

Excavation Work Plan

For

Hunts Point Parcel D Test Pit Excavation

Block 2781, Lot 500

Prepared For:

Consolidated Edison Company of New York Inc.

4 Irving Place

New York, New York 10003

Prepared By:

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1615 Bronxdale Ave

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Site Description

This Excavation Work Plan (EWP) was developed for the test pitting project located within a Consolidated Edison of New York, Inc. (Con Edison) easement (Block 2781 Lot 500) in the Hunts Point area of the Bronx. The easement is located within a parcel that is currently vacant. The parcel in which the easement is located has been accepted into the New York State Brownfield Cleanup Program (BCP) as Site #C203100 and under its current BCP enrollment status is defined as BCP Parcel D. The property is owned by New York City and managed by the New York City Economic Development Corporation (NYC EDC) and GEI Consultants acts as the Owner's Engineer.

Site History

Historically, the Hunts Point peninsula was part of a Con Edison MGP that was initially constructed between 1924 and 1932, and operated until the early 1960's. The plant was constructed to manufacture both oven gas and carbureted water gas, producing coke, ammonium sulfate, coal tar, water gas tar, and light oil as major by-products. In total, approximately 46 buildings or structures existed in the former Con Edison facility that were actively involved in gas production. There has not been a tenant or active use of the parcel (with the exception of the Con Ed head house building) since the use of the property as part of the MGP.

Proposed Work

The proposed test pitting will consist of completing 13 test pits with the dimensions of 5-foot wide, 5-foot long, and 6-foot deep. These excavations will include mechanical supports as required by OSHA. The test pits are being completed in order to expose the existing gas main that runs east to west along the northern boundary of Parcel D. Once the test pits are completed, vibration monitors will be installed to monitor any movement along the gas main as a result of the remedial work taking place within Parcel D. Once the intrusive portion of the remediation is complete, vibration monitors will be removed, and the test pits will be closed.

Notification

NYCDEC will be notified prior to excavation and earthwork activities subject to this EWP. NYCEDC, through its Brownfield Program will make the appropriate notifications and reports to the NYCDEC project manager.

	Email	Phone Number
NYSDEC		
Ronnie Lee	Ronnie.Lee@dec.ny.gov	518-402-9767
Owner – NYC EDC		
Tracey Bell	tbell@edc.nyc	212-312-3752
Owner’s Engineer – GEI		
Kevin McCarty	kmccarty@geiconsultants.com	212-845-9965
Con Edison Representatives		
Kody Cooper Gas Transmission Engineering	CooperKo@coned.com	646-477-2614
Warren Miller EH&S Field Operations	millerwar@coned.com	917-578-9151
Melissa Abt EH&S Remediation	AbtM@coned.com	718-204-4331

The information in this table will be updated as necessary to provide accurate contact information. The initial notification will include the following:

- A detailed description of the work to be performed, including the location of the test pits
- An estimate schedule for the work, detailing the start and completion of ground intrusive work.
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120.
- A copy of the contractor’s health and safety plan provided as Appendix A of this EWP.
- Backfill documentation, if necessary

Excavation Plan

Test pit completion will consist of excavation, stockpiling and backfilling of the excavated test pits at the completion of said work. The excavation described herein will be performed in accordance with applicable federal, state, and city regulations.

The proposed test pit locations are shown in Figure 1. A copy of the CHASP is included as Appendix A. NYC EDC will be promptly notified of proposed changes, delays, or deviations to the EWP and schedule.

Screening Methods

Screening at the test pit will take place for both the breathing zone of the workers as well as for determining if the material being excavated is impacted. Visual olfactory and instrumental (PID) screening will be performed by a field engineer, geologist or scientist under the supervision of a qualified environmental professional (QEP) during excavation and earthwork to determine if the material is impacted. The PID in conjunction with a multi-gas meter and dust monitor will be used to monitor the air quality in the test pit for the workers. The instruments will be calibrated daily and the PID will be equipped with a 10.6eV lamp.

Stockpile Methods

Excavated material with visual and or olfactory impacts or elevated PID readings will be stockpiled separately and will be segregated from other materials. Stockpiles of material not impacted will be staged near the test pits and on plastic and will be used as backfill.

Waste Characterization

Impacted material will be characterized in a manner required by the receiving facility and in compliance with applicable laws and regulations, before it is transported off site for disposal. NYSDEC will be notified concerning the amount of impacted material as well as the type of impacts observed.

Material Handling

The test pits will be excavated from current grade to about approximately 6 feet below grade. A Con Edison inspector will observe and document that the contractor performs excavation and handling as specified in this EWP. The inspector and contractor are responsible for safe execution of excavation and handling activities under this EWP.

Material Load Out and Disposal

Impacted material will be handled, transported and disposed of by a licensed and placarded hauler in accordance with applicable 6NYCRR Part 360 and Part 364 regulation and other applicable federal, state, and local regulations.

The contractor will identify disposal facilities and provide Owner's Engineer if necessary. The following documentation will be provided for NYSDEC review and approval, for each disposal facility:

- Generator (Con Ed) signed waste profile/application and supporting forms
- Letter from generator to the facility describing the material to be disposed and requesting written acceptance of the material.
- Pre-approval letter from the facility accepting the materials.

- Current and valid operating permits and
- Waste transporter permits

Importing Fill Material

Importing of clean fill isn't expected under this EWP. However, if backfill is required, the sources of backfill will be evaluated before any backfill is imported to the site. The process will include submitted a Fill Importation Request Form to NYSDEC, an examination of source location, current historical uses, and applicable documentation. Material from industrial sites, environmental remediation sites, spill sites or other potentially contaminated sites will not be imported to the Site. The contractor will identify source facilities for backfill and provide the Owner's Engineer with copies of the following documents, which will be provided to NYSDEC for review and approval, for each borrow source:

- Facility name, address, site history and current and valid operating permits
- Letter from the originating source or supplier of the material and physical characteristics.
- Tabulated analytical results showing the material meets Commercial SCOs
- Representative photographs of the material

Imported material will be screened for evidence of contamination (visual, olfactory, and instrumental) before it is placed and graded. The imported material shall not contain C&D debris, other than recognizable concrete aggregate as described herein, exhibit observable indicators of contamination (i.e., petroleum-staining and odors), or have been in contact with a spill of petroleum, hazardous waste, or industrial waste.

Contingency Plan

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to the Owner's Engineer and NYSDEC Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline.

Dust, Odor, Vapor and Nuisance Control

Since this work will be taking place in the vicinity of the remedial activities at Parcel D, the contractor performing the remedial activities will position their air monitoring stations so that the test pits will be included in the CAMP area.

If odors, vapors, or fugitive dust exceeding action levels set forth in this EWP within the test pit area or are identified by the remedial contractor, work will be halted, and the source identified and controlled. Work will not resume until odors, vapors, or fugitive dust are abated. The

Owner's Engineer and the NYSDEC will be notified if odors, vapors, or fugitive dust exceeding action levels are reached.

Construction Health and Safety Plan

The contractor has prepared a site-specific health and safety plan (CHASP), included as Appendix A. Work performed under this EWP will be in compliance with applicable health and safety laws and regulations, including site and occupational Safety and Health Administration (OSHA) worker safety requirements.

Reporting

The anticipated schedule for completing the test pits is approximately one week. At the completion of the work, the Owner's Engineer will receive a summary report that will include a description of the completed test pits, if any material was imported or exported onto the Site and its quantity, a summary of daily CAMP results, including exceedances, and Site photographs including the Site restoration at the completion of the work.

This report is not intended to be the primary mode of communication for notifying the NYSDEC of emergencies, requests for changes to this EWP and/or time critical information; however, such information will be included in the summary report. Emergency conditions, changes, and deviations to this EWP will be addressed immediately and directly to the Owner's Engineer and NYSDEC Project Manager.

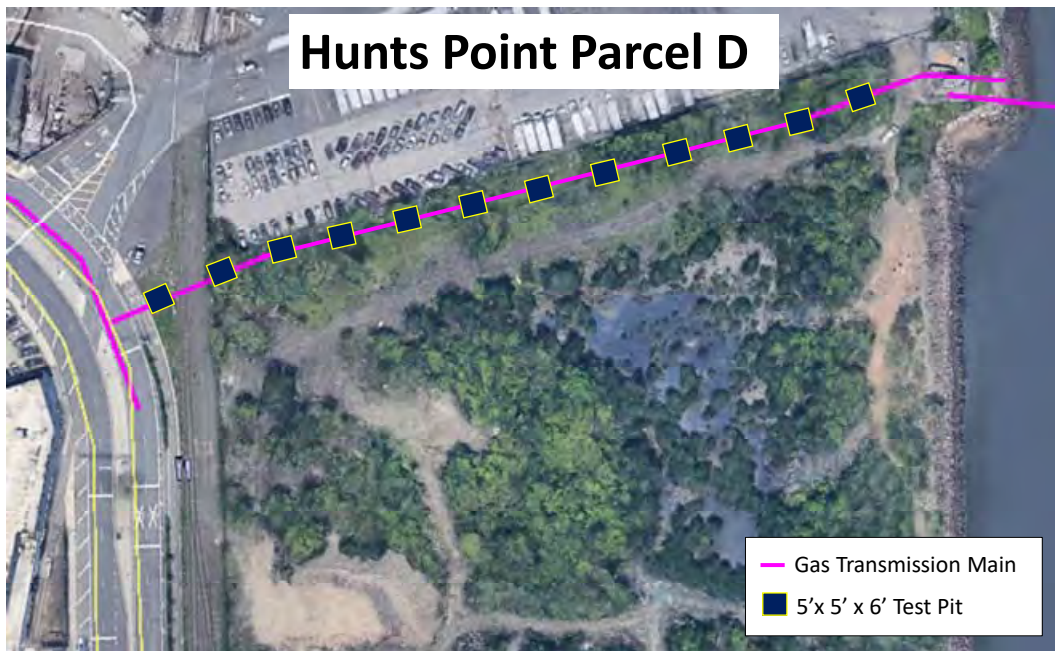


Fig. 1

APPENDIX A

Site-Specific Health and Safety Plan

Williams Industrial Services Group, LLC.

Specific Safety & Health Plan

PROJECT TITLE: **Bronx River Tunnel Pipe Cleaning Project**

Work Performed for: **CON EDISON**

Work Performed by: **Williams Industrial Services Group, LLC**
22-60 46th Street
Astoria NY 11105

Approval: Tom Scaccia
WISG Project Manager


Signature

1-21-20
Date

Approval: Michael Cutro
WISG EHS Manager

Michael Cutro
Signature

Digitally signed by Michael Cutro
DN: cn=Michael Cutro, ou=WISG, ou=Williams
Specialty, email=mcutro@wisgrp.com, c=US
Date: 2020.01.21 08:07:10 -05'00'

Date

Williams Specialty Services
22-60 46th Street
Astoria NY 11105

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1. Emergency Contact Information

Table 1. Emergency Contact Information

Important Phone Numbers	
Local Police:	911
Fire Department:	911
Ambulance:	911
Con Edison:	(800) 752-6633
Hospital and Occupational Clinic Information <i>(See Attached Maps and Directions in Appendix A)</i>	
Lincoln Medical Hospital: 234 E. 149 th Street Bronx, NY 10451	(718) 579-5000
MedCare Urgent Care: 1643 Westchester Avenue Bronx, NY 10472	(718) 328-1900
Contacts	
Project Manager: Shaun Hundley	(973) 419 -4285 cell
Corporate Health and Safety Officer: Mike Cutro	(315) 491-7279 cell
Williams Specialty Services VP of Operations Tom Scaccia	(718) 294-4885 - office (315) 529-6188 - cell

2. Background

Project Name: Bronx River Tunnel Pipe Cleaning Project

Project Location: Food Center Drive (NE Corner), Bronx, NY 10474

This Health and Safety Plan (HASP) establishes policies and procedures to protect WSS personnel from the potential hazards posed by the activities at Hunts Point Food Center Drive (NE Corner), Bronx, New York. Reading of the HASP is required of on-site WSS personnel and will be reviewed by WSS subcontractors.

Subcontractors will review the site HASP and use this as their guide for all work performed. The plan identifies measures to minimize accidents and injuries, which may result from project activities or during adverse weather conditions. A copy of this HASP will be maintained on site for the duration of the work.

2.1 Scope of Field Work

The proposed excavation will consist of one trench with the dimensions of 4.5-foot wide by 6-foot deep by 20-foot long required to access 20Lf of buried 42" retired cast iron main that has to be cleaned of PCB's prior to its removal and disposal.

The following is a list of the methods that will be used to complete this work.

