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New York State Department of Environmental Conservation

SITE MANAGEMENT PLAN

Schuyler Heights Fire District Station House Site, Town of Colonie, Albany County, New York

Site No. E401050

October 2018

SITE MANAGEMENT PLAN

Schuyler Heights Fire District Station House Site

Prepared for:

New York State Department of Environmental Conservation

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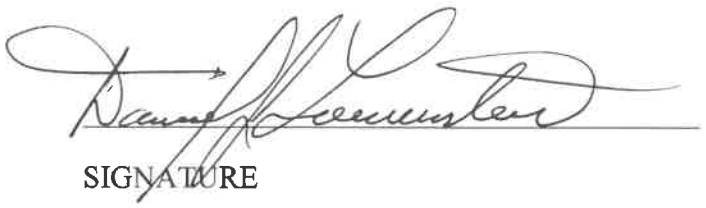
Date:

October 2018

Site Management Plan
Schuyler Heights Fire District Station House Site,
Site Number E401050
Albany County, Town of Colonie, New York
October 2018

I, Daniel J. Loewenstein, certify that I am currently a registered professional engineer in the State of New York and that this Site Management Plan was prepared in accordance with applicable statutes and regulations, and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



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Acronyms and Abbreviations

AMSL – Above Mean Sea Level

BGS – Below Ground Surface

PID – Photo-Ionization Detector

ROD – Record of Decision

SSAL – Site Specific Action Levels

SMP – Site Management Plan

PFAS – Perfluoroalkyl Substances

PFAA – Perfluoroalkyl Acids

HDPE – High-Density Polyethylene

1 Introduction

The Schuyler Heights Fire District Station House Site (Site), Site No. E401050, was identified for remediation by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) in March 2008 due to the presence of hazardous substances that created threats to human health and/or environment. The Site is owned by the Schuyler Heights Fire District (SHFD) (Owner).

1.1 Purpose of the Site Management Plan

The general purpose of this Site Management Plan (SMP) is to establish protocols for managing the Site following the completion of the remedy to address Semi-Volatile Organic Compounds (SVOCs) and Inorganics (metals), Volatile Organic Compounds (VOCs), Polychlorinated Biphenyls (PCBs), and Pesticides in general accordance with the Record of Decision (ROD), as issued by the NYSDEC in March 2008. More specifically, one objective of the SMP is to set guidelines for management of soil and groundwater during future activities at the Site. This plan is not intended to serve as a design document for potential construction activities related to Site redevelopment or reuse. The SMP is a portion of the overall remedy which addresses potential future disturbances or use of residually contaminated media remaining on the Site after other elements of the remedy have been implemented. This SMP addresses potential environmental concerns related to the management of Site soil and groundwater and has been reviewed and approved by the NYSDEC. This SMP has been prepared by Arcadis CE, Inc., who provided design and construction phase engineering services for the remedial activities.

Summaries of previous environmental investigations have been restated in this SMP, where appropriate. The Owner should refer to the original, approved investigation reports for more detail, as needed. It remains the responsibility of future Site owners and potential Site developers to prepare and obtain appropriate approvals for all future engineering designs associated with the Site. Similarly, it is also their responsibility to conduct all future construction activities in a manner that incorporates and is compatible with the requirements for soil and groundwater management as set forth in this SMP.

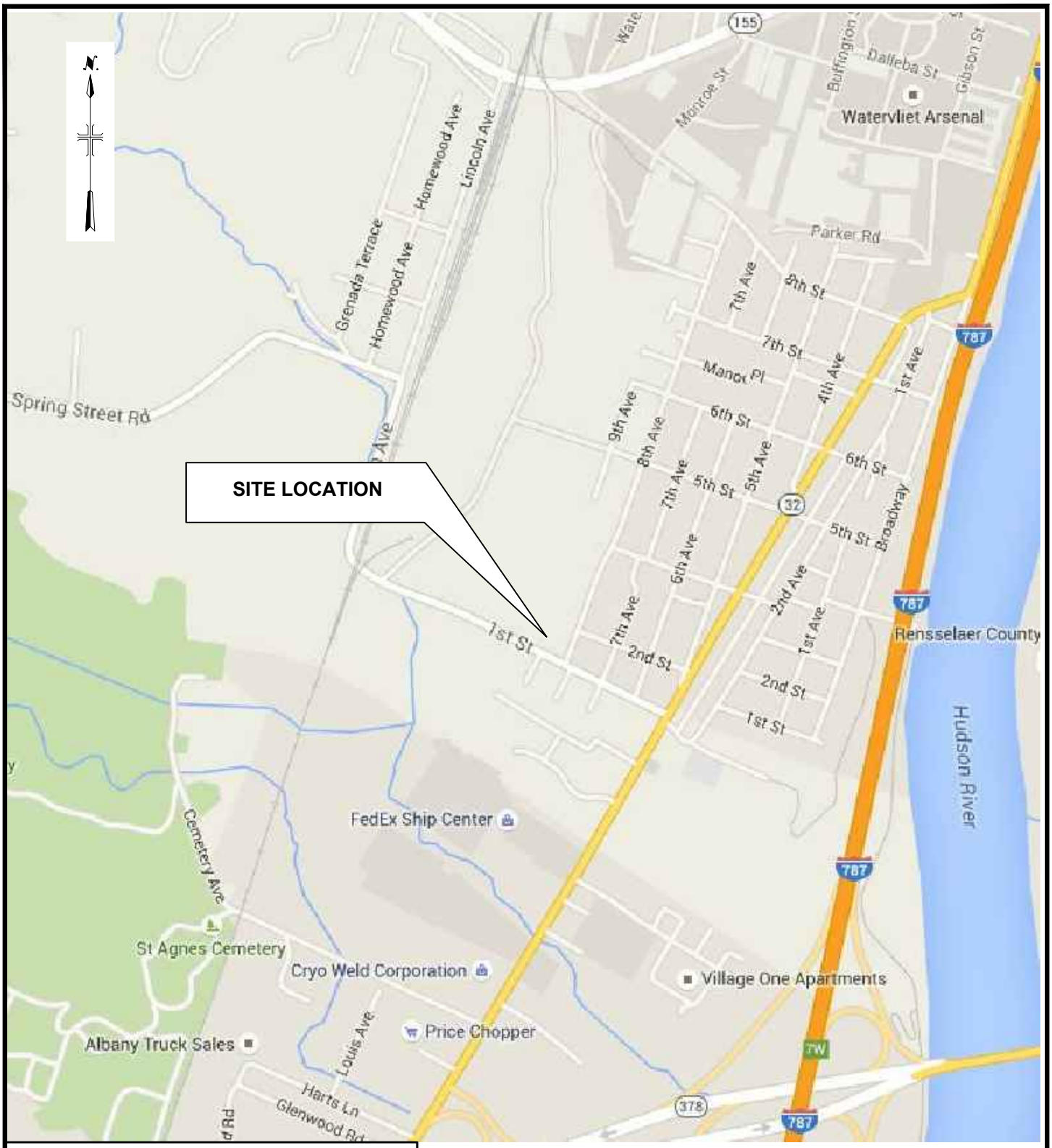
1.2 Site Description

The Schuyler Heights Fire District Station House Site is located in the Town of Colonie, Albany County, New York. It is located at 849 First Street. The location of this Site is indicated on Figure 1 (Site Location) and Figure 2 (Site Map).

The Site, as defined by the NYSDEC, consists of approximately 7.5 acres.

The topography of the area is relatively flat and generally sloping downward from northeast to south. The Site is bounded by a commercial property to the north and west, residential parcels to the east, and First Street to the south.

Figure 1 Site Location



0 1000' 2000'

APPROX. SCALE

SCHUYLER HEIGHTS FIRE DISTRICT STATION HOUSE SITE
NYSDEC SITE NO. E401050
TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

SITE LOCATION MAP

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FIGURE 1

Figure 2 Site Map

0 40’ 80’ 160’

SCALE: 1”=80’

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SCHUYLER HEIGHTS FIRE DISTRICT STATION HOUSE SITE
NYSDEC SITE NO. E401050
TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

SITE MAP

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FIGURE 2

USER: HAUSMANN FILENAME: G:\ACAD\PROJ\00266425.0000\FIGURES\SCHUYLER HEIGHTS\FIGURE 2-SITE MAP.DWG SAVE DATE: 4/9/2018 7:14 AM PLOT DATE: 4/9/2018 7:22 AM

1.3 Geology and Hydrogeology

Underlying native soil at the Site is composed of fine to course sand with varying amounts of silt and gravel. A layer of fill exists over the majority of the Site, at depths averaging five to seven feet below ground surface (bgs), with maximum depths up to 16 feet bgs. Bedrock below the Site is from the Normanskill Formation, and ranges from a depth of 17 feet bgs in the northern portion of the Site to a surface outcropping in the northeast corner of the Site. Shallow bedrock was encountered in the northeast portion of the Site during remedial activities.

Groundwater at the Site is shallow. The water table has been measured between 7.5 feet and 13.5 feet bgs. The general direction of groundwater flow is to the southwest.

1.4 Site History

The Site has been the location of many commercial activities since the early 1900s. Initially, the D&H Rail Yard extended onto the property with loading/unloading operations to transport various materials. Indications of this use include historical aerial photos and the discovery of railroad ties during investigatory activities. More recently, the Site had been utilized by scrap metal salvage businesses, which was evidenced by the unearthing of pieces of salvaged scrap metal, small amounts of solid waste and processed material, and some crushed and deteriorated metal containers during remedial activities.

At some time, a large quantity of fill was placed at the Site. The fill contains slag, cinders, ash, brick, asphalt, wood, and metal. The origin of some of the fill is likely the former steel mills in the immediate vicinity of the Site, as it resembles material observed at those sites.

1.5 Summary of Remedial Activities

Previous investigations of the Site include the following:

- A limited Phase I Environmental Site Assessment (ESA) performed in 2002 for a 3-acre portion of the property to document surficial conditions and perform a historical document review.
- A Phase II ESA performed in 2002, which included excavation of 12 test pits and installation of one temporary monitoring well. Samples from the test pits and monitoring well were tested for SVOCs, VOCs, and methyl tertiary butyl either (MTBE). No compounds were detected.
- A Remedial Investigation conducted between June and August 2006, that included test trenches, test pits and soil borings, and installation of monitoring wells. The investigation determined SVOCs, inorganics (metals), VOCs, PCBs and Pesticides as the contaminants that exceeded the Site Clean-Up Goals (SCGs)

The Site Standards, Criteria, and Guidance (SCGs) are based on Title 6 of the New York Code of Rules and Regulations (6NYCRR) Part 375 Restricted Soil Cleanup Objectives [SCOs] for Commercial Use, Table 375-6.8(b), NYSDEC's "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code for Water.

In 2016, a soil and gravel surface cover system was installed on the Site. The primary objective of the remedy implemented is to eliminate or mitigate potential human health risks related to the presence of the identified contaminants present in surface and subsurface soil by eliminating the potential for direct contact between potential receptors and the contaminated soil.

1.6 Contemplated Use

The Site's Owner is contemplating future development of the Site as a new Station House.

The Record of Decision for the Site requires that an institutional control be imposed in the form of an environmental easement that:

- Requires compliance with the approved Site Management Plan;
- Limits the use and development of the property to commercial or industrial activities;
- Restricts the use of groundwater as a source of potable or process water without necessary water quality treatment, as determined by the NYSDOH; and
- Requires the property owner to complete and submit to the NYSDEC a periodic certification of institutional and engineering controls.

2 Site Management

2.1 Surface Cover

The primary purposes of the surface cover system are to minimize the potential for:

- Human contact with contaminated fill material; and
- Contaminated surface water runoff from the property.

The cover system consists of the following:

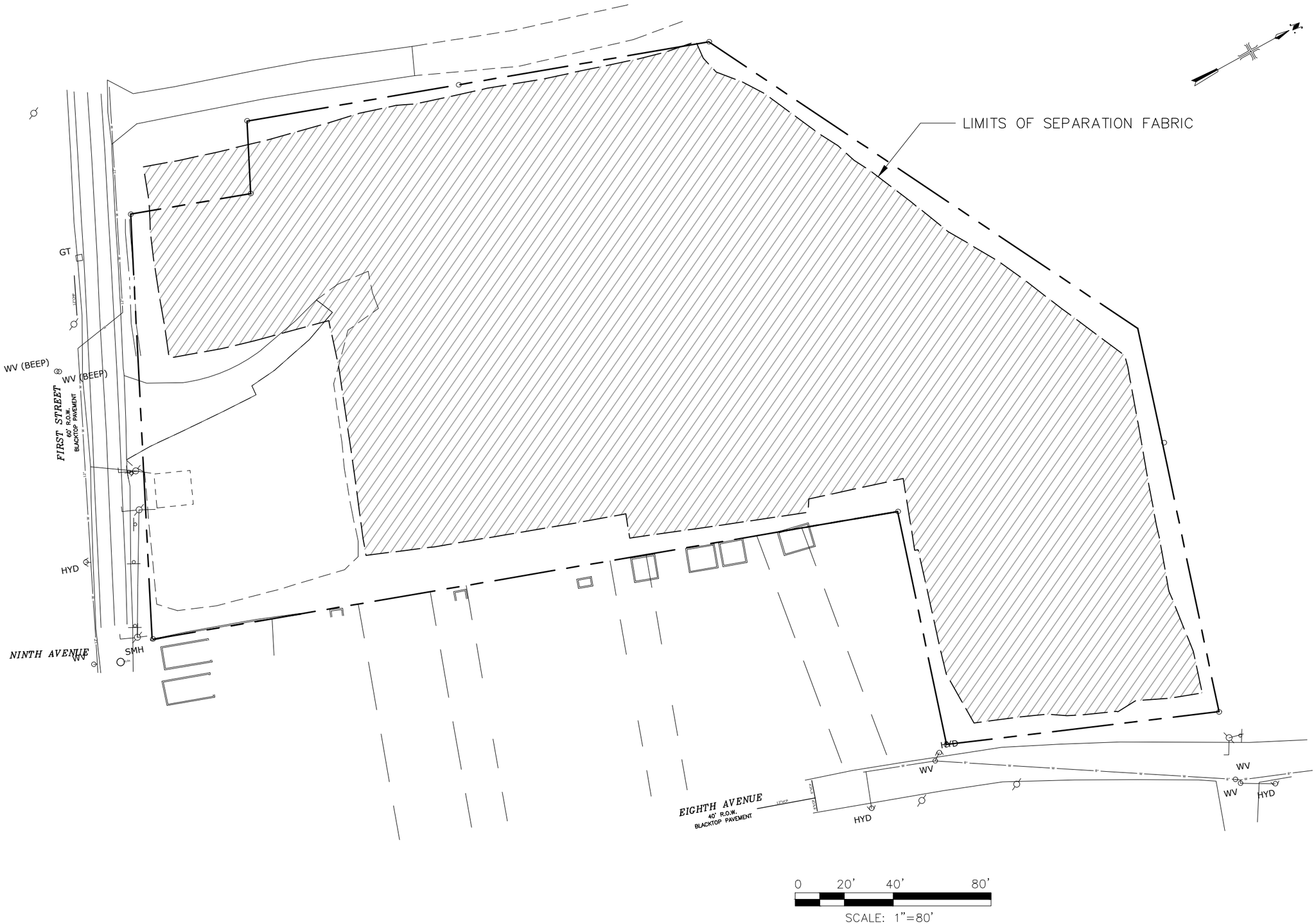
- Type I Engineered Cover - 12 inches of vegetated soil and general fill underlain by separation fabric. This was installed on the northern and central parts of the Site; and
- Type III Engineered Cover - 12 inches of gravel cover, with new portions underlain by separation fabric. This was installed on the southern portion of the Site in areas upon which paved driveways and aprons are contemplated during future development.

The areal extent of the separation fabric and the final topography of the site cover are shown on Figures 3 and 4, respectively. Appendix G, showing the final property survey depicts the extent of the Type I and Type III Engineered Covers.

2.2 Management of Soils/Fill and Long-Term Maintenance of Cover System

The purpose of this section is to provide environmental guidelines for management of subsurface soils/fill and repair/replacement of the cover system during any future intrusive work which breaches the cover system. Such work could expose contamination remaining in the underlying soil. This contamination was identified through historical investigatory activities and the character of it is summarized in Appendix D.

Figure 3 Limits of Separation Fabric



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NYSDEC SITE NO. E401050
TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

LIMITS OF SEPARATION FABRIC

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FIGURE 3

Figure 4 Final Topography of Soil Cover

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NYSDEC SITE NO. E401050
TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

FINAL TOPOGRAPHY OF SOIL COVER

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FIGURE 4

2.2.1 Site Preparation

As part of future development or future intrusive on-site activities, the Site may require grading prior to cover system replacement. The fill material disturbed during intrusive activities will be graded to the surface required for redevelopment. Trees, shrubs, roots, brush, rubbish, scrap, debris, pavement, curbs, fences, etc. will be removed and properly disposed off-site in accordance with applicable solid waste regulations. Only exempt materials, as defined in 6 NYCRR Part 360-7.1(b)(1), will be allowed to be temporarily stockpiled on the Site. Prior to cover system replacement, protruding material will be removed from the ground surface. Burning will not be allowed on the Site.

2.2.2 Excavation and Grading Below the Cover System

During construction activities at the Site, the excavation of soil/fill material may be necessary for the construction of foundations, utility corridors and other structures. For excavation work below the cover system, a Professional Engineer's representative with construction/remediation experience, representing the subject property owner or developer will monitor soil/fill excavations or disturbances. This Professional Engineer (P.E.) must also provide a stamped/signed certification that excavation work below the cover system and subsequent repair/replacement of the cover system was conducted in a manner consistent with this SMP. Prior notification of any disturbances and this certification shall be provided to the NYSDEC.

During excavation performed to support development activities, the soil/fill will be inspected for staining, sampled to detect and quantify the presence of metals and field screened for the presence of VOCs with a photoionization detector (PID).

Excavated soil/fill may be used on-site as fill below the cover system. Soil/fill that is excavated as part of development which cannot be used as fill below the cover system will be further characterized prior to transportation off-site for disposal at an appropriate permitted facility.

2.2.2.1 Visibly Impacted Soils

Stained soil is soil that is observed to be discolored, tinted, dyed, unnaturally mottled, or has a sheen. Excavated soil/fill that is visibly stained or produces elevated PID readings (i.e., sustained 10 ppm or greater) will be considered potentially contaminated and stockpiled on the property for further assessment. The potentially contaminated soil/fill will be stockpiled (maximum 50 cubic yard piles) on and be completely covered with polyethylene sheeting to reduce the potential for contaminant migration or dispersion. Sampling and analysis will be completed in accordance with protocols delineated in 6 NYCRR Part 375 and DER-10. Visibly impacted soil/fill containing one or more constituents in excess of the Site-Specific Action Levels (SSALs) shown in 6 NYCRR Part 375 Table 375-6.8(b) for commercial or industrial use will be transported off-site to a permitted waste management facility.

