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HOLDER AREA MANAGEMENT PLAN

**Niagara Mohawk – Schenectady (Seneca St.)
Former Manufactured Gas Holder Site**

**Schenectady, Schenectady County, New York
NYSDEC Site Number 4-47-025**

**Prepared For:
Niagara Mohawk, A National Grid Company
300 Erie Boulevard West
Syracuse, New York 13202**

**Prepared By:
Tetra Tech FW, Inc.
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November 2004

HOLDER AREA MANAGEMENT PLAN
Niagara Mohawk Schenectady (Seneca St.) Site
NYSDEC Site Number 4-47-025

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HOLDER AREA MANAGEMENT PLAN

Niagara Mohawk Schenectady (Seneca St.) Site
NYSDEC Site Number 4-47-025

CONTACT INFORMATION

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HOLDER AREA MANAGEMENT PLAN

for

Niagara Mohawk Former Holder Site
Schenectady (Seneca St.), New York
NYSDEC Site Number 4-47-025

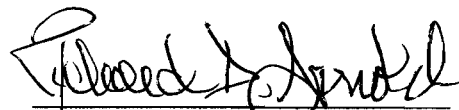
PROFESSIONAL ENGINEER'S CERTIFICATION

In March 2003, subsequent to the performance of Interim Remedial Measure activities, the New York State Department of Environmental Conservation (NYSDEC) issued a Record of Decision (ROD) for the Former Holder Site (Site) located in Schenectady, New York. As set forth in the ROD, the NYSDEC has selected a No Further Action remedy that requires engineering and institutional controls (Controls). In addition, the remedy requires that restrictive language be included in the deed.

Niagara Mohawk, A National Grid Company (Niagara Mohawk) is the Owner of the Site and is responsible for implementation of the requirements set forth under the March 2003 ROD. Niagara Mohawk has prepared a Modified Declaration of Covenants and Restrictions as a means to include the required restrictive language in the deed. Niagara Mohawk has also prepared facility health and safety information to support implementation of the NYSDEC requirements. On behalf of Niagara Mohawk, Tetra Tech FW, Inc. has prepared this Holder Area Management Plan (HAMP) for specific application to the Site. The purpose of the Plan is to identify the required Controls and to provide guidance for their implementation under the ROD.

I have personally examined and am familiar with the HAMP. To the best of my knowledge the HAMP identifies the required Controls and provides guidance for their implementation under the March 2003 Record of Decision.

Certified By Tetra Tech
Engineering Corporation P.C.


Richard Arnold, Senior Engineer
N.Y.P.E. # 076202



HOLDER AREA MANAGEMENT PLAN

Niagara Mohawk Schenectady (Seneca St.) Site NYSDEC Site Number 4-47-025

1.0 INTRODUCTION

1.1 Regulatory Framework

In March 2003, the New York State Department of Environmental Conservation (NYSDEC) issued a Record of Decision (ROD) for the Schenectady (Seneca St.) site (Site) located in the City of Schenectady, Schenectady County, New York (see Figure 1).

The ROD prescribes a No Further Action remedy requiring the imposition of certain future use restrictions and implementation and maintenance of engineering and institutional controls (Controls). The Controls are applicable to the former holder area (Controlled Area) of the Site), and will be implemented by the property owner.

A New York State Licensed Surveyor has surveyed the metes and bounds of the Controlled Area, has set permanent markers at the corners, and has prepared Drawing 1 (a certified survey drawing that displays the metes and bounds of the Controlled Area).

The extent and the specific metes and bounds of the Controlled Area have been carefully defined to include the locations of the former holder foundations and support utilities, to encompass the boundaries of the former Interim Remedial Measure (IRM) excavation area, and to provide a buffer zone around the former holder foundation and excavation areas. In addition, the Controlled Area boundaries are easy for facility operations personnel to visualize and locate in the field. The boundary locations support compliance with the ROD requirements which include controls pertinent to use of the Metal Garage Building, and the Controlled Area is practical to manage because it resides within a common use portion of the overall facility.

1.2 Action Items and Prohibited Activities

Niagara Mohawk, A National Grid Company (Niagara Mohawk) is the current property owner responsible for establishment of the imposition of future use restrictions set forth under a Modified Declaration of Covenants and Restrictions and for implementation of the required Controls. The Controls consist of a series of Action Items and Prohibited Activities that are identified in the ROD, briefly summarized in the list provided below, and addressed in greater detail in subsequent portions of this document.

- **Maintain the engineered capping and containment controls;**
- **Notify workers if utility or other excavation work is planned;**

- **Notify NYSDEC prior to any action that could jeopardize the remedy;**
- **Manage contaminated soil or waste as per the Soil Management Plan;**
- **Assess indoor air quality if the Building use changes;**
- **Complete contaminated soil removal if the Building is removed;**
- **Comply with local zoning ordinances for land use;**
- **Limit property development if any, to appropriate commercial and industrial use;**
- **Do not develop the land for residential use;**
- **Do not develop (install or utilize) water supply wells; and**
- **Annually certify that the required Controls are in place.**

It should be noted that the process of implementing the Controls is to be monitored, and that documentation and submittal of annual reports to the NYSDEC is required.

1.3 Purpose of the HAMP

The purpose of this HAMP is to identify the Controls that are required under the ROD, and to provide guidance for implementation of the Controls. To that end, the HAMP is to be distributed to appropriate Niagara Mohawk departments, facilities, and personnel, and is to be kept on site for review and use by Contractors working in the Controlled Area. Any needed training and/or familiarization will be undertaken at the discretion of Niagara Mohawk.

2.0 BACKGROUND

2.1 Site History and Locale

In 1930, the New York Power and Light Corporation purchased the Schenectady (Seneca St.) property (Site) and constructed a tar-sealed, manufactured gas holder at the northern end of the Site. The holder was then operational for approximately thirty years. In 1950, Niagara Mohawk became the property owner. In 1961, the holder was decommissioned and removed.

In June 1998, Niagara Mohawk initiated a preliminary site assessment/interim remedial measures (PSA/IRM) study. Based on the study findings, Niagara Mohawk implemented an Interim Remedial Measure (IRM) in October 2001, completed the IRM in December 2002, prepared an IRM Summary Report, and submitted the IRM Summary Report to the NYSDEC in February 2003. In March 2003, the NYSDEC issued a ROD for the Site. In Fall 2003, Niagara Mohawk submitted this Plan to the NYSDEC.

The Site is an approximate 5-acre rectangular parcel of land located in a mixed commercial, industrial, and residential area on Seneca Street of the City of Schenectady, in Schenectady County, New York. The nearby region is served by a public water supply and there are no residences directly adjacent to the Site. The Site is bordered by vacant lands to the south, a railroad ROW and municipal property to the east, a railroad ROW and commercial properties to the west, and Seneca Street to the north.