- Test hole will be dug and the soil will be sampled by Con Edison prior to start
- Because of the site's proximity to the superfund all of the following will be in place
 - Excavation, PPE, and soil removal will meet all requirements per
 - PPE to meet Hazwopper 40 requirements
 - Training for the task will also be set
 - New York 811 Excavation Training
 - 40 hour Hazwopper training required for all employees
- Supervision will be on site throughout all work activities
- Any excavation exceeding 5' will have proper shoring in place
- All soil that is removed will be contained & placed on poly sheeting for future removal or used as back fill. "Con Edison will make this determination"

2.2 SITE DESCRIPTION

This Excavation Work Plan (EWP) was developed for the test pitting project located within a Consolidated Edison of New York, Inc. (Con Edison) easement (Block 2781 Lot 800) in the Hunts Point area of the Bronx.

The easement is located within a parcel that is currently vacant. The parcel in which the easement is located has been accepted into the New York State Brownfield Cleanup Program (BCP) as Site #C203100 and under its current BCP enrollment status is defined as BCP Parcel D. The property is owned by New York City and managed by the New York City Economic Development Corporation (NYC EDC) and GEI Consultants acts as the Owner's Engineer.

2.3 Site History

Historically, the HPFDC was part of a Con Edison MGP that was initially constructed between 1924 and 1932, and operated until the early 1960's. The plant was constructed to manufacture both oven gas and carbureted water gas, producing coke, ammonium sulfate, coal tar, water gas tar, and light oil as major by-products. In total, approximately 46 buildings or structures existed in the former Con Edison facility that were actively involved in gas production. There has not been a tenant or active use of the parcel (with the exception of the Con Edison head house building) since the use of the property as part of the MGP.

3. Statement of Safety and Health Policy

WSS is committed to providing a safe and healthy work environment for its employees. To maintain a safe work environment, WSS has established an organizational structure and a Corporate Health and Safety Program to promote the following objectives:

- Reduce the risk of injury, illness, and loss of life to WSS employees.
- Maintain compliance with federal, state, and other applicable safety regulations; and minimize WSS employees' work exposure to potential physical, chemical, biological, and radiological hazards.

Safety policy and procedure on any one project cannot be administered, implemented, monitored, and enforced by any one individual. The total objective of a safe, accident free work environment can only be accomplished by a dedicated, concerted effort by every individual involved with the project from management down to all employees.

Each WSS employee must understand their value to the company; the costs of accidents, both monetary, physical, and emotional; the objective of the safety policy and procedures; the safety rules that apply to the safety policy and procedures; and what their individual role is in administering, implementing, monitoring, and compliance of their safety policy and procedures. This allows for a more personal approach to compliance through planning,

training, understanding, and cooperative effort, rather than by strict enforcement. If for any reason an unsafe act persists, strict enforcement will be implemented.

4. Hazard/Risk Analysis

The potential hazards associated with site conditions and activity hazards related to WSS onsite activities have been identified in this section.

4.1 Special Site Conditions or Concerns

- Chemical/Contaminant Exposure – coal tar, purifier waste, and other MGP-related constituents have been identified exposed at the surface and within the subsurface of Site.
- Traffic – The majority of traffic on the project site will be construction traffic. Additional precautions should be taken at the entrance/exit of Site to Food Center Drive as it is an extremely busy roadway, located west of the Site.
- Bio hazards (insect bites, poison ivy, etc.) – Poison ivy is present along with black flies.
- Hazardous winter conditions – Cold stress, slippery surfaces, and icy conditions are possible dangers.
- Utilities – Large utilities along Food Center Drive, in the northern portion of Site leading to the Con Edison metering station, and to the north of Site within the Chef's Warehouse property.

Safety equipment will include: First aid kit, fire extinguisher, eye wash, and adequate supply of drinking water, hand cleaner, insect repellent, sunscreen, air monitoring equipment, and cell phone.

4.2 Activity Hazard Analysis

The potential hazards for this project associated with site conditions and activity hazards associated with WSS on-site activities have been identified in **Table 2**. General hazards and control measures that are applicable to all site activities are identified in the General Hazards section. The site-specific tasks, potential hazards, and control measures established to reduce the risk of injury or illness are identified in the Activity Hazard section of **Table 2**. Health and Safety SOPs for routine hazards and common site conditions are referenced in the table below and included in **Appendix E**.

Table 2. Activity Hazard Analysis

General Hazards These Hazards Apply to All Site Activities	Control Measure
Chemical / Contaminant Exposure— Skin and eye injury/irritation	<ul style="list-style-type: none"> • Wear protective coveralls (e.g. Tyvek ®) with shoe covers, safety glasses, face shield, Nitrile gloves. • Dispose of gloves after use and wash hands. • Avoid contact with pooled liquids and limit contact with contaminated soils/groundwater.
Cold Stress – Hypothermia, Frostbite	<ul style="list-style-type: none"> • Take breaks in heated shelters when working in extremely cold temperatures. • Drink warm liquids to reduce the susceptibility to cold stress. • Wear protective clothing (recommended three layers: an outside layer to break the wind, a middle layer to provide insulation, and an inner layer of cotton or synthetic weave to allow ventilation). • Wear a hat and insulated boots. • Keep a change of dry clothing available in case clothes become wet. • Do heavy work during the warmer parts of the day and take breaks from the cold. • If possible shield work areas from drafts of wind and use insulating material on equipment handles when temperatures are below 30°F • Watch for symptoms of cold stress.
Dusty Conditions – Eye and respiratory irritation	<ul style="list-style-type: none"> • Avoid travel at extreme times • Wear protective gear – dust masks, safety glasses
Heat stress – Fainting, Fatigue, Heat Stroke	<ul style="list-style-type: none"> • Increase water intake while working. • Increase number of rest breaks and/or rotate workers in shorter work shifts. Rest in cool, dry areas. • Watch for signs and symptoms of heat exhaustion and fatigue. • Plan work for early morning or evening during hot months. • Use ice vests when necessary. • In the event of heat stroke, bring the victim to a cool environment and initiate first aid procedures.
Inclement Weather	<ul style="list-style-type: none"> • Listen to local forecasts for warnings about specific weather hazards such as tornados, thunder storms, and flash floods. • If the storms produce thunder and/or lightning, leave the work area immediately and move to a safe area. • Discuss an action plan prior to the severe weather. • Wear appropriate PPE for the type of weather that could be encountered. • Stop work until conditions are suitable. Take cover in vehicles or shelter as appropriate.

Insects – Bites, Stings, Allergic Reactions	<ul style="list-style-type: none"> • Apply insect repellent prior to performing field work and as often as needed throughout the work shift • Wear proper protective clothing (work boots, socks and light colored clothing) • Wear shoes, long pants with bottoms tucked into boots or socks, and a long-sleeved shirt when outdoors for long periods of time, or when many insects are most active (between dawn and dusk). • When walking in wooded areas, avoid contact with bushes, tall grass, or brush as much as possible • Field personnel who may have insect allergies should have bee sting allergy medication on site and should provide this information to the SSO and the SAFETY MANAGER prior to commencing work. • Field personnel should perform a self-check at the end of the day for ticks.
Physical Injury – Slips, Trips and Falls	<ul style="list-style-type: none"> • Wear PPE that properly fits, is in good condition and appropriate for the activities and hazards. • Maintain good visibility of the work area. • Avoid walking on uneven, steeply sloped or debris ridden ground surfaces. • Plan tasks prior to performing them including an activity hazard analysis. • Keep trafficked areas free from slip/trip/fall hazards. • Maintain weed growth in sampling areas, especially on slopes. • Wear shoes with traction. • Avoid traversing steep areas in slippery conditions. • Do not carry heavy objects to sampling areas, on steeply sloped areas, or where steep areas must be traversed to arrive at sample points.
Vehicular Traffic – Parking lot area Container truck movement	<ul style="list-style-type: none"> • Increase visibility of the work area to others by using cones, flags, barricades, proper lighting and caution tape to define work area if needed • Caution will be taken by all employees entering and exiting the Hunts Point Food Processing Facility parking areas <p>• All vehicles brought on the job site shall be inspected to ensure there are no fluid leaks. Vehicles leaking fluid will not allowed on site. Spill kits will be in all vehicles. At any time any leakage occurs it will be brought to Con Ed's attention</p>

Activity	Potential Hazard	Control Measures
Excavation and Test Pit Oversight	Crushing, entrapment, falls, fire/explosion	<ul style="list-style-type: none"> • Prior to excavating, determine utility locations and have locations marked by utility companies and the property owner. Utilities shall be properly supported and barriers should be erected around excavations in remote areas.

		<ul style="list-style-type: none"> • Backfill temporary excavations when work is completed. • Personnel must remain 2 feet from the face of the excavation. • Sides, slopes, and faces shall meet OSHA requirements. • Excavation entry will be allowed only with proper sloping or shoring.
Handdigging and Excavation with Vac truck	Equipment damage or Malfunction Back or body injury	<ul style="list-style-type: none"> • Proper ergonomics to prevent injury • Equipment placement and where about's • Communication with employees and operators

Activity	Potential Hazard	Control Measures
Heavy Equipment – Working Near	Struck-by, caught-in-between equipment, crushing, pinch points	<ul style="list-style-type: none"> • Wear hardhat; high visibility reflective safety vest; steel toed, steel-shank boots or (electrical hazard) EH-rated safety boots with composite toe and shank; safety glasses; nitrile/neoprene gloves; and earplugs. • Identify yourself and your work location to heavy equipment operators, so they may incorporate you into their operations. • Coordinate hand signals with operators. • Stay Alert! Pay attention to equipment backup alarms and swing radii. • Wear a high-visibility, reflective vest when working near equipment or motor vehicle traffic. • Position yourself in a safe location when filling out logs talking with the contractor. • Notify the contractor immediately if any problems arise. • Do not stand or sit under suspended loads or near any pressurized equipment lines. • Do not operate cellular telephones in the vicinity of heavy equipment operation.
Heavy Lifting	Back injury, knee injury	<ul style="list-style-type: none"> • Use proper lifting techniques. • Ask fellow worker for help. • Use a mechanical lifting device or a lifting aid where appropriate. • If you must lift, plan the lift before doing it.

Personal Protective Equipment (PPE) is the initial level of protection based on the activity hazards and Site conditions which have been identified. Upgrades to respiratory protection may be required based on the designated Action Levels found in Section 9. General on-site provisions will include: extra nitrile, leather, and/or Kevlar gloves, extra protective coveralls

(e.g. Tyvek®) with boot covers, drinking water and electrolyte fluids, reflective vest, first aid kit, fire extinguisher, hearing protection, and washing facilities.

If Site conditions suggest the existence of a situation more hazardous than anticipated, the Site personnel will evacuate the immediate area. The hazard, the level of precautions, and the PPE will then be reevaluated with the assistance and approval of the SAFETY MANAGER and the Project Manager (PM).

4.3 Personal Safety

Field activities have the potential to take employees into areas which may pose a risk to personal safety. The following websites (sources) have been researched to identify potential crime activity in the area of the project:

- www.crimereports.com: No crimes identified in the past 30 days within a mile of the Site.
- www.cityrating.com/crimestatistics.asp: Crime in New York City is higher than the New York State and national averages.
- www.crimemapping.com: No crimes identified in the past 30 days within a mile of the Site.
- www1.nyc.gov/site/nypd/stats/crime-statistics/borough-and-precinct-crimestats.page: New York City's 41st Precinct, located within 2 miles of Site, identifies 229 incidents that have occurred this year, accessed April 18, 2019.

To protect yourself, take the following precautions:

- If deemed necessary by the PM, use the buddy system (teams of a minimum of two persons present);
- Let the Site Safety Officer (SSO) know when you begin work in these areas and when you leave;
- Call in regularly;
- Pay attention to what is going on around you; and
- If you arrive in an area and it does not look safe to get out of your vehicle, lock the doors and drive off quickly but safely.

Employees must not knowingly enter into a situation where there is the potential for physical and violent behaviors to occur. If employees encounter hostile individuals or a confrontation develops in the work area, suspend work activities, immediately leave the area of concern, and contact local 911 for assistance. Notify the SSO, Safety Manager, and Con Edison Supervision

In the event of an emergency, prompt communications with local emergency responders is essential. At least one charged and otherwise functioning cell phone to facilitate emergency communications will be on-site. Confirmation of cellular phone operation will be confirmed at the start of each working day.

4.3.1 Handling Drums and Containers

Regulations for handling drums and containers are specified by Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations (CFR) 1910.120(j). Potential hazards associated with handling drums include vapor generation, fire, explosions, and possible physical injury. Handling of drums/containers during the Site investigation and remediation activities may be necessary. If drum/container handling is necessary, it will be performed in accordance with applicable regulations.