2.2.2.2 Buried Debris, Drums or Tanks

If buried drums or underground storage tanks are encountered during soil excavation activities, excavation will cease and the NYSDEC will be immediately notified. All drums and/or underground

storage tanks encountered will be evaluated and the contractor will submit a removal plan for NYSDEC approval. Appropriately trained personnel will excavate all of the drums and/or underground storage tanks, while following all applicable federal, state, and local regulations. Removed drums, underground storage tanks and associated materials will be properly characterized and disposed off-site. The soil/fill surrounding the buried drums or underground storage tanks will be considered to be potentially contaminated. The soil will be characterized and, as necessary, stockpiled and transported to an off-site permitted waste management facility for disposal.

2.2.3 Soil/Fill Characterization

2.2.3.1 Excavated and Stockpiled Soil/Fill

Excavated soil/fill may be used on-site as fill below the cover system. Soil/fill that is excavated as part of development, which cannot be used as fill below the cover system, will be further characterized prior to transportation off-site for disposal at a permitted facility. For excavated soil/fill with visual evidence of contamination (i.e. staining or elevated PID measurements), one composite sample and a duplicate sample will be collected for each 100 cubic yards of stockpiled soil/fill. For excavated soil/fill that does not exhibit visual evidence of contamination but must be sent for off-site disposal, one composite sample and a duplicate sample will be collected for 2,000 cubic yards of stockpiled soil, and a minimum of 1 sample will be collected for volumes less than 2,000 cubic yards.

The composite sample will be collected from five locations within each stockpile. A duplicate composite sample will also be collected. PID measurements will be recorded for each of the five individual locations. One grab sample will also be collected from the five individual locations. The grab sample will be collected from the individual location with the highest PID measurement. If none of the five individual sample locations exhibit PID readings, one location will be selected at random. The composite sample will be analyzed by a NYSDOH ELAP-certified laboratory for pH (EPA Method 9045C), Target Compound List (TCL) SVOCs, pesticides, and PCBs, and TAL metals, and cyanide. The grab sample will be analyzed for TCL VOCs.

Soil samples will be composited by placing equal portions of fill/soil from each of the five composite sample locations into a pre-cleaned, stainless steel (or Pyrex glass) mixing bowl. The soil/fill will be thoroughly homogenized using a stainless-steel scoop or trowel and transferred to pre-cleaned jars provided by the laboratory. Sample jars will then be labeled, and a chain-of-custody form will be prepared.

2.2.3.2 Soil/Fill Disposal or Reuse

Visually impacted soil/fill that has been characterized and found to meet the SSALs, may be reused as subgrade or excavation subgrade backfill, if appropriate. On-site soil/fill may not be reused as backfill in landscaping berms to be used for the planting of trees and shrubs. If the analysis of the soil/fill samples reveals unacceptably high levels of any analytes, the soil may not be used as backfill on-site and additional analyses will be necessary to further classify the material for disposal purposes. The developer will be responsible for characterizing any material that is found to contain one or more constituents in excess of the SSALs. At a minimum, a duplicate sample may need to be analyzed for the toxicity

characteristics, using the Toxicity Characteristic Leaching Procedure (TCLP), for the particular analytes that were detected at concentrations exceeding the SSALs. The duplicate sample may also be analyzed for the other RCRA Characteristics including reactivity, corrosivity, and ignitability. If the analytical results indicate that concentrations exceed the standards for RCRA characteristics, the material will be considered a hazardous waste and must be properly disposed off-site at a permitted disposal facility within 90 days of excavation.

Additional characterization sampling for off-site disposal may be required by the disposal facility. To potentially reduce off-site disposal requirements and costs, the Owner or Site developer may also choose to characterize each stockpile individually. If the analytical results indicate that the soil is not a hazardous waste, the material will be properly disposed off-site at a non-hazardous waste facility. Stockpiled soil cannot be transported on or off-site until the analytical results are received.

2.2.4 Subgrade Material

Subgrade material used to backfill excavations or placed to increase Site grades or elevations shall meet the following criteria:

- Excavated on-site soil/fill which appears to be visually impacted shall be sampled and analyzed. Analytical results shall indicate that the contaminants, if any, are present at concentrations that do not exceed the SSALs.
- Off-site borrow soils will be documented as having originated from locations having no evidence of disposal or release of hazardous, toxic or radioactive substances, wastes or petroleum products.
- Off-site materials intended for use as Site backfill cannot otherwise be defined as a solid waste in accordance with 6 NYCRR Part 360-1.2(a).
- If the contractor designates a source as “virgin” soil, it shall be further documented in writing to be native soil material from areas not having supported any known prior industrial or commercial development or agricultural use.
- Virgin soils should be subject to collection of one representative composite sample per 500 cubic yards of material from each source area. The sample should be analyzed for TCL VOCs, SVOCs, pesticides, PCBs, arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, and cyanide. The soil will be acceptable for use as backfill provided that all parameters meet the SSALs.
- One composite sample for each 500 cubic yards of material from each source area of non-virgin soils will be collected and tested. If more than 1,000 cubic yards of soil are borrowed from a given off-site non-virgin soil source area and both samples of the first 1,000 cubic yards meet SSALs, the sample collection frequency will be reduced to one composite for every 2,500 cubic yards of additional soil from the same source, up to 5,000 cubic yards total. For borrow sources greater than 5,000 cubic yards, sampling frequency may be reduced to one sample for each 5,000 cubic yards, provided that all earlier samples met the SSALs.

Should the underlying separation fabric be breached during excavations; the area will be excavated, the damaged geotextile will be cut to provide smooth edges, and a new geotextile of equal or greater quality will be installed to replace the breached area. The new geotextile will overlap the existing underlying separation fabric by a minimum of 24 inches on all sides.

2.2.5 Surface Soil Cover System

The cover soil material shall meet the following criteria:

- Excavated on-site soil/fill shall not be used as cover material.
- Off-site borrow soils will be documented as having originated from locations having no evidence of disposal or release of hazardous, toxic or radioactive substances, wastes or petroleum products.
- Off-site materials intended for use as Site cover cannot otherwise be defined as a solid waste in accordance with 6 NYCRR Part 360-1.2(a).
- If the contractor designates a source as “virgin soil”, it shall be further documented in writing to be native soil material from areas not having supported any known prior industrial or commercial development or agricultural use.
- Virgin soils should be subject to collection of one representative composite sample per 500 cubic yards of material from each source area. The sample should be analyzed for TCL VOCs, SVOCs, pesticides, PCBs, and TAL metals plus cyanide. The soil will be acceptable for use as cover material provided that all parameters meet the imported soil standards included in the NYSDEC’s Division of Environmental Remediation (DER) 10.
- Non-virgin soils will be tested via collection of one composite sample for each 500 cubic yards of material from each source area. If more than 1,000 cubic yards of soil are borrowed from a given off-site non-virgin soil source area and both samples of the first 1,000 cubic yards meet the DER 10 criteria, the sample collection frequency will be reduced to one composite for every 2,500 cubic yards of additional soil from the same source, up to 5,000 cubic yards total. For borrow sources greater than 5,000 cubic yards, sampling frequency may be reduced to one sample for each 5,000 cubic yards, provided all earlier samples meet the DER 10 criteria.
- The topsoil used for the final cover shall be fertile, friable, natural loam surface soil, capable of sustaining plant growth, and free of clods or hard earth, plants or roots, sticks or other extraneous material harmful to plant growth.
- Grassed areas will be seeded with a sustainable perennial mixture with appropriate erosion control measures taken until the perennial grasses are established.
- To reduce the disturbance of the surface cover material, uncontaminated soil berms will be constructed in areas where shallow-rooted trees and shrubs will be planted. The berms will be of sufficient thickness to allow the excavation of only uncontaminated fill deep enough to plant the

tree and/or shrub and will be of sufficient strength to support trees and/or shrubs at their maximum height.

2.2.5.1 Asphalt

Asphalt may be used for construction or development in areas that will become roads, sidewalks, and parking lots. Where asphalt will represent a cover in terms of remedial action, a minimum cross-sectional thickness of 6 inches of material (asphalt and clean subbase material) is required for protection from exposure to the underlying soil/fill material. The actual cross section of the asphalt cover (i.e. thickness of the asphalt and subbase material) will be determined based on the intended use of the area.

2.2.5.2 Concrete

Concrete may be used in areas that will become slab-on-grade structures, utilities, footings, foundations, sidewalks or signs. Concrete may also be used instead of asphalt for roads, sidewalks, and parking lots. Where concrete will represent cover in terms of remedial action, a minimum cross-sectional thickness of 6 inches of material (concrete and clean subbase material) is required for protection from exposure to the underlying soil/fill material. A vapor barrier consisting of polyethylene sheeting with a minimum thickness of 8-millimeters will be installed under all structures. Type and thickness of concrete and subbase material will be determined based on intended use of the area.

2.2.6 Erosion Control

When the development or remedial actions at the Site require the disturbance or more than five acres of land, federal and state laws require that the project obtain coverage under the NYSDEC SPDES General Permit for Storm Water Discharges from Construction Activities that are classified as “Associated with Industrial Activity”, Permit #GP-93-10 (Construction Storm Water General Permit). It should be noted that after December 9, 2002, federal and state laws require that the project obtain coverage under the NYSDEC SPDES General Permit for Storm Water Discharges from Construction Activities for certain activities disturbing between one and five acres of land. Requirements for coverage under the Construction Storm Water General Permit include the submittal of a Notice of Intent form and the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must fulfill all permit requirements and must be prepared in accordance with “Chapter Four: The Storm Water Management and Erosion Control Plan” in Reducing Impacts of Storm Water Runoff from New Development (NYSDEC, 1992). This Storm Water Management and Erosion Control Plan, in accordance with permit requirements, will provide the following information:

- A background discussion of the scope of the construction project.
- A statement of the storm water management objectives.
- An evaluation of post-development runoff conditions.
- A description of proposed storm water control measures.

- A description of the type and frequency of maintenance activities required to support the control measure.

The SWPPP will address issues such as erosion prevention, sedimentation control, hydraulic loading, pollutant loading, ecological protection, physical Site characteristics that impact design, and Site management planning. All descriptions of proposed features and structures at the Site will include a description of structure placement, supporting engineering data and calculations, construction scheduling, and references to established detailed design criteria. The SWPPP will conform to all requirements as established by applicable regulatory agencies.

Proven soil conservation practices will be incorporated in the construction and development plans to mitigate soil erosion, off-site sediment migration, and water pollution from erosion. The use of appropriate temporary erosion control measures, such as silt fencing and/or hay bales, will be required around all soil/fill stockpiles and unvegetated soil surfaces during redevelopment activities. These methods are described below. Stockpiles shall be graded and compacted as necessary for positive surface water runoff and dust control. Stockpiles of soil/fill will be placed a minimum of 50 feet from the property boundaries.

Temporary Erosion Control Measures

Temporary erosion and sedimentation control measures and facilities will be employed during active construction stages. Prior to any construction activity, temporary erosion and sediment control measures shall be installed and maintained until such time that permanent erosion control measures are installed and effective. The following temporary measures will be incorporated into construction activities:

- Silt Fence
- Check Dams
- Hay Bales

As sediment collects along the erosion controls (silt fence, hay bales, check dams, etc.), they will be cleaned to maintain desired removal performance and prevent structural failure of the silt fence. Accumulated sediment will be removed when 10% of the storage capacity of the silt fence is full. Removed sediment will be stockpiled and characterized in accordance with Section 2. The perimeter silt fences will remain in place until construction activities in the area are completed and vegetative cover or other erosion control measures are adequately established. Silt fences will be provided and installed in accordance with the New York Guidelines for Urban Erosion and Sediment Control.

Permanent Erosion Control Measures

Permanent erosion control measures and facilities will be incorporated during cover construction and during Site redevelopment for long-term erosion protection. Permanent measures and facilities will be installed as early as possible during construction phases. Parking and building systems associated with redevelopment shall not include dry wells or other subsurface injection/disposal piping or facilities. The remedial construction activities will involve the installation of a cover system including asphalt, concrete, or topsoil over the Site. Permanent erosion control measures incorporate a combination of design

features to limit overall erosion and sediment problems to practical design limits, and the placement of permanent facilities during Site restoration for long term erosion protection.

Design features incorporated into the construction plans to control erosion will include limiting steep slopes, routing runoff to surface water collection channels, limiting flow velocities in the collection channels to the extent practical, and lining collection channels, where appropriate. In areas where flow will be concentrated (i.e. collection channels) the channel slopes and configuration will be designed to maintain channel stability.

Any final slope greater than 33 percent will be reinforced and will have a demarcation layer under the clean cover to indicate if erosion has extended to the subgrade. Following the placement of final cover soils over regraded areas, a revegetation program will be implemented to establish permanent vegetation. Vegetation serves to reduce erosion, enhance evapotranspiration, and improve runoff water quality. The areas to be grassed will be seeded in stages as construction is completed with a seed mix and application rate that is consistent with the type of seed mix and soil conditions.

2.2.7 Dust Control

The surface of unvegetated or disturbed soil/fill areas will be wetted with water or other dust suppressive agents to control dust during construction. Any subgrade material left exposed during extended interim periods (greater than 90 days) prior to placement of final cover shall be covered with a temporary cover system (i.e. tarps, spray type cover system, etc.) or planted with vegetation to control fugitive dust to the extent practicable. Particulate monitoring will be performed along the downwind occupied perimeter of the parcel during subgrade excavation, grading, and handling activities in accordance with the Community Air Monitoring Plan further detailed in Section 2.3 and in accordance with NYSDEC's Fugitive Dust and Particulate Monitoring Program at Inactive Hazardous Waste Sites, which is included in Appendix A.

Dust suppression techniques will be employed at the Site in accordance with NYSDEC's Fugitive Dust and Particulate Monitoring Program. This document describes guidance for dust monitoring and includes a list of effective dust suppression techniques. Dust suppression techniques that may be used at the Site include applying water on roadways, wetting equipment, spraying water on buckets during excavation and dumping, hauling material in properly covered or watertight containers, covering excavated areas and material after excavation activity ceases, establishing vegetative cover immediately after placement of cover soil, and reducing the excavation size and/or number of excavations. The use of atomizing sprays is recommended so that excessively wet areas will not be created but fugitive dust will be suppressed.

2.2.8 Construction Water Management

Pumping of water (i.e., groundwater and/or storm water that has accumulated in an excavation) from excavations, if necessary, will be done in such a manner as to prevent the migration of particulates, soil/fill, or unsolidified concrete materials, and to prevent damage to the existing subgrade. Water pumped from excavations will be managed properly in accordance with all applicable regulations to prevent endangerment of public health, property, or any portion of the construction.

In areas where groundwater may be contaminated, the groundwater in excavations will be field screened for VOCs and observed for any noticeable sheens. The water pumped from the excavations will be

containerized and analyzed in accordance with the Surface Water and Ground Water Quality Standards set forth in 6 NYCRR Part 703.5 and the local sewer authority under a discharge permit. If the water quality is such that the local sewer authority will not approve the discharge to a sewer, it will be transported off-site for proper disposal or treated on-Site via a treatment system that has been approved by the NYSDEC.

Runoff from surface discharges shall be controlled. No discharges shall enter a surface water body without proper permits.

2.2.9 Access Controls

Access to soil/fill on the property must be controlled until the final cover is placed to prevent direct contact with subgrade materials. Excavated subgrade material that is stockpiled on-site must be temporarily covered to limit access to that material.

2.2.10 Institutional Controls

The use of the property has been restricted through an environmental easement that prevents the use of ground water and disturbance of the final cover system. Environmental easements are described in detail in the March 2008 Record of Decision. These controls include:

- Completion of a periodic certificate of institutional and engineering controls in accordance with Part 375-1.8(h)(3).
- Land use is subject to local zoning laws, the remedy allows the use and development of the controlled property for commercial and industrial use.
- The use of groundwater as a source of potable or process water is restricted without the use of necessary water quality treatment as determined by the NYSDEC, NYSDOH or County DOH.
- Prohibiting agricultural or vegetable gardens on the controlled property.
- Requires compliance with this SMP.

2.2.11 Maintenance

Overall maintenance of the Site will be the responsibility of the Owner. Impacts or damage to remedial elements remaining at the Site following remedial construction will be reported to the NYSDEC, who will determine whether corrective actions are necessary to protect the environment or preserve the integrity of the remedy. Erosion of the soil cover system will be reduced by maintaining a vegetative cover. In order to reduce the disturbance of the soil cover material, berms or mounds composed of clean soil will be constructed in areas which trees and shrubs will be planted. Cover materials, fencing, signs, and gates will be inspected annually, and repaired as needed.

The main features of inspection are:

- Inspection procedures

- Evaluation of the final cover system (i.e., vegetative cover, roads, buildings, parking lots, etc.) for sloughing, cracks, settlement, erosion, distressed vegetation, damaged fencing, gates or signs
- Repair of deficiencies found
- Inspection reporting

2.3 Health and Safety

Invasive work performed at the property will be performed in accordance with all applicable local, state, and federal regulations to protect worker health and safety.

If intrusive work is expected to breach the cover system at the Site, all contractors performing redevelopment or maintenance activities will be required to prepare a Site-specific, activity-specific Health and Safety Plan (HASP). The HASP must include certifications stating that the contractor's personnel have been 40-Hour OSHA HAZWOPER trained. The HASP must also include provisions for protection of the community as described further in this section.

2.3.1 Construction Personnel Protection

Contractors engaged in subsurface construction or maintenance activities (e.g., foundation and utility workers) will be required to implement appropriate health and safety procedures. These procedures will involve, at a minimum, donning adequate personal protective equipment, performing appropriate air monitoring, and implementing other engineering controls, as necessary, to mitigate potential ingestion, inhalation and contact with residual constituents in the soils. Recommended health and safety procedures include, but may not be limited to, the following:

- While conducting invasive work at the Site, contractors shall provide safe and healthful working conditions. The Contractor shall comply with all the New York State Department of Labor regulations and published recommendations and regulations promulgated under the Federal Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, as amended, and with the laws, rules, and regulations of other authorities having jurisdiction. Compliance with governmental requirements is mandated by law and considered only a minimum level of safety performance. Contractors shall insure that all work performed is in accordance with recognized safe work practices.
- Contractors shall be responsible for safety of the contractor's employees and the public. Contractors shall be solely responsible for the adequacy and safety of all construction methods, materials, equipment and the safe prosecution of the work.
- Contractors are responsible for ensuring that all project personnel have been trained in accordance with 29 CFR 1910.120.
- Contractors shall have a HASP, written in accordance with 29 CFR 1926.65, prepared, signed and sealed by a safety professional, a safety professional and/or a trained safety representative(s) active on the job whenever the work is in progress, an effective and documented safety training program, and a safety work method check list system.

- Recognition as a safety professional shall be based on a minimum of certification by the Board of Certified Safety Professionals as a Certified Safety Professional and 5 years of professional safety management experience in the types of construction and conditions expected to be encountered on the Site.
- All personnel employed by a contractor or their subcontractors or any visitors whenever entering the job Site, shall be required to wear appropriate personal protective equipment required for that area.

2.3.2 Community Air Monitoring Program

Air monitoring will be performed during redevelopment activities in accordance with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan, which is included in Appendix B. All air monitoring readings will be recorded in a logbook and will be available for review by the NYSDEC and NYSDOH.

