

**ENVIRONMENT, HEALTH & SAFETY PLAN
AND
EMERGENCY ACTION PLAN
FOR THE
130 LIBERTY STREET BUILDING
ABATEMENT PROJECT**

February 6, 2008
(Revision 10.7)

TABLE OF CONTENTS

<u>Title</u>	<u>Section</u>	<u>Page</u>
1.0	Introduction	1
	1.1 Background	
	1.2 Site Description	
	1.3 Purpose	
	1.4 Objectives	
2.0	Environment, Health & Safety Management System	5
	2.1 Responsibilities, Authority & Accountability	
	2.2 Pre-Abatement Risk Assessment	
	2.3 Contractor EHS Qualification Process	
	2.4 Pre-Abatement Safety Meetings	
	2.5 Daily Project Meetings	
	2.6 Daily Safety Inspections	
	2.7 Pre-Task Planning	
	2.8 Quarterly Audits	
	2.9 Training	
	2.10 Disciplinary Action Program	
	2.11 BuildSafeNYC Codes of Conduct	
3.0	Site Security and Access Controls	9
	3.1 Entrance Processing Program/Access Requirements	
	3.2 Perimeter Security	
	3.3 Emergency Access	
	3.4 Security Personnel	
	3.5 Safety Personnel	
4.0	Incident Reporting	10
	4.1 Incident Reports	
	4.2 Incident Investigation	
	4.3 Incident Critique/Root Cause Analysis	
	4.4 Incident Recordkeeping	
5.0	Operational EHS Requirements	12
	5.1 Mobilization	
	5.2 Public and Adjacent Property Protection	
	5.3 Site Preparation/Earthwork	
	5.4 Excavation & Trenching	
	5.5 Exterior Site Housekeeping and Site Dust Control	
	5.6 Traffic Control	
	5.7 Fall Protection	
	5.8 Delivery and Material Handling	
	5.9 General Building Controls	
	5.10 Scaffolding	

5.11	Ladders	
5.12	Temporary Electrical	
5.13	Hoists & Lifts	
5.14	Cranes	
5.15	Rigging	
5.16	Fire Prevention Plan	
5.17	Confined Space Entry	
5.18	Portable Tools and Equipment	
5.19	Glass Removal Program	
5.20	Steel Deconstruction (Reserved)	
5.21	Concrete Deconstruction	
5.22	Demobilization	
5.23	Hearing Conservation	
6.0	Emergency Action Plan	28
6.1	Reporting Emergencies	
6.2	Evacuation Plan	
6.3	Designated Assembly Areas	
6.4	Emergency Contacts	
6.5	Site Logistics	
7.0	Appendices	32
7.1	The Deconstruction Plan (available at LMDC’s website www.renewnyc.com)	
7.2	[intentionally omitted]	
7.3	Assembly Points Map	
7.4	Hospital Route Map	
7.5	Site Logistics Map	
7.6	BuildSafeNYC Codes of Conduct	
7.7	Bovis Residual Risk Register	
7.8	Bovis Global Audit Protocol	
7.9	Bovis Incident Investigation Report and Flash Report	

1.0 Introduction

This Environment, Health and Safety Plan (EHSP) presents the practices and procedures that Bovis Lend Lease shall implement and enforce during the decontamination of the building located at 130 Liberty Street in New York City (the Building) in compliance with the Contract Documents governing the abatement and deconstruction of 130 Liberty Street. This EHSP will be applicable to all persons entering the Building and to all persons working in and around the Building.

This document augments and incorporates by reference the approved September 7, 2005 LMDC Deconstruction Plan and the February 2008 Addendum thereto, (the "Deconstruction Plan"). All relevant hazards and protective standards referenced therein are incorporated into this document. A copy of the Deconstruction Plan is located in Appendix 7.1. The contact information provided in this document, however, supersedes the contact information provided in Appendix 7.1.

This EHSP covers the abatement activities being undertaken as part of the Deconstruction Project, which will continue to occur in the following phase:

- Phase I – Asbestos and Contaminants of Potential Concern (COPC) Abatement and Removal

Phase I – Asbestos and COPC Abatement and Removal Phase includes the cleaning and removal of all interior surfaces and non-structural elements within the building under containment. The cleanup and abatement will be conducted so that the Building can be safely deconstructed to allow for redevelopment of the WTC Site.