2.2 Site Conditions

The Site resides in elevated terrain, with a generally flat ground surface whose elevations range from about 498 to 502 feet above mean sea level. The northern portion of the Site in the Controlled Area is predominantly paved with either asphalt or concrete, and the southern portion of the Site is generally covered with stone.

During the site investigation activities, three unconsolidated geologic units were found beneath the ground surface. The three units were: 1) a fill unit ranging from 1 to several feet thick; 2) alluvial deposits ranging from about 2 to 5 feet in thickness beneath the fill and; 3) a dense, low permeability glacial till unit extending to depths greater than 25-feet below the alluvial deposits. Groundwater was encountered within the glacial till unit at a depth of about 24 to 25 feet below ground surface.

2.3 Site Features and Operations

The Site boundary is entirely enclosed with a chain link fence that is in good condition, and the Site has one main entrance at the north end that is secured with a rolling gate. There is a metal garage building in place in the northern portion of the Site in the Controlled Area, a brick maintenance and operations building is in use in the central portion of the Site south of the Controlled Area, and a modular training building and field training facility is in use in the southern portion of the Site.

The Site houses a natural gas regulator station. The northern and central portions of the Site are currently used to house equipment and as a crew facility to support natural gas and electrical distribution service and maintenance operations. The southern portion of the Site is a training center.

3.0 ENVIRONMENTAL REMEDIES

3.1 IRM and Post-IRM Restoration

The IRM was initiated for the primary purpose of removing non-aqueous phase liquid (NAPL) impacted materials. During the IRM, MGP-impacts were encountered around the perimeter of the holder ring wall, and these impacts were traced to tar leakage from perimeter tar re-circulation piping and unsealed anchor bolt sleeves. As the impacts were discovered, the IRM scope was adjusted to address the conditions. Portions of the holder ring wall, footings and tar wells were demolished during the work, dewatering was performed as necessary, and soil excavation was extended outward from the circumference of the holder structure to remove NAPL-impacted materials.

Approximately 20% of the eastern portion of the holder ring wall and associated structures were found to reside beneath the concrete slab of an existing metal garage building (Building). This portion of the ring wall was left in place beneath the Building. The excavation and soil removal efforts were advanced as close to the edge of the

Building foundation as was feasible. A Liquid Boot™ sprayed-on liner system was then installed on the soil slope face adjacent to the edge of the foundation, and the liner system and soil slope face were covered with compacted clean fill and left in place.

During the remediation work, 8,323 tons of impacted soil and solid sludge, 366 tons of debris, and 23,439 gallons of dewatering fluids and liquid sludge were removed from the Site in accordance with the rules that govern this activity.

After removal, the soil and debris removal area was backfilled with certified clean bank run sand that was compacted in lifts with a vibratory roller. Adjacent asphalt paved areas were saw-cut to obtain clean, fresh pavement cut-faces, and loose asphalt was removed from the site as debris in accordance with the rules that govern this activity. The former holder area was then re-graded to facilitate stormwater drainage to the western border of the Site. Geotextile fabric was placed, sub-base material was placed and rolled, and the northwest sector of the Site (including the entire remedial excavation area) was paved up against the existing asphalt cut-faces and to the boundaries of the removal area with an asphalt cap. When the restoration work was completed, the entire area overlying the former holder foundation and removal area had been covered with new or existing asphalt or concrete pavements.

3.2 Regulatory Controls

The purpose of the ROD is to provide a cost effective remedy that is protective of human health and the environment and complies with applicable State and Federal requirements, and relevant and appropriate to the remedial action to the extent practical. As presented in the ROD, the NYSDEC has selected a No Further Action remedy that is based on the following:

- Completion of an Interim Remedial Measure (IRM) at the Site;
- Completion of post-IRM restoration activities;
- Establishment of engineering capping and containment controls;
- Submission of an IRM Summary Report;
- The NYSDEC Administrative Record for the Site and;
- The public's input to the Proposed Remedial Action Plan (PRAP).

The remedy requires the implementation and maintenance of engineering and institutional Controls that are applicable to the Controlled Area of the Site. Maintenance of these Controls is discussed in the Sections that follow.

4.0 MAINTAINING THE REQUIRED CONTROLS

In order to maintain the required Controls, the Chain-of-Command will be from Niagara Mohawk Site operational personnel to the appropriate Niagara Mohawk Environmental Department and Safety Department (Safety Department) personnel. The Niagara Mohawk Environmental Department (Environmental Department) will then coordinate

any Control-related liaison, planning, evaluation, reporting, documentation, corrective action, and other activities and will notify the NYSDEC.

4.1 Engineered Controls

As previously discussed, the Controlled Area (entire area overlying the former holder foundation and removal area) was covered with new or existing asphalt or concrete pavement at the time of completion of the post-IRM restoration work. Subsequently the Controlled Area was surveyed, permanent corner point markers were installed, and the metes and bounds of the Controlled Area were determined and recorded on Drawing 1. To maintain the engineered capping and containment Controls that are required under the ROD, the Controlled Area pavement is to be maintained in good condition and is to be repaired and/or replaced subsequent to necessary removals that may be associated with facility repair or upgrade activities.

4.2 Notifications

Notifications and approval requests that are specifically required under the ROD are:

- Worker notification by Niagara Mohawk if utility or other excavation work is planned;
- Notification to the NYSDEC and request for NYSDEC approval by the Environmental Department prior to any action which could jeopardize the integrity of the remedy.

The worker notification requirement applies to any planned work activity in the Controlled Area that may result in disturbance of the soil below ground surface or in penetration or breaching of the pavements. If these work activities are planned, workers are to be provided with reasonable notice and sufficient preparation time, and the work is to be performed in compliance with the provisions of this Plan so that the Controls are maintained. To support the notification requirement, signs will be posted at visible locations around the perimeter of the Controlled Area.

The NYSDEC notification and request for NYSDEC approval is required prior to the performance of any intrusive work in the Controlled Area below the asphalt cap or below the ground surface, including the installation of posts or any utility trenching, and prior to any change in the use of the metal garage building.

4.3 Soil Management Plan Requirements

The soil management plan is a required component under the ROD, and the applicable ROD requirement is as written below:

- Development and approval of a soil management plan for operation and maintenance of the Site to address how any contaminated soil or waste removed from below the asphalt cap or building is to be handled.

Prior to the performance of intrusive work in the Controlled Area, Niagara Mohawk or a designated Niagara Mohawk Contractor is to prepare a Soil Management Plan. The provisions of the Soil Management Plan are to meet or exceed the minimum HAMP requirements for soil management at the Site as set forth below. The provisions of the Soil Management Plan are also to provide any additional methods, approaches or procedures that are needed to perform a specific intrusive task in accordance with good environmental practices and in accordance with the regulations.

