

**Regulatory Submittal Part III(R)  
Health & Safety Plan**

**Remediation and Abatement Operations  
Fiterman Hall – 30 West Broadway  
New York, New York**

**Prepared for:**

Dormitory Authority of the State of New York  
The City University of New York

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## CONTACTS/EMERGENCY TELEPHONE NUMBERS

### PROJECT NAME: FITERMAN HALL SITE REMEDIATION OPERATIONS

THE FOLLOWING ARE THE BUSINESS AND HOME TELEPHONE NUMBERS WHERE PROJECT PERSONNEL CAN BE REACHED AT ALL TIMES. IN ADDITION, THE EMERGENCY TELEPHONE NUMBERS OF OTHER VITAL AGENCIES ARE LISTED.

AIRTEK ENVIRONMENTAL CORP. – Environmental Consultant (212) 768-0516  
 PRINCIPAL: Benn Lewis MOBILE (917) 295-0810  
 PAGER (800) 374-8771  
 SENIOR PROJECT MANAGER: Mike Porter MOBILE (917) 337-4325  
 ALT. PRINCIPAL Mike Zouak MOBILE (917) 495-9242  
 CIH Clifford Cooper MOBILE (914) 388-9796

TISHMAN/LIRO JOINT VENTURE – Construction Manager  
 PRINCIPAL Andy Bachman MOBILE (917) 567-7924  
 HOME (203) 454-4642  
 Jerry Cohen MOBILE (347) 728-9476  
 Ken Molloy MOBILE (917) 642-5777  
 Michael Mannella MOBILE (917) 865-7135  
 Carmine Castellano MOBILE (347) 582-5844  
 SITE SAFETY MANAGER: Dwayne Carter MOBILE (347) 234-8756

DASN/CUNY - Owner  
 CHIEF - CUNY PROGRAMS Mike Stabulas OFFICE (212) 273-5090  
 Project Manager Rich Dalessio OFFICE (212) 273-5098  
 Alt. Project Manager Jay Goldstein OFFICE (212) 273-5051  
 Mobile (917) 577-8382  
 Matt Stewart OFFICE (718) 960-8566

PAL ENVIRONMENTAL SAFETY CORP.  
 PRINCIPAL Salvatore DiLorenzo Office (718) 349-0900  
 Mobile (516) 695-1306  
 PROJECT MANAGER/CSO Sanford Alper Office (718) 349-0900  
 Mobile (917) 364-7166  
 COMPLIANCE MANAGER Aric Domozick Office (718) 349-0900  
 Mobile (917) 807-0589  
 SAFETY MANAGER Safety Quality Plus Office (212) 868-3239

### REGULATORS

USEPA Pat Evangelista (212) 637-4447  
 NYSDOL Chris Alonge (518) 457-7201  
 NYCDEP Krish Radhakrishnan (718) 595-3721  
 NYCDOB Robert Iulo (212) 566-3364  
 NYS DEC Sal Carlomagno (718) 482-4994  
 OSHA Richard Mendelson (212) 337-3141

**Emergency Services:**

**Hospital:**        **NYU Downtown Hospital**  
                         **170 William Street**  
                         **New York, NY 10038**  
                         **Phone: (212) 312-5000**

**Police:**            **1<sup>st</sup> Precinct**  
                         **16 Ericsson Place**  
                         **New York, NY 10013**  
                         **Phone: (212) 334-0611**

**Fire:**                **Engine 7, Ladder 1, Battalion 1**  
                         **100 Duane Street**  
                         **New York, NY 10007**  
                         **Phone: (212) 628-2900**

## 1.0 SCOPE OF PLAN

The following Health and Safety Plan (HASP) will be utilized and modified as necessary in order to minimize and prevent exposures to hazardous substances and conditions related to the Remediation and Abatement Operation (R) of the Building located at 30 West Broadway in New York City (the Building). Please note that this project will have three (3) phases:

**Phase I - Scaffolding Erection Operation:** Remediation and abatement necessary to install scaffolding system encompassing the entire Building for its full height.

**Phase II – Remediation Phase:** Abatement of asbestos and remediation of CoPC throughout the Building including the removal of all interior building components and materials.

**Phase III – Deconstruction Phase:** Demolition of remaining building structure.

Please note that this HASP is only applicable to the Remediation Phase (R). A separate HASP has been issued for the Scaffolding Erection Operation (SEO), and another will be issued for the Deconstruction Phase.

All personnel assigned to this project will be required to review thoroughly the contents of the HASP prior to commencing Remediation activities. All personnel are required to strictly adhere to the policies and procedures listed herein. This HASP is for use only by DASNY/CUNY and their designated contractors, consultants, and approved Site visitors.

This plan meets the requirements of OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, and applicable subparts of OSHA 29 CFR 1926, 1910 and 10 CFR. Visitors will be required to review the health and safety plan and read and sign the visitor information sheet (Figure 1.1).

The Personal Protective Equipment (PPE) and additional safety and health procedures and equipment requirements presented in this HASP are deemed the minimally acceptable standard for working at this Site. Subcontractors can make individual decisions to upgrade the equipment requirements for each PPE level to ensure the hazards presented by a specific activity are controlled and worker exposure is minimized.

**Figure 1.1**

**VISITOR INFORMATION**

**NOTICE TO VISITOR:**

**ALL VISITORS MUST BE ESCORTED AT ALL TIMES WHILE ON THIS SITE**

**CAUTION: Chemical contamination may be present on this site.**

**CONTROLLED AREAS:**

**Do not enter areas with these signs unless you have an escort or the Contractor Safety Officer has given specific approval and you understand access limitations.**

**The Contractor Safety Officer will provide you with instructions.**

**You may be required to wear protective clothing in controlled areas.  
No smoking, eating, drinking or chewing in controlled areas.**

**NO EXCEPTIONS.**

Name \_\_\_\_\_

Date \_\_\_\_\_

## **2.0 SAFETY MANAGEMENT**

The following safety management structure will be utilized for the implementation, administration, and monitoring of the HASP.

### **2.1 CONTRACTOR SAFETY OFFICER (CSO)**

The CSO shall have on-site responsibility for the HASP. The CSO or designee shall monitor and maintain quality assurance of the HASP until completion of Remediation. All Subcontractors shall be required to assign a Safety Officer to administer the HASP during their work duties on Site. The CSO will oversee the Subcontractors Safety Officers administration of the HASP during Remediation.

Principal duties of the CSO include:

- Review project background data,
- Administer and enforce the HASP,
- Evaluate the adequacy of PPE to be used by Site personnel,
- Conduct required on-site training except tailgate safety meetings that will be conducted by the Field Team Leader or Work Area Supervisor,
- Conduct orientation of visitors on work Site conditions,
- Administer personnel air monitoring procedures,
- Notify the Environmental Consultant of any need to change or amend any aspect of the approved Site HASP.
- Coordinate the health and safety activities of all the Contractor and Subcontractor personnel to ensure the requirements of the HASP are followed.
- Communicate with all parties when changes occur on-site or when conditions impacting the site occur concerning the response actions to be taken.
- Communicate all hazardous materials/chemicals that may be encountered on Site during Remediation to all employees, Subcontractors and visitors. Additionally, CSO shall communicate the location of Material Safety Data Sheet (MSDS) for all hazardous materials/chemicals on Site.

The CSO or designee has the authority to stop work in the event conditions develop that pose a heightened risk to Site personnel or persons in the vicinity of the work area. Additionally, the CSO shall ensure that Subcontractors perform the following operations under the direct on-site supervision of OSHA Competent Persons:

- General Construction (29 CFR 1926.20)
- Unsanitary Conditions (29 CFR 1926.27)
- Rigging (29 CFR 1926.251)
- Scaffolding (29 CFR 1926.450)
- Ladders (29 CFR 1926.1053)
- Personal Fall Arrest Systems (29 CFR 1926.500 and .502)
- Ear Protection (29 CFR 1926.101)
- Cranes and Derricks (29 CFR 1926.550)
- Materials Hoists, Personnel Hoists and Elevators (29 CFR 1926.552)
- Demolition (29 CFR 1926.850)
- Welding/Cutting on surfaces covered by protective coatings (29 CFR 1926.354)

- Excavation (29 CFR 1926.650)
- Lead (29CFR 1926.62)
- Asbestos (29 CFR 1926.1101)
- Cadmium 1926.1127
- Powered Platforms for Building Maintenance, 29 CFR 1910.66
- Hazardous Waste Operations and Emergency Response, 29 CFR 1926.65
- Hazardous chemicals brought on-site and used in the Remediation: OSHA Hazard Communications Standard (29 CFR 1910.1200).

## 2.2 OWNER’S ENVIRONMENTAL CONSULTANT

The Owner’s Environmental Consultant shall provide a Certified Industrial Hygienist (CIH) and field industrial hygiene personnel during the project fieldwork. This work in no way relieves the Contractor or its Subcontractors of their responsibility to manage and update the site HASP, or to conduct personal sampling and testing required by the specification or by OSHA. The CIH shall be available to provide information regarding site conditions as determined by the investigations, and shall direct field industrial hygiene personnel responsible for the execution of the Environmental Community Air Monitoring Program (ECAMP) during the Remediation, and monitoring of the Remediation as required by NYS ICR 56. The CIH may review any health and safety activities at the site, review monitoring data generated during the site work, conduct walk-throughs and safety and health spot field inspections, and advise the Owner and Contractor of unacceptable conditions identified that may affect safety and health for personnel or the environment. The responsibilities of the Owner’s Environmental Consultant shall include monitoring for visible emissions as detailed in the ECAMP. None of the above activities relieves the Contractor from responsibility for Health & Safety management at the site.

## 2.3 SITE SECURITY

The following site control measures shall be implemented to protect the public and personnel working on-site:

- Fences, guardrails and access devices, including ladders, stairways, and walking surfaces shall be provided and maintained throughout the project activities in accordance with 29 CFR 1926.
- Barricades, warning signs, temporary lighting and other safety measures shall be provided, as required, to protect site personnel.
- Only authorized personnel who have been issued badges will be permitted on the Site in accordance with the requirements of this HASP. Visitors and other non-essential personnel may enter the work area only upon authorization by the Field Team Leader.
- All visitors to the Site shall report first to the Administrative trailer. Visitor access shall be allowed only with the prior consent of the Contractor CSO and the Contractor Site Manager.

No visitor (other than regulatory inspectors) shall enter a work area unescorted by a Subcontractor or Contractor representative. The presence of any regulatory agency on-site shall be reported immediately to the Contractor Site Manager.

### **3.0 PERSONNEL RESPONSIBILITIES**

The CSO will administer and supervise the HASP at the work-site level. He/she will monitor all operations and will be the primary on-site contact for health and safety issues, with full authority to stop operations if conditions are judged to be hazardous to on-site personnel or the public.

The CSO will brief all Site personnel on the contents of the HASP. Personnel will be required to review the HASP, and have the opportunity to ask questions about the planned work or hazards. The Field Team Leader will be the onsite Superintendent or Work Area Supervisor for the performance of Remediation. He/she will conduct tailgate safety meetings to familiarize the Site personnel with Site conditions, boundaries, and physical hazards. Site personnel will conduct their assigned tasks in accordance with the HASP at all times.

If at any time during the Remediation, site personnel observe unsafe conditions, faulty equipment or other conditions that could jeopardize personnel health and safety, they are required report their observations immediately to the CSO or their Field Team Leader.

The Remediation work area will be established at the Site and is defined in *Regulatory Submittal Part I(R) – Remediation Work Plan*. The work area will include decontamination facilities, equipment staging area, waste storage facility and asbestos waste container. The work area will remain fixed for the duration of the Remediation.