Phase I of the Decontamination Project will occur while the work area is placed under negative pressure containment and includes the following general categories:

- General area cleanup of WTC dust and debris,
- Removal and disposal of installed porous and certain non-porous building materials and components,
- Cleaning and salvage of certain installed non-porous building equipment and components,
- Removal of building materials containing asbestos which were present in the Building prior to September 11th, 2001 (referred to herein as "ACBM"), primarily within the Building interior,
- Packaging of asbestos and other regulated waste including, but not limited to light bulbs, lighting ballasts, batteries, mercury-containing thermostats, etc.) at generation points, movement of containers to the decontamination unit and movement of decontaminated containers to waste loading using an exterior hoist or crane,
- Cleaning of exterior surfaces of the Building (i.e. building wash down), and
- Maintenance of tower crane.

The proposed clean-up and abatement will be conducted so that the Building can be safely deconstructed in Phase II of the Deconstruction Project in compliance with applicable law to allow for redevelopment of the WTC site.

Bovis Lend Lease shall be supported on this project by various subcontractors. Subcontractors shall:

- Provide environmental testing, air sampling and asbestos and COPC project monitoring
- Perform cleaning activities to remove WTC dust, perform abatement and removal of building materials/components
- Provide miscellaneous support of decontamination activities, e.g., plumbers, electricians, elevator operators; service personnel, etc.
- Provide deconstruction activities to include controlled removal of compromised bay slab concrete.

1.1 Background

The events of September 11, 2001, which caused the destruction of the WTC Towers, physically destroyed portions of the interior and exterior of the 130 Liberty Street Building. The massive debris generated from the collapse of the WTC South Tower broke numerous windows and opened a gash (“Gash Area”) in the Building’s north wall extending from the 7th to 24th floors, thereby exposing portions of the interior of the north side of the Building allowing dust and debris to enter into the Building. The Building has remained idle since September 11, 2001.

Subsequent to September 11, 2001, operations were undertaken to clear debris from the plaza in front of the building, lobby and interior spaces in the Gash Area. Porous geosynthetic mesh or “netting” was hung on the outside of the Building. The Gash Area was cleaned to permit the construction of columns, beams and floor decks to stabilize the Gash Area. Once the initial limited cleaning and stabilization measures were in place, the majority of the office furniture, equipment and other non-attached items in the Building were removed and disposed of by then- owner Deutsche Bank.

As part of the WTC area redevelopment, the Lower Manhattan Development Corporation (“LMDC”) purchased the Building from Deutsche Bank. The LMDC plans call for removing the Building and using the property for the development of the WTC complex. The LMDC selected Bovis Lend Lease to manage the safe removal of the Building.

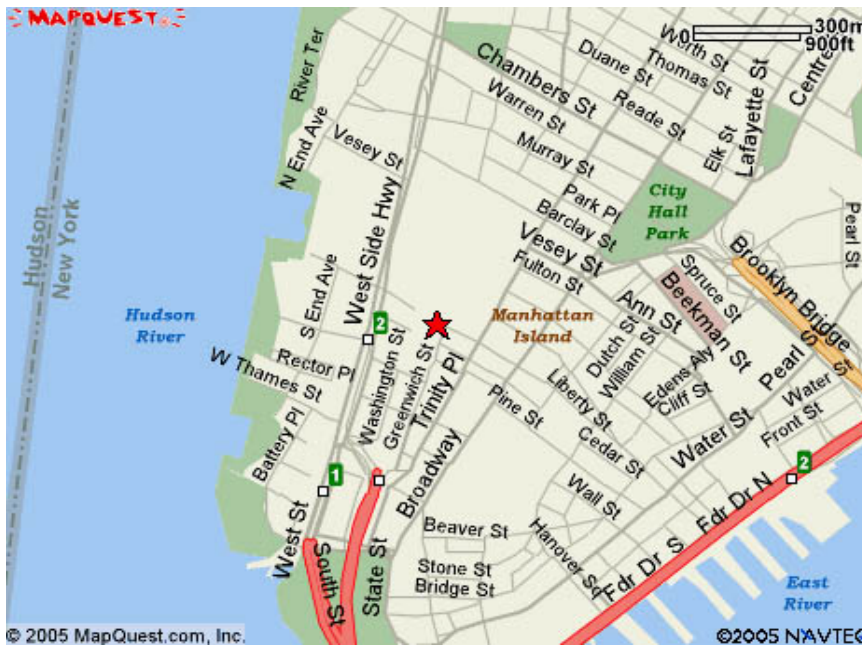
The deconstruction project began in March 2006. The Phase I abatement portion was completed to the 20th floor and the Phase II portion was completed to the 26th floor, when

a fire broke out on August 18, 2007 and stopped the project. This plan will be utilized for the restart of the project and supersedes all previous versions of Bovis Lend Lease's Environment, Health & Safety Plan for this project.