2.4 Notification and Reporting

There shall be no construction, use or occupancy of the property that results in the disturbance or excavation of soil which threatens the integrity of the cover system or which would result in human exposure to contaminated soils, unless prior written approval by the NYSDEC is obtained. Therefore, notification of NYSDEC at the address below should precede any such work by at least 60 days, to allow for review and any necessary revisions of a work plan.

The following minimum notification and reporting requirements shall be followed by the property owner prior to and following Site development, as appropriate:

- If buried drums or underground storage tanks are encountered during soil excavation activities, excavation will cease and the NYSDEC will be immediately notified.
- The Owner shall complete an Annual Report containing documentation that the institutional controls put in place, pursuant to the ROD, are still in place, have not been altered and are still effective; that the remedy and protective cover have been maintained; and that the conditions at the Site are fully protective of public health and the environment.

If the cover system has been breached during the year, the Owner shall provide the following to the NYSDEC for subsequent inclusion in the corresponding annual report:

- A certification that all work was performed in accordance with this SMP.
- Plans showing areas and depth of fill removal.
- Copies of daily inspection reports for soil-related construction.
- Description of erosion control measures.
- A text narrative describing the excavation activities performed, health and safety monitoring performed (both Site-specific and Community Air Monitoring), quantities and locations of soil/fill excavated, disposal locations for the soil/fill, soil sampling locations and results, a description of

any problems encountered, location and acceptability test results for backfill sources, and other pertinent information necessary to document that the Site activities were carried out properly.

If the disturbed area exceeds one acre, the following must also be reported to the NYSDEC:

- Plans showing the before and after survey elevations on a 100-foot grid system to document the thickness of the clean soil cover system.

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7011

3 Site Monitoring Plan

3.1 Introduction

3.1.1 General

This SMP describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the soil cover system, and all affected Site media identified below. Monitoring of other Engineering Controls is described in Section 4, Operation and Maintenance Plan. This SMP may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of groundwater and stormwater;
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards;
- Assessing achievement of the remedial performance criteria;
- Evaluating Site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan will provide information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;

- Monitoring well decommissioning procedures; and
- Annual inspection and documentation of Site conditions.

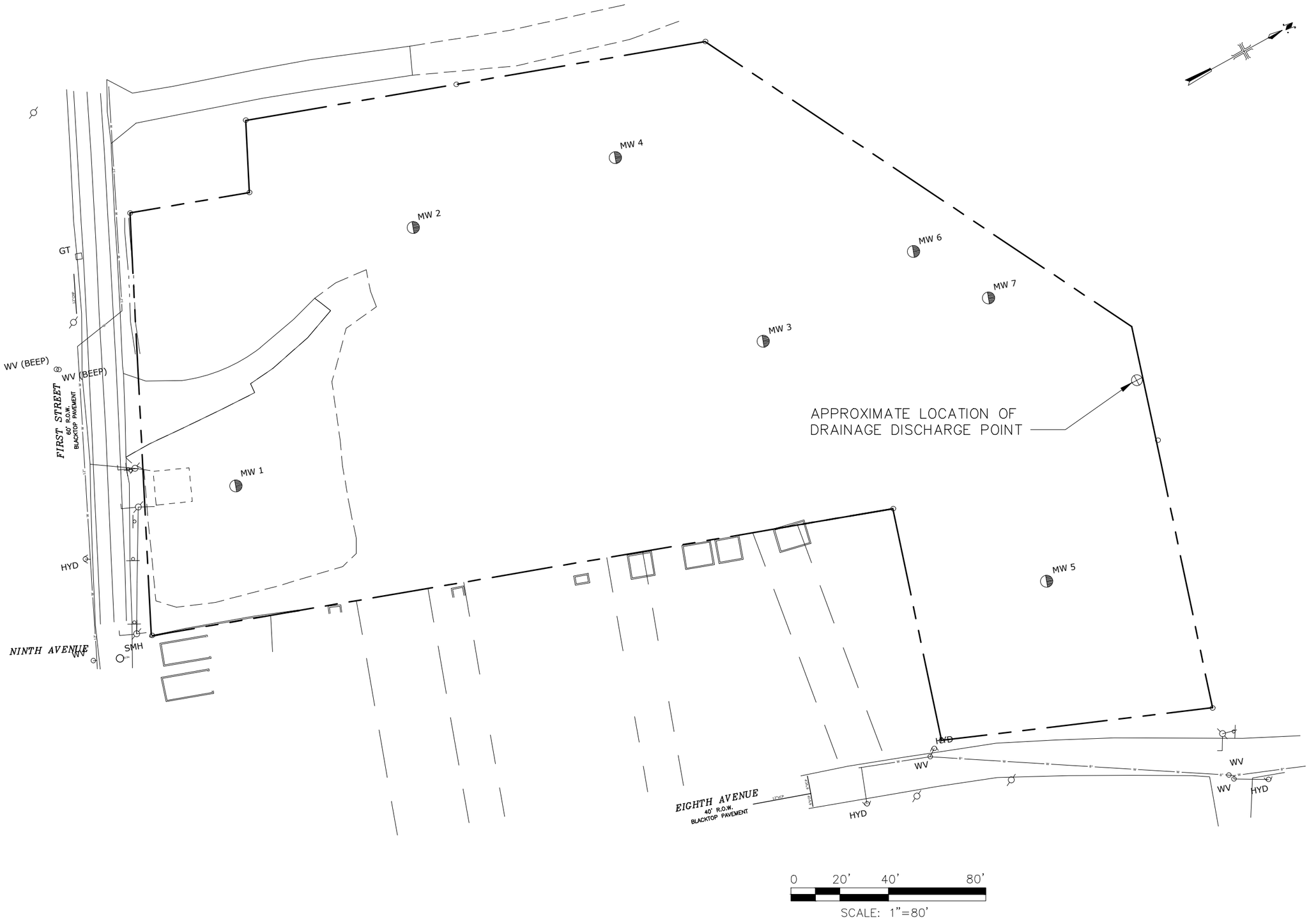
Annual monitoring of the performance of the remedy and overall reduction in contamination on-site and off-site will be conducted for the first five years following the completion of remedial construction. Based on a review by the NYSDEC of data generated during the five years of monitoring, the frequency of monitoring thereafter will be determined. Trends in contaminant levels in groundwater and stormwater in the affected areas will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in Table 3.1 and outlined in detail in Sections 3.2 and 3.3. Construction logs for the existing monitoring wells and historical groundwater analytical data for the Site are included in Appendices C and D, respectively.

Table 3.1 Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater	Annual Monitoring for five years	Groundwater from monitoring wells shown on Figure 5	TAL Metals Field Parameters 1,4-Dioxane PFAS
Stormwater	Annual monitoring for five years	Stormwater collected from drainage discharge point	TAL Metals 1,4-Dioxane PFAS
Soil Cover	Inspection during each groundwater monitoring event specified above	Topsoil and Gravel Soil Cover	Visual Inspection

*The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

Figure 5 Monitoring Well Locations



ARCADIS

SCHUYLER HEIGHTS FIRE DISTRICT STATION HOUSE SITE
NYSDEC SITE NO. E401050
TOWN OF COLONIE, ALBANY COUNTY, NEW YORK

MONITORING WELL LOCATIONS

APRIL 2018

FIGURE 5

3.2 Soil Cover Monitoring

During remedial implementation, a soil and gravel cover system was installed on the surface of the Site. Prior to placement, a geotextile separation fabric was installed as a demarcation layer between the regraded soil/fill material and the cover system. On the northern and central portions of the Site, the cover system consists of common fill overlain by a layer of topsoil. In the south region of the Site, the cover system consists of gravel. A visual inspection of the cover system shall be conducted at the time of each groundwater monitoring event described in this SMP. The purpose of the visual inspection is to identify any changes, such as damage or erosion to the surficial media, which could compromise the functionality of the cover system. Since such changes could potentially increase the likelihood of exposure to subsurface contamination remaining at the Site, the specific nature of the change shall be documented in accordance with the reporting requirements contained in this SMP. A sample inspection report form for the Site is included in Appendix E.

3.3 Media Monitoring Program

3.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. Any proposed changes to the identified sampling or monitoring program must be submitted to the NYSDEC for prior approval. The network of monitoring wells has been maintained to monitor groundwater conditions at the Site. A total of seven monitoring wells have been installed on-site over the course of multiple investigations dating back to 2002. These are shown on Figure 5. Characteristics of these monitoring wells include:

Table 3.2 Monitoring Well Construction Details

Well ID	Northing	Easting	Status	Total Depth (ft. bgs)	Top of Casing Elevation (ft. amsl)*	Measuring Point Elevation (PVC, ft. amsl)*
MW-1	1413029.33	702981.07	Existing	Unknown	42.5	42.0
MW-2	1413261.12	702865.39	Existing	Unknown	46.5	46.0
MW-3	1413468.56	703087.92	Existing	Unknown	49.25	48.75
MW-4	1413435.29	702895.89	Existing	Unknown	49.5	49.0
MW-5	1413577.31	703374.98	Existing	Unknown	54.0	49.5
MW-6	1413613.20	703083.12	Existing	Unknown	51.5	51.0
MW-7	1413648.75	703146.80	Existing	Unknown	51.5	51.0

*Elevations are approximate, requires field verification.

Table 3.3 Wells to be Sampled

Well ID	
MW-1	MW-5
MW-2	MW-6
MW-3	MW-7
MW-4	

3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and on a groundwater-sampling log presented in Appendix F. Other observations (e.g. well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

In addition to standard sampling procedures listed in this SMP, additional measures must be observed due to the sensitivity of 1,4-Dioxane and Perfluoroalkyl Substances (PFAS) sampling. Samplers should not use products such as soaps, cosmetics, moisturizers, hand creams, etc. that may contain PFAS the day of sampling. Insect repellents and sun-blocks must contain 100% natural ingredients, any other such products may contain PFAS and are not permitted on-site. Coated Tyvek clothing should be worn on-site during sampling and long hair should be tied back. All clothing must be well-laundered with minimal use of soap and zero use of fabric softener. All footwear should be made with polyurethane and polyvinyl chloride, and clothing or boots with Gore-Tex material are not permitted on-site. Seats of the field vehicle used during the sampling event must be covered with a well-laundered cotton blanket to avoid cross contamination between any latent materials on the vehicle seats and the groundwater samples being collected. Should sampling take place during wet weather, samplers should wear the appropriate clothing that will not risk cross contamination, such as avoiding synthetic gear that has been treated with a water repellant finish containing PFAS. Only gear made from wax-coated materials is acceptable.

3.3.1.2 Groundwater Level Measurements

Prior to groundwater sampling, the depth to groundwater will be measured in each well and the groundwater elevation above mean sea level will be determined for each monitoring point. Water level measurements will be used in conjunction with horizontal and vertical ground survey data to evaluate horizontal and vertical components of groundwater flow. Water level measurements will also be used to determine the volume of standing water in wells for purging activities.

The following equipment will be used for the measurement of water levels:

- Electronic water level indicator;
- Field log book and pen; and

- Photoionization Detector (PID).

At each monitoring well, the cap and internal riser cover will be removed. The headspace and breathing zone air quality will be monitored with the PID. This step may be omitted in subsequent rounds of water level measurements in those wells that yielded no detectable amounts of vapors or gases from prior sampling rounds.

The battery of the electronic water level indicator will be checked by pushing the battery check button and waiting for the audible signal to sound or the instrument light to come on. The water level indicator will be decontaminated before use in each well by using an Alconox wash and laboratory certified PFAS-free water rinse. The instrument will then be turned on and the probe will be slowly lowered into the well, until the audible signal is heard, or the instrument light goes on, indicating that the sensor in the probe has made contact with the water surface in the well.

The depth to water will be recorded to the nearest one-hundredth of a foot, from the top of the measuring mark on the well riser. The date, time, well number, and depth to water will be recorded in the field logbook in indelible ink.

3.3.2 Monitoring Well Inspection

Prior to collecting groundwater samples, each monitoring well will be inspected for the following:

- Damage to the cover or protective casing, if visible above the ground surface;
- Erosion of soil in the area immediately surrounding the casing;
- Operable lock, if appropriate; and
- Damage to the monitoring well surface seal.

3.3.2.1 Monitoring Well Sampling Procedures

The following equipment will be needed to collect groundwater samples for analysis:

- Electric water level indicator;
- Peristaltic pump;
- High-density polyethylene tubing;
- Temperature, pH, dissolved oxygen, specific conductivity and turbidity meters;
- Photoionization Detector;
- Field logbook and field logs (must be loose paper);
- Laboratory prepared sample containers (polypropylene or HDPE sample bottles);
- Roll of polyethylene sheeting; and
- Decontamination equipment.

Groundwater sampling will be conducted in accordance with the USEPA Low-Flow Sampling Protocol (USEPA 1998). A piece of high-density polyethylene (HDPE) sheeting will be fitted over the monitoring well and laid on the ground. The sampling equipment will be placed on the HDPE sheeting. The

expansion cap will be removed and the headspace at the top of the monitoring well will be measured with a PID. This step may be omitted in those monitoring wells which have already demonstrated in the previous rounds of water level measurements that they contain no or insignificant amounts of vapors or gases. The PID will be calibrated before the start of each sampling event.

Clean, new HDPE tubing will be attached to the peristaltic pump. The tubing will be lowered into the water column to a maximum depth of two feet above the bottom of the well. The well will be purged at a rate suitable to minimize drawdown. Field parameters, consisting of pH, specific conductance, temperature, dissolved oxygen, reduction potential, turbidity, and water level will be measured in each monitoring well prior to, during, and after purging (just before sampling) through the use of a flow-through cell. Both the pH and the specific conductivity meters will be calibrated for water temperature before each sampling event.

The volume of water removed from each monitoring well will be dependent upon the amount of time required for stabilization of the field parameters. In general, the well will be considered stabilized for sample collection when field parameters have stabilized for three consecutive readings as follows:

- pH: +/- 0.1 standard units
- Specific Conductance: +/- 3%
- Reduction Potential: +/- 10 millivolts
- Dissolved Oxygen: +/- 10%
- Turbidity: +/- 10%

When the field parameters have stabilized, the volume of water purged will be recorded, and groundwater in the monitoring well will be sampled through the pump at the same flow rate used to purge the well. Groundwater that is purged from monitoring wells or discharged during drilling activities may be disposed of at the Site and allowed to infiltrate into the ground based on the following conditions:

1. There is a defined Site which is the source of the groundwater contamination;
2. There is no free product observed such as LNAPLs and DNAPLs;
3. Recharge pits are used to preclude run-off from the Site, and the pits are covered with clean soil when no longer needed; and
4. The infiltrating groundwater is being returned to the same water-bearing zone from which it is being purged.

If the above criteria are not met, the materials will be containerized in U.N.-approved, 55-gallon steel drums. The contents will be identified on weather-resistant labels attached to drum exteriors.

Upon completion of sampling, the sample bottles will be immediately placed in a cooler held at 4^{o}C, using sealable plastic/polyethylene bags to hold the ice. Cooler ice must not be chemical or “blue” ice. Sample containers collected for perfluoroalkyl substances (PFAS) must be kept in a separate cooler, if sampling to detect contaminants other than PFAS are collected during the same event.

Non-powdered nitrile disposable gloves will be worn by the sampling personnel and changed frequently in the following circumstances:

- Prior to decontamination of equipment;
- After contact with any non-decontaminated surface;
- Prior to contact with sample bottles;
- Between putting labels on sample bottles and sample collection;
- Before and after handling water quality meters;
- Before and after insertion of equipment into the monitoring wells (i.e. tubing, interface probe); and
- Before and after handling of any quality control/assurance samples.

Groundwater samples will be sent to a NYSDOH ELAP and NYSDEC ASP-approved analytical laboratory under chain-of-custody procedures for analysis of 1,4-Dioxane by USEPA Method 8270 SIM, PFAS (linear and non-linear branch isomers) by USEPA Method 537, and Target Analyte List (TAL) metals by USEPA Method 6010B:

- Aluminum
- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Calcium
- Chromium
- Vanadium
- Zinc
- Cobalt
- Copper
- Iron
- Lead
- Magnesium
- Manganese
- Mercury
- Molybdenum
- Nickel
- Potassium
- Selenium
- Silver
- Sodium
- Thallium
- Tin
- Titanium

If the turbidity of the groundwater samples is greater than 50 Nephelometric Turbidity Units (NTUs) at the conclusion of well purging, total (unfiltered) and dissolved (filtered) fraction groundwater will be collected. The dissolved fraction groundwater samples will be filtered using a 0.45 micron in-line disposable filter.

In the event a spill occurs while sampling, liquids should be absorbed with inert material such as vermiculite or sand. That material should then be placed in a suitable closed container. Spark-proof tools and explosion-proof equipment should be used during clean up. Any solids should be collected with an electrically protected vacuum cleaner or by wet-brushing.

3.3.3 Field Quality Control Samples

Quality control procedures will be employed to ensure that sampling, transportation and laboratory activities do not bias sample analytical quality. Duplicate samples, matrix spike samples and matrix spike duplicates will provide a quantitative basis for validating the analytical data. A summary of the anticipated QA/QC samples for each media is included in Tables 3.4 and 3.5.

Table 3.4 QA/QC Samples – Groundwater

QA/QC Sample Type	Number of QA/QC Samples
Duplicate	**1 duplicate for every 20 samples collected or 1 duplicate for every 7 calendar days of sampling**
MS/MSD	**1 MS/MSD for every 20 samples collected or 1 MS/MSD for every 7 calendar days of sampling**

Table 3.5 QA/QC Samples – Stormwater

QA/QC Sample Type	Number of QA/QC Samples
Duplicate	**1 duplicate for every 20 samples collected or 1 duplicate for every 7 calendar days of sampling**
MS/MSD	**1 MS/MSD for every 20 samples collected or 1 MS/MSD for every 7 calendar days of sampling**

3.3.3.1 Matrix Spike/Matrix Spike Duplicates

For each sample matrix, a field duplicate sample will be collected at a rate of one sample per 20 environmental samples per media. The duplicate sample is collected at the same location as the environmental sample. The field duplicate sample is identified using the sample designation system described in this Section. The identity of the field duplicate is not revealed to the laboratory. The analytical results of the environmental samples will be compared to the field duplicate sample, to evaluate field sampling precision.

3.3.3.2 Sample Designation

A sample numbering system will be used to identify each sample. This system will provide a tracking procedure to allow retrieval of information about a particular sample and will assure that each sample is uniquely numbered. The sample identification will consist of at least four components as follows:

Project Identification: The first component consists of a four-letter designation, which identifies the project Site. For this project, the four-letter designation will be SHFD for Schuyler Heights Fire District.

- **Sample Type:** The second component, which identifies sample type, will consist of a two-letter code as follows:
    - **MW –** Monitoring Well (Groundwater sample, determined by existing well ID)
    - **SW –** Stormwater (Stormwater sample from drainage discharge point)
- **Sample Identification:** The third component will be used to uniquely identify each sample for NYSDEC EQuIS EDD purposes. The sampling date will be used and will be provided in the following format:
    - **MMDDYYYY** (i.e., June 18, 2016 would be 06182016)
- **Quality Assurance/Quality Control Samples:** The samples will be labeled with the following suffixes:
    - **MS –** Matrix Spike
    - **MSD –** Matrix Spike Duplicate

Duplicate samples will be numbered uniquely as if they were samples.