4.3.2 Electrical Hazards

4.3.2.1 Utilities

The Site may have shallow, buried utilities and also overhead utilities in certain areas. It will be necessary for parties disturbing the existing ground surface and conducting operations with heavy equipment having high clearances to exercise caution in performing project related work with respect to the presence of utilities. Utility companies with active, buried lines in the Site area will be asked by the Contractor performing intrusive activities to mark their facilities. Employees will use these data to choose work locations.

4.3.2.2 Underground Utilities

No excavating, drilling, boring, or other intrusive activities will be performed until an underground utility survey, conducted by knowledgeable persons or agencies, has been made. This survey will identify underground and in-workplace utilities such as the following:

- Electrical lines and appliances;
- Telephone lines;
- Cable television lines;
- Gas lines;
- Pipelines;
- Steam lines;
- Water lines;
- Sewer lines; and/or
- Pressurized air lines.

The location of utilities will be discussed with WSS employees and subcontractors during a Site Safety Briefing. Identified utilities should be marked or access otherwise restricted to avoid chance of accidental contact.

Even when a utility search has been completed, drilling, boring, and excavation should commence with caution until advanced beyond the depth at which such utilities are usually located. Utilities will be considered “live” or active until reliable sources demonstrate otherwise.

4.3.3 *Excavations and Trenches*

The safety requirements for excavations and trenches must be determined by a competent person who is capable of identifying existing and predictable hazards and work conditions that are unsanitary, hazardous, or dangerous to WSS employees. The competent person must also have the authorization to take prompt corrective measures to eliminate unsatisfactory conditions. WSS competent person for this project is Michael Cutro. If needed other WSS employees may be put into a competent role. WSS employees will not enter trenches.

The following are general requirements for work activities in and around excavations:

- Prior to initiation of excavation activity (or ground intrusive activity, such as drilling), the location of underground installations will be determined. The <One-Call/DigSafe> center will be contacted by the Contractor/Subcontractor a minimum of 72 hours prior to excavation activities. It may also be necessary to temporarily support underground utilities during excavation. When excavations approach the estimated location of underground installations, the exact location of the underground installations will be determined by means that are safe for WSS employees, i.e., hand dig, test pits, etc.
- Excavations should be inspected daily by the excavating company’s competent person prior to commencement of work activities. Evidence of cave-ins, slides, sloughing, or surface cracks or excavations will be cause for work to cease until necessary precautions are taken to safeguard employees.
- Excavated and other materials or equipment that could fall or roll into the excavation, and vehicular traffic and heavy equipment will be placed at least 5 feet from the edge of the excavation.
- Excavation operations will cease immediately during hazardous weather conditions such as high winds, heavy rain, lightning, and heavy snow.

Employees will refer to WSS’s Excavation Procedure # 2500 for further information.

4.3.4 Fire and Explosion

When conducting excavating activities, the opportunity for encountering fire and explosion hazards exists from contamination in soil and the possibility of free product in underground structures and pipelines. Additionally, the use of diesel-powered excavating equipment could present the possibility of encountering fire and explosion hazards.

- A con Edison Representative will be informed of all fire or explosions occurrences. Smoking is prohibited in the tunnels and in the vicinity of flammable or combustible liquids and gases. Good housekeeping standards must be enforced in all work areas, including the requirements of waste, rubbish, and flammable materials and rags will be removed from the area daily. All waste, rubbish, and flammable materials must be stored in approved containers

4.3.5 Heat Stress

Employees may be exposed to the hazards associated with heat stress when ambient temperatures exceed 70°F. Employees should increase water intake while working in conditions of high heat. Enough water should be available so that each employee can consume 1 quart of water per hour. In addition, they should increase number of rest breaks and/or rotate employees in shorter work shifts. Employees should rest in cool, dry, shaded areas for at least 5 minutes. Employees should not wait until they feel sick to cool down. Watch for signs and symptoms of heat exhaustion and fatigue. In the event of heat stroke, bring the victim to a cool environment, call for help, and initiate first aid procedures

The procedures to be followed regarding avoiding heat stress are provided in WSS Procedure # 2140 High Heat Work – Heat Stress

4.3.6 Cold Stress

Employees may be exposed to the hazards of working in cold environments. Potential hazards in cold environments include frostbite, trench foot or immersion foot, hypothermia, as well as slippery surfaces, brittle equipment, and poor judgment. The attached WSS guidelines for Cold Stress will be used for reference for this project

4.3.7 Noise

Noise is a potential hazard associated with the operation of heavy equipment, power tools, pumps, and generators. Employees who will perform suspected or established high noise tasks and operations will wear hearing protection. If deemed necessary by the SSO will be consulted on the need for additional hearing protection and the need to monitor sound levels

for Site activities. Other employees who do not need to be in proximity of the noise should distance themselves from the equipment generating the noise.

4.3.8 *Slips, Trips, and Falls*

Working in and around the Site may pose slip, trip, and fall hazards due to slippery and uneven surfaces. Excavation at the Site may cause uneven footing in trenches and around the soil piles. Steep slope and uneven terrain conditions at the Site are also a primary concern. WSS employees will wear proper foot gear and will employ good work practice and housekeeping procedures to minimize the potential for slips, trips, and falls.

4.3.9 *Manual Lifting*

Manual lifting of objects and equipment may be required. Failure to follow proper lifting technique can result in back injuries and strains. Employees should use a buddy system and/or power equipment to lift heavy loads whenever possible and should evaluate loads before trying to lift them (i.e., they should be able to easily tip the load and then return it to its original position). Carrying heavy loads with a buddy and proper lifting techniques include: 1) make sure footing is solid; 2) make back straight with no curving or slouching; 3) center body over feet; 4) grasp the object firmly and as close to your body as possible; 5) lift with legs; and 6) turn with your feet, don't twist.

4.3.10 *Projectile Objects and Overhead Dangers*

Overhead dangers, including but not limited to falling debris and equipment, can occur while operating drill rigs. WSS employees will maintain a minimum distance from large overhead operations and to maintain proper communication with heavy equipment operators and their handlers, should work necessitate their presence beyond the minimum safety distance. Proper PPE will be worn during these types of activities including steel-toed/shank boots, safety vests, and hard hats.

4.3.11 *Cuts and Lacerations*

The core sampling program may require employees to use powered cutting tools (circular saw or shears) or a hooked knife to cut open the sample liner. Safety box cutters will be utilized for routine operations such as opening boxes of supplies or cutting rope or string. When using cutting tools, follow the safety precautions listed below:

- Keep free hand out of the way.
- Secure work if cutting through thick material.
- Use only sharp blades; dull blades require more force that results in less knife control.

- Pull the knife through the object and away from your body; pulling motions are easier to manage.
- Do not put the knife in your pocket.
- Wear leather or Kevlar® gloves when using knives or blades, or when removing sharp objects caught or dangling in sampling gear.

4.3.12 Working with Ladders

WSS employees may be required to use ladders to access equipment of work areas. WSS has developed SOPs for working with ladders. The SOPs should be reviewed in the project planning stage and at the project execution stage.

For each project/task the proper ladder needs to be selected. Prior to each use, a ladder needs to be inspected and used in accordance with 29 CFR 1926.1053, as applicable. Copies of the standards will be kept on file in WSS's main office.

4.4 Chemical Hazards

The characteristics of compounds at the Site are discussed below for information purposes. Adherence to the safety and health guidelines in this HASP should reduce the potential for exposure to the compounds discussed below.

Coal Tar and Coal Tar Products

Coal tar products, which are semi-volatile organic compounds (SVOCs) consist of a mixture of acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluorethene, benz(a)pyrene, benzo(e)pyrene, benzo(g,h,i)perylene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3cd)pyrene, 2-methyl naphthalene, naphththalene, phenanthrene, phenols, pyrene.

Coal tar products and other SVOCs are present at the Site within impacted soil and fill material. Coal tar products such as those listed above may cause contact dermatitis. Direct contact can be irritating to the skin and produce itching, burning, swelling, and redness. Direct contact or exposure to the vapors may be irritating to the eyes. Conjunctivitis may result from prolonged exposure. Coal tar is considered to be very toxic, if ingested. High levels of exposure to coal tar, though not anticipated during work activities conducted during this project, may increase the risk of cancer including lung, kidney, and skin cancer. Naphthalene is also an eye and skin irritant and can cause nausea, headache, fever, anemia, liver damage, vomiting, convulsions, and coma. Poisoning may occur by ingestion of large doses, inhalation, or skin absorption.

The major route of entry for the work activities to be conducted at this Site is through direct contact. Exposure is most likely when handling soil and water samples. Inhalation may occur when the soil is disturbed causing respirable and nuisance dust particles to become airborne.

Cyanide

Cyanide compounds are common by-products of manufactured gas production. Hydrogen cyanide is toxic because it is a chemical asphyxiate. It replaces the oxygen in the blood and thereby suffocates the cells. Ferro cyanides are not considered toxic because the hydrogen cyanide ion is bound too tightly to the iron and cannot therefore replace the oxygen. It takes a great amount of heat and/or acid to release cyanide gas from the ferro cyanide molecule; therefore, hydrogen cyanide is not a concern at this Site. However, it is NYSDEC's recommendation to monitor for hydrogen cyanide during earth-disturbing activities at sites where MGP-related contaminants have been found.

Heavy Metals

Exposure to high concentrations of arsenic can cause dermatitis, gastrointestinal disturbances, peripheral neuropathy, respiratory irritation, and hyper pigmentation of skin. Chronic exposure to arsenic has resulted in lung cancer in humans.

Exposure to high concentrations of aluminum can cause irritation of the eyes, skin, and the respiratory system.

Exposure to high concentrations of antimony can cause irritation of eyes, skin, nose, throat, and mouth; coughing; dizziness; headache; nausea, vomiting, diarrhea; stomach cramps; insomnia; anorexia; and could be unable to smell properly. Chronic exposure to antimony can produce respiratory effects that include antimony pneumoconiosis (inflammation of the lungs due to irritation caused by the inhalation of dust), alterations in pulmonary function, chronic bronchitis, chronic emphysema, inactive tuberculosis, pleural adhesions, irritation; cardiovascular effects (increased blood pressure, altered EKG readings and heart muscle damage) and gastrointestinal disorders in humans.

Exposure to high concentrations of beryllium can result in "beryllium sensitization", which is an allergic response to beryllium. Symptoms of the disease include cough, shortness of breath, fatigue, fevers, skin rash, and night sweats. In the later stages, lung tissue becomes scarred. In severe cases, the right side of the heart may be strained due to increased pressure in the pulmonary artery from lung damage.

Exposure to high concentrations of cadmium can cause acute symptoms such as pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness and pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; loss of the sense of smell), mild anemia; and is considered a potential occupational carcinogen.

Exposure to chromium can cause acute symptoms such as irritation of the eyes, nose and throat as well as wheezing and coughing. Chronic effects include nosebleeds, nasal congestion, dermatitis, and loss of sight.

Exposure to high concentrations of copper through inhalation can cause irritation of the eyes, nose, pharynx, nasal septum. Ingestion may cause a metallic taste. Skin irritation may result from direct contact with skin. Damage to the liver and kidneys may occur.

No adverse health effects are associated with environmental exposure to iron. Target organs for iron via ingestion of iron (most often in supplement form) are the liver, cardiovascular system, and kidneys. Exposure to high concentrations of iron through ingestion can cause salivation nausea, vomiting, diarrhea, and abdominal pain.

Exposure to lead may cause acute symptoms such as eye irritation, weakness, weight loss, abdominal pain, and anemia. Chronic exposure to lead may result in kidney disease, effects to the reproductive system, blood forming organs, and CNS.

Lead and arsenic are regulated by specific OSHA standards. They are 29 CFR 1910.1025/1926.52 and 29 CFR 1910.1018/1926.1118, respectively. These standards include specific requirements for air monitoring, signs and labels, training and medical surveillance.

Exposure to high concentrations of manganese can cause manganism, metal fume fever, flulike fever, and kidney damage.

Exposure to high concentrations of nickel may cause sensitization dermatitis, allergic asthma, and pneumonitis. Exposure to mercury can cause dizziness, salivation nausea, vomiting, diarrhea, constipation, emotional disturbance, and kidney injury. Chronic exposure to mercury can cause CNS damage.

Exposure to high concentrations of selenium can cause mucous membrane irritation, coughing, sneezing, shortness of breath, chills, headaches, hypotension, and CNS depression. Chronic exposure to selenium could cause bronchial irritation, gastrointestinal distress, excessive fatigue, and skin discoloration.

