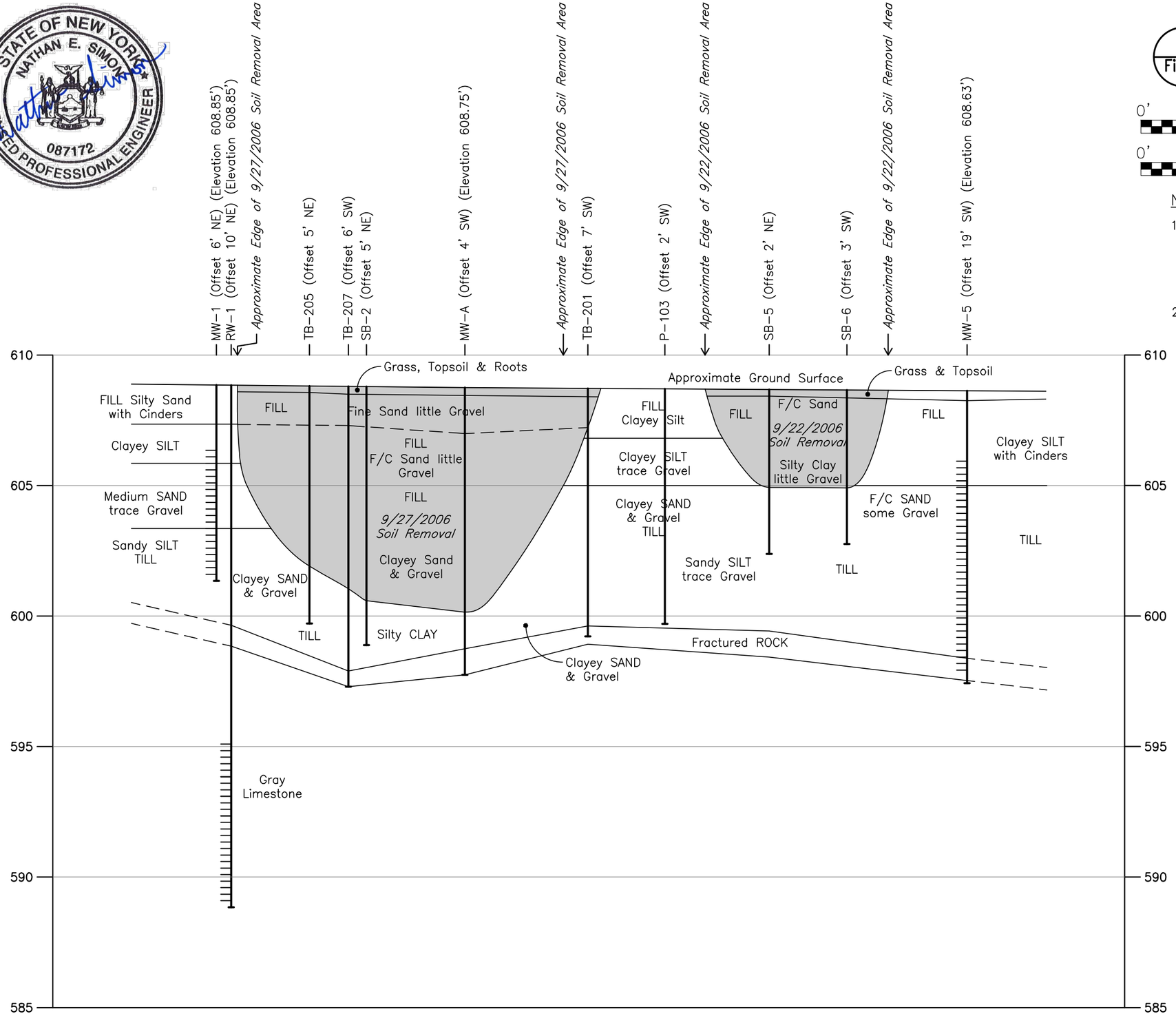
DayEng_AnsiB2



1 / Fig 6

SUBSURFACE CROSS SECTION B–B'

1" = 10' Horizontal
1" = 4" Vertical

0' 10' 20' 30'