All personnel on site will comply with the following:

1. Participate in initial site orientation as described in Section 5.0, and daily safety meetings, and shall provide any required documentation, medical clearance, fit test, asbestos certification, etc. prior to starting work on the site. Documentation requirements are determined by activities to be performed.
2. Sign the HASP Acknowledgement Form and other required documents after orientation to indicate that they participated in orientation and understood the information presented in orientation.
3. Follow the designated safety and health procedures; be alert to the hazards associated with working on the site, and exercise reasonable caution at all times.
4. Direct any questions or concerns about this HASP to the CSO or their Field Team Leader.
5. Take all reasonable precautions to prevent injury to themselves and to their fellow employees, and remain alert to potentially harmful situations.
6. Obey all applicable laws and regulations relating to health and safety.
7. Ensure that Remediation activities do not impact the neighboring community.
8. Perform only those tasks that they have been trained to complete and can safely do so.
9. Notify their supervisor of any special medical conditions (i.e., allergies, contact lenses, diabetes) that may affect their ability to perform certain tasks.

10. Notify their supervisor of any prescription and/or non-prescription medication that they may be taking that might cause drowsiness, anxiety, or other unfavorable side affects.
11. Learn and comply with Site security requirements.
12. Comply with the Site's prohibition on drug and alcohol use, smoking, horseplay, and restricted eating/drinking areas.
13. Practice good housekeeping by keeping the work areas neat, clean and orderly.
14. Immediately report all injuries, incidents and near-misses to the designated supervisor.
15. Properly use PPE specified by this HASP.
16. Properly maintain their designated PPE per manufacturers' recommendations.
17. Comply with the HASP and all health and safety recommendations and precautions.
18. Notify their supervisor of any Site conditions or concerns which are not addressed by the protective measures specified in this HASP, or which are addressed but the employee does not understand the protective requirements specified herein.

## 4.0 HAZARD ASSESSMENT

The following represents potential hazards associated with this project.

### 4.1 CHEMICAL HAZARDS

#### Principal Contaminants (Known or Suspected) \*

##### Fibrous:

- Asbestos
- Man-made Vitreous Fibers

##### Metals:

- Antimony
- Barium
- Beryllium
- Cadmium
- Chromium (III)
- Copper
- Lead
- Manganese
- Mercury (Vapor & Particulate)
- Nickel
- Zinc

##### Organics:

- Dioxins/Furans
- PAHs
- PCBs

##### Particulate:

- Crystalline Silica

\* Contaminants suspected in WTC dust, termed “Contaminants of Potential Concern (CoPCs). WTC dust with assumed varying concentrations of CoPCs is present in and around the building.

These primary routes of entry to the body will be considered:

<u>Route</u>	<u>Entry Made Via</u>
Inhalation	> Airborne dust containing chemical contaminants
Ingestion	> Airborne dust containing chemical contaminants. > Improper or poor personal hygiene practices.
Eye and Skin	> Direct contact with contaminants. > Airborne dust containing chemical contaminants. > Improper or poor personal hygiene practices.

#### 4.1.1 Overt Chemical Exposure

Please note that there are no chemicals present that could be disturbed during Remediation operations. No hazardous chemicals will be utilized to perform the Remediation. In the case that unforeseen chemicals are encountered in the Remediation work area, the following response procedures will be implemented:

##### SKIN CONTACT:

Use copious amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention if symptoms warrant. Eye wash shall be provided on-site at the work zone and Clean Zone as appropriate. If affected, eyes should be continuously flushed for a minimum of 15 minutes.

##### INHALATION:

Move to fresh air and transport to hospital or summon EMS to the Site by calling 911 if symptoms warrant. Decontaminate if possible.

##### INGESTION:

Transport to emergency medical facility or summon EMS to the Site by calling 911 if symptoms warrant. Decontaminate if possible.

##### PUNCTURE WOUND OR LACERATIONS:

Transport to emergency medical facility or summon EMS to the Site by calling 911 if symptoms warrant. Field Team Leader will provide Material Safety Data Sheets (MSDS) to medical personnel as requested. Decontaminate if possible.

## 4.2 PHYSICAL HAZARDS

Before Remediation activities begin, the CSO will conduct a site reconnaissance to identify any real or potential hazards created from Site activities. Physical hazards associated with damage to the building resulting from the collapse of the WTC and hazards inherent to construction activities and power-operated equipment may exist ( e.g., excessive heat or cold; excessive noise; inclement, weather; manual lifting/handling of heavy objects; heavy equipment operation; poor housekeeping; rough terrain; compromised structural integrity; traffic; cranes, hoists and other lifting equipment, aerial lifts and manlifts; working at elevation; use of scaffolding; hazardous materials use; potential utility and electrical sources; use of hand and power tools; slips and falls; etc.).

### 4.2.1 Heat Stress

Field activities in hot weather create a potential for heat stress. The warning symptoms of heat stress include fatigue; loss of strength; reduced accuracy, comprehension and retention; and reduced alertness and mental capacity. To prevent heat stress, personnel shall receive adequate water supplies and/or electrolyte replacement fluids, and maintain scheduled work/rest periods.

The Field Team Leader or designee shall continuously visually monitor personnel to note for signs of heat stress. In addition, field personnel will be instructed to observe for symptoms of heat stress. One or more of the following control measures can be used to help control heat stress:

1. Provision of adequate liquids to replace lost body fluids. Employees must replace body fluids lost from sweating. Employees are encouraged to drink more than the amount required to satisfy thirst, 12 to 16 ounces every half-hour is recommended. Thirst satisfaction is not an accurate indicator of adequate salt and fluid replacement.
2. Establishment of a work regimen that will provide adequate rest periods for cooling down.
3. This may require additional shifts of workers.
4. Breaks should be taken in a cool and shaded rest area.
5. Employees shall remove impermeable protective garments during rest periods.
6. Employees shall not be assigned other tasks during rest periods.

All employees shall be informed of the importance of adequate rest, acclimation, and proper diet in the prevention of heat stress. If an employee exhibits symptoms of heat stress, emergency medical services should be summoned to the Site or the employee should be transported to the hospital identified below in this HASP. The CSO shall make a determination to cancel a shift if the external weather conditions present a heat stress hazard.

#### 4.2.2 Cold Stress

Persons working in temperatures of 40 degrees and below may suffer from cold exposure. During prolonged periods with inadequate clothing, effects of cold exposure may even occur at temperatures well above freezing. Cold exposure may cause severe injury by freezing exposed body surfaces (frostbite) or result in profound generalized cooling, possibly causing death. Areas of the body which have high surface area-to-volume ratios such as fingers, toes and ears are the most susceptible to frostbite.

Two factors influence the development of a cold injury: ambient temperature and the velocity of the wind. Wind chill is used to describe the chilling effect of moving air in combination with low temperature. For instance, 10° F with a wind of 15 miles per hour (mph) is equivalent in chilling effect to still air at -18°F.

As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 mph increases to 10 mph. Additionally, water conducts heat 240 times faster than air. Thus, the body cools suddenly when external chemical-protective equipment is removed if the clothing underneath is perspiration-soaked.

#### 4.2.3 Electrical Hazards

Overhead power lines, downed electrical wires, buried cables and improper use of electrical extension cords can pose a danger of shock or electrocution. All Site personnel should immediately report to the Field Team Leader any condition that could result in a potential electrical hazard. Please note that there are no overhead power lines in the vicinity of the Remediation work area.

The Field Team Leader and/or CSO will notify Site personnel during the safety meetings of the locations of known underground cables, utilities and active electrical equipment such as temporary electric, electrical risers, basement electrical rooms or vaults, elevator equipment or other areas not de-energized.

#### 4.2.4 Noise Hazards

Operation of equipment may present a noise hazard to workers. Site personnel will utilize hearing protection when noise levels are determined to be in excess of 29 CFR 1910.95 requirements. Noise monitoring will be performed to determine noise levels. It will be necessary to monitor decibels at the shredder using a meter. Disposable ear plugs or ear muffs will be utilized dependant upon conditions

#### 4.2.5 Adverse Weather Conditions

In the event of adverse weather conditions, the CSO and/or Field Team Leader will determine if work can continue without endangering the health and safety of personnel involved in Remediation procedures. Some items to be considered before determining if work should continue are:

- Potential for heat stress and heat-related injuries.
- Potential for cold stress and cold-related injuries.
- Heavy rain, sleet, hail or snow.
- Flooding, icing or high accumulation of snow.
- Limited visibility.
- Potential for electrical storms or high winds.

#### 4.2.6 Biological Hazards

It is not anticipated that Biological Hazards will be encountered during the Remediation. Potential biological concerns are: insects, rodents, and mold/fungi. In the event that any of these concerns are encountered, they will be dealt with as follows:

##### *4.2.6.1 Insects*

The presence of insects shall be addressed by personnel as the insects are encountered. When a stinging or poisonous insect, such as a bee or spider, is identified, personnel should exercise caution to avoid being bitten or stung for example by using tools to move material. In the event that a person is stung or bitten, the incident shall be reported to the Site Manager and CSO. The Site Manager and/or CSO shall initiate actions to manage and address the bite or sting. Personnel who are allergic to insect bites and stings should identify their allergy to their employer. Extermination services will be utilized as necessary.

##### *4.2.6.2 Rodents*

In the event that rodents or animal pests are identified or observed on-site, personnel should report the incident to the Contractor CSO. The Contractor shall be responsible for evaluating the condition and implementing steps to eliminate rodents on the site. Extermination services will be utilized as necessary.

#### *4.2.6.3 Mold/Fungi*

Interior investigations have indicated that there is no mold/fungi contamination present in the Remediation work area. Should mold/fungi be determined to be present, the cleaning of impacted materials shall be addressed during the focused cleaning procedures outlined in the Part I(R) Remediation Work Plan. Removal and handling measures shall be consistent with the NYC Department of Health.

### 4.3 MEDICAL PROGRAM

Personnel shall be required to receive medical evaluation in accordance with 29 CFR 1910.120. Personnel who receive a medical evaluation will be notified by the Contractor as to the outcome of their evaluation. This will be in the form of a confidential report addressed to the individual and will contain a description of the clinical findings. In addition, it will indicate any areas of concern which would justify further medical consultation by the individual's personal physician. In the event that the areas of concern are of a severe nature, a follow-up notification will be made to the individual by the medical consultant to answer any questions the employee may have.

#### 4.3.1 Personnel Monitoring

Each Subcontractor and trade employer shall perform personnel air monitoring as described in Section 7.2. The determination of the need for personnel monitoring may be reviewed and amended based on area monitoring and review and recommendations from the CSO. If requested, project personnel shall participate in a personal exposure monitoring program administered by the Owner's Environmental Consultant. Monitoring by the Owner's Environmental Consultant in no way relieves the Contractor from its responsibilities under OSHA and/or the Specifications. The Contractor and Subcontractors shall maintain records of all chemical exposures incurred by their personnel. These records will be maintained in an up-to-date manner to comply with the requirements of OSHA. The CSO shall review the results of personal exposure monitoring to determine compliance with exposure limit requirements.

#### 4.3.2 Medical Response Equipment

The following medical response equipment shall be available on-site for the duration of the site activities.

- Eyewash Stations: The location of emergency eyewash stations shall be determined by the CSO. Each station shall provide a continuous spray of a rate of 0.4 gallons per minute for at least 15 minutes. This station shall be inspected daily to ensure proper operation. Upon determination of eye wash station locations, a plan will be submitted showing such, and made part of this HASP.

- First Aid Kits: First aid kits will be in 1) Remediation decontamination units, 2) administrative trailer located on the northwest side of the Site and 3) each Remediation work area and also at the first floor Project Command Center. As a general guideline, each Subcontractor shall provide, at minimum, one first aid kit for every 20 employees and shall station it within the existing administrative trailer.

The locations of these equipment stations shall be determined by the CSO at the site and incorporated into this HASP upon initiation of each task. The CSO shall maintain responsibility for the incorporation of this information into this HASP.