Exposure to high concentrations of thallium can cause nausea, diarrhea, abdominal pain, vomiting; tremor; chest pain, pulmonary edema; convulsions, psychosis; liver, kidney damage; and alopecia.

Vanadium may cause greenish-black discoloration of the tongue and is possibly carcinogenic to humans. Long-term or repeated exposure to vanadium may have effects on the respiratory tract, resulting in chronic rhinitis and chronic bronchitis.

Exposure to high concentrations of zinc through ingestion can cause abdominal pain, nausea, vomiting, and diarrhea. Chronic exposure can lead to low blood pressure, jaundice, and seizures.

These metals are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. As with SVOCs, the primary route of exposure is through inhalation of dust particles when soil is disturbed and becomes airborne.

Hydrogen Sulfide

Hydrogen sulfide is another common by-product of manufactured gas production. Exposure to lower concentrations can result in eye irritation, a sore throat and cough, shortness of breath, and fluid in the lungs. These symptoms usually go away in a few weeks. Long-term, low-level exposure may result in fatigue, loss of appetite, headaches, irritability, poor memory, and dizziness. Breathing very high levels (> 800 parts per million [ppm]) of hydrogen sulfide can cause death within just a few breaths. The primary route of exposure is through inhalation and therefore respiratory protection is the primary control against exposure to hydrogen sulfide.

Polycyclic Aromatic Hydrocarbons

Polycyclic aromatic hydrocarbons (PAHs), are a group of chemicals consisting of numerous carbon atoms joined together to form multiple rings. Most are formed from the incomplete combustion of plant or animal matter, or carbon fuels, such as coal or petroleum. These compounds are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. PAHs may cause contact dermatitis. Direct contact can be irritating to the skin and produce itching, burning, swelling, and redness. Direct contact or exposure to the vapors may be irritating to the eyes. Conjunctivitis may result from prolonged exposure. High levels of exposure to PAHs, though not anticipated during work activities conducted during this project, may increase the risk of cancer including lung, kidney, and skin cancer. Naphthalene is also an eye and skin irritant and can cause nausea, headache, fever, anemia, liver damage, vomiting, convulsions, and coma. Poisoning may occur by ingestion of large doses, inhalation, or skin absorption.

The major route of entry for the work activities to be conducted at this Site is through direct contact. Exposure is most likely when handling soil and water samples. Inhalation may occur when the soil is disturbed causing respirable and nuisance dust particles to become airborne.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) have previously been encountered during MGP site investigations at other sites. PCBs have historically been used from a number of sources including, but not limited to; electrical systems, hydraulic oils, lubricants, cutting oils, printer's ink, and asphalt. Exposure to PCBs can occur through unbroken skin without immediate pain or irritation. PCBs detected at the site are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. Acute effects of exposure to high concentrations of PCB can include eye, skin, nose, and throat irritation. Chronic effects of PCB exposure can include skin swelling and redness, gastrointestinal disturbances, and neurological effects such as headache, dizziness, nervousness, and numbness of extremities. PCBs are suspected human carcinogens that can cause liver cancer. PCBs can accumulate in fatty tissues and result in health effects after the initial exposure has occurred. The primary route of exposure for PCBs is inhalation, dermal contact, and ingestion. Analysis of soils from the Site did not indicate elevated PCB concentrations.

Semi-Volatile Organic Compounds

Semi-volatile organic compounds (SVOCs) usually consist of a mixture of acenaphthene, acenaphthylene, anthracene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluorethene, benz(a)pyrene, benzo(e)pyrene, benzo(g,h,i)perylene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3cd)pyrene, 2-methyl naphthalene, naphththalene, phenanthrene, phenols, and pyrene.

These SVOCs are present at the Site within impacted soil and historic fill material as well as groundwater. These compounds are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. SVOCs such as those listed above may cause contact dermatitis. Direct contact can be irritating to the skin and produce itching, burning, swelling, and redness. Direct contact or exposure to the vapors may be irritating to the eyes. Conjunctivitis may result from prolonged exposure. Many SVOCs are considered to be very toxic, if ingested. High levels of exposure to SVOCs, though not anticipated during work activities conducted during this project, may increase the risk of cancer including lung, kidney, and skin cancer. Naphthalene is also an eye and skin irritant and can cause nausea, headache, fever, anemia, liver damage, vomiting, convulsions, and coma. Poisoning may occur by ingestion of large doses, inhalation, or skin absorption.

The major route of entry for the work activities to be conducted at this Site is through direct contact. Exposure is most likely when handling soil and water samples. Inhalation may occur when the soil is disturbed causing respirable and nuisance dust particles to become airborne.

Volatile Organic Compounds

Volatile organic chemicals (VOCs), such as benzene, toluene, ethyl benzene, and xylene (BTEX) are present as soil and groundwater contaminants, and in some cases chemical components in non-aqueous phase liquids (NAPL) such as oil or tar within soils. These compounds are at environmental concentrations and are not expected to be at concentrations that exposure symptoms would occur. These compounds generally have a depressant effect on the Central Nervous System (CNS), may cause chronic liver and kidney damage, and some are suspected human carcinogens. Benzene is a known human carcinogen. Acute exposure may include headache, dizziness, nausea, and skin and eye irritation. The primary route of exposure to VOCs is through inhalation and therefore respiratory protection is the primary control against exposure to VOCs.

Coal Ash

Coal ash, also referred to as coal combustion residuals or CCRs, is produced primarily from the burning of coal in coal-fired power plants. Coal ash includes a number of by-products produced from burning coal. Coal ash contains contaminants like mercury, cadmium and arsenic. Ash is a solid, grey/black or brown/tan, odorless powder which may contain solidified masses. It is not combustible or explosive. Airborne dust may cause immediate or delayed irritation or inflammation to the eyes, nose, throat, or lungs depending on the degree of exposure. Ash may contain trace amounts of ammonia or ammonia bisulfate. Contact with water or moisture can cause the ammonia to be released from the ash into the air. Inhalation of ammonia can cause coughing and irritation or burns to the nose throat and lungs. These effects depend on the concentration of ammonia inhaled. Inhalation may occur when the soil is disturbed causing respirable and nuisance dust particles to become airborne. For dust generated during site activities which exceed site specific limits, engineering controls such as water application will be used to control dust concentrations.

4.4.1 Evaluation of Organic Vapor Exposure

Air monitoring reduces the risk of overexposure by indicating when action levels have been exceeded and when PPE must be upgraded or changed. Action Levels for VOCs and associated contingency plans for the work zone are discussed within **Section 9** of this HASP.

Exposure to organic vapors will be evaluated and/or controlled by:

- Monitoring air concentrations for organic vapors in the breathing zone with a photoionization detector (PID) or a flame ionization detector (FID).
- When possible, engineering control measures will be utilized to suppress the volatile organic vapors. Engineering methods can include utilizing a fan to promote air circulation, utilizing volatile suppressant foam, providing artificial ground cover, or covering up the impacted material with a tarp to mitigate volatile odors.

- When volatile suppression engineering controls are not effective and organic vapor meters indicate concentrations above the action levels, then appropriate respiratory protection (i.e., air purifying respirator with organic vapor cartridge) will be employed.

4.4.2 *Evaluation of Skin Contact and Absorption*

Skin contact by contaminants may be controlled by use of proper hygiene practices, PPE, and good housekeeping procedures. The proper PPE (e.g., Tyvek[®], gloves, safety glasses) as described in **Section 5** will be worn for activities where contact with potential contaminated media or materials are expected.

4.5 Biological Hazards

Areas of the Site may be wooded, surrounded with brush, or landscaped. Therefore, employees working on this project should be aware of the potential biological hazards at this Site. Each is discussed in detail below:

4.5.1 *Poisonous Plants*

Persons working on the Site should be aware of the possible presence of poisonous plants and insects. Poison ivy is a climbing plant with leaves that consist of three glossy, greenish leaflets. Poison ivy has conspicuous red foliage in the fall. Small yellowish-white flowers appear in May through July at the lower leaf axils of the plant. White berries appear from August through November. Poison ivy is typically found east of the Rockies. Poison oak is similar to poison ivy but its leaves are oak-like in form. Poison oak occurs mainly in the south and southwest. Poison sumac typically occurs as a small tree or shrub and may be 6 to 20 feet in height. The bark is smooth, dark and speckled with darker spots. Poison sumac is typically found in swampy areas and east of the Mississippi. The leaves have 7 to 13 smooth-edged leaflets and drooping clusters of ivory-white berries that appear in August and last through spring.



Poison Oak



Poison Ivy



Poison Sumac

The leaves, roots, stems and fruit of these poisonous plants contain urushiol. Contact with the irritating oil causes an intensely itching skin rash and characteristic, blister-like lesions.

The oil can be transmitted on soot particles when burned and may be carried on the fur of animals, equipment, and apparel.

Proper identification of these plants is the key to preventing contact and subsequent dermatitis. Wear long sleeves and pants when working in wooded areas. In areas of known infestation, wear Tyvek® coveralls and gloves. Oils are easily transferred from one surface to another. If you come in contact with these poisonous plants, wash exposed areas immediately with cool water to remove the oils. Some commercial products such as Tecnu's Poison Oak-n-Ivy Cleanser claim to further help with the removal of oils.

4.5.2 Ticks

4.5.2.1 Lyme Disease

Ticks are bloodsuckers, attaching themselves to warm-blooded vertebrates to feed. Deer ticks are associated with the transmission the bacteria that causes Lyme disease. Female deer ticks are about ¼-inch in length and are black and brick red in color. Males are smaller and all black. If a tick is not removed, or if the tick is allowed to remain for days feeding on human blood, a condition known as tick paralysis can develop. This is due to a neurotoxin, which the tick apparently injects while engorging. This neurotoxin acts upon the spinal cord causing incoordination, weakness, and paralysis.

The early stages of Lyme disease, which can develop within a week to a few weeks of the tick bite, are usually marked by one or more of these signs and symptoms:

- Tiredness
- Chills and fever
- Headache
- Muscle and/or joint pain
- Swollen lymph glands
- Characteristic skin rash (i.e. bullseye rash)

4.5.2.2 Rocky Mountain Spotted Fever

Rocky Mountain spotted fever is spread by the American dog tick, the lone-star tick, and the wood tick, all of which like to live in wooded areas and tall, grassy fields. The disease is most common in the spring and summer when these ticks are active, but it can occur anytime during the year when the weather is warm.

Initial signs and symptoms of the disease include sudden onset of fever, headache, and muscle pain, followed by development of a rash. Initial symptoms may include fever, nausea, vomiting, severe headache, muscle pain, and/or lack of appetite.

The rash first appears 2 to 5 days after the onset of fever and is often not present or may be very subtle. Most often it begins as small, flat, pink, non-itchy spots on the wrists, forearms, and ankles. These spots turn pale when pressure is applied and eventually become raised on the skin. Later signs and symptoms include rash, abdominal pain, joint pain, and/or diarrhea.

The characteristic red, spotted rash of Rocky Mountain spotted fever is usually not seen until the 6th day or later after onset of symptoms, and this type of rash occurs in only 35% to 60% of patients with Rocky Mountain spotted fever. The rash involves the palms or soles in as many as 50% to 80% of patients; however, this distribution may not occur until later in the course of the disease.

4.5.2.3 Prevention

Tick season lasts from April through October; peak season is May through July. You can reduce your risk by taking these precautions:

- During outside activities, wear long sleeves and long pants tucked into socks. Wear a hat, and tie hair back.
- Use insecticides to repel or kill ticks. Repellents containing the compound n,ndiethyl-meta-toluamide (DEET) can be used on exposed skin except for the face, but they do not kill ticks and are not 100% effective in discouraging ticks from biting. Products containing permethrin kill ticks, but they cannot be used on the skin -- only on clothing. When using any of these chemicals, follow label directions carefully.
- After outdoor activities, perform a tick check. Check body areas where ticks are commonly found: behind the knees, between the fingers and toes, under the arms, in and behind the ears, and on the neck, hairline, and top of the head. Check places where clothing presses on the skin.
- Remove attached ticks promptly. Removing a tick before it has been attached for more than 24 hours greatly reduces the risk of infection. Use tweezers, and grab as closely to the skin as possible. Do not try to remove ticks by squeezing them, coating them with petroleum jelly, or burning them with a match. Keep ticks in a zip-lock baggie in case testing needs to be performed.
- Report any of the above symptoms and all tick bites to the PM and Safety Team for evaluation.