A record of identification for duplicate samples will be maintained.

Examples of identification numbers are given below:

SHFD-MW-01-06182016: Monitoring well groundwater sample, monitoring well ID MW-01, location one, collected on June 18, 2016.

SHFD-MW-01-06182016-MS: Monitoring well groundwater sample, monitoring well ID MW-01, location one, collected on June 18, 2016, matrix spike.

3.3.4 Field Documentation – General

Documentation of an investigative team's field activities often provides the basis for technical Site evaluations and other such related written reports. All records and notes generated in the field will be considered controlled evidentiary documents and may be subject to scrutiny in litigation.

Personnel designated as being responsible for documenting field activities must be aware that all notes may provide the basis for preparing responses for legal interrogatories. Field documentation must provide sufficient information and data to enable reconstruction of field activities. The following information must be provided on the inside cover of each field logbook:

- Project Name (Site Name);
- Site Location;

- Site Manager; and
- Date of Issue.

Control and maintenance of field logbooks is the responsibility of the Field Team Leader.

3.3.5 Documentation of Field Activities

Field logbook entries must be legibly written and provide an unbiased, concise, detailed picture of all field activities. Use of preformatted data reporting forms must be identifiable and referenced to field notebook entries.

Step-by-step instructions and procedures for documenting field activities are provided below and in following sub-sections. Instruction and procedures relating to the format and technique in which field logbook entries are made are as follows:

- All logging taken in the field must be documented on loose paper, waterproof paper must not be used. Should a clip board be used, Masonite or Aluminum clip boards are applicable.
- Leave the first two pages blank. They will provide space for a table of contents to be added when the field logbook is complete.
- The first written page for each day identifies the date, time, Site name, location, personnel and their responsibilities, other non-personnel present, and observed weather conditions. Additionally, during the course of Site activities, deviations from the work plan must also be documented.
- All photos taken must be traceable to field logbook entries. It is recommended to reference photo locations to the Site sketch or map.
- All entries must be made in ink.
- All entries must be accompanied by the appropriate military time (such as 1530 instead of 3:30).
- Errors must be lined through and initialed. No erroneous notes are to be made illegible.
- The person documenting must sign and date each page as it is completed.
- Isolated logbook entries made by a team leader, other than the team member designated responsible for field documentation, must be signed and dated by the person making the entry.
- Additions, clarifications, or corrections made after completion of field activities must be dated and signed.

3.3.6 General Site Information

General Site characteristics must be recorded. Information may include:

- Type of access into facility (locked gates, etc.).
- Anything that is unexpected on-site (e.g., appearance of drums that have not been previously recorded).

- Information obtained from interview with Site personnel (if applicable), or other interested party contact on-site.
- Names of any community contacts on-site.
- A Site map or sketch. It can be sketched into the logbook or attached to the book.

3.3.7 Sample Activities

A chronological record of each sampling activity must be kept.

- Explanation of sampling at the location identified in the sampling plan (e.g., discolored soil, stressed vegetation).
- Exact sample location, using permanent recognizable landmarks and reproducible measurements.
- Sample matrix.
- Sample descriptions, i.e., color, texture, odor (e.g., soil type, murky water) and any other important distinguishing features.
- Decontamination procedures, if used.

As part of chain-of-custody procedures, recorded on-site sampling information must include sample number, date, time, sampling personnel, sample type, designation of sample as grab or composite, and identify any preservative used. Sample locations should be referenced by sample number on the Site sketch or map. The offer and/or act of providing sample splits to a third party (e.g., the responsible party representative; state, county, municipal environmental and/or health agency, etc.) must be documented. Sample tracking and custody will be documented between sample collection and laboratories.

3.3.7.1 Sample Dispatch Information

When sampling is complete, all sample documentation such as chain-of-custody forms shall be copied, and copies placed in the project files. A notation of the number of coolers shipped, carrier and time delivered to pick-up point should be made in a field notebook.

3.3.7.2 Monitoring Well Repairs, Replacement and Decommissioning

If bio-fouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the SMP), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented. Well decommissioning without replacement will be done only with the prior approval of the NYSDEC. Well abandonment will be performed in accordance with the NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been

rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.3.8 Stormwater Monitoring

In order to maintain proper drainage at the Site, the soil berm and swale located in the northern portion of the Site will be visually inspected for damage and debris build up, and the inspection will be documented in the field book.

Storm Water Sampling Procedures

The following equipment will be needed to collect a stormwater sample for analysis:

- Peristaltic pump.
- HDPE tubing.
- Temperature, pH, dissolved oxygen, specific conductivity and turbidity meters.
- Field logbook and field logs (must be loose paper).
- Laboratory prepared sample containers (polypropylene or HDPE sample bottles).

If water is present at the swale outfall along the northern property line, a grab sample will be collected. A single set of field parameters, consisting of pH, specific conductance, temperature, dissolved oxygen, reduction potential, turbidity, and water level will be measured once prior to sampling. Both the pH and the specific conductivity meters will be calibrated for water temperature before each sampling event. If the turbidity of the stormwater samples is greater than 50 NTUs, total (unfiltered) and dissolved (filtered) fraction stormwater samples will be collected. The dissolved fraction stormwater samples will be filtered using a 0.45 micron in-line disposable filter. To obtain a filtered sample, the stormwater will need to be collected with a peristaltic pump, in order for the water to be pumped through the filter.

The stormwater sampling frequency may be modified based on review of collected data by the NYSDEC. The SMP will be modified to reflect future changes in sampling plans approved by the NYSDEC.

Upon completion of sampling, the sample bottles will be immediately placed in a cooler held at 4^{o}C. Disposable non-powdered nitrile gloves will be worn by the sampling personnel and changed at a frequency consistent with the groundwater sampling procedures listed in Section 3.3.2.1 of this SMP.

Stormwater samples will be sent to a NYSDOH ELAP and NYSDEC ASP-approved analytical laboratory under chain-of-custody procedures for analysis of TAL metals by USEPA Method 6010B, PFAS by USEPA Method 537, and 1,4-Dioxane by USEPA Method 8270 SIM.

Sample designation and field documentation are identical to groundwater monitoring methods as previously described.

3.4 Site-Wide Inspection

Site-wide inspections will be performed on a regular schedule at a minimum of once each year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering

Controls or monitoring devices. During these inspections, an inspection report form will be completed (Appendix E). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General Site conditions at the time of the inspection;
- The Site management activities being conducted, including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirm that Site records are up to date.

3.5 Monitoring Quality Assurance/Quality Control

Not applicable to the monitoring phase at the Schuyler Heights Fire District Station House Site. Site-specific QA/QC can be found in Section 3.3.1.1 of this SMP.

3.6 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file by the NYSDEC. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be prepared in accordance with the NYSDEC's standards and as specified in this SMP.

Monitoring results will be collected by the NYSDEC on an annual basis for the first five years following completion of the remedial construction.

The results will include the following information:

- Date of monitoring event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., groundwater, stormwater, etc.);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- A figure illustrating sample type and sampling locations;
- A figure illustrating potentiometric contours;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and

- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by the NYSDEC. A summary of the monitoring program deliverables is summarized in Table 3.6 below.

Table 3.6 Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
Groundwater and Stormwater Monitoring and Site Inspection Report	**Annually for first five years**

***The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

4 Operation and Maintenance Plan

4.1 Introduction

The Site remedy does not rely on any mechanical systems. Therefore, the operation and maintenance of such components is not included in this SMP.

5 Inspections, Reporting and Certifications

5.1 Site Inspections

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 of this SMP. Inspections of remedial components will be conducted annually for the first five years following completion of remedial construction, or whenever a severe weather event has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sample Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate section of the inspection report form for their respective system. The inspection report form is contained in Appendix E. Additionally, a general Site-wide inspection form will be completed during the Site-wide inspection. These forms are subject to NYSDEC revision.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and Site monitoring data will be evaluated as part of the EC/IC certification, demonstrating that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;

- Operation and maintenance activities are being conducted properly; and
- The Site remedy continues to be protective of public health and the environment, and is performing as designed in the RAWP and RD.

5.2 Certification of Institutional Controls

For each institutional control identified for the Site, it shall be determined that all of the following statements are true:

- The institutional control employed at this Site is unchanged from the date the control was put in place, or last approved by the NYSDEC;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any Site management plan for this control;
- Access to the Site will continue to be provided to the NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the Site is compliant with the environmental easement;
- The information presented in this report is accurate and complete;
- No new information, including groundwater monitoring data from the wells located at the Site boundary, if any, indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid;
- Every five years the following certification will be added: “The assumptions made in the qualitative exposure assessment remain valid”; and
- The Owner’s representative shall certify that all information and statements in the certification form are true. A false statement made is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law.

5.3 Periodic Review Report

A Periodic Review Report will be prepared and submitted to the NYSDEC every year, beginning twelve months after the Certificate of Completion is issued. In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site depicted and described in Appendix G, including the metes and bounds of the environmental easements. The report will be prepared in accordance with NYSDEC DER-10 and will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;

- Results of the required annual Site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reported period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends. Such data and information shall be submitted in digital form in a format as determined by the NYSDEC;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period; and
- A Site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the Site-specific RAWP, ROD or Decision Document;
    - Assessment of the operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - Any new conclusions or observations regarding Site contamination, based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.

5.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be prepared and submitted to the NYSDEC. This plan will explain the failure and provide the details and schedule for performing the work necessary to correct the failure.

APPENDIX A

Fugitive Dust and Particulate Monitoring

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX B

Community Air Monitoring Program

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can 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 is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

APPENDIX C

Well Logs

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-1
ELEV.: **DATUM:**
START DATE: 7/17/06 **FINISH DATE:** 7/17/06
SHEET 1 **OF** 1

PROJECT: Schuyler Heights Fire District — CTM PROJECT NO.: 05.5698

LOCATION: Watervliet, NY — CTM OBSERVER: B.Baulsir

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4		1	3.8	Crushed ASPHALT, GRAVEL, CINDER	Moist
8		2	3.2	Brown fine to coarse SAND, trace silt	Wet @ 7'
12		3	3.1	Brown fine to coarse SAND and GRAVEL, trace silt	Wet
16		4	2.2	Similar	Wet
				Boring terminated @ 16'	

DRILLING CONTRACTOR: SJB — GEOPROBE TYPE: Truck mounted
METHOD OF SAMPLING: 4' Macro Core Sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: B.Baulsir

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-2
ELEV.: **DATUM:**
START DATE: 7/17/06 **FINISH DATE:** 7/17/06
SHEET 1 **OF** 1

PROJECT: Schuyler Heights Fire District CTM PROJECT NO.: 05.5698

LOCATION: Watervliet, NY CTM OBSERVER: B.Baulsir

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4		1	1.6	Black CINDER, some Slag, trace Glass	
8		2	1.8	becomes brown fine to coarse SAND, trace silt	Wet @ 6' +/-
12		3	2.5	brown fine to coarse SAND, trace fine gravel and silt	Wet
16		4	3.4	Similar	Wet
				Boring terminated @ 16'	

DRILLING CONTRACTOR: SJB GEOPROBE TYPE: Truck mounted
METHOD OF SAMPLING: 4' Macro Core Sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: B.Baulsir

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-3
ELEV.: **DATUM:**
START DATE: 7/17/06 **FINISH DATE:** 7/17/06
SHEET 1 **OF** 1

PROJECT: Schuyler Heights Fire District CTM PROJECT NO.: 05.5698

LOCATION: Watervliet, NY CTM OBSERVER: B.Baulsir

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4		1	1.8	CINDER, ASH, SLAG	
8		2	1.9	Brown fine to coarse SAND, fine gravel, trace silt	Wet @ 6'
12		3	2.1	Similar	Wet
16		4	2.8	Brown fine to coarse SAND, gray/brown fine gravel	Wet
				Boring terminated @ 16'	

DRILLING CONTRACTOR: SJB GEOPROBE TYPE: Truck mounted
METHOD OF SAMPLING: 4' Macro Core Sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: B.Baulsir

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-4
ELEV.: **DATUM:**
START DATE: 7/17/06 **FINISH DATE:** 7/17/06
SHEET 1 **OF** 1

PROJECT: Schuyler Heights Fire District CTM PROJECT NO.: 05.5698

LOCATION: Watervliet, NY CTM OBSERVER: B.Baulsir

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4		1	0.7	Black CINDER, ASH, GRAVEL	
8		2	0.6	Black CINDER, ASH , GRAVEL, with some brick	
12		3	1.1	Similar	Wet
16		4	1.2	Black CINDER, SLAG, and GRAVEL	Wet
				Boring terminated @ 16'	

DRILLING CONTRACTOR: SJB GEOPROBE TYPE: Truck mounted
METHOD OF SAMPLING: 4' Macro Core Sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: B.Baulsir

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-5
ELEV.: **DATUM:**
START DATE: 7/17/06 **FINISH DATE:** 7/17/06
SHEET 1 **OF** 1

PROJECT: Schuyler Heights Fire District CTM PROJECT NO.: 05.5698

LOCATION: Watervliet, NY CTM OBSERVER: B.Baulsir

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4		1	2.8	Brown fine to coarse SAND, some organic matter	
8		2	2.6	Brown fine to coarse SAND and fine Gravel	moist
12		3	2.1	Similar	Wet @ 10'
13		4	1	Refusal due to Weathered Rock @ 13'	

DRILLING CONTRACTOR: SJB GEOPROBE TYPE: Truck mounted
METHOD OF SAMPLING: 4' Macro Core Sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

THE SUBSURFACE INFORMATION SHOWN HEREON WAS OBTAINED FOR C.T. MALE ASSESSMENT PURPOSES. IT IS MADE AVAILABLE TO AUTHORIZED USERS ONLY THAT THEY MAY HAVE ACCESS TO THE SAME INFORMATION AVAILABLE TO C.T.MALE. IT IS PRESENTED IN GOOD FAITH, BUT IS NOT INTENDED AS A SUBSTITUTE FOR INVESTIGATIONS, INTERPRETATION OR JUDGMENT OF SUCH AUTHORIZED USERS.

SAMPLE CLASSIFICATION BY: B.Baulsir

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-6
ELEV.: **DATUM:**
START DATE: 7/17/06 **FINISH DATE:** 7/17/06
SHEET 1 **OF** 1

PROJECT: Schuyler Heights Fire District — CTM PROJECT NO.: 05.5698

LOCATION: Watervliet, NY — CTM OBSERVER: B.Baulsir

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4			1.6	CINDER, ASH, SLAG	
8			1.8	Brown fine to coarse SAND, trace silt	Wet @ 7'
12			3	Similar	Wet
15.5			1.2	Similar with gray clay at bottom of sample	Wet
				Refusal @ 15.5' due to Weathered Rock	

DRILLING CONTRACTOR: SJB — GEOPROBE TYPE: Truck Mounted
METHOD OF SAMPLING: 4' Macro Core Sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: B.Baulsir

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-7
ELEV.: **DATUM:**
START DATE: 7/17/06 **FINISH DATE:** 7/17/06
SHEET 1 **OF** 1

PROJECT: Schuyler Heights Fire District CTM PROJECT NO.: 05.5698

LOCATION: Watervliet, NY CTM OBSERVER: B.Baulsir

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4		1	3.1	CINDER,ASH, slag, sand	
8		2	2.6	fine to coarse Brown SAND, trace silt	Wet @ 6
12		3	2.7	similar	wet
15.5		4	3.2	Similar w/ weathered rock @ 15.5'	wet
				Refusal due to weathered rock @ 15.5'	

DRILLING CONTRACTOR: SJB GEOPROBE TYPE: Truck mounted
METHOD OF SAMPLING: 4' Macro Core Sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: B.Baulsir

APPENDIX D

Analytical Data

APPENDIX A

ANALYTICAL DATA SUMMARY TABLES

Table 1	Surface Soil/Fill Results - VOCs
Table 2	Surface Soil/Fill Results - SVOCs
Table 3	Surface Soil/Fill Results - PCBs
Table 4	Surface Soil/Fill Results- Pesticides
Table 5	Surface Soil/Fill Results - TAL Metals
Table 6	Subsurface Soil/Fill (Geoprobe) Results - SVOCs
Table 7	Subsurface Soil/Fill (Geoprobe) Results - PCBs
Table 8	Subsurface Soil/Fill (Geoprobe) Results - Pesticides
Table 9	Subsurface Soil/Fill (Geoprobe) Results - TAL Metals
Table 10	Subsurface Soil/Fill (Test Pits/Trenches) Results - VOCs
Table 11	Subsurface Soil/Fill (Test Pits/Trenches) Results - SVOCs
Table 12	Subsurface Soil/Fill (Test Pits/Trenches) Results - PCBs
Table 13	Subsurface Soil/Fill (Test Pits/Trenches) Results - Pesticides
Table 14	Subsurface Soil/Fill (Test Pits/Trenches) Results -TAL Metals
Table 15	Groundwater Results - VOCs
Table 16	Groundwater Results - SVOCs
Table 17	Groundwater Results - Pesticides
Table 18	Groundwater Results - TAL Metals

TABLE 1

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SURFACE SOIL/FILL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		SS-1	SS-2RE	SS-3	SSEQUIPBLANK	SS-4	DUPLICATE	SS-5	SS-6	SS-7	SS-8	SS-9
Lab Sample Number		X3587-01	X3587-02RE	X3587-03	X3587-04	X3587-05	X3587-14	X3587-06	X3587-07	X3587-08	X3587-09	X3587-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06
Matrix		SOIL	SOIL	SOIL	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/L	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Acetone	500,000	120 UJ	120 UJ	68 UJ	48 J	69 UJ	62 UJ	130 UJ	85 UJ	130 UJ	76 UJ	65 UJ
Methyl Acetate	n/a	4.7 U	5.4 UJ	4.5 U	0.20 UJ	4.9 UJ	18 J	4.7 U	5.2 U	4.4 U	5.3 U	5.0 UJ
Methylene Chloride	500,000	14 UJ	21 UJ	11 UJ	0.43 U	11 UJ	14 UJ	15 UJ	19 UJ	14 UJ	15 UJ	16 UJ
2-Butanone	500,000	15 U	18 UJ	15 U	5.2 J	16 U	16 U	15 U	17 U	14 U	17 U	16 U
Toluene	500,000	2.2 U	9.6 J	2.1 U	0.36 U	2.3 U	2.2 U	2.2 U	2.4 U	2.1 U	2.5 U	2.3 U
m/p-Xylenes	500,000	4.7 U	13 J	4.5 U	1.2 U	4.9 U	4.8 U	4.7 U	5.2 U	4.4 U	5.3 U	5.0 U
Total Confident Conc. VOC		0	22.6	0	53.2	0	18	0	0	0	0	0
Total TICs		0	0	0	0	0	0	0	0	0	0	0