1.2 Site Description

130 Liberty Street was a 40-story, 565 foot tall, approximately 1.4 million square foot (SF) office building, with two basement levels, located in Lower Manhattan, one block south of the WTC site. Until 1999, the Building, which was built between 1973 and 1974, was owned by the Banker's Trust Corporation. In 1999, Deutsche Bank acquired the Building and owned it until August 31, 2004, when it was sold to LMDC. As of November 1, 2007, the building is 26 stories high.

Figure 1 - Site Location Map



1.3 Purpose

This document presents the safety procedures and practices to be followed during all abatement activities to ensure the safe completion of tasks. The procedures and practices herein are designed to prevent occupational injuries and illness to workers at the Site. The procedures are presented to facilitate compliance with all applicable laws and regulations, including requirements and protocols established by the Occupational Safety and Health Administration (“OSHA”); the New York City Department of Buildings (“NYC DOB”); the United States Environmental Protection Agency (“USEPA”); the New York State Department of Conservation (“NYSDEC”); the State of New York, New York State Department of Labor (“NYS DOL”); the

New York City Department of Environmental Protection (“NYCDEP”); the Fire Department of the City of New York (“FDNY”); the New York Police Department (“NYPD”); Citywide Office of Safety and Health (“COSH”); and the City of New York.

This document augments and incorporates relevant health and safety guidance outlined in the Deconstruction Plan. All relevant hazards and protective standards referenced therein are incorporated into this document.

Compliance with this EHSP is required due to structural and environmental damage suffered by the Building on September 11, 2001 and the subsequent fire on August 18, 2007; hazards associated with the Building’s current condition; and anticipated abatement activities. This EHSP is based upon current knowledge of conditions at the site and shall be updated as new information becomes available and/or conditions change within the Building.

1.4 Objectives

This EHSP addresses decontamination Phase I - Asbestos and COPC Abatement and Removal activities. This EHSP has been developed to provide the minimum requirements for protecting project personnel and the public from the hazards that may exist during the abatement project. This EHSP addresses the site construction safety issues associated with the project and supplements the Deconstruction Plan.

The entire interior of the Building with the exception of the dry standpipe system, steel, concrete deck, non-porous stairs, shafts and large scale MEP components, will be removed under Phase I– Asbestos and COPC Abatement and Removal. In addition, the fire rated walls protecting the interior emergency stairs (“Stairs A & B”) will not be removed during Phase I. These walls will be maintained on floors until the floors are deconstructed.

The Site Safety Manager shall conduct daily inspections to determine that the work is conducted in accordance with this EHSP, the Deconstruction Plan and the Building Code.

2.0 Environment, Health & Safety Management System

2.1 Responsibilities, Authority & Accountability

- 2.1.1 All project personnel shall be responsible for complying with all requirements related to environment, health and safety, as a condition of continued access to the project site.
- 2.1.2 All project personnel in a supervisory position shall be responsible for the effective execution of project requirements related to environment, health and safety as it relates to the subordinates under their span of control.
- 2.1.3 All personnel in a supervisory position shall execute authority to direct their subordinates to comply (enforce) with the project requirements relating to environment, health and safety.
- 2.1.4 All project personnel in a supervisory position shall be held accountable to execute the responsibility and authority of their position relative to project requirements relating to environment, health and safety.
- 2.1.5 A list of supervisors, their roles and phone numbers from all contractors is posted on site.
- 2.1.6 The Bovis project team is as follows: Greg Gelish - Senior Project Manager; EJ Ignacio - Project Manager; Jon Kraft – Senior Project Superintendent; Ray Master – Site Safety Manager and Contractor Emergency Coordinator (CEC). Jon Kraft will act as the alternate NYC Site Safety Manager in Mr. Master’s absence. Both the Site Safety Manager and the alternate Site Safety Manager must be NYC Licensed Site Safety Managers. The designated or alternate Site Safety Manager must be full-time Site Safety Manager when they have site safety responsibility. Bovis will provide additional licensed Site Safety Managers as per discussion with NYCDOB and LMDC/LMCCC. In addition, Bovis will provide 24/7 site safety presence (Site Safety Manager or Off-Hours Site Safety Representative).
- 2.1.7 The CEC will obtain a list of supervisors, their roles and phone numbers from all subcontractors, including the Subcontractor Emergency Coordinator (SEC) for each subcontractor. The CEC will post the lists for each subcontractor on site and provide a copy to LMDC, LMCCC and the appropriate City, State and Federal Agencies.