The soil management plan applies to any activity in the Controlled Area of the site that has or is likely to disturb, remove or excavate soil and waste beneath the ground surface or beneath the engineered controls. It provides appropriate soil and waste excavation, handling, storage, transport, and disposal procedures. It does not provide a description of the methods and procedures needed to protect workers and receptors, because that information is to be provided in the site Health and Safety Plan (HASP) that is required under Section 5.0 of this HAMP. It also does not attempt to provide all pertinent waste management details, and is based on the assumption that the waste management activity will be directed and overseen by individuals who are competent to perform those activities.

Preparation - Prior to the start of any planned soil disturbance, removal, or excavation activities in the Controlled Area, the Facility Manager is to notify the Safety Department and the Environmental Department and is to provide the location for the activities, the expected volume of soil to be excavated, the means and methods for the proposed staging, and the ultimate disposal location for any soil to be transported off-site. All necessary notifications, transporter permits, and disposal approvals are to be secured prior to the initiation of the work.

Disturbance, Removal, and Excavation – These activities are to be performed in a manner that is protective of workers (see HASP) and receptors in the vicinity of the site. Possible concerns include, but are not limited to, the control of soil erosion and sedimentation, and the prevention of stormwater pollution, direct contact, particulate runoff during rainfall or snow melt, particulate transport through the air, vapor emissions in or downwind of the work area, solids tracking or carry-off on equipment that is not thoroughly decontaminated, and solids tracking or carry-off on personnel who are not thoroughly decontaminated.

Dust and Vapor Suppression - If necessary, water spray or vapor suppressing foam (Biosolve) are to be used to suppress dust and/or vapor emissions during the work. Other suppressive measures may include rapid backfilling of excavation areas and the use of plastic sheeting to cover excavation areas, ground surface areas, and soil piles.

Personnel and Equipment Decontamination - Personnel and equipment decontamination are to be performed in accordance with the HASP. All personnel and equipment are to be decontaminated before leaving the HAS exclusion zone, and all potentially impacted equipment are to be decontaminated prior to leaving the property. All residual materials are to be cleaned up prior to the completion of work at the end of

each working day. If a decontamination pad is to be used, a sketch showing the pad construction is to be submitted to the Environmental Department for review.

Cessation of Operations - Activities are to immediately stop and the Environmental Department is to be contacted if any of the following occurs:

- Discovery of a drum, tank or other similar product or waste container;
- Discovery of soils that are grossly contaminated with MGP-related or other wastes;
- Discovery of conditions that significantly impede/change the scope of the work;
- Difficulty in controlling the activities in accordance with the provisions of the Plan.

Soil Storage - Excavated soil is to be stored on the property in accordance with the applicable regulations in a designated, secure area and in a manner that will minimize the potential for exposure to workers and receptors. The preferred method of storage for excavated soil is to containerize the soil in DOT rated steel drums that are suitably protected from the weather. If necessary, the soils is to be stockpiled entirely on and covered with minimum 6-mil polyethylene sheeting to minimize precipitation impacts, contaminant volatilization, and dust release. The polyethylene sheeting cover is to be properly secured and possess the necessary physical strength to resist tearing by the wind. If the cover does become damaged or displaced, it is to be replaced or secured. The polyethylene sheeting base is to be of sufficient thickness or is to be protected with a layer of clean stone or soil to withstand normal soil handling operations without damage to its integrity. Movement of the stockpiles is to be limited to those activities that are necessary to manage the soil.

Soil Reuse - If the excavated soil is not visually impacted with MGP-related or other contaminants and if field instrument measurements do not indicate the presence of contaminants, the soil that has been excavated is to be returned to the original excavation area in accordance with the applicable regulations, Niagara Mohawk waste management protocols, and discussions between the Environmental Department and the NYSDEC. This soil is to be placed and compacted with a flat plate vibratory compactor in 12-inch thick lifts. If the soil is overly moist or is otherwise unsuitable for compaction, then the soil is to be removed from the Site. If the volume of reused soil is not sufficient to completely backfill the excavation area, then additional soil is to be obtained from a source of certified clean, off-site, sand and gravel fill.

Restoration of Engineering Controls - In the event that pavement removal is needed to facilitate excavation beneath the pavements in the Controlled Area, or if the pavement is damaged during facility operations, then the pavement is to be restored. The restoration is to be with materials (asphalt or concrete) that are equivalent to those removed before the excavation work, that are bonded to the vertical cut-faces of the adjacent undisturbed pavements, and that are as thick as the original pavement.

Waste Routing – The soils to be disposed of offsite are to be managed in accordance with the applicable regulations and in accordance with Niagara Mohawk waste management protocols. The preferred method for disposal of excess soils in the Schenectady area is by disposal at a licensed landfill facility that is approved by Niagara Mohawk. The actual landfill or alternate disposal facility (e.g. thermal treatment facility) to receive the soils is to be determined by Niagara Mohawk at the time of the waste routing activity. Any excess soils that cannot be reused on the property are to be sampled and the samples provided under chain of custody documentation to a certified New York State analytical laboratory for analysis. The analytical results along with a current copy of the disposal facility permit are to be provided to the Environmental Department for review prior to the disposal.

Transport and Disposal – The soil is to be transported to the disposal facility in covered, liquid-tight transporters whose licenses are current and who are acceptable to Niagara Mohawk. Acceptability is to be determined early, before the planned date of transport, by sending the current transporter permits to the Environmental Department for review. At the time of transport, assuming that the soils have been found to be non-hazardous, non-hazardous waste manifests are to be used, truck license plate numbers are to be matched against those on the current transporter permits, and the manifests are to be completed in a manner that is acceptable to the Environmental Department.

4.4 Metal Garage Building

Qualified activities, as specified in the ROD, are listed below:

- Assessment of indoor air quality if the use of the existing building in the Controlled Area (Building) is modified from its current use as an equipment storage garage;
- Completion of the excavation of contaminated soil from beneath and adjacent to the Building if appropriate if the Building is demolished or removed in the future.

Based on the above, if garage building qualified activities are anticipated or planned or occur for any reason, the responsible party will contact the Environmental Department and that Department will coordinate the activities that are needed to maintain the Controls.

4.5 Prohibitions

The Controlled Area prohibitions that are specifically required under the ROD are listed below:

- “Appropriate industrial and commercial uses of the property to be consistent with any applicable zoning ordinances, but not to include any enterprises that draw susceptible portions of the community to the property for activities that may lead to exposures to residual site contamination (e.g. day care, child care, medical treatment facilities, some recreational enterprises)” and;

- “Prohibition of land development for residential use, only appropriate commercial or industrial use will be allowed”;
- “Prohibition of the development of water supply wells”.

If actions that may be in conflict with the prohibitions are anticipated or planned or occur for any reason, the responsible party will contact the Environmental Department and that Department will coordinate the activities that are needed to maintain the Controls.