Sample ID		SS-10	SS-11RE	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20
Lab Sample Number		X3587-11	X3587-12RE	X3587-13	X3639-01	X3639-02	X3639-03	X3639-04	X3639-05	X3639-06	X3639-09	X3639-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Acetone	500,000	80 UJ	83 UJ	85 UJ	100 UJ	91 UJ	87 UJ	140 UJ	98 UJ	120 UJ	81 UJ	110 UJ
Methyl Acetate	n/a	4.9 U	4.5 UJ	4.9 U	4.6 U	4.7 U	5.0 U	4.7 U	4.8 U	4.7 U	4.7 UJ	4.8 UJ
Methylene Chloride	500,000	17 UJ	18 UJ	10 UJ	9.8 UJ	9.9 UJ	11 U	10 J	11 J	10 J	10 UJ	10 UJ
2-Butanone	500,000	16 U	15 UJ	16 U	15 U	15 U	16 U	15 U	16 U	15 U	15 U	16 U
Toluene	500,000	2.3 U	2.1 UJ	2.3 U	2.2 U	2.2 U	2.3 U	2.2 U	2.3 U	2.2 U	2.2 U	2.2 U
m/p-Xylenes	500,000	4.9 U	4.5 UJ	4.9 U	4.6 U	4.7 U	5.0 U	4.7 U	4.8 U	4.7 U	4.7 U	4.8 U
Total Confident Conc. VOC		0	0	0	0	0	0	10	11	10	0	0
Total TICs		0	0	0	0	0	0	0	0	0	0	0

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
ug/Kg - Micrograms per Kilogram
ug/L - Micrograms per Liter
n/a - Not Applicable (no established standard)

TABLE 2

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SURFACE SOIL/FILL ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		SS-1	SS-2	SS-3	SSEQUIPBLANK	SS-4	DUPLICATE	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10
Lab Sample Number		X3587-01	X3587-02	X3587-03	X3587-04	X3587-05	X3587-14	X3587-06	X3587-07	X3587-08	X3587-09	X3587-10	X3587-11
Sampling Date		07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06
Matrix		SOIL	SOIL	SOIL	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	5.0	1.0	1.0	1.0	1.0	1.0	5.0	5.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/L	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)												
Benzaldehyde	n/a	72 U	86 J	360 U	1.7 U	76 U	130 J	73 U	81 U	350 U	410 U	85 J	77 U
2-Methylnaphthalene	n/a	59 U	71 J	290 U	1.1 U	62 U	61 U	59 U	66 U	290 U	340 U	72 J	63 U
Acenaphthylene	500,000	57 U	170 J	280 U	1.3 U	81 J	130 J	58 U	64 U	280 U	330 U	88 J	71 J
Dibenzofuran	n/a	58 U	85 J	290 U	1.3 U	61 U	61 U	59 U	65 U	280 U	330 U	61 U	62 U
Fluorene	500,000	59 U	110 J	300 U	1.4 U	62 U	62 U	60 U	66 U	290 U	340 U	62 U	63 U
Phenanthrene	500,000	270 J	1700	670 J	1.5 U	120 J	200 J	220 J	79 J	890 J	850 J	180 J	450
Anthracene	500,000	61 J	450	260 U	1.4 U	71 J	110 J	53 U	59 U	260 U	300 U	97 J	150 J
Carbazole	n/a	53 U	120 J	270 U	1.3 U	57 U	56 U	54 U	60 U	260 U	310 U	57 U	62 J
Di-n-butylphthalate	n/a	53 U	61 U	270 U	1.3 U	67 JB	56 UJ	54 U	60 U	260 U	310 U	56 U	82 J
Fluoranthene	500,000	640	3100	1100 J	1.2 U	440	840	390	120 J	1500 J	1700 J	310 J	930
Pyrene	500,000	570	3300 E	1100 J	1.5 U	600	1000	370	100 J	1500 J	1700 J	400	960
Butylbenzylphthalate	n/a	57 U	99 J	280 U	1.5 U	60 U	520	57 U	63 U	280 U	330 U	180 J	110 J
Benzo(a)anthracene	5,600	380	2000	640 J	1.1 U	320 J	570	240 J	55 U	870 J	1100 J	240 J	480
Chrysene	56,000	370	1900	710 J	1.7 U	340 J	600	250 J	70 U	940 J	1200 J	270 J	510
bis(2-Ethylhexyl)phthalate	n/a	67 U	110 J	340 U	1.6 U	440	910	68 U	75 U	400 J	3300	470	930
Di-n-octyl phthalate	n/a	60 U	68 U	300 U	1.3 U	63 U	230 J	60 U	67 U	290 U	340 U	63 U	64 U
Benzo(b)fluoranthene	5,600	480	3100	1100 J	0.770 U	640	1000	260 J	76 J	1200 J	1900 J	340 J	830
Benzo(k)fluoranthene	56,000	140 J	970	410 J	1.9 U	250 J	400	120 J	86 U	520 J	650 J	150 J	320 J
Benzo(a)pyrene	1,000	320 J	**1700**	570 J	1.2 U	320 J	540	200 J	63 U	770 J	**1100** J	260 J	480
Indeno(1,2,3-cd)pyrene	5,600	220 J	310 J	220 U	0.850 U	69 J	140 J	160 J	50 U	280 J	510 J	76 J	100 J
Dibenz(a,h)anthracene	560	44 U	56 J	220 U	0.890 U	46 U	46 UJ	44 U	49 U	220 U	250 U	46 U	47 UJ
Benzo(g,h,i)perylene	500,000	150 J	460	290 U	1.1 U	110 J	160 J	120 J	65 U	310 J	510 J	100 J	140 J
Total Confident Conc. SVOC		3601	19897	6300	0	3868	7480	2330	375	9180	14520	3318	6605
Total TICs		4229	11620	5510	129.2	5435	15900	4885	5180	5910	10160	6633	6718

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
E - Indicates a compound whose concentration exceeds the calibration range of the instrument for this analysis.
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG.
ug/Kg - Micrograms per Kilogram
ug/L - Micrograms per Liter
n/a - Not Applicable (no established standard)

TABLE 2

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SURFACE SOIL/FILL ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20
Lab Sample Number		X3587-12	X3587-13	X3639-01	X3639-02	X3639-03	X3639-04	X3639-05	X3639-06	X3639-09	X3639-10
Sampling Date		07/05/06	07/05/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)										
Benzaldehyde	n/a	3400 U	76 U	710 U	700 U	770 U	74 U	77 U	700 U	76 U	76 U
2-Methylnaphthalene	n/a	2800 U	62 U	580 U	570 U	630 U	60 U	63 U	570 U	62 U	62 U
Acenaphthylene	500,000	2700 U	60 U	560 U	550 U	610 U	58 U	61 U	550 U	60 U	60 U
Dibenzofuran	n/a	2800 U	61 U	570 U	560 U	620 U	59 U	62 U	560 U	61 U	61 U
Fluorene	500,000	2800 U	62 U	580 U	580 U	630 U	60 U	63 U	580 U	63 U	62 U
Phenanthrene	500,000	2700 U	410	550 U	540 U	860 J	57 U	65 J	540 U	59 U	59 U
Anthracene	500,000	2500 U	95 J	520 U	510 U	570 U	54 U	56 U	510 U	56 U	56 U
Carbazole	n/a	2500 U	56 U	530 U	520 U	570 U	55 U	57 U	520 U	57 U	57 U
Di-n-butylphthalate	n/a	2500 U	56 U	530 U	520 U	570 U	55 U	57 U	520 U	57 U	56 U
Fluoranthene	500,000	2500 U	810	510 U	520 J	2000 J	53 U	110 J	510 U	55 U	55 U
Pyrene	500,000	2900 U	740	610 U	600 U	2500 J	63 U	120 J	600 U	66 U	140 J
Butylbenzylphthalate	n/a	2700 U	60 U	560 U	550 U	610 U	58 U	61 U	550 U	60 U	60 U
Benzo(a)anthracene	5,600	2300 U	420	480 U	480 U	1300 J	50 U	54 J	480 U	52 U	52 U
Chrysene	56,000	3000 U	380	620 U	610 U	1400 J	64 U	67 U	610 U	67 U	66 U
bis(2-Ethylhexyl)phthalate	n/a	3200 U	71 U	660 U	660 U	2000 J	69 U	72 U	650 U	71 U	71 U
Di-n-octyl phthalate	n/a	2800 U	63 U	590 U	580 U	640 U	61 U	64 U	580 U	63 U	63 U
Benzo(b)fluoranthene	5,600	1800 U	490	380 UJ	510 J	2500 J	39 U	77 J	380 UJ	41 U	51 J
Benzo(k)fluoranthene	56,000	3700 U	170 J	760 UJ	750 U	820 U	79 U	82 U	750 UJ	82 U	81 UJ
Benzo(a)pyrene	1,000	2700 U	360 J	550 UJ	550 U	**1400** J	57 U	60 U	550 UJ	59 U	59 UJ
Indeno(1,2,3-cd)pyrene	5,600	2100 U	180 J	440 U	430 U	690 J	46 U	48 U	430 U	47 U	47 U
Dibenz(a,h)anthracene	560	2100 U	46 U	430 UJ	430 U	470 U	45 U	47 U	430 UJ	47 U	46 UJ
Benzo(g,h,i)perylene	500,000	2800 U	150 J	570 UJ	560 U	800 J	59 U	62 U	560 UJ	61 U	61 UJ
Total Confident Conc. SVOC		0	4205	0	1030	18050	0	426	0	0	191
Total TICs		110000	4929	28600	28800	21100	3480	7560	28100	5886	6120

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
E - Indicates a compound whose concentration exceeds the calibration range of the instrument for this analysis.
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG.
ug/Kg - Micrograms per Kilogram
ug/L - Micrograms per Liter
n/a - Not Applicable (no established standard)

TABLE 3

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SURFACE SOIL/FILL ANALYTICAL RESULTS - PCBs
(DETECTED COMPOUNDS ONLY)

Sample ID		SS-1	SS-2	SS-3	SSEQUIPBLANK	SS-4	DUPLICATE	SS-5	SS-6	SS-7	SS-8	SS-9
Lab Sample Number		X3587-01	X3587-02	X3587-03	X3587-04	X3587-05	X3587-14	X3587-06	X3587-07	X3587-08	X3587-09	X3587-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06
Matrix		SOIL	SOIL	SOIL	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	5.0	10.0	1.0	1.0	1.0	10.0	5.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/L	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Aroclor-1254	1,000	1.8 U	2.0 U	1.8 U	0.037 U	620 JN	**1400** JN	1.8 U	2.0 U	50 N	**2800** J	750 J
Aroclor-1260	1,000	4.5 U	39 J	92 N	0.1600 U	4.7 U	47 U	4.5 UJ	39	4.4 U	51 U	4.7 U

Sample ID		SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20
Lab Sample Number		X3587-11	X3587-12	X3587-13	X3639-01	X3639-02	X3639-03	X3639-04	X3639-05	X3639-06	X3639-09	X3639-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		2.0	1.0	1.0	1.0	1.0	20.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Aroclor-1254	1,000	370	1.7 U	1.9 U	1.7 U	200	**4100**	1.8 U	1.9 U	1.8 U	1.9 U	1.8 U
Aroclor-1260	1,000	4.8 U	4.4 U	4.7 U	4.4 U	4.6 U	4.6 U	4.5 U	4.8 U	4.5 U	4.7 U	4.5 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
N - Indicates presumptive evidence of a compound, where identification is based on a library search.
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG.
ug/Kg - Micrograms per Kilogram
ug/L - Micrograms per Liter

TABLE 4
SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SURFACE SOIL/FILL ANALYTICAL RESULTS - PESTICIDES
(DETECTED COMPOUNDS ONLY)

Sample ID		SS-1	SS-2	SS-3	SSEQUIPBLANK	SS-4	DUPLICATE	SS-5	SS-6	SS-7	SS-8	SS-9
Lab Sample Number		X3587-01	X3587-02	X3587-03	X3587-04	X3587-05	X3587-14	X3587-06	X3587-07	X3587-08	X3587-09	X3587-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06
Matrix		SOIL	SOIL	SOIL	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/L	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Endosulfan I	200,000	0.93 U	1.1 U	0.93 U	0.0078 U	0.98 U	0.97 U	0.94 U	1.0 U	0.91 U	1.1 U	14 N
4,4-DDE	62,000	0.83 U	0.95 U	0.83 U	0.0074 U	0.87 U	0.87 U	0.84 U	0.93 U	0.81 U	0.95 U	8.5 N
Endrin	89,000	0.90 U	1.0 U	0.90 U	0.0071 U	0.95 U	0.94 U	0.91 U	1.0 U	0.88 U	1.0 U	17 N
alpha-Chlordane	24,000	0.89 U	1.0 U	0.89 U	0.0078 U	0.93 U	0.92 U	0.89 U	0.99 U	7.9 N	1.0 U	0.93 U

Sample ID		SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20
Lab Sample Number		X3587-11	X3587-12	X3587-13	X3639-01	X3639-02	X3639-03	X3639-04	X3639-05	X3639-06	X3639-09	X3639-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Endosulfan I	200,000	8.2 N	0.91 U	0.98 U	0.92 U	0.96 U	50 N	0.95 U	0.99 U	0.94 U	0.98 U	0.98 U
4,4-DDE	62,000	0.89 U	0.81 U	0.88 U	0.82 U	0.86 U	0.88 U	0.85 U	0.88 U	0.84 U	0.88 U	0.88 U
Endrin	89,000	13 N	0.88 U	0.95 U	0.89 U	0.93 U	63 N	0.92 U	0.96 U	0.91 U	0.95 U	0.95 U
alpha-Chlordane	24,000	0.94 U	0.87 U	0.93 U	0.87 U	0.91 U	24 N	0.90 U	0.94 U	0.90 U	0.93 U	3.6

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
N - Indicates presumptive evidence of a compound, where identification is based on a library search.
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG.
ug/Kg - Micrograms per Kilogram
ug/L - Micrograms per Liter

TABLE 5

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SURFACE SOIL/FILL ANALYTICAL RESULTS - TAL METALS
(DETECTED METALS ONLY)

Sample ID		SS-1	SS-2	SS-3	SS-E.B.	SS-4	SS-DUP.	SS-5	SS-6	SS-7	SS-8	SS-9
Lab Sample Number		X3587-01	X3587-02	X3587-03	X3587-04	X3587-05	X3587-14	X3587-06	X3587-07	X3587-08	X3587-09	X3587-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06	07/05/06
Matrix		SOIL	SOIL	SOIL	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	ug/L	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (mg/Kg)											
Aluminum	n/a	8370	5590	9720	25.8 J	8660	9000	7630	5220	8310	11300	8800
Antimony	n/a	0.349 UJ	49.8	0.343 U	5.450 J	36.1 J	44.6 J	0.83 U	0.387 U	0.338 U	79.8	0.368 U
Arsenic	16	4.860	**19.9**	9.970	3.320 U	14.5	14.7	11.3	8.240	6.580	15.3	10.7
Barium	400	58.0	182	162	0.723 U	319	293	208	169	95.2	**417**	252
Beryllium	590	0.386 J	0.411 J	0.493 J	0.090 U	0.50 J	0.56	0.51 J	0.375 J	0.414 J	0.788	0.418 J
Cadmium	9.3	0.164 J	1.310	0.995	0.327 U	**10.5**	**11.2**	0.13 J	0.754	0.269 J	**14.3**	7.480
Calcium	n/a	2040	5990	15600	273 J	36900	43500	3200	3530	18800	28900	38400
Chromium	1,900	13.0	58.7	85.2	0.343 U	**5280** J	1200 J	23.8	104	109	911	1230
Cobalt	n/a	5.810 J	13.9	15.7	0.370 U	57.6	55.5	11.7	9.850	11.2	41.2	52.1
Copper	270	158	**1050**	267	3.640 U	**1850** J	**2520** J	219	**301**	119	**2160**	**776**
Iron	n/a	17400 J	73500	34300	27.0 U	99100 J	133000 J	23000	50500	23200	74800	92600
Lead	1,000	156 J	**2720**	518	2.180 U	**1540** J	**1250** J	374	263	177	**2590**	**1160**
Magnesium	n/a	2680 J	2870	5260	18.1 J	5790	6110	3380	1960	5400	6150	6120
Manganese	10,000	306 J	651	743	0.106 U	1510 J	1860 J	589	375	565	1330	1590
Mercury	2.8	0.112	0.537	0.323	0.2000 J	**9.3**	0.282	0.282	0.197	**10.100**	**4.9**	**3.0**
Nickel	310	16.3	57.5	74.6	1.560 U	**933**	**983**	27.4	36.7	104	**1510**	**712**
Potassium	n/a	765 J	720	1170	61.8 UJ	1050	1280	758	616	1090	1320	1080
Selenium	1,500	1.330 U	5.100	2.100 U	3.040 U	5.2 J	8.6 J	2.0 U	3.250 U	1.530 U	5.490	4.170
Silver	1,500	0.084 UJ	0.095 U	0.083 U	1.640 U	10.7 J	17.5 J	1.1	0.093 U	0.081 U	0.095 U	0.089 U
Sodium	n/a	202 U	438 U	325 U	332 U	412 UJ	606 J	30.6 U	274 U	258 U	1100	559 J
Thallium	n/a	1.520 U	0.635 U	0.551 U	3.050 U	3.9	4.2	0.56 U	0.778 U	0.543 U	13.7	1.240 U
Vanadium	n/a	18.1	29.3	41.8	0.701 U	49.2	51.9	20.0	22.1	24.5	71.5	56.8
Zinc	10,000	259 J	703	283	35.1	1800	1830	143	135	199	1920	989

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG.
mg/Kg - Milligrams per Kilogram
ug/L - Micrograms per Liter
n/a - Not Applicable (no established standard)

TABLE 5

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SURFACE SOIL/FILL ANALYTICAL RESULTS - TAL METALS
(DETECTED METALS ONLY)