2.2 Pre-Abatement Risk Assessment

- 2.2.1 For all major abatement tasks, a risk assessment shall be completed to highlight the risks associated with those tasks. In addition to the risk assessment, a Pre-Task Plan will be developed by subcontractors and discussed with the work crew and reviewed by Bovis Lend Lease and the owner’s representative/construction manager prior to starting a new task.

- 2.2.2 The Bovis Lend Lease Residual Risk Register (RRR) shall be completed to facilitate the risk assessment. A copy of the RRR is contained in Appendix 7.7.
- 2.2.3 The RRR shall be used as a guide in reviewing subcontractor daily pre-task plans submittals. The RRR will be discussed/reviewed during the daily safety/project meetings.
- 2.2.4 The RRR shall be reviewed and updated as needed (and in any event no less frequently than monthly).

2.3 Contractor EHS Qualification Process

- 2.3.1 The project shall record and demonstrate that appropriate processes are in place to assess the competence of subcontractors, and that all subcontractors working on the project are trained to an appropriate standard. Prior to subcontractor's workers commencing work onsite, they will all be instructed in their safe method of work to eliminate the risks of the operation they are to undertake via pre-task plans. Subsequent to this, all workers shall receive at least one task-related training session per month.

2.4 Pre-Abatement Safety Meetings

- 2.4.1 Prior to mobilization to the site, all subcontractors shall be required to attend a pre-mobilization meeting to discuss project health & safety expectations.

2.5 Daily Project Meetings

- 2.5.1 Each subcontractor shall have their senior site representative attend a daily project meeting for purposes of coordination, health & safety review, and general work progress. The project superintendent and site safety manager will review the safety program and discuss any new health and safety issues that may be encountered that day.

2.6 Daily Safety Inspections

- 2.6.1 Daily inspections shall be conducted to determine adherence to the site EHSP and the Building Code.
- 2.6.2 Observations shall be discussed at daily site meetings.
- 2.6.3 Observations shall be consolidated on a weekly basis in a format report for distribution to subcontractors.
- 2.6.4 Subcontractors shall be accountable for the correction of open observations.

2.7 Pre-Task and Safety Plan

- 2.7.1 Subcontractor supervision/foremen shall all submit daily pre-task and safety plans that outline the new and/or revised tasks to be performed for the day.
- 2.7.2 Each pre-task and safety plan shall list the task steps, hazards and hazard controls associated with work activities for that day.

2.7.3 The Bovis Lend Lease project team shall review the plans to determine that appropriate health and safety measure are being used for the tasks.

2.8 Quarterly Audits

The Project shall be audited at least once in every 12 weeks by a person appointed by the Region EHS Director and who is not normally based at the project or by an independent auditor.

The Bovis Lend lease Global Audit Protocol shall be used to conduct the audit. A copy of the protocol is contained in Appendix 7.8.

2.9 Training

2.9.1 New-Hire Orientation - All employees and visitors shall attend an on-site orientation prior to gaining access privileges as identified in the Deconstruction Plan. The orientation will be conducted by Bovis safety personnel and the owner's environmental monitor. This orientation will discuss items including, but not limited to, the EHSP and Emergency Action Plan (EAP) as defined in Section 6.0 herein, PPE requirements, decontamination procedures and general safety issues. After completing the orientation, all employees and visitors must sign an EHSP and EAP training acknowledgment form prior to entering the building.

2.9.2 Daily Task-Specific Pre-Job Safety Briefings - Subcontractor supervision / foremen shall brief all workers under their span of control daily as to the hazards associated with all planned or anticipated work activities for that day via pre-task and safety plans. The briefing shall be documented and shall contain the signatures of all workers indicating they understand the hazards and hazard controls associated with their work.