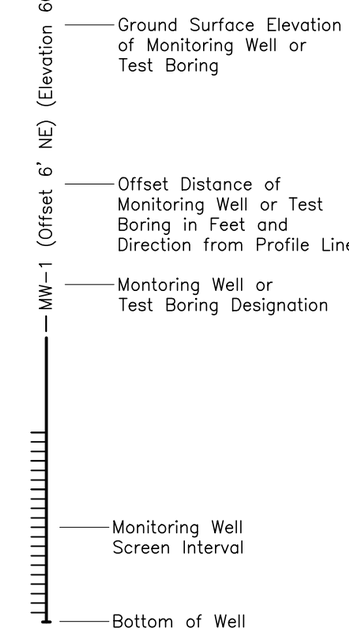
0' 4' 8' 12'

NOTES:

1. Test borings TB–202, TB–206, TB–207, SB–3, MW–A, SB–2 and TB–205 were completed in 2017 and 2018 (i.e., subsequent to the soil removal and backfilling completed in 2000 and 2006).

2. The areal and vertical extent of the soil removal completed in 2000 and 2006 is based on the "Final Engineering Report for the Frederick Property Environmental Restoration Project", submitted by the Village of Manchester, NY, with date last revised November 2016; and the findings of test borings advanced in 2017 and 2018. The limits shown should be considered approximate and accurate to the degree implied by the methods used.

LEGEND



FIELD VERIFIED BY	DATE	DRAWN BY	DATE DRAWN	SCALE	DATE ISSUED
CAH	12/2018	RJM/Tw	12/12/2018	As Noted	1/29/2019

DAY ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERING CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

PROJECT TITLE
FREDERICK PROPERTY 147 STATE STREET
MANCHESTER, NEW YORK
NYSDEC SITE B00131-8
FINAL ENGINEERING REPORT

DRAWING TITLE
Subsurface Cross Section B-B'

PROJECT NO.
5474S-18

FIGURE 6

Reference Files Attached:
REF1: Subsurface Cross Section A–A.dwg
REF2:
REF3:
REF4:

File Name: P:\Drawings\Manchester\Subsurface Cross Section Plot Sheet.dwg
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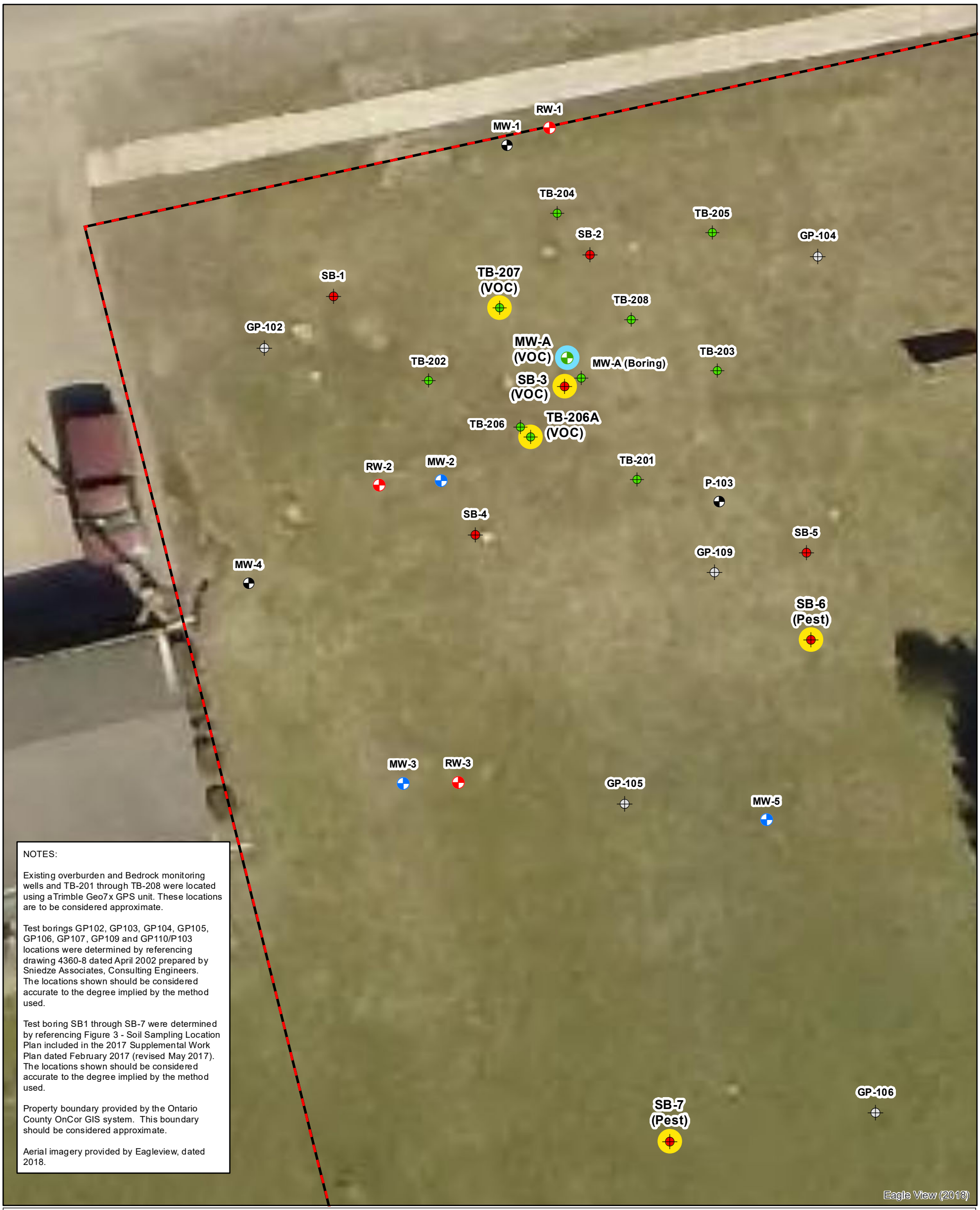
Time Plotted: Tuesday, January 29, 2019 7:25:26 AM
Pen Setting File: 800psFullcolor.ctb