Sample ID		SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20
Lab Sample Number		X3587-11	X3587-12	X3587-13	X3639-01	X3639-02	X3639-03	X3639-04	X3639-05	X3639-06	X3639-09	X3639-10
Sampling Date		07/05/06	07/05/06	07/05/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06	07/06/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (mg/Kg)											
Aluminum	n/a	9480	5650	8240	12400	6360	8770	8200	7000	9410	14700	15500
Antimony	n/a	0.371 U	0.338 U	26.7	5.170 J	0.712 U	22.2	0.716 U	0.744 U	0.706 U	0.735 U	0.740 U
Arsenic	16	**16.1**	4.700	9.340	11.3	6.550	13.1	3.560	4.370	7.740	11.4	13.3
Barium	400	320	45.1	102	202	93.6	229	37.7	49.7	144	211	270
Beryllium	590	0.578	0.323 J	0.405 J	0.642	0.376 J	0.563	0.400 J	0.372 J	0.547	0.766	0.767
Cadmium	9.3	7.590	0.034 U	0.188 J	0.069 U	1.770	**10.9**	0.072 U	0.075 U	0.071 U	0.074 U	0.074 U
Calcium	n/a	33200	71400	3880	4760 J	6460 J	24800 J	348 J	802 J	17400 J	1560 J	3120 J
Chromium	1,900	1690	125	32.8	21.6	203	421	10.3	26.2	25.8 J	31.9	38.8
Cobalt	n/a	44.4	5.910	10.7	15.9	13.6	30.7	6.010	6.000	10.2	17.5	23.5
Copper	270	**539**	18.2	**646**	53.6	239	**798**	14.9	19.5	32.4	36.9	58.2
Iron	n/a	79100	13400	30200	27600	33200	58900	13400	12200	21700 J	29000	35600
Lead	1,000	**1880**	26.4	**1020**	67.6	269	639	15.1	36.5	136 J	69.9	94.2
Magnesium	n/a	5510	7860	3830	5150	2850	5060	2400	2140	5040 J	5300	6980
Manganese	10,000	1640	361	705	950	509	1230	330	339	803 J	1230	1060
Mercury	2.8	0.053	**9.8**	0.151	0.151	0.282	**2.8**	0.034	0.149	0.109 J	0.108	0.159
Nickel	310	**1410**	29.5	40.4	32.5	117	**1890**	14.7	30.9	31.1 J	43.9	54.2
Potassium	n/a	1260	1050	805	1240	600	795	552	445 J	1010	1140	1510
Selenium	1,500	3.650	0.598 U	2.330 U	0.960 U	1.440 U	1.550 U	0.745 U	0.859 U	0.745 U	2.450 U	2.280 U
Silver	1,500	0.089 U	0.081 U	0.088 U	0.164 U	0.172 U	0.175 U	0.172 U	0.179 U	0.170 U	0.177 U	0.178 U
Sodium	n/a	548 J	231 U	147 U	202 U	211 U	764	56.4 U	104 U	107 U	89.6 U	173 U
Thallium	n/a	7.980	0.544 U	0.588 U	1.100 U	1.140 U	1.170 U	1.150 U	1.200 U	1.130 U	1.180 U	1.190 U
Vanadium	n/a	62.0	31.3	30.0	26.4	23.0	40.6	15.0	20.9	26.1 J	29.3	34.3
Zinc	10,000	897	56.4	246	102	293	1370	87.3	54.0	87.3 J	114	131

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG.
ug/L - Micrograms per Liter
n/a - Not Applicable (no established standard)

TABLE 6

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (GEOPROBE) ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		GP-1(4-6)	GP-2(0-4)	GP-3(0-4)	GP-4(4-8)	GP-5(6-8)	GP-6(6-8)	GP-7(4-6)	DUPLICATE	EQUIPBLANK
Lab Sample Number		X3772-01	X3772-02	X3772-03	X3772-06	X3772-07	X3772-08	X3772-09	X3772-11	X3772-10
Sampling Date		07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L
COMPOUND	Part 375 SCG (ug/Kg)									
Benzaldehyde	n/a	76 U	120 J	86 J	150 J	73 U	82 U	75 U	83 U	1.7 UJ
Acetophenone	n/a	54 U	56 U	54 U	88 J	52 U	59 U	54 U	59 U	1.3 U
3+4-Methylphenols	n/a	59 U	60 U	58 U	130 J	56 U	63 U	58 U	64 U	1.4 U
Naphthalene	500,000	63 U	210 J	63 U	380	60 U	69 U	63 U	69 U	1.5 U
2-Methylnaphthalene	n/a	62 U	200 J	62 U	340 J	59 U	67 U	61 U	68 U	1.1 U
1,1-Biphenyl	n/a	61 U	65 J	61 U	200 J	58 U	66 U	60 U	67 U	1.5 U
Acenaphthylene	500,000	60 U	170 J	60 U	62 U	57 U	65 U	59 U	66 U	1.4 U
Acenaphthene	500,000	66 U	87 J	66 U	68 U	63 U	71 U	65 U	72 U	1.4 U
Dibenzofuran	n/a	61 U	130 J	61 U	170 J	58 U	66 U	61 U	67 U	1.4 U
Fluorene	500,000	63 U	140 J	62 U	64 U	60 U	68 U	62 U	69 U	1.5 U
Phenanthrene	500,000	59 U	1700	970	1300	56 U	64 U	58 U	65 U	1.5 U
Anthracene	500,000	56 U	440	160 J	190 J	53 U	61 U	55 U	61 U	1.5 U
Carbazole	n/a	57 U	140 J	150 J	110 J	54 U	61 U	56 U	62 U	1.3 UJ
Di-n-butylphthalate	n/a	57 U	58 U	56 U	84 U	54 U	61 U	56 U	62 U	1.9 J
Fluoranthene	500,000	150 J	2400	1800	1400	53 U	60 U	61 J	60 UJ	1.3 U
Pyrene	500,000	140 J	4100	1900	2200	62 U	71 U	65 U	72 U	1.5 U
Benzo(a)anthracene	5,600	55 J	1800	820	1100	49 U	56 U	51 U	57 U	1.2 U
Chrysene	56,000	88 J	1700	960	1400	63 U	72 U	66 U	73 U	1.8 U
bis(2-Ethylhexyl)phthalate	n/a	71 U	74 U	71 U	200 J	68 U	77 U	70 U	91 J	1.6 U
Benzo(b)fluoranthene	5,600	87 J	2800 J	1700 J	2000 J	39 U	44 U	50 J	45 UJ	0.790 U
Benzo(k)fluoranthene	56,000	82 U	960 J	560 J	680 J	78 U	88 U	81 U	89 U	2.0 U
Benzo(a)pyrene	1,000	59 U	**2000** J	940 J	**1100** J	57 U	64 U	59 U	65 U	1.2 U
Indeno(1,2,3-cd)pyrene	5,600	47 U	310 J	170 J	210 J	45 U	51 U	47 U	52 U	0.870 U
Dibenz(a,h)anthracene	560	47 U	74 J	46 UJ	48 UJ	44 U	50 U	46 U	51 U	0.910 U
Benzo(g,h,i)perylene	500,000	61 U	740 J	330 J	450 J	58 U	66 U	61 U	67 U	1.1 U
Total Confident Conc. SVOC		520	20986	10546	13882	0	0	111	91	1.9

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 7

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (GEOPROBE) ANALYTICAL RESULTS - PCBs
(DETECTED COMPOUNDS ONLY)

Sample ID		GP-1(4-6)	GP-2(0-4)	GP-3(0-4)	GP-4(4-8)	GP-5(6-8)	GP-6(6-8)	GP-7(4-6)	DUPLICATE	EQUIPBLANK
Lab Sample Number		X3772-01	X3772-02	X3772-03	X3772-06	X3772-07	X3772-08	X3772-09	X3772-11	X3772-10
Sampling Date		07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L
COMPOUND	Part 375 SCG (ug/Kg)									
Aroclor-1254	1,000	1.9 U	1.9 U	1.9 U	120 N	1.8 U	2.0 U	1.8 U	2.0 U	0.039 U
Aroclor-1260	1,000	4.7 U	41	120 JN	4.9 U	4.5 U	5.1 U	4.7 U	5.2 U	0.1600 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
N - Indicates presumptive evidence of a compound. This qualifier is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)

TABLE 8

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (GEOPROBE) ANALYTICAL RESULTS - PESTICIDES
(DETECTED COMPOUNDS ONLY)

Sample ID		GP-1(4-6)	GP-2(0-4)	GP-3(0-4)	GP-4(4-8)	GP-5(6-8)	GP-6(6-8)	GP-7(4-6)	DUPLICATE	EQUIPBLANK
Lab Sample Number		X3772-01	X3772-02	X3772-03	X3772-06	X3772-07	X3772-08	X3772-09	X3772-11	X3772-10
Sampling Date		07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L
COMPOUND	Part 375 SCG (ug/Kg)									
Dieldrin	1,400	0.92 U	0.95 U	6.2 N	0.95 U	0.88 U	1.0 U	0.91 U	1.0 U	0.0073 U
Endrin	89,000	0.95 U	0.98 U	0.94 U	2.7 J	0.91 U	1.0 U	0.93 U	1.0 U	0.0069 U
Endosulfan II	200,000	1.1 U	1.1 U	7.3 JN	1.1 U	1.0 U	1.1 U	1.0 U	1.2 U	0.0073 U
Methoxychlor	n/a	0.96 U	0.99 U	20 JN	0.99 U	0.92 U	1.0 U	0.94 U	1.1 U	0.0072 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
N - Indicates presumptive evidence of a compound. This qualifier is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 9

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (GEOPROBE) ANALYTICAL RESULTS - TAL METALS
(DETECTED METALS ONLY)

Sample ID		GP-1(4-6)	GP-2(0-4)	GP-3(0-4)	GP-4(4-8)	GP-5(6-8)	GP-6(6-8)	GP-7(4-6)	DUPLICATE	EQUIPBLANK
Lab Sample Number		X3772-01	X3772-02	X3772-03	X3772-06	X3772-07	X3772-08	X3772-09	X3772-11	X3772-10
Sampling Date		07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06	07/17/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	ug/L
COMPOUND	Part 375 SCG (mg/Kg)									
Aluminum	n/a	8850	4160	5220	3220	9400	6870	11100 J	7150 J	44.6 J
Antimony	n/a	0.366 U	132	26.4 J	211	0.351 U	0.398 U	0.366 U	0.404 U	14.7 J
Arsenic	16	4.870	**20.5**	12.3	**48.2**	4.14	2.550	5.180 J	1.450 J	3.320 U
Barium	400	52.3	205	104 J	160	38.4	22.8 J	32.2	26.6	3.720 J
Beryllium	590	0.421 J	0.334 J	0.340 J	0.222 U	0.415 J	0.318 J	0.447 U	0.289 U	0.310 J
Cadmium	9.3	0.037 U	0.458 J	2.070 J	2.160	0.035 U	0.040 U	0.037 U	0.041 U	0.327 U
Calcium	n/a	1200	8930	23000 J	7650	866	572 J	844 J	613 J	467 J
Chromium	1,900	13.0	58.4	122 J	175	12.7	8.250	16.2 J	7.880 J	12.1
Cobalt	n/a	6.310	13.1	16.2 J	19.4	6.720	4.000 J	7.200 J	3.170 J	0.700 J
Copper	270	65.4	**1400**	**884**	**1220**	21.4	13.3	34.5 J	12.0 J	5.590 J
Iron	n/a	20800	62600	45700 J	NR	19100	12800	20700 J	12300 J	358
Lead	1000	82.0	**2680**	**1660** J	**1360**	10.1	7.110	13.4 J	6.490 J	2.180 U
Magnesium	n/a	3080	3610	4640 J	2200	4000	2400	4070 J	2460 J	33.0 J
Manganese	10,000	378	590	510 J	808	512	175	473 J	198 J	8.570 J
Mercury	2.8	0.029	0.293	0.817 J	0.711	0.009 J	0.007 U	0.022 J	0.012 J	0.0300 UJ
Nickel	310	16.6	51.9	125 J	135	18.7	11.2	22.6 J	10.5 J	8.110 J
Potassium	n/a	877	603	714	574	833	739	878	737	100 J
Selenium	1,500	0.575 J	4.010	1.980	2.590	0.365 U	0.414 U	0.380 U	0.420 U	3.040 U
Sodium	n/a	162 U	337 J	262 UJ	1100	153 U	215 U	85.4 U	107 U	563 J
Thallium	n/a	0.588 U	0.614 U	0.722 J	2.430	0.563 U	0.639 U	0.588 U	0.649 U	3.050 U
Vanadium	n/a	17.4	25.4	21.5 J	36.1	16.6	14.2	18.8 J	12.7 J	1.960 J
Zinc	10,000	199	626	470 J	2460	55.1	36.1	55.3 J	42.8 J	38.5

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
mg/Kg - Milligrams per Kilogram (ppm)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)
NR - Not Reported

TABLE 10

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (TEST PITS AND TRENCHES) ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		TRENCH1-1	TRENCH1-2	TRENCH2-1	TRENCH2-2RE	TRENCH3-1	TRENCH3-2	TRENCH4-1	TRENCH4-2a	TRENCH4-2b	TRENCH5-1	TRENCH5-2	TRENCH6-1
Lab Sample Number		X3392-01	X3392-02	X3392-03	X3392-04RE	X3457-04	X3457-02	X3457-03	X3457-01	X3472-01	X3472-02	X3472-05	X3532-01
Sampling Date		06/19/06	06/20/06	06/20/06	06/20/06	06/21/06	06/21/06	06/22/06	06/22/06	06/23/06	06/26/06	06/23/06	06/27/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)												
Acetone	500,000	120 J	54 UJ	40 UJ	18 UJ	71 UJ	82 UJ	75 UJ	18 UJ	61 J	58 J	63 J	56 UJ
Carbon Disulfide	n/a	1.9 U	2.1 U	2.2 U	1.9 UJ	2.1 U	2.2 U	2.0 U	2.0 U	2.2 U	2.2 U	2.2 U	2.1 UJ
Methylene Chloride	500,000	9.5 U	10 U	11 U	56 UJ	24 UJ	56 U	22 UJ	35 U	54 U	25 U	46 U	11 UJ
2-Butanone	500,000	36 J	16 U	17 U	15 UJ	16 U	27 J	15 U	15 U	17 U	17 U	17 U	16 U
Toluene	500,000	2.1 U	2.3 U	2.4 U	2.1 UJ	2.3 U	2.4 U	2.2 U	2.2 U	2.5 U	2.4 U	2.4 U	2.3 U
Ethyl Benzene	390,000	1.8 U	2.0 U	2.1 U	1.9 UJ	2.0 U	2.1 U	1.9 U	1.9 U	2.1 U	2.1 U	2.1 U	2.0 U
m/p-Xylenes	500,000	4.5 U	4.9 U	5.1 U	4.6 UJ	5.0 U	5.1 U	4.7 U	4.7 U	5.2 U	5.1 U	5.2 U	5.0 U
o-Xylene	500,000	10 J	2.2 U	2.3 U	2.0 UJ	2.2 U	2.3 U	2.1 U	2.1 U	2.3 U	2.3 U	2.3 U	2.2 U
Isopropylbenzene	n/a	2.2 U	2.4 U	2.5 U	2.2 UJ	2.4 U	2.4 U	2.3 U	2.3 U	2.5 U	2.5 U	2.5 U	2.4 U
Total Confident Conc. VOC		166	54	40	56	95	165	97	35	115	83	109	56
Total TICs		3870	0	0	0	0	0	0	0	0	0	0	0

Sample ID		DUPLICATE	TRENCH6-2	TRENCH7-1	TRENCH7-2	TRENCH8-1	TRENCH8-2	TP1-2	TP2-1	TP2-3	TP3-1	TP4-1
Lab Sample Number		X3532-05	X3532-02	X3532-03	X3532-04	X3549-01	X3549-02	X3549-03	X3585-02	X3585-03	X3585-04	X3585-01
Sampling Date		06/29/06	06/27/06	06/29/06	06/29/06	06/30/06	06/30/06	06/30/06	07/03/06	07/03/06	07/03/06	07/03/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Acetone	500,000	62 UJ	72 UJ	61 UJ	20 UJ	57 UJ	60 UJ	46 UJ	190 UJ	180 UJ	110 UJ	390 UJ
Carbon Disulfide	n/a	2.1 U	2.1 U	2.0 U	2.2 U	2.1 UJ	2.1 U	2.0 U	2.2 U	8.5 J	2.1 U	17 J
Methylene Chloride	500,000	31 J	11 U	9.8 U	16 J	13 J	14 J	13 J	11 UJ	11 UJ	14 UJ	12 UJ
2-Butanone	500,000	16 U	16 U	15 U	17 U	16 U	16 U	16 U	15 U	17 U	16 U	56 UJ
Toluene	500,000	2.3 U	2.4 U	2.2 U	2.4 U	2.4 U	2.3 U	2.2 U	27 U	2.5 U	7.3 J	13 J
Ethylbenzene	390,000	2.0 U	2.1 U	1.9 U	2.1 U	2.1 U	2.0 U	2.0 U	36 U	2.2 U	2.1 U	45
m/p-Xylenes	500,000	4.9 U	5.0 U	4.7 U	5.2 U	5.0 U	4.8 U	4.8 U	37 U	5.3 U	8.5 J	22 J
o-Xylene	500,000	2.2 U	2.2 U	2.1 U	2.3 U	2.2 U	2.1 U	2.1 U	38 U	2.3 U	2.2 U	17 J
Isopropylbenzene	n/a	2.4 U	2.4 U	2.2 U	2.5 U	2.4 U	2.3 U	2.3 U	41 U	2.5 U	2.4 U	20 J
Total Confident Conc. VOC		93	72	61	16	70	74	59	201	188.5	139.8	592
Total TICs		0	0	0	340	0	0	0	0	0	0	0

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 11

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (TEST PITS AND TRENCHES) ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		TRENCH1-1	TRENCH1-2	TRENCH2-1	TRENCH2-2	TRENCH3-1	TRENCH3-2	TRENCH4-1	TRENCH4-2a	TRENCH4-2b	TRENCH5-1	TRENCH5-2	TRENCH6-1	DUPLICATE
Lab Sample Number		X3392-01	X3392-02	X3392-03	X3392-04	X3457-04	X3457-02	X3457-03	X3457-01	X3472-01	X3472-02	X3472-05	X3532-01	X3532-05
Sampling Date		06/19/06	06/20/06	06/20/06	06/20/06	06/21/06	06/21/06	06/22/06	06/22/06	06/23/06	06/26/06	06/23/06	06/27/06	06/29/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		5.0	1.0	1.0	10.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)													
Benzaldehyde	n/a	3100 U	77 U	78 U	740 U	79 UJ	79 UJ	72 UJ	74 UJ	80 UJ	83 UJ	81 UJ	80 U	79 U
Naphthalene	500,000	4500 J	64 U	65 U	610 U	66 U	66 U	60 U	61 U	66 U	69 U	68 U	66 U	66 U
2-Methylnaphthalene	n/a	2900 J	62 U	64 U	600 U	64 U	65 U	59 U	60 U	65 U	67 U	66 U	65 U	64 U
Acenaphthylene	500,000	2400 U	61 U	62 U	1000 J	63 U	63 U	57 U	58 U	63 U	65 U	64 U	63 U	62 U
Acenaphthene	500,000	6700 J	66 U	68 U	900 J	69 U	69 U	63 U	64 U	69 U	72 U	70 U	69 U	68 U
Dibenzofuran	n/a	5800 J	62 U	63 U	830 J	64 U	64 U	58 U	59 U	64 U	66 U	65 U	64 U	63 U
Fluorene	500,000	8400 J	63 U	64 U	1400 J	65 U	65 U	60 U	61 U	65 U	68 U	67 U	66 U	65 U
Phenanthrene	500,000	37000	59 U	61 U	16000	61 U	62 U	56 U	57 U	62 U	64 U	63 U	62 U	61 U
Anthracene	500,000	14000 J	56 U	57 U	4600	58 U	58 U	53 U	54 U	59 U	61 U	60 U	59 U	58 U
Carbazole	n/a	7800 J	57 U	58 U	1100 J	59 U	59 U	54 U	55 U	59 U	61 U	60 U	59 U	59 U
Di-n-butylphthalate	n/a	2300 U	57 U	58 U	550 U	59 U	59 U	54 U	55 U	59 U	61 U	60 U	59 U	59 U
Fluoranthene	500,000	30000	56 U	57 U	4000 J	57 U	58 U	52 U	54 U	58 U	60 U	59 U	58 UJ	110 J
Pyrene	500,000	18000	66 U	67 U	25000	68 U	68 U	62 U	64 U	69 U	71 U	70 U	69 UJ	100 J
Benzo(a)anthracene	5,600	**8400** J	52 U	53 U	**18000**	54 U	54 U	49 U	50 U	54 U	56 U	55 U	54 UJ	59 J
Chrysene	56,000	8900 J	67 U	68 U	16000	69 U	69 U	63 U	65 U	70 U	72 U	71 U	70 UJ	69 J
bis(2-Ethylhexyl)phthalate	n/a	2900 U	72 U	73 U	690 U	74 U	87 J	68 U	580	75 U	77 U	76 U	75 UJ	110 J
Benzo(b)fluoranthene	5,600	**8600** J	41 U	42 U	**19000**	42 U	43 U	39 U	40 U	43 U	44 U	43 U	43 UJ	79 J
Benzo(k)fluoranthene	56,000	5300 J	89 J	85 JB	6100 J	85 U	85 U	78 U	79 U	85 U	88 U	87 U	100 J	120 J
Benzo(a)pyrene	1,000	**5100** J	60 U	61 U	**15000**	62 U	62 U	56 U	58 U	62 U	64 U	63 U	62 U	61 U
Indeno(1,2,3-cd)pyrene	5,600	2400 J	47 UJ	48 UJ	**6600** J	49 UJ	49 UJ	45 UJ	46 UJ	49 UJ	51 UJ	50 UJ	49 UJ	49 UJ
Dibenz(a,h)anthracene	560	1900 UJ	47 UJ	48 UJ	**680** J	48 UJ	49 UJ	44 UJ	45 UJ	49 UJ	50 UJ	50 UJ	49 U	48 U
Benzo(g,h,i)perylene	500,000	2500 UJ	62 UJ	63 UJ	5300 J	64 UJ	64 UJ	58 UJ	59 UJ	64 UJ	66 UJ	65 UJ	64 U	63 U
Total Confident Conc. SVOC		173800	89	85	174510	0	87	0	580	0	0	0	100	647
Total TICs		NR	NR	NR	NR	5240	5860	4880	5440	5430	5680	5170	14290	13890