4.5.3 Mosquito- Borne Disease – West Nile Virus

West Nile encephalitis is an infection of the brain caused by the West Nile virus, which is transmitted by infected mosquitoes. Following transmission from an infected mosquito, West Nile virus multiplies in the person's blood system and crosses the blood-brain barrier to reach the brain. The virus interferes with normal CNS functioning and causes inflammation of the brain tissue. However, most infections are mild and symptoms include fever, headache, and body aches. More severe infections may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and rarely, death. Persons over the age of 50 have the highest risk of severe disease.

Prevention centers on public health action to control mosquitoes and on individual action to avoid mosquito bites. To avoid being bitten by the mosquitoes that cause the disease, use the following control measures:

If possible, stay inside between dusk and dark. This is when mosquitoes are most active. When outside (between dusk and dark), wear long pants and long-sleeved shirts. Spray exposed skin with an insect repellent, preferably containing DEET.

4.5.4 Wasps and Bees

Wasps (hornets and yellow-jackets) and bees (honeybees and bumblebees) are common insects that may pose a potential hazard to the field team if work is performed during spring, summer, or fall. Bees normally build their nests in the soil. However, they use other natural holes such as abandoned rodent nests or tree hollows. Wasps make a football-shaped, paperlike nest either below or above the ground. Yellow-jackets tend to build their nests in the ground but hornets tend to build their nests in trees and shrubbery. Bees are generally more mild-mannered than wasps and are less likely to sting. Bees can only sting once while wasps sting multiple times because their stinger is barbed. Wasps sting when they feel threatened. By remaining calm and not annoying wasps by swatting, you lessen the chance of being stung.

Wasps and bees inject a venomous fluid under the skin when they sting. The venom causes a painful swelling that may last for several days. If the stinger is still present, carefully remove it with tweezers. Some people may develop an allergic reaction (i.e. anaphylactic shock) to a wasp or bee sting. If such a reaction develops, seek medical attention at once. If a WSS employee is allergic to bees or wasps notify the SSO and if, needed, the location of the epi pen.

4.5.5 Sun Exposure

Employees are encouraged to liberally apply sunscreen, with a minimum sun protection factor (SPF) of 15, when working outdoors to avoid sunburn and potential skin cancer, which is associated with excessive sun exposure to unprotected skin. Additionally, employees should wear safety glasses that offer protection from ultraviolet A and B (UVA/UVB) rays.

4.5.6 Oversight, CAMP, Hotspot Removal, Dewatering

Excavation Oversight

Management of excavated fill and rock, including excavation, screening, handling and disposal, import and reuse will be conducted in accordance with EWP. The contractor shall be responsible for all excavation and earthwork. Con Ed Engineering will be on site to oversee excavation, screening, and earthwork and document and compliance with the remedial action requirements described in the EWP

Community Air Monitoring Program

Real time air monitoring for VOC's and particulate matter at the upwind and downwind perimeter of the construction area will be performed by GEI personnel on a continuous basis during soil disturbance activities and the handling of contaminated soil and fill material. Soil disturbance activities include but not limited to, soil / fill material excavation, screening of soil/fill material, handling, stockpiling, and loading, grading, trenching, sheeting and lagging. Particulate matter will be monitored as well as VOC's

Hotspot removal

No hazardous waste is expected at the site. Any hotspot contamination found at the site will be managed with in accordance with local, state, and federal laws and regulations and with any special conditions established by NYSDEC.

Dewatering

Dewatering is anticipated during the construction of the building because the excavation will extend into the groundwater table. The contractor shall be responsible for handling, treating, and disposing all groundwater removed from the site in accordance with applicable laws and regulations. Dewatering shall be accomplished in a manner that shall preserve the strength of foundation strata; shall not cause instability of the excavation sides; shall not cause damage to existing structures, streets, pavements, and utilities; and complies with all applicable regulations

5. Personal Protective Equipment

The PPE specified in Table 4 represents PPE selection required by 29 CFR 1910.132, and is based on the Activity Hazard Analysis of Section 4 (Table 2). Specific information on the selection rationale activity can be found in the WSS Health and Safety Manual.

The PPE program addresses elements, such as PPE selection based on Site hazards, use and limitations, donning and doffing procedures, maintenance and storage, decontamination and disposal, training and proper fitting, inspection procedures prior to / during / and after use, evaluation of the effectiveness of the PPE program, and limitations during temperature extremes, heat stress, and other appropriate medical considerations. A summary of PPE for each level of protection is in Table 4.

Table 4. Site-Specific PPE

Task	PPE Level	Site-Specific Requirements	Respirator
Mobilization/Demobilization			
Mobilization/Demobilization of Equipment and Supplies	D	Hard hat, safety glasses, steel toe/shank safety boot, reflective vest, leather work gloves, hearing protection as needed	D – None
Establishment of Site Security, Work Zones, and Staging Area	D	Hard hat, safety glasses, steel toe/shank safety boot, reflective vest, leather work gloves, hearing protection as needed	D - None
Construction			
Excavation, Digging Test Pits, Backfilling, Grading Observation, Sampling	D	Hard hat, safety glasses, steel toe/shank safety boot with overboot as needed, reflective vest, leather work gloves as needed, nitrile gloves, hearing protection as needed, Tyvek as needed	Level D initially, Level C-If action levels exceeded (see Section 9 of HASP)
Hazardous Materials Assessment			
Demolition/Remediation Observation			
Observe Contractor Activities	D	Hard hat, safety glasses, steel toe/shank safety boot with overboot as needed, reflective vest, leather work gloves as needed, nitrile gloves, hearing protection as needed, Tyvek as needed	D - None

- *Note: No white or Consolidated Edison blue hard hats allowed on site*
- *Williams Procedure # 1600 is also attached*

Use of Level A or Level B PPE is not anticipated. If conditions indicating the need for Level A or Level B PPE are encountered, personnel will leave the Site and this HASP will be revised with oversight of the SAFETY MANAGER or WSS personnel will not re-enter the Site until conditions allow.

For most work conducted at the site, Level D PPE will include long pants, hard hats, safety glasses with side shields, and steel toe/shank or EH-rated safety boots. When work is conducted in areas where non-aqueous phase liquid (NAPL) or tar-saturated soil is anticipated, employees will wear, at a minimum, modified Level D PPE, which can include Tyvek® coveralls and safety boots with overboots.

5.1 OSHA Requirements for PPE

Personal protective equipment used during the course of this field investigation must meet the following OSHA standards:

Table 5. OSHA Standards for PPE

Type of Protection	Regulation	Source
Eye and Face	29 CFR 1910.133	ANSI Z87.1 1968
Respiratory	29 CFR 1910.134	ANSI Z88.1 1980
Head	29 CFR 1910.135	ANSI Z89.1 1969
Foot	29 CFR 1910.136	ANSI Z41.1 1999 or ASTM F-2412-2005, and ASTM F-2413-2005

CRF = Code of Federal Regulations

ANSI = American National Standards Institute

ASTM = American Society For Testing and Materials

On-site WSS personnel who have the potential to don a respirator must have a valid fit test certification and documentation of medical clearance. The SAFETY MANAGER will maintain such information on file for on-site personnel. The PM will obtain such information from the subcontractor's site supervisor prior to the initiation of such work. Both the respirator and cartridges specified for use in Level C protection must be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910.134). Air purifying respirators cannot be worn under the following conditions:

- Oxygen deficiency (less than 20.7%).
- Imminent Danger to Life and Health (IDLH) concentrations.
- If contaminant levels exceed designated use concentrations.

5.2 Con Edison “Rules We Live By”

Hazard	Electric Operations	Setback Operations	Gas Operations	Customer Operations	Utility Shared
Verify Dead/Lockout-Tag Out	Properly test or appear to ensure that electric equipment, cable, or wire is “dead” as required regardless of voltage before beginning dead work activities.	Properly test or verify that equipment is de-energized, isolated and protected prior to initiating dead work activities.			Properly lock out/tag out equipment before beginning work on the equipment. (when not intentionally live and
Permits (Operating, Outlets)	Enter D-Fault tagged structures only when authorized by the operating authority to perform feeder processing, or to perform work after all D-faults have been identified and de-energized.	<ul style="list-style-type: none"> Only perform work that is within the authorized scope of work as listed on the work permit. Do not change the status of a piece of equipment that has a Stop Tag applied to it. Follow the sequence of an operating order. 		Do not enter a structure that has been classified and tagged as a D-fault.	Only perform work that is within the authorized scope of work as listed on the work permit.
Atmospheric Testing	<ul style="list-style-type: none"> Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space. For excavations greater than 4 feet in depth the atmosphere shall be tested prior to entry or when the excavation is not already occupied. 	<ul style="list-style-type: none"> Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space. For excavations greater than 4 feet in depth the atmosphere shall be tested prior to entry or when the excavation is not already occupied. 	<ul style="list-style-type: none"> Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space. For excavations greater than 4 feet in depth the atmosphere shall be tested prior to entry or when the excavation is not already occupied. 	Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space.	Perform air monitoring and ventilate as required for entry and work in an enclosed space or a permit-required confined space.
Rescue/Retrieval	Entrant and attendant are required to wear rescue harness when working in enclosed spaces.	Entrant and attendant are required to wear rescue harness when working in enclosed spaces.	Entrant and attendant working in enclosed spaces shall wear rescue harnesses when required.	Entrant and attendant are required to wear rescue harness when working in enclosed spaces.	Entrant and attendant are required to wear rescue harness when working in enclosed spaces.
High Hazard Energy PPE	<ul style="list-style-type: none"> Use fall protection equipment as required. Use appropriate rubber gloves with protective gauntlet, rubber sleeves, fire retardant clothing and eye protection/face shield as required for the electrical hazard. 	<ul style="list-style-type: none"> Use fall protection equipment as required. Use appropriate rubber gloves, rubber sleeves, fire retardant clothing, and eye protection/face shield as required for the electrical hazard. In Steam Distribution, use appropriate water resistant coveralls and face shields before disconnecting any piping from the dead side of the trap valve up to and including the trap inlet valves and trap bypass valve. These coveralls and face shields must be removed when piping is reconnected. 	<ul style="list-style-type: none"> Use fall protection equipment as required. Wear airline respirator, FR coveralls, FR hood & FR gloves or liners as required by IF-42. 	<ul style="list-style-type: none"> Use fall protection equipment as required. Use appropriate rubber gloves with protective gauntlet, rubber sleeves, fire retardant clothing, and eye protection/face shield as required for electrical hazard. Do not come into contact or move a downed or low hanging utility wire while performing Site Safety or Gas Assessment work. 	<ul style="list-style-type: none"> Use fall protection equipment as required. Use the appropriate rubber gloves, rubber sleeves, fire retardant clothing, and eye protection/face shield as required for the electrical hazard.
Sheeting/Shoring		Ensure that excavations five feet or deeper are properly sheeted and shored before anyone enters.	Ensure that excavations five feet or deeper are properly sheeted and shored before anyone enters.		
Gas Piping Integrity Test			Perform an integrity test before a customer turn-on.	Perform an integrity test before a customer turn-on.	
Securing Loads					Reels over 5,000 lbs (individually or when bundled together) are secured per MTS Metal Coil Guidelines.

5.3 Work Area Protection

Workers must not only be protected from hazards on the project site but also from hazards generated by nearby operations. It is therefore important that all work areas be properly barricaded and posted with warning signs.

In order to perform work on any Con Edison facility or project, all contractors must, at least, meet the following requirements. Please note that additional requirements may be necessary based on job-specific activities.

- All work areas must be sufficiently barricaded to prevent unauthorized access and limit exposure of the public to work area hazards.
- Accident prevention signs (e.g., "Danger – Keep Out") must be visible when work is being performed and must be covered when hazards no longer exist.
- All signs must conform to the requirements specified by OSHA and be used only for their intended purpose.

6. Key Project Personnel/Responsibilities and Lines of Authority

6.1 WSS Personnel

- Shaun Hundley Project Manager
- Mike Cutro EHS Manager

The implementation of health and safety at this project location will be the shared responsibility of the PM, the Health and Safety Officer, other WSS personnel implementing the proposed scope of work.