ANSI "B" 11x17
DayEng_AnsiB2



NOTES:

Existing overburden and Bedrock monitoring wells and TB-201 through TB-208 were located using a Trimble Geo7x GPS unit. These locations are to be considered approximate.

Test borings GP102, GP103, GP104, GP105, GP106, GP107, GP109 and GP110/P103 locations were determined by referencing drawing 4360-8 dated April 2002 prepared by Sniedze Associates, Consulting Engineers. The locations shown should be considered accurate to the degree implied by the method used.

Test boring SB1 through SB-7 were determined by referencing Figure 3 - Soil Sampling Location Plan included in the 2017 Supplemental Work Plan dated February 2017 (revised May 2017). The locations shown should be considered accurate to the degree implied by the method used.

Property boundary provided by the Ontario County OnCor GIS system. This boundary should be considered approximate.

Aerial imagery provided by Eagleview, dated 2018.

Legend

- Sample location with one or more tested constituent concentrations exceeding Unrestricted Use SCO
- Sample location with one or more tested constituent concentrations exceeding TOGS 1.1.1
- Sample location with one of more tested constituent concentrations exceeding Restricted Residential Use SCO
- Test boring advanced August 21, 2001
- Overburden monitoring well installed August 21, 2001
- Monitoring well installed June 20, 2018
- Test boring advanced June 20, 2018
- Test boring advanced in August-September 2017
- Bedrock monitoring well installed April 2002
- Overburden monitoring well installed April 2002
- Property Boundary / Easement Boundary / Cover System Boundary

VOC - Volatile Organic Compounds

Pest - Pesticides

N

0 5 10 20 Feet

Project No. 5474S-18

FIGURE 7

Project Title
FREDERICK PROPERTY
147 STATE STREET, MANCHESTER, NEW YORK
NYSDEC SITE: B00131-8
FINAL ENGINEERING REPORT

Drawing Title
Site Plan with 2017/2018 Samples Exceeding Soil Cleanup Objectives (SCOs)

day
DAY ENGINEERING, P.C.
Environmental Engineering Consultants
Rochester, New York 14606
New York, New York 10170

DESIGNED BY	DATE
RLK	01-2019
DRAWN BY	DATE DRAWN
CPS	01-2019
SCALE	DATE ISSUED
AS NOTED	01-21-2019