The locations of eyewashes, first aid kits, and the procedures for using and reporting an incident shall be presented during the initial on-site training. The Contractor CSO shall make all personnel aware of the locations and use of this equipment prior to engaging in site work activities.

Refer to Section 17.6 for the Emergency Plan.

#### 4.4 ACCIDENT and INCIDENT REPORTING

All accidents, injuries, or incidents will be reported to the CSO. This accident/incident will be reported as soon as possible to the employee's supervisor. An Accident/Incident Form will be completed by the Field Team Leader, and a copy will be forwarded to the Project Manager. A copy of the form is shown as Figure 4.1.

**FIGURE 4.1 (PAGE 1 OF 3)  
 ACCIDENT/EXPOSURE INVESTIGATION REPORT**

COMPANY		DATE
INVESTIGATION TEAM		
EMPLOYEE'S NAME & ID		
SEX	AGE	JOB DESCRIPTION
DEPARTMENT & LOCATION		
ACCIDENT DATE & TIME		
DATE & TIME ACCIDENT REPORTED TO SUPERVISOR		
NATURE OF INCIDENT		
NATURE OF INJURY		
REFERRED TO MEDICAL FACILITY/DOCTOR <input type="checkbox"/> YES <input type="checkbox"/> NO		
EMPLOYEE RETURNED TO WORK <input type="checkbox"/> YES DATE/TIME _____ <input type="checkbox"/> NO		
<input type="checkbox"/> INJURED EMPLOYEE INTERVIEW/STATEMENT - ATTACHED		
WITNESSES		
<input type="checkbox"/> WITNESSES INTERVIEWS/STATEMENTS ATTACHED		
<input type="checkbox"/> PHOTOGRAPHS OF SITE - ATTACHED		
<input type="checkbox"/> DIAGRAMS OF SITE - ATTACHED		
EQUIPMENT RECORDS - ATTACHED - REVIEWED	<input type="checkbox"/> YES	<input type="checkbox"/> NO
ACCIDENT/EXPOSURE INCIDENT DESCRIPTION		

**FIGURE 4.1 (PAGE 2 OF 3)  
 ACCIDENT/EXPOSURE INVESTIGATION REPORT**

<b>ACCIDENT DESCRIPTION</b>			
<b>DATE &amp; TIME</b>		<b>LOCATION</b>	
<b>EMPLOYEES INVOLVED</b>			
<b>PREVENTIVE ACTION RECOMMENDATIONS</b>			
<b>CORRECTIVE ACTIONS COMPLETED</b>		<b>MANAGER RESPONSIBLE</b>	<b>DATE COMPLETED</b>
<b>EMPLOYEE LOST TIME - TEMPORARY HELP - CLEANUP - REPAIR - DISCUSSION</b>			
<b>ACCIDENT COST ANALYSIS</b>	<b>INVESTIGATION</b>	<b>COMPLIANCE</b>	<b>TOTAL COST</b>
<b>MEDICAL</b>			
<b>PRODUCTION LOSS</b>			
<b>REPORT PREPARED BY</b>		<b>DATE COMPLETED</b>	
<b>SAFETY COMMITTEE REVIEW</b>	<input type="checkbox"/> <b>YES</b>	<input type="checkbox"/> <b>NO</b>	
<b>CORRECTIVE ACTION</b>		<b>DATE STARTED</b>	
<b>SAFETY COMMUNICATION NOTICE PREPARED</b>	<b>DATE</b>		
<b>SAFETY DIRECTOR SIGNATURE</b>			



## 5.0 TRAINING & ORIENTATION

All Contractor Site personnel shall be trained and certified as applicable in accordance with 29 CFR 1910.120.

### 5.1 PROJECT AND SITE-SPECIFIC ORIENTATION

Prior to Remediation commencement, all assigned personnel shall receive an initial project and site-specific training session. The CSO shall ensure that all site employees receive this hazard awareness training.

This orientation shall include, but not be limited to, the following areas:

- Review of the Health and Safety Plan;
- Review of applicable chemical and physical hazards present at the work site and their associated health risks;
- Location of the MSDS files.
- Proper use of all tools and equipment to complete the scope of work activities;
- PPE levels to be used by Site personnel;
- Site security control;
- Emergency response and evacuation procedures;
- Project communication;
- Required decontamination procedures;
- Waste disposal procedures;
- Prohibited on-site activities;
- Work practices to prevent the spread of contamination;
- Work practices to reduce or prevent exposure to hazardous chemicals; and
- Site alarms, emergency response procedures, and locations of emergency staging, evacuation and lay down areas.

NOTE ON CoPC/Asbestos: Because of the potential presence of WTC dust with assumed varying concentrations of CoPCs, the Contractor shall ensure that all site employees receive the required training concerning asbestos as well as all applicable Hazard Communication training. Personnel who have the potential to disturb, handle or abate Asbestos-Containing Building Materials (ACBM) shall have completed appropriate training and have appropriate current certifications as required according to New York State ICR 56 regulations.

Hazardous Waste Operations and Emergency Response (HAZWOPER) Training Requirement: There is no potential exposure to hazardous waste and none shall be generated by Remediation procedures. It will not be necessary for personnel performing the Remediation to have HAZWOPER training. Awareness training will be provided for CoPC's and Universal Waste.

### 5.2 VISITOR ORIENTATION

The Owner, their authorized representative(s) and any representative of a regulatory or other agency having jurisdiction over the project shall be considered an Authorized Visitor.

During the Remediation all visitors entering restricted work areas must provide proof of an up-to-date fit test, medical clearance and completion of asbestos certifications required for the employee's scope of work. In addition each visitor will receive site-specific training by the CSO that includes:

- Location and description of potential chemical and physical hazards and risks,
- Required PPE,
- Areas of the site that may be closed to visitors,
- The site evacuation and emergency procedures, and
- Other topics as deemed appropriate by the Contractor CSO.

All non-essential personnel and visitors who plan to enter the Interior Containment will be briefed on the HASP requirements and 10 CFR 1912 requirements prior to entry with a trained Site escort.

### 5.3 SAFETY TAILGATE MEETINGS

Before the start of the work week, on Monday morning, the Field Team Leader will assemble the Site personnel for a brief safety meeting. The purpose of these meetings will be to discuss project status, problem areas, conditions, safety concerns, PPE levels and to reiterate HASP requirements. The Field Team Leader will complete a Safety Meeting Report (Figure 5.1) to indicate the contents of the meeting and the attendees.

Topics to be addressed include:

- Use and maintenance of PPE;
- Evacuation routes;
- Warning signals;
- Maintaining line-of-sight and communications;
- Rehearsal of scheduled activities;
- Hospital routes;
- Locations of safety equipment;
- Fall protection;
- Previous violations of the safety plan and procedures or changes to the program to correct the violation;
- Anticipated hazards for the day's work activities;
- Any changes to the requirements for levels of PPE;
- The locations of work zones; and
- General site conditions.

### 5.4 FIRST AID

At least one (1) individual, trained and qualified to administer first aid and CPR in accordance with American Red Cross requirements, will be present at the Site.

### 5.5 SPECIAL WORK CONDITIONS

Site workers in special work conditions such as confined space, hot work, trenching, or other physical hazards, will not be required for the performance of Remediation procedures.

## 5.6 EMERGENCY RESPONSE TRAINING

Emergency response training shall be provided to all on-site-personnel as part of the site-specific safety and health awareness training. The emergency response training shall be conducted by each Subcontractor's Safety Officer for its respective employees.

At a minimum, the topics of this training shall include the following:

- Location of all site emergency equipment
- Response procedures for fires
- Response procedures for injuries and accidents
- On-site/off-site response resources
- Fall protection
- Emergency site operations shut down procedures
- On-site "Chain of Command"
- Designated on-site emergency meeting location
- Recognition of evacuation signals and alarms

**SAFETY MEETING REPORT (PAGE 1 OF 2) (FIGURE 5.1)**

DATE	DIVISION	DEPARTMENT	DURATION OF MEETING	
			FROM <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.	TO: <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
NUMBER PRESENT	NUMBER ABSENT	MEETING CONDUCTED BY	DID MEETING INCLUDE REQUIRED TRAINING? <input type="checkbox"/> YES (DESCRIBE BELOW) <input type="checkbox"/> NO	
SUPERVISOR'S PRESENTATION	DISCUSSION OF SAFE/ UNSAFE WORK PRACTICES, MATERIALS, PRECAUTIONS, HAZARDS, EQUIPMENT FAMILIARIZATION, ETC.			
EMPLOYEE FEEDBACK	COMMENTS, QUESTIONS, COMPLAINTS, ETC.			
SUPERVISOR'S CORRECTIVE ACTION PLAN	KNOWN PLANS FOR CORRECTION, PARTS ON ORDER, ITEMS TO BE DISCUSSED WITH DEPART. HEAD, AND CORRECTION OF ITEMS PREVIOUSLY SUBMITTED			
DEPARTMENT HEAD COMMENTS	RESOLUTION OF QUESTIONS, ITEMS OR ISSUES RAISED IN MEETING OR WITH SUPERVISOR			
SUPERVISOR		DEPARTMENT HEAD		
FACILITY MANAGER		HAVE EMPLOYEES ATTENDING SIGN ON REVERSE SIDE. FORWARD A COPY TO THE LOCAL SAFETY DEPARTMENT		



## 6.0 COMMUNICATIONS

### 6.1 GENERAL COMMUNICATIONS

The Field Team Leader will have available at the Site the means for telephone communications, or an equivalent means of communication, for summoning emergency assistance from the fire/ambulance and police departments in the event they are required. The telephone will also act as a direct link to technical personnel for information pertaining to all phases of the project.

### 6.2 RADIO/TELEPHONES

Short-range walkie-talkies or cellular telephones will be made available to PAL Project Manager, Site Superintendent, Work Area Supervisors and Site Safety Personnel working at the Site during the Remediation.

### 6.3 EMERGENCY WARNING

In the event of an emergency condition, the CSO or Field Team Leader will notify project personnel verbally if all are within immediate hearing or by short-range walkie-talkies or cellular telephones if they are out of range. The CSO or Field Team Leader will also notify any visitors present within the area. Site personnel will immediately proceed to the designated assembly area. Personnel will remain in the designated area until further instructions are received by the CSO. A warning signal of three (3) consecutive air horn alerts will be sent if evacuation is required from the Remediation work area.

All communication equipment will be tested at the beginning of each day to verify operational integrity.

### 6.4 HAND SIGNALS

Hand signals will be used by field teams in conjunction with the buddy system. Hand signals shall be familiar to the entire field team before operations commence and should be reviewed during site-specific training and orientation.

<u>Signal</u>	<u>Meaning</u>
Hand gripping throat	Out of air; can't breathe
Grip partner's wrist	Leave area immediately; no debate
Hands on top of head	Need assistance
Thumbs up	OK; I'm all right; I understand
Thumbs down	No; negative

## **7.0 PERSONNEL EXPOSURE AND AIR QUALITY MONITORING**

### **7.1 AIR QUALITY (DUST)**

Due to the nature of the principal contaminants associated with the project, dust suppression will be important as a means of minimizing exposure levels and off-site migration of contaminants. The Field Team Leader will routinely monitor the project area. The OSHA personal exposure limit (PEL) for nuisance dust is 15 mg/m<sup>3</sup>. As outlined in the Part I(R) Remediation Work Plan, wet methods shall be used as a means of dust control during all Remediation activities.

### **7.2 AIRBORNE CHEMICAL MONITORING**

Monitoring for airborne chemical exposure is as important as other occupational safety precautions; this requires the following elements:

- Air sampling for particulates and specified CoPCs,
- Recordkeeping regarding personnel work locations and time in location, and
- Respiratory protective equipment records for devices used by workers in potential airborne contaminant areas.

By closely monitoring these three elements, a continuous record of personnel exposure to airborne chemical contaminants is maintained.