Consolidated Edison Contacts

- Victor Billingham – Tunnel Maintenance Engineer
- Warren Miller – EH & S Project Specialist
- Top Man to be assigned (Top Man is Con Edison Supervisor)

6.1.1 WSS Project Manager

The Shaun Hundley, is responsible for confirming that the requirements of this HASP are implemented. Some of the PM's specific responsibilities include:

- Conducting and documenting the Project Safety Briefing for WSS project employees and forwarding the signed form (Appendix D) to the Safety Team;
- Verifying that the WSS staff selected to work on this program are sufficiently trained for Site activities;
- Assuring that personnel to whom this HASP applies, including subcontractor personnel, have received a copy of it;
- Providing the SAFETY MANAGER with updated information regarding conditions at the Site and the scope of Site work;
- Providing adequate authority and resources to the on-site SSO to allow for the successful implementation of necessary safety procedures;
- Supporting the decisions made by the SSO and SAFETY MANAGER;
- Maintaining regular communications with the SSO and, if necessary, the SAFETY MANAGER;
- Verifying that the subcontractors selected by WSS to work on this program have completed WSS environmental, health and safety requirements and has been deemed acceptable for the proposed scope of work; and
- Coordinating the activities of WSS subcontractors and confirming that they are aware of the pertinent health and safety requirements for this project.

6.1.2 WSS Corporate Health and Safety Officer

The Safety Manager is the individual responsible for the review, interpretation, and modification of this HASP. Modifications to this HASP which may result in less stringent precautions cannot be undertaken by the PM or the SSO without the approval of the SAFETY MANAGER. Specific duties of the SAFETY MANAGER include:

- Writing, approving, and amending the HASP for this project;
- Advising the PM and SSO on matters relating to health and safety on this Site;
- Recommending appropriate PPE and safety equipment to protect personnel from potential Site hazards;
- Conducting accident investigations; and
- Maintaining regular contact with the PM and SSO to evaluate Site conditions and new information which might require modifications to the HASP.

6.1.3 WSS Site Safety Officer

WSS field staff are responsible for implementing the safety requirements specified in this HASP. However, one person will serve as the SSO. For this program, MICHAEL cUTRO, will serve as the SSO. The SSO will be on-site during all activities covered by this HASP. The SSO is responsible for enforcing the requirements of this HASP once work begins. The SSO has the authority to immediately correct situations where noncompliance with this HASP is noted and to immediately stop work in cases where an immediate danger is perceived. Some of the SSO's specific responsibilities include:

- Conducting/attending the Project Safety Briefing prior to beginning work, and subsequent safety meetings as necessary;
- Conduct daily Safety Tailgate meeting in accordance with NYCEDC requirements (can be combined with "pre-entry") briefing for Site-related work;
- Verifying that personnel to whom this HASP applies have attended and participated in the Project Safety Briefing and subsequent safety meetings that are conducted during the implementation of the program;
- Maintaining a high level of health and safety consciousness among employees implementing the proposed activities;
- Procuring the air monitoring instrumentation required and performing air monitoring for investigative activities;
- Procuring and distributing the PPE and safety equipment needed for this project for WSS employees;
- Verifying that PPE and health and safety equipment used by WSS is in good working order;
- Verifying that the selected contractors are prepared with the correct PPE and safety equipment and supplies;
- Notifying the PM of noncompliance situations and stopping work in the event that an immediate danger situation is perceived;
- Monitoring and controlling the safety performance of personnel within the established restricted areas to confirm that required safety and health procedures are being followed;
- Stopping work in the event that an immediate danger situation is perceived; and
- Reporting accident/incident and preparing accident/incident reports, if necessary.

6.1.4 WSS Field Personnel

WSS field personnel covered by this HASP are responsible for following the health and safety procedures specified in this HASP and for performing their work in a safe and responsible manner. Some of the specific responsibilities of the field personnel are as follows:

- Reading and signing the HASP in its entirety prior to the start of on-site work;
- Attending and actively participating in the required Project Safety Briefing prior to beginning on-site work and any subsequent safety meetings that are conducted during the implementation of the program;
- Stopping work in the event that an immediate danger situation is perceived;
- Bringing forth any questions or concerns regarding the content of the HASP to the PM or the SSO, prior to the start of work;
- Reporting accidents, injuries, and illnesses, regardless of their severity, to the SSO, SAFETY MANAGER, and HR; and Consolidated Edison Top Man
- Complying with the requirements of this HASP and the requests of the SSO.

6.1.5 Lines of Authority will be as follows:

On Site – WSS will have responsibility for safety of its employees during the work performed at the Parcel D Site. WSS's field representative will have a cell phone available to contact the appropriate local authorities, in the event of an emergency. WSS's field representative will be available for communication with the WSS PM and with the NYCEDC representative.

WSS employees have the authority to stop work activities if an unanticipated hazard is encountered or a potential unsafe condition is observed. The WSS employee should contact the Site Safety Officer, Project Manager, and Con Ed Supervisor to discuss the stop work conditions and potential control methods that can be implemented.

6.2 Subcontractors

WSS sub-contractors are listed below work on this project:

Subcontractor Name	Contact Name
O'Leary Construction	O'leary Construction
	1830 Gilford Ave Hyde Park NY 11040
	Office 515-775-6161

WSS requires its subcontractors to work in a responsible and safe manner. Subcontractors hired by WSS are required to read, acknowledge, and comply with the WSS site HASP for this project..

6.3 Management of Change

Supervisors for the job site will file for management of change if there is any problem with the job that was not covered in this HASP or blue prints. Work will stop immediately and a Con Ed representative will be notified. An addendum will be created for this HASP and all workers will receive a job briefing on the changes

7. Training Program

7.1 HAZWOPER Training

In accordance with OSHA Standard 29 CFR 1910.120 "Hazardous Waste Operations and Emergency Response" (HAZWOPER) responders will, at the time of job assignment, have received a minimum of 40 hours of initial health and safety training for hazardous waste site operations. At a minimum, the training will have consisted of instruction in the topics outlined in the standard. Personnel who have not met the requirements for initial training will not be allowed to work in any Site activities in which they may be exposed to hazards (chemical or physical). Proof of training will be submitted to the PM or his/her representative prior to the start of field activities.

7.2 Annual 8-Hour Refresher Training

Annual 8-hour refresher training will be required of hazardous waste site field personnel in order to maintain their qualifications for fieldwork. The training will cover a review of 29 CFR 1910.120 requirements and related company programs and procedures. Proof of current 8-hour refresher training will be submitted to the PM or his/her representative prior to the start of field activities.

7.3 Supervisor Training

Personnel acting in a supervisory capacity will have received 8 hours of instruction in addition to the initial 40-hour training. In addition, supervisors will have 1 year of field experience and training specific to work activities (i.e., sampling, construction observation, etc.)

7.4 Site-Specific Training

Prior to commencement of field activities, the PM or the SSO will verify WSS field personnel assigned to the project will have completed training that will specifically address the activities, procedures, monitoring, and equipment used in the Site operations. It will include Site and facility layout, hazards, and emergency services at the Site, and will highlight the provisions contained within this HASP and applicable WSS H&S SOPs. This training will be documented on the Project Safety Briefing Form. The signed form will be kept on site. In addition, WSS personnel will sign the plan to document that they understand the hazards and control measures presented and agree to comply with the procedures established in the HASP. Personnel that have not received project-specific training will not be allowed on-site.

7.5 On-Site Safety Briefings

Other WSS personnel will be given health and safety briefings daily by the SSO or field representative to assist WSS personnel in safely conducting work activities. The briefing will include WSS subcontractors. The briefings can include information on new operations to be conducted, changes in work practices, or changes in the Site's environmental conditions, as well as periodic reinforcement of previously discussed topics. The briefings will also provide a forum to facilitate conformance with safety requirements and to identify performance deficiencies related to safety during daily activities or as a result of safety inspections. Documentation of these briefings will be recorded in the WSS field log book. The meetings will also be an opportunity to periodically update the employees on monitoring results. All employees have the right to ask questions concerning the day's activities.

7.6 First Aid and CPR

The PM will verify that WSS field staff has current certifications in first aid and Cardiopulmonary Resuscitation (CPR), so that emergency medical treatment is available during field activities. The training will be consistent with the requirements of the American Red Cross Association. WSS employees also attend annual Bloodborne Pathogens training in compliance with OSHA regulations.

7.7 Railroad Worker Safety Training

NA for this project

7.8 OSHA 10-hour Construction Safety Training

WSS employees will have received 10 / 30 hour construction / general Industry safety training through the OSHA Outreach Training Program when required for a specific site, client, or based on the type work activities that are being performed. This training provides employees with an awareness level training in recognizing and preventing the hazards associated with the construction industry. Employees receive training in hazard identification, avoidance, control, and prevention; not OSHA standards. The training implies an increased level of safety training has become a widely known standard for OSHA orientation training in the construction industry. The PM will verify that WSS staff requiring this training has an OSHA issued completion card. While the OSHA 10-hour construction safety completion card does not expire in New York State, New York City does require renewal of the training every 5 years.

8. Medical Surveillance Program

WSS maintains a continuous, corporate, medical surveillance program that includes a plan designed specifically for field personnel engaged in work at sites where hazardous or toxic materials may be present. WSS's SAFETY MANAGER is responsible for the administration and coordination of medical evaluations conducted for WSS's employees at branch office locations. Comprehensive examinations are given to WSS field personnel on an annual or biennial basis (as determined to be appropriate by the SAFETY MANAGER) participating in hazardous waste operations. The medical results of the examinations aid in determining the overall fitness of employees participating in field activities.

Under the SAFETY MANAGER's supervision, field personnel undergo a complete initial physical examination, including a detailed medical and occupational history, before they participate in hazardous waste site investigations. Extensive annual/biennial reexaminations are also performed. Upon completion of these tests, personnel are certified by an occupational health physician as to whether they are fit for field work in general and fit to use respiratory protection.

If a WSS employee or other project worker shows symptoms of exposure to a hazardous substance and wishes to be rechecked, he/she will be directed to the nearest area hospital or medical facility.

WSS subcontractor personnel that will enter any active waste handling or other active non"clean" area must certify that they are participating in a medical surveillance program that complies with OSHA regulations for hazardous waste operations (i.e., 29 CFR 1910.120 and 29 CFR 1926.65). Proof of medical clearance will be submitted to the WSS PM or SSO prior to the start of field activities.

9. Atmospheric Monitoring

Community Air Monitoring (CAMP) will be performed by GEI. Refer to the CAMP work plan for further information.

WSS will conduct work zone monitoring for on-site WSS employees during intrusive activities only. WSS will monitor and document daily Site conditions and operations and inform field representatives of results.

If Action Levels are exceeded, the SSO will immediately implement Site action(s) according to Table 6 below and notify the PM and Safety Team.

The following air monitoring equipment will be on site:

- Multi-gas meter: lower explosive limit (LEL) / oxygen (O₂) / hydrogen sulfide (H₂S) / hydrogen cyanide (HCN) meter

9.1 Equipment Use

9.1.1 Calibration

Air monitoring equipment will be calibrated and maintained in accordance with manufacturer's requirements. Calibrations will be recorded in the project notes daily or on a daily calibration form.

9.1.2 Multi-Gas Meter

A multi-gas meter will be used to monitor for combustible gases and O₂ content in the work zone during intrusive activities. The meter will also be equipped with an H₂S sensor and an HCN sensor. H₂S monitoring will be completed every 15 minutes or, if a sulfur odor is present, monitoring will be continuous. HCN monitoring will be completed every 15 minutes or, if an almond odor is detected, monitoring will be continuous.

9.2 Action Levels

Table 6 provides a summary of real time air monitoring Action Levels and contingency plans for work zone activities. The below Action Levels are determined by halving the Permissible Exposure Limits (PELs) or Threshold Limit Values (TLVs) as set forth by OSHA and the American Conference of Government Industrial Hygienists (ACGIH). O₂ values are based on the maximum use limits of a full-face respirator if oxygen were being displaced by a chemical.

Table 6. Real-Time Work Zone Air Monitoring Action Levels

Air Monitoring Instrument	Action Level (above background)	Site Action
PID	< 5.0 ppm	Continue working. No respiratory protection is required.
	> 5.0 ppm	Stop work, withdraw from work area, institute engineering controls, if levels persist, upgrade to Level C.
O ₂ Meter	< 20.7%	Stop work, withdraw from work area, ventilate area, notify PM and Safety Team.
	> 21.1%	Stop work, withdraw from work area, notify PM and Safety Team.
H ₂ S Meter	< 5.0 ppm	No respiratory protection is required.
	> 5.0 ppm	Stop work, cover excavation, withdraw from work area, institute engineering controls, notify PM and CHSO.
HCN Meter	< 3.0 ppm	Continue working. No respiratory protection is required.
	> 3.0 ppm	Stop work, cover excavation and withdraw from work area, institute engineering controls, notify PM and CHSO.
Lower Explosive Limit	< 10% LEL	Investigate possible causes, allow excavation to ventilate, use caution during procedures.
	> 10% LEL	Stop work, allow excavation/borehole to ventilate to < 10% LEL, if ventilation does not result in a decrease to < 10% LEL, withdraw from work area, notify PM and Safety Team.
Particulate Meter	150 µg/m ³	Implement work practices to reduce/minimize airborne dust generation, e.g., spray/misting of soil with water.