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)
NR - Not Reported

TABLE 11

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (TEST PITS AND TRENCHES) ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		TRENCH6-2	TRENCH7-1	TRENCH7-2	TRENCH8-1	TRENCH8-2	TP1-2	TP2-1	TP2-3	TP3-1	TP4-1
Lab Sample Number		X3532-02	X3532-03	X3532-04	X3549-01	X3549-02	X3549-03	X3585-02	X3585-03	X3585-04	X3585-01
Sampling Date		06/27/06	06/29/06	06/29/06	06/30/06	06/30/06	06/30/06	07/03/06	07/03/06	07/03/06	07/03/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	5.0	1.0	1.0	1.0	5.0	1.0	1.0	5.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)										
Benzaldehyde	n/a	80 U	73 U	410 U	80 U	79 U	75 U	400 U	89 J	79 U	420 U
Naphthalene	500,000	66 U	61 U	340 U	66 U	65 U	63 U	330 U	69 U	65 U	350 U
2-Methylnaphthalene	n/a	65 U	59 U	340 U	65 U	64 U	61 U	330 U	67 U	64 U	340 U
Acenaphthylene	500,000	63 U	58 U	330 U	200 J	62 U	60 U	350 J	65 U	78 J	330 U
Acenaphthene	500,000	69 U	63 U	360 U	69 U	68 U	65 U	390 J	72 U	68 U	370 U
Dibenzofuran	n/a	64 U	59 U	330 U	64 U	63 U	61 U	320 U	66 U	63 U	340 U
Fluorene	500,000	65 U	60 U	340 U	140 J	65 U	62 U	370 J	68 U	65 U	350 U
Phenanthrene	500,000	62 U	57 U	1300 J	1500	61 U	59 U	2200	220 J	480	420 J
Anthracene	500,000	59 U	54 U	330 J	430	58 U	55 U	670 J	66 J	120 J	310 U
Carbazole	n/a	59 U	54 U	310 U	88 J	59 U	56 U	300 U	61 U	59 U	310 U
Di-n-butylphthalate	n/a	59 U	54 U	310 U	59 U	58 U	56 U	300 U	61 U	64 J	440 J
Fluoranthene	500,000	58 U	53 U	1400 J	2500	57 U	55 U	4000	420	1000	570 J
Pyrene	500,000	69 U	63 U	3000	2100	68 U	65 U	3900	510	1300	610 J
Benzo(a)anthracene	5,600	54 U	50 U	960 J	1400	54 U	51 U	2300	250 J	710	290 U
Chrysene	56,000	70 U	64 U	1100 J	1100	69 U	66 U	2500	260 J	680	370 U
bis(2-Ethylhexyl)phthalate	n/a	74 U	68 U	9300	75 U	74 U	71 U	790 J	960	240 J	1800 J
Benzo(b)fluoranthene	5,600	43 U	39 U	1300 J	1400	42 U	40 U	3600	400 J	1100 J	480 J
Benzo(k)fluoranthene	56,000	100 J	78 U	890 J	460	84 U	81 U	1200 J	190 J	420 J	450 UJ
Benzo(a)pyrene	1,000	62 U	57 U	900 J	980	61 U	59 U	**1900** J	250 J	700 J	330 UJ
Indeno(1,2,3-cd)pyrene	5,600	49 UJ	45 UJ	550 J	490	49 U	47 U	250 U	53 J	150 J	260 U
Dibenz(a,h)anthracene	560	49 U	45 U	250 UJ	54 J	48 U	46 U	250 U	50 UJ	48 UJ	260 UJ
Benzo(g,h,i)perylene	500,000	64 U	59 U	830 J	340 J	63 U	61 U	710 J	85 J	240 J	340 UJ
Total Confident Conc. SVOC		100	0	21860	13182	0	0	24880	3753	7282	4320
Total TICs		14000	12590	24490	21880	19780	20190	11990	16770	6417	16370

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)
NR - Not Reported

TABLE 12
SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (TEST PITS AND TRENCHES) ANALYTICAL RESULTS - PCBs
(DETECTED COMPOUNDS ONLY)

Sample ID		TRENCH1-1	TRENCH1-2	TRENCH2-1	TRENCH2-2	TRENCH3-1	TRENCH3-2	TRENCH4-1	TRENCH4-2a	TRENCH4-2b	TRENCH5-1	TRENCH5-2	TRENCH6-1	DUPLICATE
Lab Sample Number		X3392-01	X3392-02	X3392-03	X3392-04	X3457-04	X3457-02	X3457-03	X3457-01	X3472-01	X3472-02	X3472-05	X3532-01	X3532-05
Sampling Date		06/19/06	06/20/06	06/20/06	06/20/06	06/21/06	06/21/06	06/22/06	06/22/06	06/23/06	06/26/06	06/23/06	06/27/06	06/29/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)													
Aroclor-1016	1,000	2.7 U	2.9 U	2.9 U	2.7 U	3.0 U	2.9 U	2.7 U	2.8 U	3.0 U	15 J	3.0 U	3.0 U	2.9 U
Aroclor-1232	1,000	6.2 U	6.7 U	6.8 U	6.3 U	6.9 U	6.8 U	6.2 U	6.4 U	6.9 U	31	7.0 U	6.9 U	6.8 U
Aroclor-1242	1,000	5.5 U	5.9 U	6.0 U	5.6 U	6.1 U	6.0 U	5.5 U	5.7 U	6.1 U	18 J	6.2 U	6.1 U	6.1 U
Aroclor-1248	1,000	2.7 U	2.9 U	2.9 U	2.7 U	3.0 U	2.9 U	2.7 U	2.8 U	3.0 U	15 J	3.0 U	3.0 U	2.9 U
Aroclor-1254	1,000	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	1.9 U	2.9 J	2.0 U	1.9 U	1.9 U

Sample ID		TRENCH6-2	TRENCH7-1	TRENCH7-2	TRENCH8-1	TRENCH8-2	TP1-2	TP2-1	TP2-3	TP3-1	TP4-1
Lab Sample Number		X3532-02	X3532-03	X3532-04	X3549-01	X3549-02	X3549-03	X3585-02	X3585-03	X3585-04	X3585-01
Sampling Date		06/27/06	06/29/06	06/29/06	06/30/06	06/30/06	06/30/06	07/03/06	07/03/06	07/03/06	07/03/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)										
Aroclor-1016	1,000	3.0 U	2.7 U	3.1 UJ	3.0 U	2.9 U	2.8 U	3.0 U	3.1 U	15 U	3.1 U
Aroclor-1232	1,000	6.9 U	6.3 U	7.2 UJ	6.9 U	6.8 U	6.5 U	7.0 U	7.1 U	34 U	7.3 U
Aroclor-1242	1,000	6.1 U	5.6 U	6.4 UJ	6.1 U	6.0 U	5.8 U	6.2 U	6.3 U	30 U	6.5 U
Aroclor-1248	1,000	3.0 U	2.7 U	3.1 UJ	3.0 U	2.9 U	2.8 U	3.0 U	3.1 U	15 U	3.1 U
Aroclor-1254	1,000	1.9 U	1.8 U	2.0 UJ	1.9 U	1.9 U	1.8 U	900	2.0 U	**1200**	2.1 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 13

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (TEST PITS AND TRENCHES) ANALYTICAL RESULTS - PESTICIDES
(DETECTED COMPOUNDS ONLY)

Sample ID		TRENCH1-1	TRENCH1-2	TRENCH2-1	TRENCH2-2	TRENCH3-1	TRENCH3-2	TRENCH4-1	TRENCH4-2a	TRENCH4-2b	TRENCH5-1	TRENCH5-2	TRENCH6-1
Lab Sample Number		X3392-01	X3392-02	X3392-03	X3392-04	X3457-04	X3457-02	X3457-03	X3457-01	X3472-01	X3472-02	X3472-05	X3532-01
Sampling Date		06/19/06	06/20/06	06/20/06	06/20/06	06/21/06	06/21/06	06/22/06	06/22/06	06/23/06	06/26/06	06/23/06	06/27/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)												
Endosulfan I	200,000	2.7 J	0.99 U	1.0 U	0.94 U	1.0 U	1.0 U	0.94 U	0.96 U	1.0 U	1.1 U	1.0 U	1.0 U
4,4-DDD	92,000	2.1 J	0.79 U	0.81 U	0.75 U	0.81 U	0.82 U	0.75 U	0.77 U	0.81 U	0.84 U	0.84 U	0.82 U
Endrin ketone	n/a	3.5	0.93 U	0.94 U	7.1 JN	0.95 U	0.96 U	0.88 U	0.90 U	0.95 U	0.99 U	0.98 U	0.96 U
alpha-Chlordane	24,000	2.5 J	0.94 U	0.96 U	0.89 U	0.97 U	0.97 U	0.89 U	0.91 U	0.97 U	1.0 U	1.0 U	0.98 U

Sample ID		DUPLICATE	TRENCH6-2	TRENCH7-1	TRENCH7-2	TRENCH8-1	TRENCH8-2	TP1-2	TP2-1	TP2-3	TP3-1	TP4-1
Lab Sample Number		X3532-05	X3532-02	X3532-03	X3532-04	X3549-01	X3549-02	X3549-03	X3585-02	X3585-03	X3585-04	X3585-01
Sampling Date		06/29/06	06/27/06	06/29/06	06/29/06	06/30/06	06/30/06	06/30/06	07/03/06	07/03/06	07/03/06	07/03/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)											
Endosulfan I	200,000	1.0 U	1.0 UJ	0.95 U	1.1 U	1.0 U	1.0 U	0.97 U	23 JN	16	25 N	35 N
4,4-DDD	92,000	0.81 U	0.83 U	0.75 U	0.85 U	0.82 U	0.82 U	0.78 U	0.83 U	0.85 U	0.81 U	0.87 U
Endrin ketone	n/a	0.95 U	0.97 U	0.89 U	1.0 U	0.97 U	0.96 U	0.91 U	0.97 U	1 U	0.95 U	1 U
alpha-Chlordane	24,000	0.97 U	0.98 U	0.90 U	1.0 U	0.98 U	0.97 U	0.93 U	0.99 U	1 U	0.97 U	1 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
N - Indicates presumptive evidence of a compound, where identification is based on a library search.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 14

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (TEST PITS AND TRENCHES) ANALYTICAL RESULTS - TAL METALS
(DETECTED METALS ONLY)

Sample ID		TRENCH1-1	TRENCH1-2	TRENCH2-1	TRENCH2-2	TRENCH3-1	TRENCH3-2	TRENCH4-1	TRENCH4-2a	TRENCH4-2b	TRENCH5-1	TRENCH5-2	TRENCH6-1	DUPLICATE
Lab Sample Number		X3392-01	X3392-02	X3392-03	X3392-04	X3457-04	X3457-02	X3457-03	X3457-01	X3472-01	X3472-02	X3472-05	X3532-01	X3532-05
Sampling Date		06/19/06	06/20/06	06/20/06	06/20/06	06/21/06	06/21/06	06/22/06	06/22/06	06/23/06	06/26/06	06/23/06	06/27/06	06/29/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (ug/Kg)													
Aluminum	n/a	7230	7680	8570	4270	710	6080	5920	8470	8030	5430	7330	8570	7600
Antimony	n/a	0.351 UJ	0.374 U	0.373 U	225	0.387 U	0.384 U	0.354 U	0.355 U	0.379 U	0.400 U	0.394 U	0.384 U	0.382 U
Arsenic	16	5.000	2.810	3.230	**19.1**	0.462 U	3.100	1.960	2.990	2.990	2.750	3.590	3.550	3.380
Barium	400	43.6 J	20.7 J	42.8	205	3.200 J	22.6 J	26.0	40.8	35.8	21.1 J	23.3 J	44.5	41.9
Beryllium	590	0.365 J	0.322 U	0.406 J	0.353 J	0.065 U	0.295 J	0.279 J	0.406 J	0.367 J	0.294 U	0.499 J	0.428 U	0.399 U
Cadmium	9.3	0.232 U	0.234 U	0.198 U	1.550 U	0.039 U	0.039 U	0.036 U	0.036 U	0.038 U	0.040 U	0.040 U	0.337 U	0.416 U
Calcium	n/a	50100 J	822	1250	24100	116 J	1160	925	1210	1410	826	955	619	678
Chromium	1,900	16.8	7.290	8.980	42.3	0.696 J	7.610	5.640	9.020	8.500	8.850	8.270	9.030 U	11.0 U
Cobalt	n/a	5.320 J	5.000 J	5.600 J	9.370	0.311 J	4.730 J	4.160 J	5.170 J	4.940 J	4.360 J	5.470 J	5.710 J	5.310 J
Copper	270	32.3	11.5	16.1	**1140**	0.929 J	15.4	11.0	18.8	14.2	19.2	15.0	20.8 J	32.9 J
Iron	n/a	16900	12700	15600	72200	1370	12800	10300	15000	15800	12000	15600	14600 J	13400 J
Lead	1,000	41.3	6.580	9.590	**1770**	0.340 U	6.470	3.630	11.6	6.580	14.2	5.620	16.9 J	31.0 J
Magnesium	n/a	12200	2030	3450	5090	297 J	2850	2090	3400	3110	2220	3170	2890	2650
Manganese	10,000	395	277	434	577	26.5	353	211	413	337	131	448	432	380
Mercury	2.8	0.027	0.023	0.027	0.218	0.032 U	0.012 U	0.025 U	0.024 U	0.029	0.048	0.014	0.029 U	0.017 U
Nickel	310	17.3 J	8.980 J	13.1	33.8	0.831 J	11.0	8.700	13.4	12.6	45.6 J	12.6	14.0	14.0
Potassium	n/a	1100 J	918 J	866 J	813 J	23.5 UJ	696 J	625 J	568 J	704 J	632 J	737 J	844 J	698 J
Selenium	1,500	0.365 U	0.389 U	0.387 U	2.460	0.402 U	0.399 U	0.368 U	0.369 U	0.394 U	0.416 U	0.409 U	0.399 U	0.397 U
Silver	1,500	0.084 U	0.090 U	0.090 U	0.085 U	0.093 U	0.092 U	0.085 U	0.086 U	0.091 U	0.631 U	0.095 U	0.159 U	0.098 U
Sodium	n/a	767 J	36.4 J	106 J	414 J	30.4 U	177 U	132 U	52.2 U	95.1 J	280 J	50.2 J	375 U	414 U
Thallium	n/a	0.564 U	0.601 U	0.599 U	1.210 U	0.621 U	0.617 U	0.569 U	0.571 U	0.609 U	0.643 U	0.633 U	0.617 U	0.614 U
Vanadium	n/a	22.6 J	15.3	15.4	17.0	1.090 J	12.3	11.0	14.9	14.6	12.5	13.6	15.0	13.6
Zinc	10,000	92.7	30.5	61.8	852	6.250	40.6	32.5	38.9	40.5	36.1 J	40.5	97.4	88.0

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 14

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
SUBSURFACE SOIL/FILL (TEST PITS AND TRENCHES) ANALYTICAL RESULTS - TAL METALS
(DETECTED METALS ONLY)

Sample ID		TRENCH6-2	TRENCH7-1	TRENCH7-2	TRENCH8-1	TRENCH8-2	TP1-2	TP2-1	TP2-3	TP3-1	TP4-1
Lab Sample Number		X3532-02	X3532-03	X3532-04	X3549-01	X3549-02	X3549-03	X3585-02	X3585-03	X3585-04	X3585-01
Sampling Date		06/27/06	06/29/06	06/29/06	06/30/06	06/30/06	06/30/06	07/03/06	07/03/06	07/03/06	07/03/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (ug/Kg)										
Aluminum	n/a	7340	6740	6420	6810	10000	8680	8640	10400	7530	18400
Antimony	n/a	0.385 U	0.355 U	70.8	18.3	0.380 U	0.364 U	165	0.401 U	0.383 U	0.412 U
Arsenic	16	4.630	3.100	9.920	12.5	4.260	4.480	14.9	12.7	12.3	14.6
Barium	400	47.1	20.9 J	221	74.2	36.2	42.9	263	326	176	337
Beryllium	590	0.371 U	0.332 U	0.383 U	0.465 J	0.417 J	0.411 J	0.425 J	0.506 J	0.431 J	0.413 J
Cadmium	9.3	0.595 U	0.248 U	**15.9**	0.038 U	0.038 U	0.037 U	6.900	**15.1**	4.210	**16.4**
Calcium	n/a	953	423 J	22100	3100	697	710	38800	34200	11700	30600
Chromium	1,900	12.7 U	6.790 U	324	33.7	9.910	10.6	**5700**	795	224	**2520**
Cobalt	n/a	5.500 J	5.310 J	20.5	10.3	5.380 J	6.710	43.2	39.5	20.4	43.4
Copper	270	28.7	13.5	**1430**	232	13.3	18.1	**1660**	**2850**	**774**	**1280**
Iron	n/a	14300 J	12400 J	50900 J	20700	14600	16300	58600	70500	57600	77700
Lead	1,000	23.9	4.560	806	188	7.820	7.410	**1670**	**1210**	904	930
Magnesium	n/a	2660	2640	3570	2410	3030	3260	5270	7220	3270	5810
Manganese	10,000	372	330	822	447	294	420	1230	1450	821	1520
Mercury	2.8	0.131	0.013	2.6	0.098	0.029	0.015	**3.0**	**6.1**	2.4	**6.8**
Nickel	310	27.6	11.7	**507**	37.5	14.4	16.1	**1000**	**1460**	292	**1760**
Potassium	n/a	875 J	721 J	926 J	689	640 J	649 J	1110	1510	915	1270
Selenium	1,500	0.401 U	0.369 U	0.414 U	0.791 U	0.395 U	0.378 U	3.680	4.130	3.860	4.780
Silver	1,500	0.093 U	0.263 U	3.690 U	0.091 U	0.091 U	0.088 U	0.093 U	0.097 U	0.092 U	0.099 U
Sodium	n/a	391 U	369 U	1050 U	110 UJ	38.1 UJ	28.6 UJ	712	1250	350 U	1990
Thallium	n/a	0.619 U	0.570 U	2.140	0.606 U	0.613 J	0.584 U	4.640	2.710	0.616 U	1.520
Vanadium	n/a	14.8	12.1	31.3	17.0	16.5	15.2	47.3	46.7	36.1	53.5
Zinc	10,000	69.3	36.3	1730	117	43.5	44.5	1120	1900	689	3100