General methodologies for sample collection and analysis include:

#### **7.2.1 PERSONAL AIR MONITORING**

Each Subcontractor and trade employer shall evaluate the need to perform personnel air sampling for the contaminants during Remediation activities. A Negative Exposure Assessment will be conducted to verify the need for personnel air monitoring.

Personal sampling shall be conducted for ACM related activities

The results of personnel monitoring conducted will be reviewed on a daily basis by the Subcontractor Safety Officer to determine if current levels of respiratory protection are adequate.

The subcontractor safety officer shall provide written documentation of this review to the CSO, and the subcontractor must immediately report any results that trigger PPE upgrades.

Additional evaluation of samples shall be performed when determined necessary based upon elevated results.

### **7.3 ACTION LEVELS**

#### **7.3.1 Chemical Action Levels**

Please note that Remediation activities are not anticipated to generate any airborne chemical hazards. As a precautionary measure, the HASP addresses Chemical Action Levels and procedures necessary should they be exceeded.

The following table lists the OSHA PEL (Permissible Exposure Levels) and Action Level by contaminant:

Figure 7-1

Contaminants	OSHA PEL	Action Level (Half value of OSHA PEL)	10 X OSHA PEL (Protection factor for Half-face APR)	100 X OSHA PEL (Protection Factor for Full-face PAPR)
Asbestos	0.1 f/cc	0.05 f/cc	1 f/cc	10 f/cc
Antimony	0.5 mg/m <sup>3</sup>	0.25 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>
Barium	0.5 mg/m <sup>3</sup>	0.25 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>
Beryllium	0.002 mg/m <sup>3</sup>	0.001 mg/m <sup>3</sup>	0.02 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>
Cadmium	0.005 mg/m <sup>3</sup>	0.0025 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Chromium (III)	0.5 mg/m <sup>3</sup>	0.25 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>
Copper	1 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	100 mg/m <sup>3</sup>
Lead	0.05 mg/m <sup>3</sup>	0.025 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Manganese	5 mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	500 mg/m <sup>3</sup>
Mercury	0.1 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Nickel	1 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	100 mg/m <sup>3</sup>
Zinc	5 mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	500 mg/m <sup>3</sup>

Personnel shall not be exposed to airborne chemical contaminants such that their short term or time-weighted average exposure exceeds OSHA “Permissible Exposure Levels” or ACGIH (American Conference of Governmental Industrial Hygienists) Threshold Limit Values” for the chemicals of concern. To avoid the need for upgrade of personal protection equipment due to airborne contamination, engineering controls such as the use of water to minimize dust levels will be implemented as necessary during abatement activities.

The required level of protection may be modified based on airborne monitoring. All assessments shall incorporate industrial hygiene principles. Engineering controls shall be used prior to assignment of respiratory protective equipment.

Signs shall be posted by either PAL or the Environmental Consultant at entrances to areas where airborne chemical contaminants levels exceed, or have the potential to exceed, 25% of the applicable exposure limit.

## **8.0 ENGINEERING AND ADMINISTRATIVE CONTROLS**

### **8.1 ENGINEERING CONTROLS**

The Contractor shall be responsible for providing and implementing Engineering Controls as a primary means of ensuring worker health and safety, and shall provide the following minimum controls. Any Subcontractors with a potential exposure to regulated materials will conform to the same criteria as the Contractor as described below:

- HEPA-filtered air filtration equipment (micro traps) to reduce area dust levels;
- HEPA-filtered Vacuum cleaners;
- Barricades, railings or fall arrest systems to prevent employee exposure to fall hazards or moving equipment (29 CFR 1926); and
- Other task-specific engineering controls as recommended by OSHA guidelines or as recommended by the Contractor CSO or Environmental Consultant CIH.

### **8.2 ADMINISTRATIVE CONTROLS**

Each Subcontractor, as overseen by the CSO, shall be responsible for the provision and maintenance of the administrative documentation as a secondary means of ensuring worker health and safety. Please note that all Subcontractors entering the site will adopt this HASP to their work and conform to its rules.

During Remediation, only employees of the Contractor will be permitted to perform work with regulated materials. Should it become necessary for Subcontractors to perform work with regulated materials, the following administrative controls shall be implemented by each required Subcontractor:

- Ensure all employees are enrolled in a medical monitoring program as required by OSHA;
- Ensure all employees who require respiratory protection have current fit-test and training certifications;
- Implement work practices and engineering controls that avoid generating dust whenever possible;
- Require all employees to follow decontamination procedures, including washing hands, face, hair and neck upon leaving the work area and before eating, drinking or smoking;
- Require that the Buddy System be utilized when employees are working within the Remediation work area

### **8.3 WORK ZONES**

- Clean Zone

This area includes the ground outside of the building and any temporary structures/office spaces. The Clean Zone starts at the project/property fence line and extends to the Building itself. All personnel shall wear Level D PPE while in the Clean Zone. NOTE: Within this area restricted access and/or additional PPE may be required depending on the progression of Remediation procedures, for example: where material handling is performed, where hoisting equipment is located or where equipment is staged.

- Decontamination Unit

The Decontamination Unit includes an area to drop off equipment, plastic bags to dispose of protective clothing, adequate soap and water for personnel and equipment decontamination and a means of capturing wash water generated during decontamination. For the Remediation, this shall be the worker and waste decontamination facilities. To view the decontamination facilities locations, please refer to Part I (R) Logistics Plan.

The Decontamination Unit shall exist until the completion of Remediation activities. To ensure that they are not exposed to contaminants and to minimize the potential for contamination of personnel and the spread of contamination outside the Interior Containment, personnel shall be aware of and follow all site control procedures with respect to entering and exiting the Decontamination Unit. These measures include requiring that personnel follow the proper procedures for donning and removal of PPE and washing in the Decontamination Unit. The measures also address the decontamination procedures for use when moving equipment between zones. The Decontamination Unit shall also have a first-aid kit, fire blanket and fire extinguisher (20-lb ABC type) with current inspection tag.

- Interior Containment

This area extends from the Decontamination Unit and includes all areas on each floor as described in Part I (R). This definition of the Interior Containment shall remain effective until Remediation activity on each floor is completed. No employee shall enter the Interior Containment without the required training and PPE. No employee shall eat, drink, chew gum, apply cosmetics, smoke or use other tobacco products while in the Interior Containment. The employee must first exit the Interior Containment and follow decontamination procedures (Section 2.8.2.1) in the Decontamination Unit before engaging in any of the above actions. In the event that an employee in the Interior Containment requires a replacement or his/her protective suit or respirator filters, the employee shall exit the Interior Containment and utilize proper decontamination procedures in the Decontamination Unit, replace or repair the defective PPE, then reenter the Interior Containment.

## **9.0 PERSONAL PROTECTIVE EQUIPMENT**

Determinations of PPE requirements for Remediation activities are based on PAL's Respiratory Protection Program (RPP) and upon available historical site characterization data and knowledge of the anticipated hazards. Changes in levels of PPE and changes in the PPE requirements for specific areas may be made based following evaluation of the results of monitoring, visual observations and specific conditions associated with Remediation activities.

All PPE shall be provided, used, and maintained in a sanitary and reliable condition per OSHA 29 CFR 1910.132-138 and 1926.28 (Personal Protective Equipment). All selected PPE shall be of construction, design, and material that properly and appropriately fits the employee to protect employees against known or anticipated hazards.

On entering the site and at all locations other than in designated safe locations such as the first floor Command Center, all personnel shall have with them and/or wear Level D PPE. Each employee will wear a hard hat and safety glasses or other eye protection at all times while onsite, except for designated "safe" areas.

All abatement activities in designated Interior Containments can be conducted in Level C personal protective equipment (PPE), based on the EPA concern for potential exposure risks from WTC dust. Level D will be used when anywhere on the project Site that is outside of the Interior Containment.

NOTE: Should air sampling data generated during abatement demonstrate that the level of asbestos and CoPCs are consistently below their action level, respiratory protection may be downgraded.

**Level D** personal protective clothing and equipment includes:

- Hard hat
- Safety shoes/boots
- Work gloves
- Safety glasses\* (ANSI Approved)
- Dust mask (optional)
- Hearing Protection (as necessary)

**Level C** personal protective clothing and equipment includes:

- Full-face powered air-purifying respirator (PAPR) with HEPA filter approved by the National Institute for Occupational Safety and Health (NIOSH)/Mine Safety and Health Administration (MSHA). Half-face air-purifying respirators (APR) may be used during work preparation activities or removals of non-friable materials.
- Gloves - nitrile inner; chemical resistant outer (nitrile or neoprene)
- ANSI-approved safety boots
- Safety glasses\* (ANSI Approved)
- ANSI-approved Hard hat with bill facing forward
- Tyvek coveralls with head cover (Two layers Tyvek or equivalent)
- Water-resistant overboots which are treaded to provide slip protection
- Hearing protection (as necessary)

**Level B** personal protective clothing and equipment includes:

- Self-Contained Breathing Apparatus (SCBA) or combination airline/SCBA approved by the National Institute for Occupational Safety and Health (NIOSH)/Mine Safety and Health Administration (MSHA).
- Gloves - nitrile inner; chemical resistant outer (nitrile or neoprene)
- ANSI-approved safety boots
- Safety glasses\* (ANSI Approved)
- ANSI-approved Hard hat with bill facing forward
- Tyvek coveralls with head cover (Two layers Tyvek or equivalent)
- Water-resistant overboots which are treaded to provide slip protection
- Hearing protection (as necessary)

**Level A PPE** Use of this type of PPE is not anticipated for any activities to take place at the Site. Should work conditions and personnel sampling exceed action levels for a PPE upgrade to Level A, operations shall cease in that area until site conditions can be re-evaluated by the Contractor and the Environmental Consultant's CIH.

\*Eye protection includes safety glasses, safety goggles, welding goggles, welding hoods, or full-face respirators. Prescription or non-prescription eyeglasses and sunglasses are not approved for eye protection. All acceptable eye protection must include side shields and must be ANSI-approved.

## **10.0 CONTAMINATION REDUCTION PROCEDURES**

When exiting the Interior Containment, personnel shall be aware of and follow the procedures used to decontaminate personnel, equipment, and sampling containers. Subcontractors shall ensure that their employees follow proper decontamination and waste disposal procedures. Disposal of PPE and other items shall be performed with material placed in appropriately sized and labeled containers. Specific decontamination procedures are presented in the following subsections. All decontamination procedures shall be in accordance with the Entry/Exit Procedures of NYS Industrial Code Rule 56.

### **10.1 EQUIPMENT**

Since equipment decontamination is difficult, unnecessary equipment shall not be brought into the controlled areas. All materials used in the Interior Containment shall be properly HEPA vacuumed and wet-wiped before leaving the decontamination zone.

### **10.2 PERSONNEL**

Personnel exiting Remediation work areas shall follow proper decontamination procedures as outlined below.

- All employees shall remove all gross contamination and debris from disposable protective clothing and equipment by vacuuming prior to leaving the Interior Containment.
- Upon entering the Decontamination Unit, each employee shall remove the first layer of protective clothing and place it in the appropriate container. If the employee performs duties and becomes “grossly contaminated”, the decontamination procedure will include a soapy wash and a tap water rinse of the outer suit, gloves and overboots prior to removal of the outer layer.
- He/she shall then move into decon area, the employee removes the Tyvek and gloves and places into the appropriate waste container. Personnel shall then proceed to a washing facility to take full showers.
- The employee shall dispose of all protective clothing upon exiting the decontamination unit; all half-face APR respirator cartridges, if used, shall be changed out, as needed, but on a daily basis at a minimum. Full-face PAPR cartridges may be utilized more than one day if functioning as designed and sealed and decontaminated after each use.

If additional decontamination steps are necessary, these steps shall be performed and documented by the CSO.