10. Site Control Measures

10.1 Site Zones

Site zones are intended to control the potential spread of contamination and to assure that only authorized individuals are permitted into potentially hazardous areas. A three-zone approach will be utilized. It will include an Exclusion Zone (EZ), Contamination Reduction Zone (CRZ) and a Support Zone (SZ). Specific zones will be established on the work site by the Contractor when operations begin for each task requiring such delineation.

This project is being conducted under the requirements of 29 CFR 1910.120, and any personnel working in an area where the potential for exposure to Site contaminants exists, will only be allowed access after proper training and medical documentation.

The following will be used for guidance in revising these preliminary zone designations, if necessary.

Support Zone – The SZ is an uncontaminated area that will be the field support area for most operations. The SZ provides for field team communications and staging for medical emergency. Appropriate sanitary facilities and safety equipment will be located in this zone. Potentially contaminated personnel/materials are not allowed in this zone.

Contamination Reduction Zone – The CRZ is established between the EZ and the SZ. The CRZ contains the contamination reduction corridor and provides an area for decontamination of personnel and portable hand-held equipment, tools and heavy equipment. A personnel decontamination area will be prepared at each exclusion zone. The CRZ will be used for EZ entry and egress in addition to access for heavy equipment and emergency support services.

Exclusion Zone – Activities which may involve exposure to Site contaminants, hazardous materials, and/or conditions should be considered an EZ. This zone will be clearly delineated by cones, tapes, or other means. The Contractor may establish more than one EZ where different levels of protection may be employed or different hazards exist. The size of the EZ will be determined by the Contractor allowing adequate space for the activity to be completed, field members, and emergency equipment.

The Contractor is responsible for constructing, maintaining, and enforcing the zones.

10.2 Buddy System

WSS personnel should be in line-of-site or communication contact with another on-site person. The other on-site person should be aware of his or her role as a “buddy” and be able to provide assistance in the event of an emergency. A copy of this plan will be given to any person acting as a WSS “buddy” for informational purposes.

10.3 Sanitation for Temporary Work Sites

Sanitation requirements identified in the OSHA Standard 29 CFR 1926.51 “Sanitation” specifies that employees working at temporary project sites have at least one sanitary facility available to them. Temporary sanitary facilities including toilets will be available on-site.

10.4 Illumination

Illumination requirements identified by OSHA are directed to work efforts inside buildings and/or during non-daylight hours. Activities planned for the Site are anticipated to occur outside during daylight hours. However, if work areas do not meet illumination requirements, they will be equipped with appropriate illumination that meets or exceeds

requirements specified in OSHA Standard 29 CFR 1926.56 "Illumination." Employees will not work on sites that are not properly lighted.

10.5 Smoking

Smoking is prohibited at or in the vicinity of hazardous operations or materials. Where smoking is permitted, safe receptacles will be provided for smoking materials.

10.6 Alcohol and Drug Abuse Prevention

Alcohol and drugs will not be allowed on the Site. Project personnel under the influence of alcohol or drugs will not be allowed to enter the Site.

11. Incident Reporting

WSS will report incidents involving WSS personnel or subcontractor personnel, such as: lost time injuries, injuries requiring medical attention, near miss incidents, fires, fatalities, accidents involving the public, chemical spills, vehicle accidents, and property damage. The following steps must be followed when an incident occurs:

1. In life-threatening situations, immediately call 9-1-1.
Stop work activity to address any injury, illness, property damage, spill or other emergency.
Immediately report any incidents to your Supervisor/Project Manager and Con Edison top man
2. If your injury or illness is not life-threatening call Axis Care 770-464-1818
3. Complete an Incident Report Form **immediately** after addressing the incident.

For vehicle accidents involving another vehicle or damage to property, the employee will take pictures of each vehicle or property involved in the incident and obtain a police report. In some municipalities police will not be dispatched to a non-injury accident, but every effort needs to be made to try and obtain the report.

The Incident Report Form and the Near Miss Reporting Form can be found in Appendix D, on the WSS Health and Safety smartphone app, or on the Safety page of the WSS Intranet. To report subcontractor injuries or incidents, follow the same verbal reporting procedures and submit an email describing the event to the PM and the Safety Team.

In the event of a close call which may cause injury or damage to personal or equipment, a report will be made to an immediate supervisor, followed by a Con Ed site representative. Any corrective or preventative action will be discussed and approved by both Con Ed and the contractor

11.1 Injury Triage Service

If a WSS employee experiences a work-related injury that is not life-threatening, the employee will initiate a call to Axis Care. The injured employee will detail any medical symptoms or complaints which will be evaluated by a Registered Nurse (RN) specially trained to perform telephonic triage. The RN will recommend first aid self-treatment or refer the injured employee for an off-site medical evaluation by a health professional at a clinic within WSS's workers compensation provider network. WSS employees are still required to follow our Accident Reporting procedures as listed above.

12. Decontamination Procedures

A decontamination pad has been established for personnel decontamination and equipment decontamination.

12.1 Personnel Decontamination Station

A personnel decontamination station where employees can drop equipment and remove PPE will be set up at the decontamination pad by the Contractor. It will be equipped with basins for water and detergent, and trash bag(s), or cans for containing disposable PPE and discarded materials. Once personnel have decontaminated at this station and taken off their PPE, they will proceed to a sink where they will wash themselves wherever they have potentially been exposed to any contaminants (e.g., hands, face, etc.)

The following specific decontamination procedure will be used as necessary by WSS personnel or subcontractor personnel wearing PPE from Level D through Level C.

- **Step 1** – Equipment drop (respirator, tools, monitoring equipment, etc.)
Decontaminate as appropriate (per WSS's field representative's instructions).

- **Step 2** – Boot wash/rinse (wash with non-foaming detergent, rinse with fresh water spray). Remove boots. If inner and outer gloves are worn, wash outer gloves, remove and save for later use, or remove and discard outer gloves and place in trash bag/can provided in the decontamination area.
- **Step 3** – Hard hat removal; wash if visibly contaminated (use same wash as in Step 2).
- **Step 4** – If Tyvek[®] (or equivalent) suit was worn and is visibly contaminated, remove and place in trash bag/can provided in the decontamination area or decontaminate (wash) and store for reuse. Contaminated washable coveralls should be removed and bagged for washing.
- **Step 5** – Respirator and/or eye protection removal (as applicable). Wash (per Step 2) to remove visible contamination.
- **Step 6** – Remove outer gloves.
- **Step 7** – Wash potentially exposed skin (use water and soap at indoor sink).
- **Step 8** – Disinfect respirator per manufacturer's recommendations.

Contaminated PPE (gloves, suits, etc.) will be decontaminated and stored for reuse or placed in plastic bags (or other appropriate containers) and disposed of in an approved facility.

Decontamination wastewater and used cleaning fluids will be collected and disposed of in accordance with applicable state and federal regulations.

12.2 Heavy Equipment Decontamination

Heavy equipment decontamination will be performed by the Contractor within the limits of the on-site decontamination pad in accordance with the contract specifications. A steam generator and brushes will be used to clean demolition equipment and other tools. No heavy equipment will be permitted to leave the Site unless it has been thoroughly decontaminated.

Wastewater from the heavy equipment and personnel decontamination areas will be collected and disposed of in accordance with applicable state and federal regulations. The Contractor will be responsible for ultimate disposal of investigation-derived wastes.

12.3 Decontamination Equipment Requirements

The following equipment, if required, should be in sufficient supply to implement decontamination procedures for WSS's equipment.

- Buckets

- Alconox™ detergent concentrate
- Hand pump sprayers
- Long handled soft bristle brushes
- Large sponges
- Cleaning wipes for respirators
- Bench or stool(s)
- Methanol and/or Nitric Acid
- Liquid detergent and paper towels
- Plastic trash bags

The Contractor performing decontamination procedures is responsible for verifying that the above materials, as required for their operation, are in sufficient supply.

13. Supplemental Contingency Plan Procedures

13.1 Hazard Communication Plan

WSS personnel have received hazard communication training as part of their annual health and safety training and new employee health and safety orientation training. Hazardous materials used on the Site will be properly labeled, stored, and handled. SDS will be available to potentially exposed employees.

- No chemicals will be brought on site without pre-approval by Consolidated Edison

13.2 Fire

In the event of a fire personnel will evacuate the area. WSS's field representative will contact the local fire department with jurisdiction and report the fire. Notification of evacuation will be made to the PM and the Safety Team. The field representative will account for WSS personnel and subcontractor personnel and report their status to the PM and Con Edison top man.

13.3 Medical Support

In case of minor injuries, on-site care will be administered with the Site first aid kit. For serious injuries, call 911 and request emergency medical assistance. Seriously injured persons should not be moved, unless they are in immediate danger. Notify the PM, Safety Manager, and Con Edison top man of the emergency.

Section 1 and Table 1 of this HASP contain detailed emergency information, including directions to the nearest hospital, and a list of emergency services and their telephone numbers. In addition, Appendix A includes maps to the hospital and/or occupational health clinic. WSS field personnel will carry a cellular telephone.

13.4 Severe Weather

The contingency plan for severe weather includes reviewing the expected weather to determine if severe weather is in the forecast. Severe weather includes high winds over 30 miles per hour (mph), heavy rains or snow squalls, thunderstorms, tornados, and lightning storms. If severe weather is approaching, the decision to evacuate WSS personnel and subcontractor personnel from the Site will be the responsibility of WSS's field representative. Notification of evacuation will be made to the PM and the Safety Team. The field representative will account for WSS personnel and subcontractor personnel and report their status to the PM. If safe, work can resume 30 minutes after the last clap of thunder or flash of lightening.

13.5 Spills or Material Release

If a hazardous waste spill or material release occurs, if safe, the SSO or their representative will immediately assess the magnitude and potential seriousness of the spill or release based on the following:

- SDS for the material spilled or released;
- Source of the release or spillage of hazardous material;
- An estimate of the quantity released and the rate at which it is being released;
- The direction in which the spill or air release is moving;
- Personnel who may be or may have been in contact with the material, or air release, and possible injury or sickness as a result;
- Potential for fire and/or explosion resulting from the situation; and
- Estimates of area under influence of release.

If the spill or release is determined to be within the on-site emergency response capabilities, the SSO will verify implementation of the necessary remedial action. If the release is beyond the capabilities of the Site personnel, personnel will be evacuated from the immediate area and the local fire department will be contacted. The SSO will notify the PM, Safety Manager, and Con Edison top man immediately.

14. Health and Safety Plan Sign-Off

WSS personnel conducting site activities will be familiar with the information in this HASP. After reviewing this plan, please sign the copy in the project files, and bring a copy of the plan with you to the Site. By signing this site-specific HASP, you are agreeing that you have read, understand, and will adhere to the provisions described in this plan while working on the Project Site below.

Site Name: Hunts Point Test Pits

Investigation: Remedial Action

WSS Project No:

Print Name	Signature
Project Manager: Shaun Hundley	

[illegible]

1. Head northwest on Food Center Drive towards Halleck St (0.5 mi)
2. Turn right onto Halleck St (0.2 mi).
3. Turn left onto Randall Ave (0.7 mi).
4. Randall Ave becomes Leggett Ave (0.4 mi).
5. Turn left onto Southern Blvd (0.3 mi).
6. Take the 2nd right onto E 149th St (1.2 mi).
7. Make a U-turn at Park Ave onto E 149th St (0.08 mi).
8. Hospital is on the right.

Total Mileage: 3.31 miles Trip Time: 11 minutes

Map to Occupational Health Clinic



Food Center Drive (NE Corner), Bronx, NY 10474

1. Head northwest on Food Center Rd towards Halleck St (0.5 mi).
2. Turn right onto Halleck St (0.5 mi).
3. Slight left onto Edgewater Rd (0.5 mi).
4. Turn right onto Bruckner Blvd (0.1 mi).
5. Take the 1st left onto Bronx River Ave (0.4 mi).
6. Turn right onto Westchester Ave (0.5 mi).
7. Medcare Urgent Care is on the left.