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (References: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** print denote exceedeence of SCG
ug/Kg - Micrograms per Kilogram (ppb)
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 15

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		MW-1	MW-2	MW-5	EQUIPBLANK	CTM-3	CTM-4	CTM-6	DUPLICATE	CTM-7
Lab Sample Number		X3873-01	X3873-02	X3873-09	X3873-11	X4003-01	X4003-02	X4003-05	X4003-07	X4003-06
Sampling Date		07/25/06	07/25/06	07/26/06	07/26/06	08/03/06	08/03/06	08/03/06	08/03/06	08/03/06
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
COMPOUND	SCG (ug/L)									
1,1,1-Trichloroethane	5	0.32 U	0.32 U	0.32 UJ	0.32 UJ	0.32 U	0.32 U	2.1 J	0.32 U	0.32 U
1,2-Dichloroethane	0.6	0.34 U	0.34 U	0.34 UJ	0.34 UJ	0.34 U	0.34 U	0.34 U	**2.9** J	0.34 U
Total Confident Conc. VOC		0	0	0	0	0	0	2.1	2.9	0
Total TICs		0	0	0	0	0	0	0	0	0

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (Reference: NYSDEC *Ambient Water Quality Standards and Guidance Values, and Groundwater Effluent Limitations*, June 1998)
Values in **BOLD** print denote exceedeence of SCG
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 16

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		MW-1	MW-2	MW-5	EQUIPBLANK	CTM-3	CTM-4	CTM-6	DUPLICATE	CTM-7
Lab Sample Number		X3873-01	X3873-02	X3873-09	X3873-11	X4003-01	X4003-02	X4003-05	X4003-07	X4003-06
Sampling Date		07/25/06	07/25/06	07/26/06	07/26/06	08/03/06	08/03/06	08/03/06	08/03/06	08/03/06
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
COMPOUND	**SCG (ug/L)**									
bis(2-Ethylhexyl)phthalate	5	1.6 U	1.9 J	1.6 UJ	1.5 UJ	1.6 UJ	2.1 J	1.6 UJ	1.6 UJ	1.6 UJ
Total Confident Conc. SVOC		0	1.9	0	0	0	2.1	0	0	0
Total TICs		49.9	106.1	60.6	53.1	27	46.6	62.6	65.9	32.8

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (Reference: NYSDEC *Ambient Water Quality Standards and Guidance Values, and Groundwater Effluent Limitations*, June 1998)
Values in **BOLD** print denote exceedeence of SCG
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 17

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - PESTICIDES
(DETECTED COMPOUNDS ONLY)

Sample ID		MW-1	MW-2	MW-5	EQUIPBLANK	CTM-3	CTM-4	CTM-6	DUPLICATE	CTM-7
Lab Sample Number		X3873-01	X3873-02	X3873-09	X3873-11	X4003-01	X4003-02	X4003-05	X4003-07	X4003-06
Sampling Date		07/25/06	07/25/06	07/26/06	07/26/06	08/03/06	08/03/06	08/03/06	08/03/06	08/03/06
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
COMPOUND	SCG (ug/L)									
beta-BHC	0.04	0.0072 U	0.0075 U	0.0072 UJ	0.0073 UJ	0.0072 U	0.0072 U	**0.12**	**0.12**	0.0072 U
gamma-BHC	0.05	0.0072 U	0.0076 U	0.0073 UJ	0.0074 UJ	0.0073 U	0.0073 U	**0.084**	**0.089**	0.0073 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (Reference: NYSDEC *Ambient Water Quality Standards and Guidance Values, and Groundwater Effluent Limitations* , June 1998)
Values in **BOLD** print denote exceedeence of SCG
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

TABLE 18

SCHUYLER HEIGHTS FIRE DISTRICT
849 FIRST STREET, WATERVLIET, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - TAL METALS
(DETECTED METALS ONLY)

Sample ID		MW-1	MW-2	MW-5	EQUIPBLANK	CTM-3	CTM-4	CTM-6	DUPLICATE	CTM-7
Lab Sample Number		X3873-01	X3873-02	X3873-09	X3873-11	X4003-01	X4003-02	X4003-05	X4003-07	X4003-06
Sampling Date		07/25/06	07/25/06	07/26/06	07/26/06	08/03/06	08/03/06	08/03/06	08/03/06	08/03/06
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
COMPOUND	**SCG (ug/L)**									
Aluminum	100	**855**	5.310 U	42.2 J	5.310 UJ	5.310 U	5.310 U	5.310 U	5.310 U	5.310 U
Antimony	3	3.170 U	3.170 U	14.5 UJ	3.170 UJ	3.170 U	**18.6** J	3.170 U	3.170 U	3.170 U
Barium	1,000	28.7 J	22.6 J	43.6 J	0.723 UJ	46.9 J	9.340 J	4.310 J	3.860 J	20.8 J
Calcium	n/a	108000	115000	31600 J	128 J	66500	143000 J	137000	117000	125000
Chromium	50	0.600 J	0.343 U	4.150 J	0.343 UJ	5.350 U	3.330 U	0.870 U	5.420 UJ	3.080 U
Cobalt	5	0.370 U	0.370 U	0.760 J	0.370 UJ	0.370 U	0.620 U	0.370 U	1.420 UJ	0.370 U
Copper	200	3.640 U	3.640 U	4.130 J	3.640 UJ	3.640 U	29.8 U	3.640 U	5.930 UJ	9.070 U
Iron	300	**2740**	27.0 U	27.0 UJ	41.7 J	27.0 U	**10500** J	27.0 U	27.0 U	27.0 U
Lead	25	2.180 U	2.180 U	2.180 UJ	2.180 UJ	2.180 U	2.180 U	2.180 U	2.180 U	5.450
Magnesium	35,000	17900	29700	21800 J	20.6 J	15300	**38400** J	30700 J	24600 J	22600
Manganese	300	**1790**	**1880**	151 J	0.106 UJ	32.6	**1010** J	**804**	**780**	261
Mercury	0.7	0.03 U	0.03 U	0.03 UJ	0.06 J	0.0300 U	0.0300 U	0.0300 U	0.0300 U	0.0300 U
Nickel	100	1.560 U	1.560 U	1.880 J	1.560 UJ	3.390 U	14.1 U	40.0 J	35.5 J	1.560 U
Potassium	n/a	8720	8640	4030 J	61.8 UJ	5220	13900 J	16500	18200	20100
Sodium	20,000	**39700**	**30900**	**24200** J	986 J	**92800**	**52800** J	**51800**	**44900**	**27500**
Vanadium	14	1.200 J	0.701 U	3.150 J	0.701 UJ	0.701 U	0.701 U	0.701 U	1.820 U	0.701 U
Zinc	2,000	40.5 U	24.4 U	20.0 UJ	24.3 UJ	65.7	90.5 J	22.8 U	18.0 U	22.0 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value.
SCG - Standards, Criteria & Guidance levels (Reference: NYSDEC *Ambient Water Quality Standards and Guidance Values, and Groundwater Effluent Limitations*, June 1998)
Values in **BOLD** print denote exceedeence of SCG
ug/L - Micrograms per Liter (ppb)
n/a - Not Applicable (no established standard)

APPENDIX E

Inspection Report

New York Works
Schuyler Heights Fire District Station
House Site
NYSDEC Site Number E401050
Cover Inspection Form

Time: _____

Date: _____

Weather Conditions: _____

Were Photographs Taken ?: _____

Inspection Checklist:

A. Soil Cover:

The soil cover shall be inspected by traversing it and examining it for the following:

		Yes	No
1.	Is there bare ground, or dead or damaged vegetation?	___	___
2.	Are there cracks, subsidence, or holes in the ground surface?	___	___
3.	Is there evidence of burrowing by animals?	___	___
4.	Is there disturbance of the vegetated surface material?	___	___
5.	Is there any erosion damage to vegetated areas?	___	___
6.	Is there discoloration or evidence of spills on the surface?	___	___
7.	Is there other evidence of disturbance to the area?	___	___
8.	Is there debris or trash present?	___	___

Comments *(Explanation required for each Yes answer in Section A):*

B. Gravel Cover:

The gravel cover shall be inspected by traversing it and examining it for the following:

		Yes	No
1.	Are there ruts or holes in, or subsidence of the gravel?	___	___
2.	Is there evidence of burrowing by animals?	___	___
3.	Is there debris or trash present?	___	___
4.	Is there any erosion damage to the gravel surface?	___	___
5.	Is there discoloration or evidence of spills on the surface?	___	___
6.	Is there other evidence of disturbance to the area?	___	___

ARCADIS Design & Consultancy for natural and built assets

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: _____ PROJECT NUMBER: _____

DATE OF INSPECTION: _____ INSPECTOR: _____

WELL DESIGNATION: _____

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
Integrity of Protective Casing	Describe: _____		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	_____ inches		
Weep Hole in Protective Casing	Yes [ ]	No [ ]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: _____		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [ ]	Describe: _____
Well ID. Visible?	Yes [ ]	No [ ]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [ ]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: _____			
Integrity of Cap Seal	Describe: _____			
Surface Water in Casing?	Yes [ ]	No [ ]	Describe: _____	
Well Casing Diameter	_____ inches			
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [ ]	Describe: _____	

Downhole

Odor	Yes [ ]	No [ ]	Describe: _____	
PID Reading	_____ ppm			
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: _____			

Additional Comments:

_____

_____

_____

_____

_____

_____

Comments (*Explanation required for each Yes answer in Section B):*

C. Site Drainage

The perimeter of the Site near adjacent properties shall be inspected by traversing the area and examining it for the following:

		Yes	No
1.	Is there any erosion damage?	___	___
2.	Is there debris blocking drainage pathways?	___	___
3.	Is there evidence of ponding or puddling of water?	___	___

Comments *(Explanation required for each Yes answer in Section C):*

General Comments, Site Notes and Observations of Activities on Adjacent Parcels Which Could Interact With the Work:

Signature:

_____	_____	_____
Inspector	Date	Organization

APPENDIX F

Groundwater Sampling Log

ARCADIS Design & Consultancy for natural and built assets

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: _____ DATE: _____

PROJECT NAME: _____

PROJECT NUMBER: _____

SAMPLERS: _____

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 (\quad)^2 \times (\quad - \quad) =$ _____ gal.

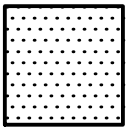
PARAMETER	ACCUMULATED VOLUME PURGED												
Time													
Gallons													
Depth to Water													
Temperature (^{o}C)													
pH													
Redox (mV)													
Conductivity (mohm/cm													
Turbidity (ntu)													
Disolved Oxygen (mg/l)													
TDS													
Salinity													

Notes:

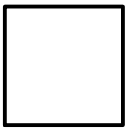
APPENDIX G

Property Survey

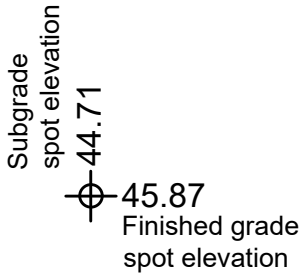
COVER TYPE



Type III Engineered Cover:
12 inches of gravel underlain by separation fabric.

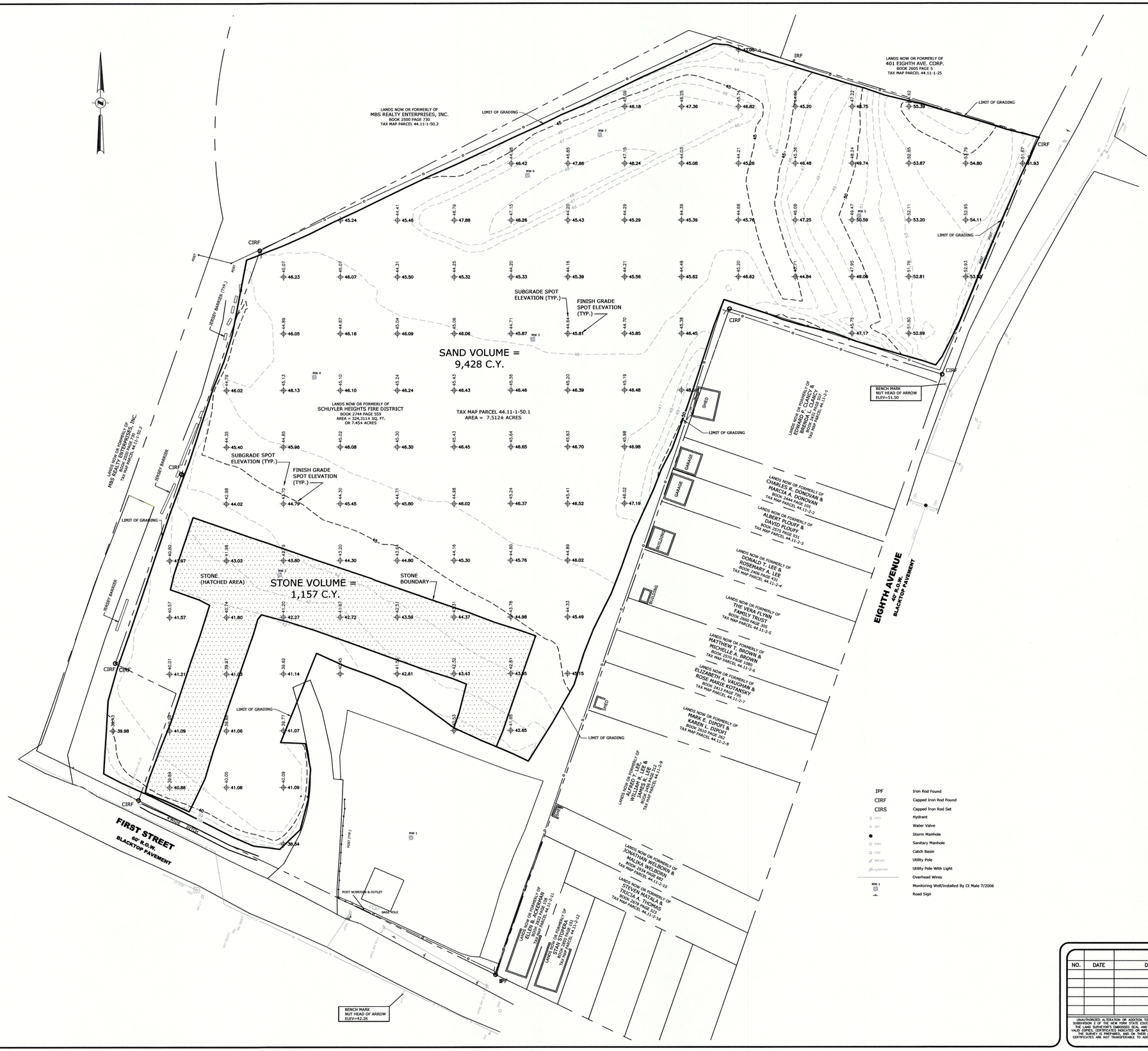


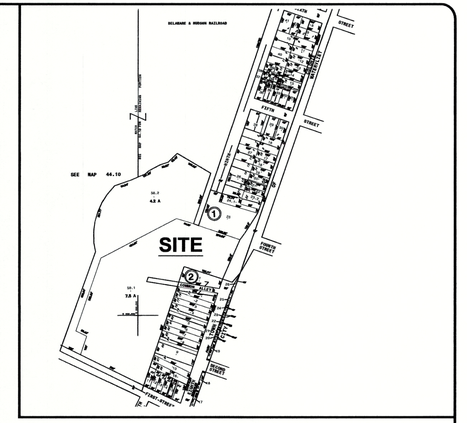
Type I Engineered Cover:
12 inches of vegetated soil and general fill underlain by separation fabric.



Cover thickness indicated by the difference between the subgrade spot elevation and finished grade spot elevation.

Limits of new cover = Extents of separation fabric. (See Figure 3)





SITE LOCATION MAP

N.T.S.

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A JULY 2016 FIELD SURVEY.
2. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
3. UNDERGROUND UTILITIES SHOWN HERON ARE APPROXIMATE AND BASED ON UTILITY EVIDENCE VISIBLE AT GROUND SURFACE AND ARE SUBJECT TO FIELD VERIFICATION BY EXCAVATION. UTILITIES SHOWN DO NOT IMPLY TO CONSTITUTE OR REPRESENT ALL UTILITIES UPON OR ADJACENT TO THE SURVEYED AREA. OTHER UTILITIES MAY EXIST, IF ANY.
4. THE DATUM USED FOR THIS SURVEY IS BASED ON PROVIDED PROJECT CONTROL.
5. ORIGINAL GROUND TOPOGRAPHY WAS PROVIDED BY J.H. MALOY.
6. NMB LAND SURVEYING PLLC PERFORMED NO BOUNDARY DETERMINATION FOR THE PURPOSES OF THIS SURVEY. PROPERTY LINES SHOWN ARE FOR REFERENCE ONLY.
7. ALL FEATURES AND PROPERTY LINES SHOWN ARE ARE REFERENCED FROM MAP REFERNCE NO. 1.

MAP REFERENCES:

1. DESIGN PLANS ENTITLED "SCHUYLER HEIGHTS FIRE DISTRICT STATION HOUSE SITE SITE NO. E410050, FORMER SCOLITE SITE, SITE NO. E442037, FORMER HETTLING FARM SITE, SITE NO. E411015, REMEDIAL CONSTRUCTION PROJECT" DATED NOVEMBER 2015 AND PREPARED BY ARCADIS CE, INC.

NMB
LAND SURVEYING
PLLC
20 TROY AVE. WYNANTSKILL NY, 12198
518-376-4630

REVISIONS			
NO.	DATE	DESCRIPTION	BY

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

TOPOGRAPHIC SURVEY

FINISH GRADE TOPOGRAPHY
LANDS N/F OF SCHUYLAR HEIGHTS FIRE DISTRICT

TOWN OF COLONIE

COUNTY OF ALBANY — STATE OF NEW YORK

SURVEYED BY: J.H. MALOY	CHECKED BY: NMB	DATE: XXXXXXX
DRAWN BY: DMB	JOB No. NY WORKS	DWG No. PRE-CON-SCH

SCALE: 1"=40' — SHEET 1 OF 1