Respirator Maintenance Procedure:

1. All respirators will be cleaned, sanitized, inspected, assembled, and maintained ready for use on a daily basis.
2. Each respirator will be stored in a clean and sanitary container.
3. Prior to use, the wearer will inspect the respirator, including the valves, valve covers, nosepiece, straps, eyepiece (for full face respirators), face piece and its snaps, cylinders, and canisters to insure that the respirator can be worn.

4. Each employee will be responsible for cleaning, inspecting, maintaining, sanitizing, and storage of his/her respirator equipment.
5. If a respirator becomes chemically contaminated or malfunctions, the respirator will be replaced by the employer with a clean and sanitized respirator, and the contaminated/defective respirator shall be decontaminated and repaired before reuse, or tagged “out of service” and disposed of.
6. The respirator wearer shall inspect the replacement respirator for defective parts and leaks and will be fit tested if the replacement respirator is of a different make, model or size than the original.

### 10.3 CONTAMINATION PREVENTION

Work practices that minimize the spread of contamination will reduce worker exposure and help ensure valid sample results by precluding cross-contamination. Procedures for contamination avoidance include the following:

- Know the limitations of all PPE being used;
- Avoiding walking through areas of obvious or known contamination;
- Refrain from handling or touching contaminated materials directly;
- Do not sit or lean on potentially contaminated surfaces;
- Ensure PPE has no cuts or tears prior to donning;
- Fasten all closures on suits, covering with tape if necessary;
- Take steps to protect against any skin injuries;
- Stay upwind of airborne contaminants; and
- When working in contaminated areas, refraining from eating, chewing gum, smoking, or engaging in any activity from which contaminated materials may be ingested.

### 10.4 DISPOSAL PROCEDURES

All discarded materials, waste materials, or other field equipment and supplies should be handled in such a way as to prevent the spread of contamination, creating a sanitary hazard, or causing litter to be left on-site. All potentially contaminated waste materials (e.g., clothing, gloves) shall be placed in appropriately sized and labeled containers. Appropriate labels shall be affixed to all containers.

## **11.0 GENERAL WORK PRECAUTIONS**

### **11.1 GENERAL WORK PRECAUTIONS**

The following general work precautions apply to all Site personnel involved in Remediation:

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in the work area.
- Hands and face must be thoroughly washed upon leaving the work area. Wash water will be provided at the Site for this purpose.
- Whenever levels of chemical contaminants warrant, the entire body should be thoroughly washed, as soon as possible, after the protective coveralls and other clothing are removed as part of the decontamination process.
- No facial hair that interferes with a satisfactory fit of the mask-to-face-seal is allowed on personnel required to wear respirators.
- Contact with contaminated or suspected contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, leachate, discolored surfaces, kneel on ground, lean, sit, or place equipment on drums, containers, or the ground.
- Medicine, drugs and alcohol may interfere with or impair judgment and reaction times. Therefore, usage of prescribed drugs must be specifically approved by a qualified physician and made known to the CSO prior to an individuals' presence on the work-site.
- Alcoholic beverage intake is strictly prohibited at the Site and prior to work.
- All personnel must be familiar with standard operating procedures and any additional instructions and information contained in the HASP.
- All personnel must adhere to the requirements of the HASP.
- Contact lenses are not permitted when respiratory protection is required or where the possibility of a splash exists.
- Personnel must be cognizant of symptoms for chemical exposure onsite, for heat stress and cold stress, and knowledgeable regarding emergency measures contained in the Emergency Plan.
- Respirators shall be cleaned and disinfected after each day's use or more often, if necessary.
- Prior to donning, respirators shall be inspected for worn or deteriorated parts. Emergency respirators or self-contained devices will be inspected at least once a month and after each use.
- Each employee shall be familiar with the project's Respiratory Protection Program.

### **11.2 OPERATIONAL PRECAUTIONS**

The following operational precautions must be observed at all times:

- All Site personnel shall be adequately trained and thoroughly briefed on anticipated hazards, equipment to be worn, safety practices to be followed, emergency procedures, and communications.
- All Site personnel shall use the buddy system when wearing respiratory protective equipment.

- During continual operations, on-site workers act as a safety backup to each other. Contractor personnel not on site at the time, Consultant and Subcontractor personnel provide emergency assistance if necessary. If the situation requires, emergency services should be summoned to the site by calling 911.
- Personnel should practice any unfamiliar operations prior to undertaking the actual procedure.
- Entrance and exit locations shall be designated and emergency escape routes delineated.
- Warning signals for Site evacuation must be established. During Remediation, warning signal for evacuation shall be three (3) successive air horn alerts.
- Personnel and equipment in the contaminated work area should be minimized, consistent with effective Site operations.
- Work areas for various operational activities shall be established.
- Procedures for leaving a contaminated area shall be planned and implemented prior to going on-site. Work areas and decontamination procedures shall be established based on expected Site conditions.
- Inspection of Site operations will be conducted on a daily basis by the CSO during Remediation to ensure compliance with the HASP.
- If any changes in operation occur, the HASP will be modified to reflect those changes.

## 12.0 FALL PREVENTION

The nature of the work during Remediation requires strict adherence to the fall prevention procedures as outlined in this section. Fall protection shall be implemented and utilized in accordance with OSHA requirements outlined in 29 CFR 1926. The Contractor and Subcontractors shall ensure any potential fall hazards are eliminated from the Remediation work area. Safety measures for fall prevention outlined below are divided into the areas of specific concern for the Remediation: ladders, scaffolding, shafts and hoist ways.

All personnel utilizing fall protection equipment shall be properly trained in its usage. CSO shall maintain records of this training on Site. CSO shall be responsible for performing a visual inspection of the Remediation work area prior to each shift to ensure that it is free from potential fall hazards.

All falls or near misses shall be reported immediately reported to the CSO. Conditions leading to falls or near misses shall be investigated in order to determine the cause and the corrective measures or equipment needed in order to prevent the possibility of further incidents. Documentation of investigations and corrective measures implemented shall be kept on Site in the existing administrative trailer.

### 12.1 LADDERS

Please note that metal ladders will not be used during abatement procedure for the Remediation. An analysis of accidents involving ladders revealed that the four principal causes of such accidents are:

- Ascending or descending improperly
- Failure to secure ladder at top and/or bottom
- Structural failure of the ladder itself
- Carrying objects in hands while ascending or descending ladders
- When climbing off or onto the ladder.

In order to prevent ladder accidents while using ladders on Site the CSO shall take the following measures regarding their usage.

- The foot of the ladder should be placed approximately one-quarter of its supported length away from the vertical plane of its top support. Only light, temporary work should be performed from ladders. Workers should be cautioned frequently about the danger of trying to reach too far from a single setting.
- Since, in most ladder applications, the weight of the worker is unevenly distributed over an area of approximately three (3") inches long by three (3") inches wide, any effort which tends to shift the balance of the worker should be discouraged.
- Ladders shall not be placed in front of doors, which open towards the ladder unless the door is locked or otherwise guarded. In addition, ladders will not be placed in passageways, driveways, or any other location where they may be displaced by activities being conducted by persons not working directly with the ladder.
- Ladder feet should be placed on a firm level base, and the area in the vicinity of the bottom of the ladder should be kept clear of tools and debris.
- Ladders leading to landings, walkways, platforms will extend thirty-six inches (36") above this point and will be securely fastened to prevent moving. Long ladders will be braced at intermediate points as necessary to prevent springing.

- When ascending or descending ladders, workers will face the ladder and use both hands to hold onto the side rails. If material must be moved from one level to another via ladders, a rope, block and tackle, or other means will be used.
- Workers will ascend or descend ladders one rung at a time.
- Ladder rungs will be kept clear of tools, debris and slip hazards at all times.
- Ladders will not be used in a horizontal position as runways, platforms or scaffolds.
- Ladders will be inspected on a regular basis by the CSO. Any ladder discovered to have loose, broken or missing rungs, broken or split side rails, or other faulty or defective construction will be immediately removed from service, tagged out of service, and disposed of.
- Frame ladders shall not be used as a straight or extension ladder.

## 12.2 SCAFFOLDING

The Contractor and all Subcontractors utilizing scaffolding will provide, to the greatest extent possible, safe working conditions for those employees engaged in the erection, use and dismantling of scaffolds, to encourage and direct safe work practices, and to comply in all respects with all applicable laws, regulations and standards governing the use and safety of scaffolds.

### 12.2.1 Competent Person

No scaffold shall be erected, moved, dismantled, or altered except under the supervision of a competent person (s).

### 12.2.2 OSHA Requirements

All scaffolding erection, maintenance and usage will be conducted in strict accordance with Subpart L of OSHA 29 CFR 1926 at all times during the Remediation.

### 12.2.3 Scaffold Erection Requirements

Scaffold erection requirements will be enforced by the CSO and the scaffolding Subcontractors Safety Officer. Regular inspections to ensure compliance shall be performed. The competent person will sign off on scaffolding installation. Any conditions that do not conform to the following requirements will be corrected immediately by the scaffolding subcontractor. A record of all inspections and any corrections made will be kept in the existing administrative trailer.

- Each scaffold must be able to support without failure a load four times the maximum intended load.
- All load-carrying timber members of a scaffold framing must be a minimum of 1,500 fiber construction grade lumber.
- All planking must be platforms must be overlapped at least twelve inches (12") or otherwise secured from movement.
- Scaffold planks must extend over end supports at least 6 inches but not more than twelve inches (12").
- Safe access onto and off of scaffolding must be maintained at all times.

- Scaffold poles, legs or uprights must be plumb and braced securely to prevent swaying or displacement.
- Toe boards and guardrails must be properly installed
- Scaffolding must be erected, used, and dismantled in accordance with the manufacturer's specifications.

#### 12.2.4 Guardrail, Midrail and Toeboard Requirements

- Guardrails, midrails and toeboards must be installed on all open sides and ends of platforms more than ten feet (10') above the ground and for scaffolds with platform heights between four (4') to ten (10') feet high, having a minimum horizontal dimension in either direction of less than 45 inches, also require guardrails.
- All guardrails must be constructed with two inch (2") x four inch (4") lumber, or the equivalent and they must be located approximately forty-two (42") inches above the deck of the platform. Guardrails, which are constructed between thirty-six (36") and forty-two (42") inches in height, will satisfy the intent of the OSHA Standard. Supports must be at intervals that do not exceed 8 feet.
- Toeboards must be at least four (4") inches in height and must be used on all scaffolds, which are located in areas where it is expected that personnel may walk or work in the area directly beneath the scaffold.
- Midrails and toeboards, constructed of not less than one inch (1") x six inch (6") lumber or other materials providing equivalent protection, must be installed on all System Scaffolds, Tube and Coupler Scaffolds, Fabricated Tubular Frame Manually Propelled Mobile Scaffolds, and Prefabricated Mobile Tower Scaffolds. Midrails should be located midway between the guardrails and the deck of the platform.

#### 12.2.5 Personal Fall Protection

- When the potential exists for a free fall of longer than 2 feet, or when the distance from the working or walking surface to grade or lower level is more than six (6) feet, or less if lower obstructions are present, workers must continuously use the fall protection equipment provided by the company and insure that it is used in a proper manner.
- The personal fall protection system must either prevent a free fall, or if a free fall does occur, must bring the employee to a complete stop within a deceleration distance of 42 inches, excluding lifeline elongation. This distance is in addition to the maximum six (6) foot distance of the free fall.

#### 12.2.6 Areas of Scaffold Use

- The scaffold used during the Remediation Phase will include rolling towers, and ladder frame systems in areas such as interior floors, mechanical rooms and the exterior areas such as the cooling tower.