4.6 Annual P.E. Certification

The annual certification requirement that is specifically required under the ROD is set forth below as written in the ROD:

- “Annual certification will be required to ensure that engineering and institutional controls included in the remedy are in place and remain effective to control the identified exposures”.

In accordance with this requirement, the certifying Engineer should be informed of Controls-related activities that are anticipated or planned or occur for any reason. The Engineer is then to log these activities and respond appropriately through liaison, exchanges of documentation, site visits and meetings, and preparation of an annual certification form (see Appendix A) for review by Niagara Mohawk and submittal to the NYSDEC.

5.0 HASP AND CONTINGENCY PLAN REQUIREMENTS

5.1 Implementation

Site health and safety information has been prepared as a separate document by a Niagara Mohawk Certified Industrial Hygienist and is provided for reference in Appendix B of this HAMP.

Prior to the performance of intrusive work in the Controlled Area, Niagara Mohawk or a designated Niagara Mohawk Contractor is to refer to the site health and safety reference information in Appendix B and is to prepare a site specific HASP that addresses this information. The HASP is to be prepared in accordance with the applicable requirements of CFR 1910.120 and CFR 1926.65 and is to: 1) implement compliance with all applicable rules and regulations, including 29 CFR 1910, 29 CFR 1926, and the Department of Transportation (DOT) waste management requirements; 2) implement a personnel protective air monitoring plan that specifies action levels; 3) designate a site specific health and safety officer and means to provide HASP supportive equipment, supplies, training, medical monitoring, and documentation; and 4) include and implement an emergency preparedness and contingency plan that addresses emergency spill response, fire and explosion, personal injury, toxic exposures, public notification, and emergency logistics. A copy of the HASP is to be kept at the site and is to be used by the applicable personnel during the work.

6.0 LIMITATIONS

This Plan has been prepared under the direction of the certifying Engineer on behalf of Niagara Mohawk for specific application to the Site. The purpose of the Plan is to identify the Controls that are required under the ROD, and to provide guidance for implementation of the Controls.

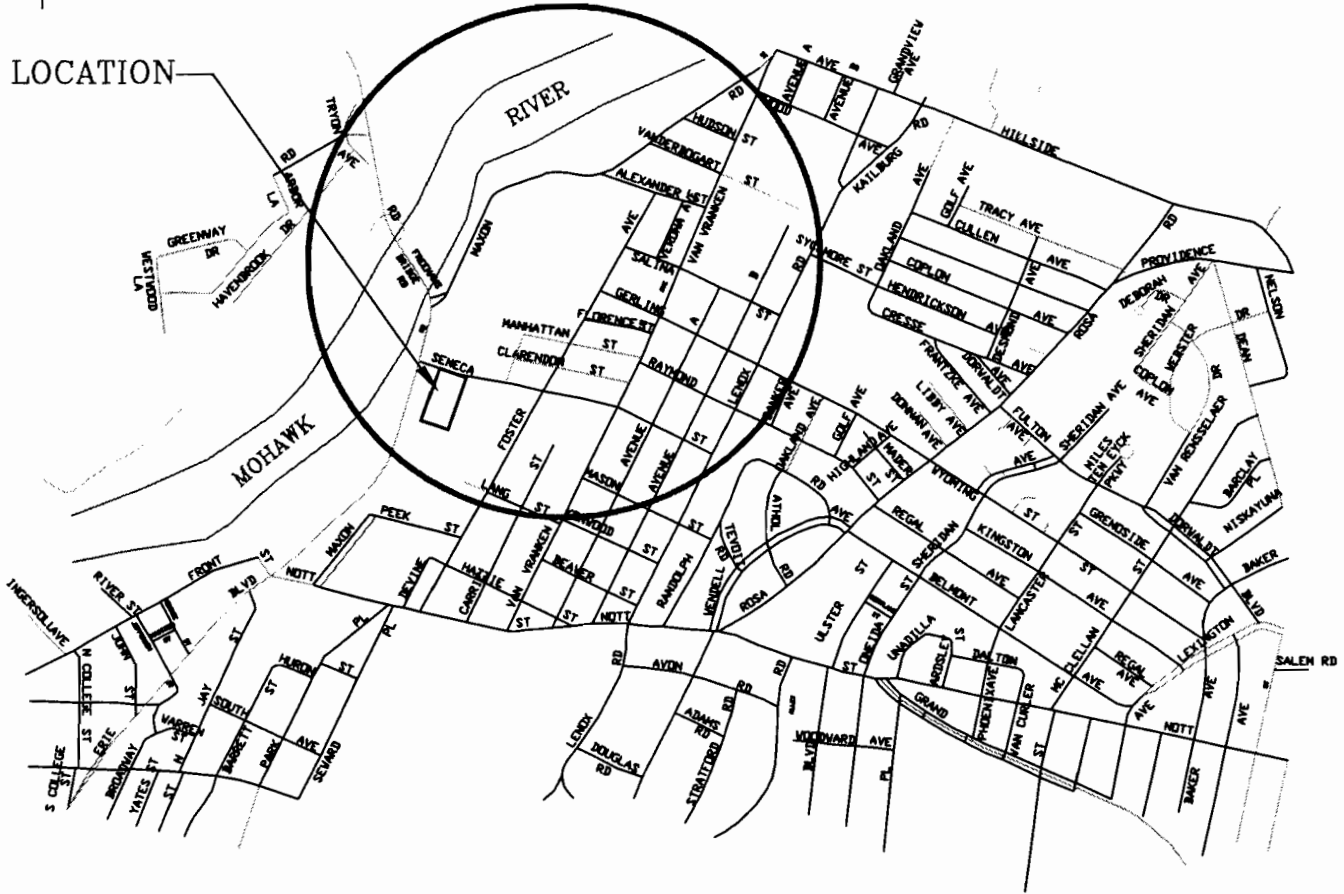
Subsequent to the approval of this Plan, substantive changes may occur that may affect the Plan, and may include but not be limited to those listed below:

- A change in ownership of the Site;
- A substantive change in the Site conditions;
- A NYSDEC revision/modification of the ROD requirements.

Any of the above-listed or other substantive changes shall constitute a Plan revision event. In that event, the Plan and the Plan's contents shall be revised, re-certified, and re-distributed in an appropriate response to the change.