2.9.3 HAZWOPER/Asbestos Training – Personnel handling hazardous waste must have received the required 40 hour training as outlined by 29 CFR 1910.120(a)(i) and appropriate annual refresher training as required. Personnel entering the contamination zones to conduct abatement work must have the appropriate asbestos licenses. Personnel entering these areas to conduct other work ancillary to the asbestos abatement work must have the appropriate “Allied Trades Asbestos Training” to work in these areas.

2.9.4 Asbestos and COPC Awareness - Asbestos and COPC Awareness training shall be provided to all visitors, new hire workers and non-abatement workers as a pre-requisite for gaining access privileges. Appropriate asbestos licenses will be required for all personnel conducting abatement work.

2.9.5 Emergency Action Plan – The details of the site emergency action plan shall be communicated to all project personnel and visitors.

2.9.6 Incident & Injury Free Work – All project supervision and foremen will be required to attend the Bovis Lend Lease Incident & Injury Free Supervisors Skills Workshop.

2.10 Disciplinary Action Program

2.10.1 Bovis shall, and shall require its subcontractors to, implement an effective disciplinary action program for the enforcement of project requirement relative to environment, health and safety.

2.10.2 Each such program shall contain a progressive disciplinary process as follows:

- First Incident of Non-Compliance – Verbal and written warning
- Second Incident of Non-Compliance – Written warning
- Third Incident of Non-Compliance – Access privileges revoked

2.10.3 Incidents of Non-Compliance shall be defined as any failure to comply with the established project requirements relative to environment, health and safety.

2.10.4 Personnel shall have their access privileges immediately revoked for violation of the following “Zero Tolerance” criteria:

- **Smoking on Site**
- Fighting
- Use or possession of drugs, alcohol or other controlled substances
- Possession of weapons
- Assaulting, harassing, intimidating or otherwise failing to cooperate with any personnel (including authorized visitors)
- Tampering with air monitoring equipment
- Tampering with safety equipment, critical barriers, negative pressure ventilation systems, fire extinguishers, or other critical safety equipment
- **Unauthorized removal of materials from the site.**

2.10.5 Bovis Lend Lease shall determine the effectiveness of its and its subcontractors’ disciplinary action program implementation.

2.10.6 A system of subcontractor fines shall be implemented for failure of subcontractors to implement an effective disciplinary action program.

2.10.7 A review committee comprised of representatives of Bovis and LMDC (or their respective designees) shall meet to review appeals to any disciplinary action.

2.11 BuildSafeNYC Codes of Conduct

2.11.1 Bovis Lend Lease shall implement the BuildSafeNYC Codes of Conduct on the project site.

2.11.2 The BuildSafeNYC Codes of Conduct are a management and labor agreement in the New York City unionized construction sector which specify minimum health & safety protocols.

3.0 Site Security and Access Controls

3.1 Entrance Processing Program/EHS Access Requirements

All personnel entering the site shall participate in the project entrance processing program and be required to fulfill the project access requirements prior to receiving access privileges. Access requirements include the following:

- New-hire Orientation
- Asbestos and COPC Awareness Training
- Asbestos License Verification (as required)
- HAZWOPER Training Verification (as required)
- Medical Surveillance and Respirator Protection Fitness for Duty Verification
- Emergency Action Plan Training
- Health and Safety Awareness Training
- Fire Watch Certification Verification (as required)
- Cutting/Burning Certification Verification (as required)

All personnel who have fulfilled the access requirements will be issued a Photo ID card. Employees will be required to present ID cards prior to admittance and exit to the site. If employees are terminated for any reason, ID cards will be returned prior to the employee leaving the site.

3.2 Perimeter Security

3.2.1 A fixed, secure perimeter shall be maintained around the site at all times. Access shall only be via security stations.

3.2.2 All breaches of the fixed, secure perimeter shall be manned by security personnel until said breach is repaired

3.2.3 Work activity requiring a breach of the fixed, secured perimeter shall be performed only by direct authorization of Bovis Lend Lease and shall be manned by security until the work requiring the breach is completed.

3.3 Emergency Access

3.3.1 Provisions shall be made for emergency services personnel to access the site during site emergencies.

3.3.2 The Bovis Lend Lease Emergency Coordinator (Ray Master) will act as the onsite representative to First Responders.

3.3.3 The South Gate – Main Entrance has been pre-designated as the meeting place for the Bovis Lend Lease Emergency Coordinator to brief first responders on the scope and nature of the emergency.