### **13.0 SANITARY FACILITIES**

#### **13.1 POTABLE WATER**

- a. An adequate supply of potable drinking water shall be maintained at all times immediately outside the Site. Drinking water shall meet all federal, state and local health requirements.
- b. Drinking water shall be supplied to project personnel via approved dispensing sources.
- c. Paper cups shall be permitted for the drinking of potable water supplies.
- d. Drinking water dispensers shall be clearly marked and shall, in no way, have the potential for contamination from non-potable supplies.
- e. Site personnel must be fully decontaminated prior to approaching the drinking water supply located in the Clean Zone.

#### **13.2 TOILET FACILITIES**

- a. Adequate toilet facilities shall be provided at the Site.
- b. These facilities shall be in the form of portable chemical toilets.  
Routine servicing and cleaning of the toilets must or shall be established with the selected contractor and shall be in accordance with federal, state, and local health regulations.
- c. Site, personnel must be fully decontaminated prior to approaching the toilet facilities.

#### **13.3 WASHING AREAS**

- a. Adequate washing areas shall be provided for personal use within the work area.
- b. Washing areas shall be maintained in a sanitary condition and will be provided with adequate supplies of soap, towels for drying, and covered waste receptacles.
- c. Washing areas shall be maintained and sanitized daily.
- d. No eating, drinking or smoking shall be permitted in the work area. This policy will be strictly enforced by the Field Team Leader.

#### **14.0 FIRE CONTROL EQUIPMENT**

An adequate number of approved portable fire extinguishers (class rated A, B and C and a minimum of 10 pounds) shall be readily available at the Site at all times. A minimum of two (2) fire extinguishers on each floor of the Building during Remediation will be provided. Extinguishers will be located in close proximity to the on-going work and will move as the work progresses. All fire extinguishers shall have current inspection tags.

All Site personnel shall be trained in the use of the extinguishers. Extinguishers shall only be used on incipient stage fires or fires of minor nature. The Building shall be evacuated and the local fire department shall be contacted by calling 911 in the event of a larger fire. The dry standpipe will be available for use.

## **15.0 HAZARD COMMUNICATION**

### **15.1 PURPOSE**

The purpose of this written Hazard Communication Program is to inform our employees, by means of labels, Material Safety Data Sheets and Training, of the physical and health hazards to which they may be exposed during Remediation.

### **15.2 POLICY**

Although no hazardous materials/chemicals will be used during Remediation, it is the policy of the Contractor that all persons entering the Site are required to read the Haz-Com in case of unforeseen exposure to hazardous materials/chemicals. Any chemicals found in at the Site during Remediation will be evaluated, and information concerning their hazard will be transmitted to all affected employees, subcontractors and visitors.

### **15.3 SCOPE**

This section applies to all Remediation activities engaged in by all employees, subcontractors and visitors on Site. The Hazardous Communication Program is administered by the CSO. It is not anticipated that the use of any hazardous products will be required during Remediation activities. The Contractor and Subcontractors shall notify the CSO of any hazardous materials/chemicals prior to bringing them on Site and shall provide an up to date MSDS for each product. These MSDSs shall be maintained by the Contractor CSO and shall be kept in a site master file in the existing administrative trailer. In addition, each Subcontractor shall maintain a copy of the MSDS for each product that they bring on-site.

The CSO will have the responsibility to review MSDSs for hazardous materials proposed for the site in order to investigate potential alternate products that are non-hazardous.

The Subcontractors shall review with the CSO the procedures for handling, using and storing the chemicals brought on-site, and shall review with their personnel the proper procedures for handling, using and storing the chemicals before the product is used on-site. This includes but is not limited to all commercial products brought on-site by Subcontractors, including commercial cleansers, degreasers, lubricants and paints.

### **15.4 RIGHT-TO-KNOW**

All persons entering the Site have the right-to-know the potential hazardous that may be encountered upon doing so. All applicable right-to-know laws will be abided by during the course of Remediation. The CSO shall communicate all potential hazards to employees, Subcontractors and visitors entering the Site.

### **15.5 CONTAINER LABELS**

All containers of hazardous materials shall be labeled in accordance with appropriate standards. The labels on containers provided by the manufacturer, importer, or distributor shall be used.

Labels affixed to containers of hazardous materials shall:

- Identify the material using a name with which workers are familiar,
- Identify the hazards associated with the material, including toxicity information that indicates symptoms and target organs.
- Identify the name, address and telephone number of the manufacturer, importer or distributor where more information may be obtained.

Labels shall not conflict with Hazardous Materials Transportation Act (HMTA) labeling requirements and shall meet the requirements of OSHA substance-specific health standards, where required.

Labeling of all portable/temporary hazardous materials containers shall be required of all portable/temporary hazardous materials containers at all times. The contractor/subcontractor shall prepare a container label on portable containers filled from a correctly labeled container and when the container label is defaced or illegible. The prepared temporary label shall indicate pertinent chemical identification and health information as required by OSHA.

All hazardous materials containers shall be labeled for content, hazard, and storage prohibitions, such as those relating to temperature range and chemical incompatibility with other materials and/or wastes. The labels shall be in compliance with requirements of New York State law. Containers containing hazardous waste shall also be labeled or marked clearly with the words, "Hazardous Waste".

#### 15.2 Material Safety Data Sheets (MSDSs)

All MSDSs shall be submitted by any Subcontractors and shall be maintained by the Contractor CSO within a site master file. In addition, each Subcontractor shall maintain a copy of the MSDS for each product that they bring on-site. In addition, each Subcontractor shall also retain a log of MSDSs for chemicals used on this project and this log shall be kept on-site. The location of the MSDS folder shall be made known to all project employees. For the Remediation, the MSDS folder shall be kept in the existing administrative trailer.

Each Subcontractor shall review incoming MSDSs for new or significant health and safety information and shall ensure that any new information is communicated to affected employees, the Contractor Site Safety Manager (SSM) and other subcontractors. If an MSDS is not received at the time of initial shipment of materials, the material may not be used until the MSDS has been obtained from the manufacturer.

Employees shall be instructed to notify their Site Manager if an MSDS is not available. When a revised MSDS is received, the Site Manager shall immediately replace the old MSDS. Subcontractors shall insure that the MSDSs on file for their chemicals are current (updated within the last two years).

## 16.0 ELECTRICAL LOCKOUT/TAGOUT

The Field Team Leader must approve all work in areas requiring lockout/tagout procedures based on the need for a worker to work around electrical equipment. All systems must be locked out and tagged before the work begins. Forms of residual energy will be tested and released prior to work. This includes pipes, air lines, electrical equipment and mechanical devices. The equipment must be start tested and approved for use by a

worker by the Contractor SSM or the Field Team Leader by start-testing to make sure the locked-out equipment does not operate.

## **17.0 EMERGENCY RESPONSE**

Below is a list of unplanned events that may occur during the Remediation. This list may not be comprehensive, but is representative of the types of events that may occur. These include:

- Unplanned, sudden, or non-sudden release of hazardous waste or constituents
- Falling or dropped building debris
- Fire or explosion
- Power failure
- Structural failure
- Medical Emergency

### **17.1 UNPLANNED, SUDDEN, OR NON-SUDDEN RELEASE OF HAZARDOUS WASTE OR CONSTITUENTS**

In the event of an unplanned, sudden or non-sudden release of hazardous waste or constituents, the CSO shall immediately:

1. Call 911, if warranted.
2. Initiate building evacuation procedures, as outlined in the Emergency Plan of this HASP, of any personnel in the Remediation work area if necessary dependent upon the nature of the release.
3. Coordinate with the Site Manager to initiate containment isolation activities to include:
  - Immediately seal Personnel and Waste Decontamination units to prevent a fiber release.
  - Ensure all containment isolation barriers remain secure under the required negative pressure.
  - Perform a controlled cleanup of the release.

Reentry into the Building following any release will not be allowed until the Owner's Environmental Consultant has inspected the area and determined that it is safe to do so. If the conditions of evacuation require emergency responders (police, fire department, EMS) to be summoned to the Site, reentry to the work area must first be approved by the responders before any CSO or consultant determinations may be made.

### **17.2 FALLING OR DROPPED BUILDING DEBRIS**

In the event of falling or dropped building debris, the CSO shall immediately:

1. Call 911, if warranted;
2. Initiate building evacuation procedures as outlined in the Emergency Plan of this HASP of any personnel in the Remediation work area if necessary depending on the nature of the incident.

3. Coordinate with the Site Manager to initiate containment isolation activities (e.g. both the Personnel and Waste Load Out Decontamination units must be immediately sealed to prevent a fiber release); and
4. All containment isolation barriers are to remain secure until the required negative pressure has been re-established.

Reentry into the Building following any falling or dropped building debris will not be allowed until the Owner's engineer has inspected the area and determined that it is safe to do so. If the conditions of evacuation require emergency responders (police, fire department, EMS) to be summoned to the Site, reentry to the work area must first be approved by the responders before any CSO or engineer determinations may be made.

### 17.3 FIRE OR EXPLOSION

All Site personnel shall be trained in the use of the extinguishers. Extinguishers shall only be used on incipient stage fires or fires of minor nature. The local fire department shall be contacted in the event of a fire. The building will be evacuated in all cases until a decision about re-entering has been made by the CSO.

In the event of an explosion or a fire, the CSO shall immediately:

1. Call 911;
2. Initiate building evacuation procedures as outlined in the Emergency Plan of this HASP;
3. Meet First responders at the pre-designated location for briefing on the scope and nature of the emergency; and
4. Notify OWNER.

Should there be a work stoppage in a certain area due to a fire or an explosion, work will not resume until the CSO verifies that appropriate corrective actions have been taken.

### 17.4 POWER FAILURE

The criteria for defining the need for building evacuation in the case of "certain power failures" would be the extent or duration of the failure. An example would be that a "total power failure" may require building evacuation for the safety of the workers if a repair was not immediate.

In the event of a power failure, the CSO shall immediately:

1. Call 911, if warranted;
2. Coordinate the safe exit of any personnel in the Remediation work area.
3. Notify on site Electrician to evaluate issue;
4. Coordinate with the Site Manager to initiate containment isolation activities to include:
  - Immediately seal Personnel and Waste Decontamination units to prevent a fiber release until power is restored
  - Coordinate with the Site Manager to initiate back-up power generation; and
  - Ensure all containment isolation barriers remain secure until the required negative pressure has been re-established.

## 17.5 STRUCTURAL FAILURE

In the event of an unanticipated structural failure, the CSO shall immediately:

1. Call 911, if warranted;
2. Coordinate the safe exit of any personnel in the Remediation work area.
3. Coordinate with the Site manager to initiate containment isolation activities (e.g. both the Personnel and Waste Decontamination units must be immediately sealed to prevent a fiber release);
4. Ensure that all containment isolation barriers are to remain secure until the required negative pressure has been re-established.
5. Ensure that reentry into the Building following any structural failure is not allowed until the Owner's engineer has inspected the area and determined that it is safe to do so. If the conditions of evacuation require emergency responders (police, fire department, EMS) to be summoned to the Site, reentry to the work area must first be approved by the responders before any CSO or engineer determinations may be made.
6. Address any shoring requirements based on engineering assessments.

## 17.6 EMERGENCY PLAN

### **Work Area Evacuation**

All personnel working on Remediation shall be given the opportunity to read the Health and Safety Plan (HASP) in its entirety prior to their entrance onto the Site. The Primary Designated Assembly Area (PDAA) for the Remediation is the corner of Greenwich Street and Warren Street to the north of the Site. If it is not possible to reach the PDAA, an Alternative Designated Assembly Area (ADAA) is the Corner of Greenwich Street and Vesey Street to the south of the Site. Communication via an air horn warning system (three consecutive alerts) will be used to alert all personnel to proceed immediately to the Assembly Areas. In case of an evacuation, all personnel will be instructed to proceed to the PDAA for roll call to be compared to the Site sign in sheets. It will be the responsibility of the CSO to check both Assembly Areas to check for personnel after an evacuation. If the roll call shows that all persons are not accounted for, the CSO shall notify the First Responders. In the event evacuation of the work area is required on an emergency basis, the following shall be incorporated to the greatest extent possible as the nature of the emergency dictates.