SITE LOCATION



Niagara Mohawk, A National Grid Company
Maintenance and Distribution Facility
300 Seneca Street
Schenectady, New York 12308

Niagara Mohawk

A National Grid Company



FIGURE 1-1
SITE LOCATION MAP



TETRA TECH



CAO DWG. FILE NAME: TS.FOSTER-REV.DWG

MAP NOTES

1. Boundary and topographic information shown hereon was compiled from an actual field survey conducted during the month of September, 2002.
2. North orientation and bearings are based on the New York State Plane Coordinate System, NAD 83, datum established in 1983. The distances shown are horizontal ground distances. Grid lengths may be obtained by a multiplier of 0.99991826 (Combined factor).
3. Vertical datum established from NAVD 88 established from GPS observations.
4. This survey was prepared without the benefit of an up to date abstract of title or title statement of fact that such documents may disclose.
5. Right of Way of Seneca Street was established per the City of Schenectady, Common Council, Resolution No. 1910, Dated as follows: Seneca Street, from Lenox Road to Maxon Road, length 2,390 feet; width 50 feet; carriage way 26 feet; sidewalks 12 feet.
6. Underground facilities, structures, and utilities have been plotted from data obtained from previous maps and record drawings. Surface features such as catch basins, manholes, and utility covers, etc., may be other underground utilities, the existence of which are not known to the undersigned. Size and location of all underground utilities and structures must be verified by the appropriate authorities. Conducting test borings, excavation and construction.
7. The location of underground improvements or encroachments, if any exist or are shown hereon, are not certified.
8. Right of Way of Seneca Street was established per the City of Schenectady, Common Council, Resolution No. 1910, Dated as follows: Seneca Street, from Lenox Road to Maxon Road, length 2,390 feet; width 50 feet; carriage way 26 feet; sidewalks 12 feet. Sidewalks no longer exist on this portion of the street. Centerlines of pavement are shown. There may be other underground utilities, the existence of which are not known to the undersigned. Size and location of all underground utilities and structures must be verified by the appropriate authorities. Conducting test borings, excavation and construction.
9. Contour interval is 0.2' in flat areas and 1' on steeper grades.
10. The locations of the former gas holder foundation, for pits for vaults, test pits and piping were provided by Terra Tech P.W. Inc. Field conditions have not been updated since the September 2002 survey.

MAP REFERENCES

1. "Right of Way and Track Map, The Saratoga and Schenectady Railroad Company, operated by the Delaware and Hudson Company, Saratoga Division, Ballston Branch, Schenectady to Ballston Spa, Station 0+00 to station 35+00, dated June 30, 1910 by Office of Chairman Valuation Committee Albany, NY, map V-11/10.
2. "N.Y.P. & L. Corp. Mica Insulator Co. Purchase, Schenectady Gas Plant." Dated 2/17/30 and supplied by Niagara Mohawk A National Grid Company Real Estate Rights, New York East 1125 Broadway, Albany, NY, map E-3341.
3. "New York Power & Light Corp. Seneca St. Gas Plant, Location Plan." Dated May 1935, approved 4/16/30, supplied by Niagara Mohawk A National Grid Company Real Estate Rights, New York East 1125 Broadway, Albany, NY, map E-1845.
4. "New York Power & Light Corp., Ballston Reservoir, Tap to Alico Plan & Profile." Dated May 1945 and supplied by Niagara Mohawk A National Grid Company Real Estate Rights, New York East 1125 Broadway, Albany, NY, map O-479.

DEED REFERENCE

Niagara Mohawk Power Corporation supplied the deed description. An indenture made the March 1, 1930 between Mica Insulator Company and New York Power and Light Corporation.

LEGEND

- BOL BOLLARD
- △ METER
- BMH ELECTRIC MANHOLE
- GD GAS DRIP
- GM GAS MARKER
- GT GAS TEST
- ← GUY WIRE
- GV GAS VALVE
- HW ELECTRIC HAND HOLE
- FHD FIRE HYDRANT
- MON BRASS CAPPED IRON ROD SET IN CONCRETE W/ RESPECTIVE NUMBER
- BMH SANITARY MANHOLE
- UP UTILITY POLE
- UP UTILITY POLE WITH LIGHT
- CIP CAPPED IRON ROD SET
- OHS OVERHEAD UTILITY WIRES

C.T. MALE ASSOCIATES, P.C.
OCT 2 6 2004

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DATE	REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR
10/26/04	Added Former Holder Lot and Former Improvements	J. White	DD	WN

RAYMOND T. LUZZO
P.L.S. NO. 50366

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CHECKED: RTL
PROJ. NO.: 02.8505
SCALE: 1" = 20'
DATE: SEPT. 9, 2002



BOUNDARY AND TOPOGRAPHIC SURVEY
Portion of Lands Now or Formerly of
NIAGARA MOHAWK POWER CORPORATION
Prepared For
FOSTER WHEELER ENVIRONMENTAL CORPORATION

CITY OF SCHENECTADY
SCHENECTADY COUNTY, NEW YORK

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ARCHITECTURE & BUILDING SYSTEMS ENGINEERING
SURVEYING & LAND INFORMATION SERVICES

SHEET 1 OF 1
DWG. NO. 02-547

FORMER HOLDER AREA MANAGEMENT PLAN

Niagara Mohawk Schenectady (Seneca St.) Site
NYSDEC Site Number 4-47-025

ANNUAL CERTIFICATION FORM

Maintenance of Controls

“This is to certify that engineering and institutional controls, required under the March 2003 ROD as a part of the remedy for NYSDEC Site Number 4-47-025, are in place and being maintained with no exceptions unless noted in the exceptions statement below.”

CERTIFIED BY: _____

Richard D. Arnold, PE #76202

Certification Number

Date

IDENTIFICATION OF CONTROL	STATUS OF CONTROL	EXCEPTION
Engineering Control – Asphalt Cap	_____	_____
Engineering Control – Concrete Slab	_____	_____
Institutional Control – Worker Notification	_____	_____
Institutional Control – NYSDEC Notification	_____	_____
Institutional Control – Soil Management Plan	_____	_____
Institutional Control – Indoor Air Quality Assess	_____	_____
Institutional Control – Complete Soil Removal	_____	_____
Institutional Control – Prohibitive Ordinances	_____	_____
Institutional Control – Prohibited Enterprises	_____	_____
Institutional Control – Prohibited Residential Use	_____	_____
Institutional Control – Prohibited Water Wells	_____	_____
Institutional Control – Annual Certification	_____	_____

BASIS OF CERTIFICATION:

EXPLANATION OF EXCEPTION:

SITE SPECIFIC INFORMATION
FOR
NATIONAL GRID USA
SCHENECTADY (SENECA STREET) SITE
SCHENECTADY, NEW YORK
NOVEMBER 2004

REVIEWED AND APPROVED BY:

National Grid USA
Safety Coordinator:

Name

Date

Paul J. Webb

10/21/2004

Emergency Contacts

In the event of any situation or unplanned occurrence requiring assistance, the appropriate contact(s) should be made from the list below. For emergency situations, contact should first be made with the Site Health and Safety Officer (SHSO) (or designee) who will notify emergency personnel who will then contact the appropriate response teams. This emergency contacts list must be in an easily accessible location at the site.