Medcare Urgent Care-Walk In
1643 Westchester Avenue, Bronx 10472

Total Mileage: 2.48 miles Trip Time: 8 minutes

Williams Specific Procedures & Guidelines (attached)

- #1100 Reporting and Investigating injury / Near Miss
- #1500 Hazardous Communication
- #1600 PPE Requirements
- #2140 High Heat Work – Heat Stress
- #2500 Excavation Trenching & Shoring
- WSS Cold Stress Guidelines

Project Name: Con Edison Hudson Avenue
Project Number: Dismantling of Unused Elevators

Date: _____
Supervisor Field Review: _____

Task Safety Evaluation

(TSE must be immediately accessible to foreman while work is in progress)

Job Task/Title: _____ Location of Job: _____
Person in charge of task: _____ Person completing TSE: _____
What special training is required for this task? _____

Basic Job Steps associated with Task

1. _____ 4. _____
2. _____ 5. _____
3. _____ 6. _____

Physical Hazards (Remove these Hazards where possible)

- | | | |
|---|--|--|
| <input type="checkbox"/> Fall Hazard-Personnel Fall Potential | <input type="checkbox"/> Weld Flash Hazard | <input type="checkbox"/> Heavy Metal: _____ |
| <input type="checkbox"/> Trip Hazard | <input type="checkbox"/> Electrical Hazard-Possible Contact | <input type="checkbox"/> Chemical: _____ |
| <input type="checkbox"/> Flying Debris / Grinding | <input type="checkbox"/> Rigging Hazard | <input type="checkbox"/> Hazardous Material: _____ |
| <input type="checkbox"/> High Noise Hazard >85 dBL | <input type="checkbox"/> Manual Lifting Hazard-Strain Hazard | <input type="checkbox"/> Vehicle Traffic Area |
| <input type="checkbox"/> High Heat / Heat stress >77 d WBGT | <input type="checkbox"/> Excavations/Trenches | <input type="checkbox"/> Thermal Spray Fumes/Ventilation |
| <input type="checkbox"/> Burn Hazard-Contact Hot Surfaces | <input type="checkbox"/> Entanglement w/ Moving Equipment | <input type="checkbox"/> Radiation/Contamination Area |
| <input type="checkbox"/> Pinch Point Hazard-Hand Protection | <input type="checkbox"/> Asbestos Hazard | <input type="checkbox"/> Sensitive Equipment Area |
| <input type="checkbox"/> Struck by falling object | <input type="checkbox"/> Lead Hazard | <input type="checkbox"/> Other: _____ |

Work Practice/Engineering Controls

- | | | |
|--|--|--|
| <input type="checkbox"/> Consult w/ Safety/Operations/Security | <input type="checkbox"/> Control Energy/Lockout-Tagout | <input type="checkbox"/> Install Shielding |
| <input type="checkbox"/> HEPA ventilation/Vacuuming | <input type="checkbox"/> Build Enclosure | <input type="checkbox"/> Other: _____ |

Signs/ Barricades required

- | | | |
|---|--|--|
| <input type="checkbox"/> YELLOW Caution Tape/Rope/Signs | <input type="checkbox"/> Danger-Flammable Signs | <input type="checkbox"/> Radiological Barricades/Signs |
| <input type="checkbox"/> RED Danger Tape/Rope/Signs | <input type="checkbox"/> Hazardous Materials Signs | <input type="checkbox"/> Wall Openings/Holes |
| <input type="checkbox"/> Danger-Confined Space Signs | <input type="checkbox"/> Ownership Barricades/Chains | <input type="checkbox"/> Other: _____ |

Personal Protective Equipment required

- | | | |
|--|---|--|
| <input type="checkbox"/> Hardhat (within inspection dates) | <input type="checkbox"/> <u>Coveralls/suits</u> | <input type="checkbox"/> Mandatory |
| <input type="checkbox"/> Safety Glasses (w/sideshields) | <input type="checkbox"/> Fire retardant | <input type="checkbox"/> 1/2 Face APR |
| <input type="checkbox"/> Dark lenses | <input type="checkbox"/> Ores / Tyvek | <input type="checkbox"/> PAPR |
| <input type="checkbox"/> Monogoggles/Spoggles | <input type="checkbox"/> Chemical suits | <input type="checkbox"/> Full Face APR |
| <input type="checkbox"/> Faceshield | <input type="checkbox"/> Welding Jackets / Leathers | <input type="checkbox"/> Air Supplied |
| <input type="checkbox"/> Dark Shield | <input type="checkbox"/> <u>Gloves</u> | <input type="checkbox"/> Blast Hood |
| <input type="checkbox"/> Work Boots (steel or composite toe) | <input type="checkbox"/> Cotton | <input type="checkbox"/> <u>Respirator Cartridge</u> |
| <input type="checkbox"/> Rubber Boots | <input type="checkbox"/> Welding | <input type="checkbox"/> HEPA |
| <input type="checkbox"/> Shoe Covers | <input type="checkbox"/> Electrical | <input type="checkbox"/> Organic Vapor |
| <input type="checkbox"/> Hearing protection | <input type="checkbox"/> Impact Resistant | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> <u>Fall Protection</u> | <input type="checkbox"/> Latex/Rubber | <input type="checkbox"/> Ice Vest |
| <input type="checkbox"/> Body Harness | <input type="checkbox"/> Leather | <input type="checkbox"/> Personal Flotation Device-PFD |
| <input type="checkbox"/> Retractable | <input type="checkbox"/> Cut resistant (Kevlar) | <input type="checkbox"/> Reflective Safety Vest (flagging) |
| <input type="checkbox"/> Guardrails | <input type="checkbox"/> <u>Respirator</u> | <input type="checkbox"/> Other: _____ |
| | <input type="checkbox"/> Voluntary | |

Permits/Procedures required

- ☐ Hot Work Permit
- ☐ Confined space Permit
- ☐ Critical Lift Permit
- ☐ Excavation/Trench

Monitoring required

- ☐ Personnel IH Monitoring
- ☐ Atmospheric Monitoring
- ☐ Fire watch
- ☐ Attendant (hole watch)

Inspections

- | | |
|--|---|
| <input type="checkbox"/> Excavation | <input type="checkbox"/> Confined Space |
| <input type="checkbox"/> Ladders | <input type="checkbox"/> Aerial Lift |
| <input type="checkbox"/> Scaffolding | <input type="checkbox"/> Fork-Lift |
| <input type="checkbox"/> Equipment / Tools | <input type="checkbox"/> Other: _____ |

Employee Certifications / Qualifications Required

- | | |
|--|---|
| <input type="checkbox"/> Crane Operator | <input type="checkbox"/> Asbestos |
| <input type="checkbox"/> Fork-lift Operator | <input type="checkbox"/> Excavation/Trenching |
| <input type="checkbox"/> Aerial Lift Operator | <input type="checkbox"/> Confined Space Entry Supervisor/Entrant/Supervisor |
| <input type="checkbox"/> Powder Actuated Tool User | <input type="checkbox"/> Qualified Scaffold Erector |
| <input type="checkbox"/> Fire Watch | <input type="checkbox"/> FME |
| <input type="checkbox"/> Lead | <input checked="" type="checkbox"/> Other <u>Sky Climber</u> |

List below any additional hazards and or controls needed to perform this task

All Williams employee's and sub-contractors have been briefed and understand the revised Con Edison "Rules We Live By"
YES NO NA

Circle one!

Procedure #1210

Rev 5: 01-21-14

Form 1210A

Task Safety Evaluation

Emergency Phone Numbers and Assembly Point

Phone _____ Radio _____ Fire _____ Medical _____

Assembly Point _____

Questions for the Supervisor to ask the Crew:

1. Is there anyone unfamiliar with performing this task? If yes, team the individual(s) up with an experienced person.
2. Has the appropriate MSDS been reviewed?

TSE Briefing with work crew:

By signing this document, you have attended a Pre-Job Briefing, understand and agree with the safety requirements identified, the Williams/Site policies and procedures outlined for the safe completion of this task and that failure to follow these requirements and/or procedures properly may result in disciplinary action up to and including termination. Lastly have you reported any pre-existing condition, or are you on any medications that would affect you from completing this task in a safe manner

PRINT NAME _____ SIGN NAME _____ PRINT NAME _____ SIGN NAME _____

This image shows a blank sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook or worksheet page.

Task Completion

Task area is cleaned up and safe?		Barricades/Tape are removed from task area?		Clearances removed from plant equipment?	
<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> YES	<input type="radio"/> NO

If No, Why Not? _____

List any problems, delays, hold-ups, and/or improvements encountered with task assignment: _____

Events

TSE must be kept on file for the duration of the job. If any of the below events occur otherwise TSE may be disposed of after 30 days.

* Requires Site Safety Manager notification within 30 minutes

****Requires immediate Corporate EHS Department notification**

Environmentals Event

- | | |
|--|---|
| <input type="checkbox"/> Near miss* | <input type="checkbox"/> Air contaminant release* |
| <input type="checkbox"/> Chemical Spill* | <input type="checkbox"/> EPA Event** |

Injury Event

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> Near Miss* | <input type="checkbox"/> Medical Attention* |
| <input type="checkbox"/> First Aid* | <input type="checkbox"/> Hospital/Doctors Visit** |

Property Event

- (9) Near Miss***

Event Documentation

Has the event been reported to the Safety Department?

- ☐ Yes ☐ No ☐ NA

If No, Why not? _____

Crew Supervisor/Foreman signature _____ Supervisory Review _____

HASP submitted by

Signature: _____ Date _____

Type/Print Name: Michael Cutro

Title: EH & S Manager WSS

Con Edison Acceptance

To be completed by authorized Con Edison Representative

Yes No

Accepted X X

Signature _____ Date _____

Type/Print Name _____ Title _____

APPENDIX B

Community Air Monitoring Program

GEI Consultants



Consulting
Engineers and
Scientists

Community Air Monitoring Plan

Hunts Point Parcel D (BCP #C203100)
For the Property Located at Food Center Drive (NE Corner)
Bronx, NY 10474

Prepared For:

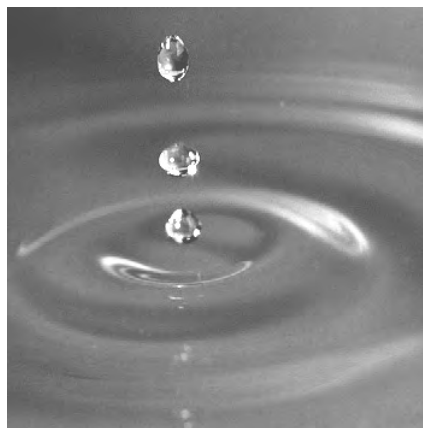
New York City Economic Development Corporation
110 William Street
New York, NY 10038

Submitted by:

GEI Consultants, Inc., P.C.
1385 Broadway
20th Floor
New York, NY 10018
(212)-687-8282

April 2019

Project No. 1705341



Community Air Monitoring Plan

1.1 Introduction

The purpose of the Community Air Monitoring Plan (CAMP) 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. During all ground intrusive activities at the Site, continuous real-time air monitoring for particulates, volatile organic compounds (VOCs), hydrogen sulfide (H₂S), and hydrogen cyanide (HCN) will be conducted. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, installation of soil borings or monitoring wells, and oversight of remedial activities (e.g. soil-bentonite wall installation and in-situ stabilization of MGP-related wastes).

1.2 VOC, H₂S, and HCN Monitoring, Response Levels, and Actions

VOCs, H₂S, and HCN will be monitored at two locations on the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during all ground intrusive activities. Upwind concentrations will be measured continuously at one location to establish background conditions. Monitoring locations will be adjusted if wind direction changes. Monitoring will be conducted using a MultiRAE Plus configured to monitor for VOCs, H₂S, and HCN at each upwind and downwind monitoring station. The equipment will be calibrated at least daily for the contaminants of concern. Each MultiRAE Plus will be set to record 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for VOCs or H₂S or 3 ppm above background for HCN for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the level readily decreases (per instantaneous readings) below 5 ppm over background for VOCs or H₂S or 3 ppm over background for HCN, work activities can resume with continued monitoring.
2. If levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background for VOCs and H₂S or 3 ppm over background for HCN, but less than 25 ppm, work activities will 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), is below 5 ppm over background for VOCs and H₂S or 3 ppm over background for HCN for the 15-minute average.
3. If the VOCs, H₂S, or HCN level is above 25 ppm at the perimeter of the work area, activities will be shutdown.
 4. All 15-minute readings must be recorded and be available for State (NYSDEC and NYSDOH) and County Health personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

1.3 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at one upwind location and two downwind locations around the perimeter of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using a DustTrak II, a real-time monitoring device 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 will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) 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 $150 \mu\text{g}/\text{m}^3$ 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 $150 \mu\text{g}/\text{m}^3$ 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 $150 \mu\text{g}/\text{m}^3$ of the upwind level and in preventing visible dust migration.
3. All 15-minute readings must be recorded and be available for State (NYSDEC and NYSDOH) and County Health personnel to review.