#### A. PROTECT WORKERS POTENTIALLY EXPOSED TO BUILDING CONTAMINANTS

1. Notify workers that levels of asbestos above background levels may be present in building dust, contents, and building components.
2. Any personnel not utilizing respirators will be instructed through radio communication to immediately don respiratory protection and to proceed to the PDAA or ADAA. If respiratory protection is not immediately available, personnel must avoid inhaling or ingesting dust and proceed directly to the PDAA or ADAA. It is recommended that all personnel carry a dust mask at a minimum on their person at all times during the Remediation.
3. Avoid contact with the dust, tools and building components to the extent possible.
4. Wear protective coveralls or disposable coveralls to facilitate cleanup of workers who may have been exposed to contamination during evacuation.

5. Any personnel reentering the work area immediately after an evacuation will utilize PPE until satisfactory test results indicate that the area is free of contaminants. PPE shall be at a minimum: half face air-purifying respirators equipped with P100 filter cartridges, safety goggles, disposable cover-alls with hoods, boots, boot covers, nitrile gloves and hard hats.
6. No personnel shall reenter the work area until the CSO has determined it is safe to do so. If structural damage has occurred, the Owner's engineer must issue the determination that it is safe to reenter the Building. If the conditions of evacuation require emergency responders (police, fire department, EMS) to be summoned to the Site, reentry to the work area must first be approved by the responders before any CSO or engineer determinations may be made.

#### B. AVOID SPREAD OF CONTAMINATION

1. Limit activities that promote transport of dust as much as possible. Stop operating tools and equipment and leave them behind. Proceed in an orderly manner to the nearest point of exit. If possible choose an exit route that does not pass through known contaminated areas.
2. Do not remove equipment which has been in contact with potential contamination until it has been checked and released.

#### C. MINIMIZE POTENTIAL PUBLIC CONTACT

1. Limit access using barricades, temporary fencing and re-entry to the site using "jersey barriers" if necessary. For the Remediation a wooden construction barrier, painted blue, will be in place to enclose the Site from public areas.
2. Control, to the extent possible, off-site tracking by vehicles, potentially contaminated footwear or clothing by workers.

#### D. DISPOSAL

1. Any materials, including PPE, removed from a contaminated area following an emergency situation will be disposed of as required by law based on the characteristics of the contamination.

#### E. EMERGENCY MEDICAL TREATMENT

1. Emergency first aid should be administered on-site as appropriate. Depending on the severity of the injury, the person may need to be transported to the nearest medical facility, as named in the HASP. If it is not possible to transport the person, emergency medical personnel shall be summoned to the Site by calling 911. Treatment of the injury is of primary concern and decontamination a secondary concern in emergency medical situations.
2. The Field Team Leader will complete the appropriate incident report, if warranted. See Section 4.4, Accident and Incident Reporting.

3. An emergency first-aid station will be established and will include a first-aid kit for onsite emergency first aid. For the Remediation, the first-aid station will be located in the existing administrative trailer located on the northwest side of the Site.
4. Provisions for emergency medical treatment shall be implanted within the following guidelines:
  - At least one individual qualified to render first aid and Cardiopulmonary Resuscitation (CPR) shall be assigned to each shift during Remediation.
  - Emergency first aid station will be accessible in the immediate work area vicinity. Additional first aid stations will also be available in the Remediation decontamination facilities and administrative area.
  - Phone numbers and procedures for contacting ambulance services, fire department, police, and medical facilities shall be conspicuously posted on Site.
  - Maps and directions to medical facilities, and evacuation routes and gathering area locations shall be posted conspicuously on Site.

F. NOTIFY AUTHORITIES

1. If necessary, contact emergency medical services (EMS) by dialing 911 from a cellular phone or a pay phone in the vicinity of the PDAA/ADAA. Additionally, notify Agencies identified on the enclosed emergency notification list (Page 5).

***Note: Any explosion, regardless of size or type, any structural failure, fires and total power failures will require a complete work area evacuation.***

The criteria for defining the need for building evacuation in the case of “certain power failures” would be the extent or duration of the failure. An example would be that a “total power failure” may require building evacuation for the safety of the workers if a repair was not immediate.

**Reporting Emergencies:** Any site personnel, upon discovering an emergency situation, shall immediately call 911. If multiple personnel witness an emergency situation, only one person should be assigned to make the call to 911. The Contractor Safety Officer (CSO) shall be notified immediately thereafter and will assume responsibility as the onsite representative to the Emergency Services. The CSO shall immediately notify OWNER.

**Emergency Services:**

**Hospital:** NYU Downtown Hospital  
170 William Street  
New York, NY 10038  
Phone: (212) 312-5000

**Police:** 1<sup>st</sup> Precinct

**16 Ericsson Place  
New York, NY 10013  
Phone: (212) 334-0611**

**Fire: Engine 7, Ladder 1, Battalion 1  
100 Duane Street  
New York, NY 10007  
Phone: (212) 628-2900**

#### 17.7 MEDICAL EMERGENCY

The first worker who notices that a medical emergency or personal injury has occurred shall immediately make a subjective decision as to whether the emergency is life threatening and/or otherwise serious.

Potential injuries that may result in a medical emergency include:

- Slips, trips, falls, lacerations
- Trauma injuries caused by being struck by heavy equipment, building components, waste containers, etc.
- Eye injuries
- Burns from electrical, fire or explosion
- Electrical contact or electrocution
- Heat stress/stroke
- Chemical exposures
- Cardiac emergencies
- Respiratory emergencies

The Contractor and its Subcontractors will respond to minor injuries requiring first aid only; major injuries or requirements for search and rescue will be handled by First Responders.

If a worker is showing signs of distress or obvious injury or illness, the CSO shall be immediately notified and provided the following information:

1. Location of victim
2. Nature of Emergency
3. Whether the victim is conscious
4. Specific details regarding the injury or illness
5. Whether the victim is in need of decontamination

The CSO will suspend work within the immediate area until the emergency situation has been corrected. If possible the subcontractors' first aid attendant shall treat the injured employee as necessary until a decision is made to seek outside medical assistance or to remove the victim from the Building.

The CSO will be responsible for calling 911 and will inform the First Responders whether asbestos abatement activities are taking place within the work area, and whether or not the injured employee has been brought through the decontamination chamber.

#### *17.7.1 Life-Threatening and/or Otherwise Serious Incident*

If a life-threatening incident occurs, those persons recognizing the situation should perform whatever actions necessary, within their capabilities, to reduce the threat and then the CSO shall be contacted. The CSO shall immediately notify the Emergency Medical Services (EMS-911) and implement emergency action procedures to have someone meet and guide EMS to the incident location. The Contractor shall be notified of the incident as early as possible.

The CSO shall be kept apprised of the situation and the location of the injured person(s).

As the CSO proceeds to the accident scene, communications channels shall be opened and kept on standby until the CSO has surveyed the scene and performed a primary survey of the injured person.

The CSO shall provide emergency action guidance consistent with the injury and shall relay the appropriate information to the site person meeting the EMS. Depending on the nature of the injury and the location at which the injury occurred, the CSO shall determine whether the person can be moved or whether the EMS team will need to come into the work area to assist the injured person. Should the person be injured in the Interior Containment, all appropriate life-saving methods shall be exercised in that area before attempting decontamination of the injured person. The extent of emergency decontamination performed shall depend on the severity of the injury or illness and the nature of the contamination. If the emergency is such that emergency decontamination cannot be performed safely, the injured person shall be given necessary first-aid treatment and wrapped in a blanket prior to transportation by EMS. If heat stress is a factor in an injury/illness, all protective clothing shall be removed from the person immediately.

#### *17.7.2 Non-Life-Threatening Incident*

Should it be determined that no threat to life is present, a co-worker will assist the injured person and contact the CSO as soon as reasonably possible. Should a person be injured in the Interior Containment, a rapid decontamination consisting of Tyvek, glove and respirator removal shall be performed in the Decontamination Unit prior to initiation of medical assistance. For all non-life-threatening injuries, all medical assistance shall be provided in the Clean Zone to reduce the spread of contamination to medical personnel or equipment.

#### *17.7.3 Bloodborne Pathogens*

When an emergency occurs that involves the potential for contact with bodily fluids, personnel shall use procedures and PPE that minimize the potential for exposure.

All personnel who provided direct support to an injured person shall participate in a post-incident exposure review during which their role in the event and the potential for contact with bodily fluids shall be evaluated. The information relating to exposure shall be documented for each individual. The procedures for the post-exposure consultation identified in the OSHA Bloodborne Pathogens (BBP) Standard (29 CFR 1910.1030) shall be followed.

All personnel on-site shall receive awareness training concerning BBP and the procedures to be followed to respond to emergencies that occur on-site. This awareness training shall be provided by each Subcontractor prior to the initiation of work activities and when new employees are introduced to the Site

## **18.0 DOCUMENTATION**

The Contractor shall and require each Subcontractor to maintain documentation, which shall record, at a minimum, the following information:

- The employees on Site, including arrival and departure times and their destination at the Site.
- Information required to be maintained by the OSHA respiratory protection standard, including medical clearance documents, training and certification records, fit-test records, and the results of personal air monitoring used to determine employee exposures. Additionally, all medical and sampling documentation required by OSHA's Lead in Construction standard must be maintained.
- Area air testing results
- Incidents and unusual activities that occur at the Site, including but not limited to injuries, illnesses, accidents, spills, breaches of security, equipment failures, weather-related problems and near-misses.
- Records of daily safety briefings, including attendance documentation for all employees required to attend.
- Records of health and safety inspections by governmental agencies
- Records of corrective actions performed in response to any deficiencies noted through government agency inspection or by the CSO.

## Attachment 1

Location Map  
Fiterman Hall  
30 West Broadway, New York, NY 10007



## Attachment 2

### Contractor/Sub-Contractor/Visitor HASP Acknowledgement

HASP Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name \_\_\_\_\_

Affiliation: \_\_\_\_\_

Address \_\_\_\_\_ Phone \_\_\_\_\_

\_\_\_\_\_ is the designated Contractor Safety Officer (CSO) for this project. His contact numbers are \_\_\_\_\_ as indicated in Attachment 1.

These are the primary Contractor emergency contact phone numbers, and both are 24-hour contact numbers. The CSO's base of operations will be the Contractor's field office (trailer). In the event that Mr. \_\_\_\_\_ is not on site, an alternate CSO will be designated and will be responsible for ensuring proper implementation of this HASP.

Signature

Date

\_\_\_\_\_

\_\_\_\_\_

## Attachment 3

### Worker Hygiene and Protection

Work clothes include Tyvek full body work clothing, gloves, hardhats, disposable shoe coverlets, safety vests and vented goggles. These items will be provided as required according to the requirements of 29 CFR 1926.62.

Employees will be required to observe the following procedures:

1. Change into work clothing and shoe covers in the designated area;
2. Use work garments and appropriate protective gear including respirators before entering the work area; and
3. Store any clothing not worn under protective clothing in the designated area.

When leaving the work area, employees will:

1. HEPA vacuum all contaminated protective work clothing while it is still being worn.
2. Remove shoe covers (these must not be left in work area). Work area must be left clean before lunch and at end of the day.
3. Remove protective clothing and gear in the controlled section of the designated changing area. Remove protective coveralls by carefully rolling down the garment to reduce exposure to dust.
4. Remove respirator last.

In addition to the procedures described above, employees will obey the following procedures at all sites:

1. Place all disposal coveralls and shoe covers with the abatement waste.
2. Contaminated clothing, which is to be disposed of, must be placed in a clearly marked closed container in the designated changing area.
3. Clean protective gear in accordance with the PAL training sessions and respiratory program. Wash hands and face.
4. Eating areas or lunchrooms will be the only area in which employees may eat and drink during the work shift. Employees may not wear their protective clothing in this area. Employees will be required to wash prior to using the designated eating area.