Contingency Contacts

Phone Number

Nearest phone located onsite	National Grid Radio System or (518) 382-2861
Fire Department	(518) 374-3111
Police:	(518) 374-7744
Poison Control Center (Albany)	(800) 336-6997
Pollution Toxic Chemical, Oil Spills:	(800) 424-8802
Dig Safely	(800) 962-7962
Utility Emergencies: (Electric)	(800) 637-2770
Utility Emergencies: (Gas)	(800) 627-6466

Medical Emergency:

Ambulance Service: (Mohawk Ambulance)	(518) 374-4401
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Hospital Name:	Ellis Hospital
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Hospital Phone Number:	(518) 382-4124, Information (518) 382-4121, Emergency
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Hospital Address:	1101 Nott Street Schenectady, NY 12308
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Map to Hospital:	See Figure A-1
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Travel Time From Site:	5 Minutes
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- LEGEND
- Population Center
 - State Route
 - Geo Feature
 - ◊ Large City
 - ◈ Hospital
 - △ Park

- Interstate Highway
- +— Railroad
- River
- Open Water

Scale 1:15,625 (at center)

1000 Feet

500 Meters

FIGURE A-1 ROUTE TO HOSPIT
Mag 15.00
Thu Jan 25 13:57:59 1996

**FIGURE A-1
ROUTE TO HOSPITAL**

Route to Hospital:

- 1.) Turn right out of the site onto Seneca Street.
- 2.) Travel on block east and turn right onto Foster Avenue.
- 3.) Travel south approximately 1/2 mile on Foster Avenue and turn left onto Nott Street.
- 4.) Travel east approximately 1/2 mile on Nott Street and turn left onto Rosa Road.
- 5.) The hospital emergency entrance is the second drive on the right.

Prior to start of work, the Site Health and Safety Officer shall discuss site activities with hospital personnel to confirm that they will be able to handle an emergency (e.g., decontamination).

National Grid USA Contacts

National Grid USA, Schenectady, NY (Schenectady Service Center)	(518) 382-2861
Environmental Department Project Manager (PM): Steven Stucker (Syracuse)	(315) 428-5652
Alternate PM – Terry Young	(315) 428-6614
Sharon Prefore (North Albany Service Center)	(518) 433-3989
Safety Coordinator: Jeff O'Brien (Albany)	(518) 433-3354
Safety Manager: Don Lehman (Albany)	(518) 433-3735

SITE DESCRIPTION

The Seneca Street site is a 5-acre rectangular shaped tract located at 308 Seneca St. in the City of Schenectady, Schenectady County, New York (See Route to Hospital Map). It is the former location of a manufactured gas plant (MGP) holder which received purified manufactured gas from offsite, and currently houses a service garage, a metal framed storage building, a training center, and a natural gas regulator station. The site is bordered by Seneca Street to the north, vacant lands to the south, a railroad right of way (ROW) and municipal property to the east, and a railroad ROW and commercial property to the west.

A Record of Decision (ROD) was established by the New York State Department of Environmental Conservation (NYSDEC) with Niagara Mohawk, A National Grid Company (Niagara Mohawk) for the site in March 2003. The ROD specifies no further remedial action required for the site, and defines a footprint area of approximately 0.5 acres in extent which covers the northern portion of the site. This footprint area is administered under Niagara Mohawk's Holder Area Management Plan (HAMP), dated October 2003.

SCOPE OF WORK

Work that falls under the jurisdiction of this health and safety plan includes any intrusive activities within the area encompassed by the existing HAMP, which includes areas potentially impacted by past MGP activities.

PROJECT TEAM ORGANIZATION

The field team will consist of at least two persons. A SHSO must be present to perform air monitoring during intrusive activities. Key personnel involved with onsite activities follow:

Environmental Department Project Manager:	Steven Stucker
National Grid New York, Eastern Division Safety Manager:	Don Lehman
SHSO:	Jeffrey O'Brien

SITE SPECIFIC HEALTH AND SAFETY REQUIREMENTS

The general health and safety requirements presented in Sections 1 through 6 of this plan are modified as described below to provide for specific conditions onsite.

Physical Hazards

Physical hazards include contact with overhead power lines, or underground utilities when excavation activities are taking place. A site map is depicted in Figure A-2. The Site map may contain current or historical utilities. However, the exact location of all active utilities must be verified prior to commencing intrusive activities.

National Grid USA standard procedures for locating buried utility lines will be employed prior to site excavations, including contacting Dig Safely New York at least three days in advance.

Chemical Hazards

The National Grid USA Seneca Street site property is depicted in Figure A-2. The areas of potentially MGP impacted soil have been characterized. However, all intrusive activities at this site property should be considered to have the potential for MGP related materials.

The primary chemical hazards identified for MGP related materials are listed in Table A-1. Table A-1 lists chemicals suspected to be found within areas of former MGP operations. This includes areas of potential purifier materials as well as areas with non-aqueous phase liquid (NAPL) deposits.

Direct Contact

Level D personal protective equipment, modified for protection against dermal exposure to phenol, and Hydrogen Cyanide, will be used by all personnel in areas potentially impacted by past MGP activities. Level D equipment (see Section 3.4.1) will be modified to require steel toed rubber boots, or boot covers that prevent contamination of boots. Nitrile outer and latex inner gloves should provide adequate protection from direct contact hazards. Should pH levels in ground water show acidic (< pH=4.0) or basic (> pH=11.0) conditions in excavations, Poly-coated tyvek shall be required as added protection from skin burns. Litmus test paper shall be available to test conditions of pH in excavation ground water if contact is expected.

Volatile Compounds (Vapor Pressure >10 mm Hg):

Of the listed volatile chemicals, Benzene has the lowest Permissible Exposure Limit (PEL) as set by OSHA and hence sets the action limit for monitoring with a Photoionization Detector (PID). For any activities taking place in areas potentially impacted by past MGP activities, continuous measurements shall be taken in the breathing zone with a PID equipped with a 10.6 eV lamp.

In addition, monitoring during excavation activities must incorporate use of cyanide color detector tubes taken at least once every half hour. Cyanide color detector tube readings of 5 mg/m³ or greater shall be cause for employee retreat and/or upgrade to Level B personal protective equipment as determined by the Safety Coordinator.

Background PID levels should be taken initially upwind from planned site activities. If, during site activities, PID readings reach 5 ppm above background levels (and are sustained for 15 minutes), then all personnel must upgrade to Level C personal protective gear. See Section 3.4.2 of this health and safety plan for a description of Level C equipment. Upon upgrading to Level C, a Draeger® Benzene 2/a color detector tube (part number 8101231) should be used to verify the absence of Benzene. If Benzene is greater than 5 ppm, all personnel must upgrade to Level B.

Furthermore, if PID readings reach 25 ppm above background (sustained for 15 minutes), then personnel should retreat and consult the National Grid USA Safety Coordinator before deciding to upgrade to Level B equipment.

Conditions may warrant waiting until air monitoring shows that concentrations have fallen below 25 ppm so that work may continue in Level C.