## **Personnel Entrance and Decontamination Procedures Utilizing Full Decontamination Facility:**

**NOTE: Medical emergencies take priority over decontamination procedures.**

1. All workers and authorized visitors shall enter the work area through the worker decontamination enclosure system.
2. All individuals who enter the work area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall identify fully the facility, agents, contractor(s), the project, each work area and worker respiratory protection employed. The site supervisor shall be responsible for the maintenance of the log.
3. Each worker or authorized visitor shall, upon entering the job site, remove street clothes in the clean room and put on a clean respirator (with new filters, if appropriate) and clean protective clothing before entering the work area through the shower room and equipment room.
4. Each worker or authorized visitor shall, each time he leaves the work area: remove gross contamination from clothing before leaving the work area; proceed to the equipment room and remove all clothing except the respirator; still wearing the respirator, proceed to the shower room; clean the outside of the respirator with soap and water while showering; remove filters, wet them, and dispose of them in the container provided for that purpose; wash and rinse the inside of the respirator; and thoroughly shampoo and wash himself/herself.
5. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately. Disposable clothing of the type worn inside the work area is not permitted outside the work area.

## Attachment 4

# Medical Emergencies

### MAJOR MEDICAL EMERGENCIES

- **If it is not practical to move the ill or injured individual**, call **911** to obtain an ambulance and escort it to the location of the emergency.
- For job sustained injury/illness, all patients must be taken to either

#### NYU Downtown Hospital

(212) 312-5000  
170 William St  
New York, NY 10038



Start address: 30 W Broadway  
New York, NY 10007  
End address: 170 William St  
New York, NY 10038  
Distance: 0.5 mi (about 1 min)

1. Head southeast from Park Pl - go 0.2 mi
2. Turn right at Broadway - go 0.1 mi
3. Turn left at Ann St - go 0.2 mi
4. Turn left at William St - go 0.0 mi

These directions are for planning purposes only. You may find that construction projects, traffic, or other events may cause road conditions to differ from the map results.

**or their own hospital of choice.** Hospital personnel must be told it is an on-the-job injury, if applicable. A First Report of Injury Form must be filed with the Site Manager.

- When the injury or illness involves a chemical, a Material Safety Data Sheet (MSDS) must accompany the victim to the hospital.

### MINOR MEDICAL EMERGENCIES

- On-the-job, minor medical injuries/illness (e.g. falls, cuts, sprains and strains) involving employees must be reported immediately to the injured person's supervisor. The supervisor must fill out a Record of Occupational Injury Form. If medical attention is required, the injured can be taken to **NYU Downtown Hospital's Emergency Room**, 170 William St New York, NY 10038 (212- 312-5000) or the injured person's **physician of choice**.

## Attachment 5

### LIST OF ACRONYMS

ACBM	Asbestos Containing Building Materials
ANSI	American National Standards Institute
APR	Air-Purifying Respirator
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
COPCs	Contaminants of Potential Concern
CPR	Cardiopulmonary Resuscitation
Decon	DECONTAMINATION UNIT
CSO	Contractor Safety Officer
CUNY	City University of New York
DASNY	Dormitory Authority of New York
dBA	decibels adjusted (decibels on the “A” scale)
EC	Emergency Coordinator
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
ER	Emergency Response
ERT	Emergency Response Team
INTERIOR CONTAINMENT	
f/cc	Fibers per cubic centimeter
GFCI	Ground Fault Circuit Interrupter
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCS	Hazard Communication Standard
HEPA	High Efficiency Particulate Air
HMTA	Hazardous Materials Transportation Act
IC	Incident Commander
IDLH	Immediately Dangerous to Life and Health
lbs	pounds
LEL	Lower Explosive Limit
MAWP	Maximum Allowable Working Pressure
mg/m <sup>3</sup>	milligrams per cubic meter
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NYCDEP	New York City Department of Environmental Protection
NYCSSM	New York City Site Safety Manager
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limits
PM	Project Manager
PPE	Personal Protective Equipment
ppm	parts per million
psia	pounds per square inch, absolute
psig	pounds per square inch, gauge
SAR	supplied air respirator
SCBA	self-contained breathing apparatus
SOW	Scope of Work
SSHO	Site Safety and Health Officer
STEL	Short-Term Exposure Limit
	Clean Zone
TWA	Time-Weighted Average
WTC	World Trade Center

## Attachment 6

### Emergency Evacuation Assembly Areas Fiterman Hall 30 West Broadway, New York, NY 10007



## Attachment 7

### Bloodborne Pathogens

#### I. PURPOSE

The purpose of the PAL Environmental Safety Corp., Inc. (PAL) Bloodborne Pathogens Module is to establish an Exposure Control Plan (ECP) to eliminate or minimize occupational exposure to blood and other potentially infectious materials (OPIM). This Module is designed to comply with the Occupational Safety and Health Administration (OSHA) General Industry Standards for Bloodborne Pathogens found at 29 Code of Federal Regulations (CFR) 1910.1030.

For the purposes of this Module;

. **Blood** – means human blood, human blood components, and products made from human blood.

. **Bloodborne Pathogens** – means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), and human immunodeficiency virus (HIV).

. **Exposure Incident** - means a specific eye, mouth, or other mucous membrane, non-intact skin or parenteral (enters the body in some way other than the digestive tract) contact with blood or other potentially infectious materials that result from the performance of an employee's duties.

. **Occupational Exposure** - means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

. **Other Potentially Infectious Materials (OPIM)** – means (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV containing cell or tissue cultures, organ cultures, and HIV- or HBV containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

. **Universal Precautions** – is an approach to infection control that utilizes the concept that all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other Bloodborne Pathogens.

This ECP includes:

. Determination of employee exposure;

- . Implementation of various methods of exposure control, including universal precautions, the use of personal protective equipment (PPE), and housekeeping;

- . Hepatitis B vaccinations;

- . Post-exposure evaluation and follow-up, including procedures for evaluating circumstances surrounding an exposure incident;

- . Information and Training; and

- . Recordkeeping.

## **II. DETERMINATION OF EMPLOYEE EXPOSURE**

The nature of the work and services provided by PAL does not routinely expose employees to blood or OPIM. PAL provides services in a variety of commercial, industrial, and residential settings. The risk of exposure shall be determined by the Project Manager (PM) on a per project basis.

Employees that may be exposed under certain conditions include;

- . Project Supervisors (PS's) who are trained in First Aid and CPR.

- . Affected employees whose current job assignment may involve exposure to blood or OPIM.

PAL PM's, PS's and affected employees shall comply with the procedures and work practices outlined in this ECP.

## **III. EXPOSURE CONTROL**

### **A. Universal Precautions**

PAL employees shall utilize universal precautions in order to prevent contact with blood or other potentially infectious materials. Blood or other potentially infectious material will be considered infectious, regardless of the status of the individual.

### **B. Personal Protective Equipment**

PPE shall be provided without cost to employees. Gloves and barrier devices for performing mouth-to-mouth resuscitations shall be available in the First Aid kits at PAL project sites. Gloves shall be worn where it is reasonably anticipated that PS's will have hand contact with blood or OPIM. A barrier device shall be utilized before performing any mouth-to-mouth resuscitation. Employees using PPE shall observe the following precautions:

. Wash hands immediately or as soon as feasible after removal of contaminated gloves or other PPE.

. Remove PPE after it becomes contaminated, and before leaving the work area.

. Contaminated PPE shall be disposed of in appropriate red, biohazard bags.

. Wear appropriate gloves when it can be reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surface.

. Replace gloves if torn, punctured, contaminated or if their ability to function as a barrier is compromised.

. Never wash or decontaminate disposable gloves for reuse.

. Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.

. Remove immediately or as soon as feasible any garment contaminated by blood or OPIM in such a way as to avoid contact with the outer surface.

### **C. Housekeeping**

Visible contamination of surfaces shall be decontaminated with either a 10% bleach solution or a commercially available disinfectant (designed for use with blood or OPIM) immediately or as soon as feasible after any spill involving blood or OPIM.

## **III. HEPATITIS B VACCINATION**

The Hepatitis B vaccination series shall be made available at no cost to affected employees and PS's with valid First Aid and CPR credentials. The vaccination series shall also be promptly provided at no cost to employees who have had an exposure incident. Vaccinations shall be provided at a reasonable time and place under the supervision of a licensed physician or under the supervision of another licensed healthcare professional.

Vaccination is encouraged unless documentation exists that the employee has previously received the series, antibody testing reveals that the employee is immune, or medical evaluation shows that vaccination is inadvisable.

If an employee chooses to decline vaccination, the PM or PS shall promptly document HBV Declination. Employees who decline may request and obtain the vaccination at a later date at no cost. The PM shall maintain the original documentation in the employee's medical file, one copy in the project file, if applicable, and one copy shall be mailed to the employee.

PM's shall provide physicians or Licensed Health Care Providers (responsible for providing Hepatitis B vaccinations) with Attachment 8.1, OSHA 29 CFR 1910.1030.

#### **IV. POST-EXPOSURE EVALUATION and FOLLOW-UP**

Incidents involving exposure to blood or OPIM shall be immediately documented and reported using an Incident Investigation Report.

Following the report of an exposure incident, PAL Corporate Health, Quality and Safety and the PM shall:

1. Arrange for a confidential medical evaluation and follow-up for the exposed employee in accordance with the OSHA standard.
2. Document the routes of exposure and the circumstances under which the exposure occurred.
3. Identify and document the source individual.
4. Obtain consent and make arrangements to have the source individual's blood tested as soon as feasible to determine HIV, HCV, and HBV.
5. Convey the source individual's test results to the exposed employee's health care provider.
6. Inform the exposed employee of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.
7. Provide appropriate information regarding the incident investigation to the exposed employee's health care provider, including all medical records relevant to the appropriate treatment of the exposed employee.
8. Obtain and provide the exposed employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation. The written opinion shall be limited to the following information:

. A statement that the employee has been informed of the results of the evaluation.

. A statement that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials, which require further evaluation or treatment.

All other findings or diagnosis shall remain confidential and shall not be included in the written report.

#### **V. INFORMATION AND TRAINING**

Training shall be provided to affected employees whose current job assignment may involve exposure to blood or OPIM as mentioned in Section II. Bloodborne pathogen training shall be documented. The training shall be tailored to the education level and language of the employee,

offered during the normal work shift, and tailored to the appropriate tasks and risks of the projects requirements. The training shall cover at least the following topics:

- . An explanation of the contents of 29 CFR 1910.1030;
- . A discussion of the epidemiology and symptoms of bloodborne diseases;
- . An explanation of the modes of transmission of bloodborne pathogens;
- . An explanation of PAL’s Bloodborne Pathogen ECP and a method for obtaining a copy;
- . The tasks that may involve exposure;
- . An explanation of the use and limitations of methods to reduce exposure (i.e. work practices and personal protective equipment);
- . Information on the types, use, location, removal, handling, decontamination and disposal of PPE;
- . An explanation of the basis of selection of personal PPE;
- . Information on the Hepatitis B vaccination, including effectiveness, safety, method of administration, benefits and that it will be offered without charge;
- . Information on the appropriate actions to be taken and persons to contact in an emergency involving blood or other potentially infectious material;
- . An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting and medical follow-up;
- . Information on the evaluation and follow-up required after an employee exposure incident; and
- . An explanation of the signs, labels and color coding systems.

## **VI. RECORDKEEPING**

Medical records shall be maintained in accordance with OSHA 29 CFR 1910.20 at the PAL office. These records shall be kept confidential and shall be maintained for at least 30 years. The records shall include all documentation necessary to comply with this Module.

Training records shall be maintained in accordance with OSHA 29 CFR 1910.1030(h) (2) at the PAL office. These records shall be kept for 3 years from the date of the training.