Semivolatile and Nonvolatile Compounds (Vapor Pressure <10 mm Hg):

PAHs could pose significant health threats if ingested or inhaled as a dust. Onsite personnel will avoid activities that could generate potentially contaminated dust, and work upwind of soils and groundwater during excavation activities. Should visible dust emissions occur in potentially MGP impacted areas, real time aerosol monitoring or upgrading to Level C may be warranted for affected personnel. Consult the National Grid USA Safety Coordinator.

The metals potentially present in the Seneca Street site's are unlikely to become airborne because of their low vapor pressures and wet conditions under which they are expected to be encountered.

Summary of Action Levels

Based on a review of the potential chemical hazards at the site, the following conditions will determine the level of protective equipment that will be used by personnel while onsite:

Conditions for Level D:

- All areas
- PID readings < 5 ppm.
 - and Hydrogen Cyanide readings < 5 mg/m³

Conditions for Level C:

- All areas
- PID readings > 5 ppm and < 25 ppm
 - and Draeger® Benzene 2/a Tube readings < 5 ppm
 - or any visible fugitive dust emissions from site activities that disturb contaminated soil.

Conditions for Level B (or retreat):

- All areas
- PID readings > 25 ppm.
 - or Draeger® Benzene 2/a Tube readings > 5 ppm
 - or Hydrogen Cyanide readings > 5 mg/m

COMMUNITY AIR MONITORING PLAN

Real-time air monitoring for volatile compounds at the perimeter of the exclusion zone will be conducted. Particulate could result from soil management activities such as excavation or other disturbance of cap material. Contaminants on-site are not anticipated to pose a problem as particulate because of the asphalt and gravel cover, and the anticipated high moisture content of the underlying soil. The following procedures will be implemented during field activities as appropriate:

- Volatile organic compounds will be monitored at the downwind perimeter of the exclusion zone on a continuous basis. Concentrations will be determined using a 15 minute running average. Upwind concentrations will be measured at the start of each workday and every four hours thereafter to establish

background conditions. If total organic vapor levels exceed 5 ppm above background for the 15-minute average, soil management activities will be halted and monitoring continued under the provisions of the Vapor Emission Response Plan. All readings must be recorded and be available for State (DEC & DOH) personnel to review.

- Particulate could become a concern if visible dust emissions occur from site soil management activities or wind erosion. If particulate become a concern, the following protocol will be followed. Particulate will be continuously monitored downwind of the exclusion zone with a portable real-time particulate monitor that will have an alarm set at 100 mcg/m³ (micrograms per cubic meter) above background. Background will be measured by monitoring for particulate at the upwind perimeter. If downwind particulate levels integrated over a period of 15 minutes exceed 100 mcg/m³ above background, dust suppression techniques will be employed. An example of a dust suppression technique is applying a fine mist of water to the source of the dust to keep the dust from becoming airborne. Work will continue with dust suppression techniques provided the downwind particulate levels do not exceed 150 mcg/m³ above the upwind level and provided no visible dust is migrating from the work area. All readings will be recorded and be available for State (DEC & DOH) personnel to review. These action levels can be modified if particulates are better characterized and identified.

VAPOR EMISSION PLAN

If the ambient air concentration of organic vapors exceeds 5 ppm above background levels for the 15-minute running average at the perimeter of the exclusion zone, soil management activities will cease and monitoring will be continued. If the organic vapor level decreases below 5 ppm (above background), soil management activities may resume. If the organic vapor levels are greater than 5 ppm, but less than 25 ppm over background at the perimeter of the work area, activities may resume provided:

- The organic vapor level 300 feet downwind of the exclusion zone or half the distance to the nearest residential or commercial receptor, whichever is less, is below 5 ppm over background for the 15-minute average, and
- More frequent intervals of monitoring, as directed by the FOL/ESS, are conducted.

If the organic vapor level is above 25 ppm over background at the perimeter of the exclusion zone, work activities will halt and odor control contingencies will be implemented. The odor control methods may include spraying a biodegradable, surfactant-based foam concentrate, such as MSA's VEED foam, onto the excavated soils to control the fugitive vapors. When work shutdown occurs, downwind air monitoring as directed by the Site Safety Officer will be implemented to ensure that vapor emission do not impact the nearest residential or commercial receptor.

WORK ZONES AND DECONTAMINATION

Site Work Zones

Work areas will be segregated using zones to reduce the potential for exposure to subsurface materials within the HAMP footprint, should disturbance of this material become necessary during soil management activities. The flow of personnel between the zones will be controlled using appropriate barricades, caution tape and other means to control access. The establishment of the work zones will help ensure that:

- Personnel are properly protected against the hazards present where they are working;
- Work activities and contamination are confined to the appropriate areas; and,
- Personnel can be located and evacuated in an emergency.

Exclusion Zone

Exclusion zones will be established at the site for all soil management activities where subsurface materials within the HAMP footprint may become uncovered or otherwise disturbed. Exclusion zones will also be established during any activities when Level C protection is established. All personnel within the exclusion zone will be required to use the specified level of protection. No eating, drinking, or smoking will be allowed in the exclusion or decontamination zones.

Decontamination Zone

If appropriate, a decontamination zone will be established between the exclusion zone and the support zone, and will include the personnel and equipment necessary for decontamination of equipment and personnel (discussed below). Personnel and equipment in the exclusion zone must pass through this zone before entering the support zone. This zone should always be located upwind of the exclusion zone.

Support Zone

The support zone will include the remaining areas of the job site. Break areas, operational direction and support facilities (to include supplies, equipment storage and maintenance areas) will be located in this area. No equipment or personnel will be permitted to enter the support zone from the exclusion zone without passing through the personnel or equipment decontamination station. Eating, smoking, and drinking will be allowed only in this area.

Decontamination

Due to the low level of contaminants expected, any water used in decontamination procedures will be containerized on-site and sampled before disposal.

Personnel Decontamination Station

Personnel hygiene, coupled with diligent decontamination will significantly reduce the potential for exposure of off-site areas to contaminants from the site. When participating in potentially dust-raising activities, such as excavating, it will be crucial for field personnel to adhere to the following personal hygiene guidelines:

- Wash hands and face after leaving the CRZ with soap and water or waterless hand cleaner; and
- Make every effort to reduce dust production through engineering controls (i.e., watering, if deemed necessary based on weather conditions).

Minimization of Contact with Contaminants

During completion of site activities, personnel should attempt to minimize contact with contaminated materials. This involves a conscientious effort to keep “clean” during site activities. This may ultimately minimize the degree of decontamination required and the quantity of waste materials generated during site operations.

Personnel Dry Decontamination Sequence

When decontamination of Tyvek or poly protective clothing is needed a dry decon will be used whenever possible. The dry decon procedure is as follows:

1. Perform dry decon if contact with contaminants occurred.
2. Remove exterior protective clothing carefully and dispose of same.
3. Remove respirator, if applicable, clean and dry.
4. Remove gloves without touching outside surface of gloves and dispose of same.
5. Wash hands and face thoroughly.

Heavy Equipment Decontamination

An area will be designated as the heavy equipment decontamination area. Heavy contamination will be scraped off manually. A steam generator or pressure washer and brushes will be used to clean drilling equipment, vehicles, and tools. Decontamination may take place on portable or fixed decontamination pads where decontamination water can be contained and collected for disposal. No heavy equipment will be permitted to leave the EZ unless it has been thoroughly decontaminated and visually inspected by the ESS or his designee. This inspection will be documented in the Health and Safety or Site Logbook.

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ACCIDENT PREVENTION AND CONTINGENCY PLAN

Accident Prevention

All field personnel will receive health and safety training prior to the initiation of any site activities. On a day-to-day basis, individual personnel should be constantly alert for indicators of potentially hazardous situations and for signs and symptoms in themselves and others that warn of hazardous conditions and exposures. Rapid recognition of dangerous situations can avert an emergency. Before work assignments, daily meetings should be held and documented. Items addressed should in general include:

- Tasks to be performed.
- Time constraints (e.g., rest breaks, cartridge changes).
- Hazards that may be encountered, including their effects, how to recognize symptoms or monitor them, concentration limits, or other danger signals.
- Emergency procedures.

Excavation

Prior to any excavation activity within the HAMP footprint, an underground utility clearance will be performed which includes documentation that Dig Safety New York was contacted. In addition, hand digging is required over a known utility, or a vactor truck will be utilized. The Site Safety Officer will provide constant on-site supervision of the subcontractor to ensure that they are meeting the health and safety requirements. If deficiencies are noted, work will be stopped and corrective action will be taken (e.g., retrain and purchase additional safety equipment). Reports of health and safety deficiencies and the correction action taken will be forwarded to the Project Manager.

One Call Incident Reporting

One call reporting is required for any near miss or incident. As soon as first aid and/or emergency response needs have been met, as necessary, the following contacts are to be made:

1. One Call , 315.460.1200
- 2 Jeffrey O'Brien, 518.433.3354
3. Steven Stucker, Project Manager, 315.428.5652

Written confirmation of verbal reports are to be submitted to the PM within 24 hours by the Site Safety Officer. The appropriate National Grid report form is to be used for this purpose.

All incidents, accidents, and near misses include, but are not limited to, fatalities, all injuries, spill or exposure to hazardous materials (radioactive materials, toxic materials, explosive or flammable materials), fire, explosion, or property damage.

FIELD PERSONNEL REVIEW

This form serves as documentation that field personnel have read, or have been informed of, and understand the provisions of the HASP for the NM NGrid Schenectady (Seneca Street) facility. It is maintained at the facility during the investigation by the Site Safety Officer as a project record.

Each field team member shall sign this section after facility-specific training is completed and before being permitted to work on investigation activities of the facility.

I have read, or have been informed of, the Site-Specific Health and Safety Plan and understand the information presented. I will comply with the provisions contained therein.

Name (Print and Sign)	Date

**TABLE A-1
RELEVANT PROPERTIES OF VOLATILES AND
SEMIVOLATILES KNOWN OR SUSPECTED
AT THE SENECA STREET FORMER MGP SITE**

Compound (Synonym)	OSHA PEL ⁽¹⁾ (ppm)	IDLH (ppm)	LEL (%)	Odor Threshold ⁽²⁾ (ppm)	Odor Character	Vapor Pressure (mm Hg)	Physical State	Detectable w/ 10.6 eV lamp PID (I.P. eV)
Benzene	1 5 [STEL]	500 [Ca]	1.2	119	Aromatic, sweet	75	Flammable Liquid	Yes 9.24
o-,m-, p- Xylenes	100 150 [STEL]	900	0.9	20	Aromatic	7,9,9	Flammable Liquid vapor	Yes (8.4-8.6)
Toluene	200 300 [CEIL]	500	1.1	37	Sweet, pungent Benzene-like	20	Flammable Liquid vapor	Yes (8.82)
Ethyl Benzene	100 125 [TLV-STEL]	800	0.8	0.6	Oily Solvent	10	Flammable Liquid	Yes (8.76)

(1) 29 CFR 1910, June 30, 1993 (8-hour Time weighted average unless otherwise specified.)

(2) ACGIH 1989 Highest reported value of acceptable odor threshold range.

[IDLH] Immediately dangerous to life or health.

[CA] Suspect carcinogen - Minimize all possible exposures.

[STEL] 15 minute Short Term Exposure Limit

[SKIN] Designates that skin is an important possible route of exposure.

[TLV] Threshold Limit Value.

[CEIL] Ceiling Limit - not to be exceeded at any time during a work day.

TABLE A-1 (CONTINUED)
RELEVANT PROPERTIES OF VOLATILES AND
SEMIVOLATILES KNOWN OR SUSPECTED
AT THE SENECA STREET FORMER MGP SITE

Compound (Synonym)	OSHA PEL ⁽¹⁾ (ppm)	IDLH (ppm)	LEL (%)	Odor Threshold ⁽²⁾ (ppm)	Odor Character	Vapor Pressure (mm Hg)	Physical State	Detectable w/ 10.6 eV lamp PID (I.P.)
Styrene	50	700	0.9	1.9	Sweet floral	5	Flammable Liquid	Yes (8.4)
Hydrogen Cyanide	5.0 mg/m ³ [STEL] [SKIN]	50	5.6	5	Bitter almond	630	Flammable Liquid	No (13.6) (Draeger Tube)
Phenol	5 [SKIN]	250	1.8	1.0	Acid/Creosote	0.4	Combustible Solid	Yes (8.50)
Naphthalene	10 15 [TLV-STEL]	250	0.9	0.64	Mothballs/ Tar/ Creosote	0.08	Combustible Solid	Yes (8.12)

(1) 29 CFR 1910, June 30, 1993 (8-hour Time weighted average unless otherwise specified.)

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RELEVANT PROPERTIES OF VOLATILES AND
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AT THE SENECA STREET FORMER MGP SITE

Compound (Synonym)	OSHA PEL(1) (ppm)	IDLH (ppm)	LEL (%)	Odor Threshold(2) (ppm)	Odor Character	Vapor Pressure (mm.Hg)	Physical State	Detectable w/ 10.6 eV lamp PID (I.P.)
Polynuclear Aromatic Hydrocarbons (PAH's)	0.2 mg/m ³	80mg/m ³ [Ca]	varies	varies	varies	very low	Combustible Solid	No (?)
Arsenic	10 µg/m ³	5mg/m ³ [Ca]	NA	NA	No odor	0	Noncombustible solid	No (NA)
Lead	50 µg/m ³	100 mg/m ³	NA	NA	No odor	0	Noncombustible solid	No (NA)

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