3.3.4 The Emergency Action Plan is presented in Section 6.0 and Section 3.0 of the Deconstruction Plan.

4.0 Incident Reporting

4.1 Incident Reports

4.1.1 An Incident Investigation Report shall be completed within 24 hours of all reported occurrences. A copy of the Incident Investigation Report is contained in Appendix 7.9.

4.1.2 A Flash Report shall be initiated following any major incident. A major incident includes the following:

- Injury resulting in fracture of the skull, spine or pelvis.
- Injury resulting in multiple fractures.
- Injury resulting in amputation of hand or foot or multiple fingers or toes.
- Injury resulting in loss of sight or penetrating injury to an eye
- Taken to hospital unconscious.
- Any other life endangering injury.
- Serious potential life endangering event such as a major collapse of structural work, fall of materials which could result in a serious injury, significant incident involving a public interface, significant fall exceeding 10 feet or a major fire.
- Serious environmental pollution incident.
- Power failure

A copy of the Flash Report is contained in Appendix 7.9.

4.2 Incident Investigation

4.2.1 A project incident investigation report shall be filed for all incidents involving injury, illness, fire, material spills, damaged equipment, near misses, or other uncontrolled release of energy and unplanned events.

4.3 Incident Critique/Root Cause Analysis

4.3.1 An incident critique/root cause analysis meeting shall be required for all incidents which result in a recordable injury/illness, fire, breach of the fixed, secure perimeter, breach of containment, environmental damage, or any flash report criteria.

4.4 Incident Recordkeeping

4.4.1 All subcontractors shall maintain a copy of the OSHA 300 log and post it as required by OSHA regulation.

4.4.2 All subcontractors shall maintain a record of total man-hours, number of first aid cases, recordable cases, lost time cases, restricted days and lost time days for review.

5.0 Operational EHS Requirements

This section provides requirements, safe work practices and control methods used to reduce or eliminate potential hazards as identified in the pre-construction risk assessment, the Deconstruction Plan or as defined by applicable regulatory standards. These requirements, work practices and controls are to be implemented by all project personnel. This section is not an attempt to reiterate the laws and regulations applicable to the work. All laws and regulations applicable to the work shall apply and compliance with said laws is mandatory. Each subcontractor/employer is responsible for compliance with all applicable laws and regulations. Bovis Lend Lease's overall site safety and other responsibilities do not relieve subcontractors of their responsibility for effective implementation and compliance with the established requirements and plans.

The EHSP will be amended or revised as project activities or conditions change, when supplemental information becomes available. The EHSP adopts, by reference, the Deconstruction Plan and any subsequent revisions. In addition, this EHSP may adopt procedures and/or be augmented by the project contract documents.

5.1 Mobilization

- 5.1.1 Personnel – all personnel entering the site shall be required to report to security and participate in the entrance processing program.
- 5.1.2 Equipment – all subcontractor equipment shall be inspected prior to mobilization to the project site to determine that it is safe to operate on site.
- 5.1.3 Materials Management – all subcontractors shall provide a material safety data sheet, approximate quantity and anticipated storage requirements for all materials and supplies to be mobilized to the project site prior to mobilization. A copy of the MSDS shall be stored in the FDNY on-site lock box.
- 5.1.4 Special storage requirements and facilities for materials and equipment shall be requested by the subcontractor prior to mobilization.
- 5.1.5 Subcontractors are required to transport and store materials and equipment as required by DOT, DOB, FDNY, OSHA, EPA, NYCDEC and DSNY and other applicable regulations.
- 5.1.6 Subcontractors shall ensure that all potential hazards associated with these products shall be mitigated through training, administrative controls (i.e. proper labeling and storage), and proper use of the prescribed personal protective equipment.

5.2 Public and Adjacent Property Protection

- 5.2.1 A daily determination of all sidewalks or public thoroughfares adjacent to or near enough to be affected by the work shall be conducted to establish the need for closure, relocation, or additional protection throughout the entire sequence of abatement.

- 5.2.2 All facilities installed for public and adjacent property protection (e.g., sidewalk sheds, barriers, fences, etc) shall be inspected regularly for integrity and defects.
- 5.2.3 No loads shall be permitted to be lifted by crane or other hoisting device over occupied public sidewalks, thoroughfares, buildings or job trailers.
- 5.2.4 Access points to the project site shall be attended by security personnel at all times. Access points which cannot be attended for any length of time shall be physically secured and closed to allow no personnel to pass.

5.3 Site Preparation/Earthwork

- 5.3.1 Only authorized personnel are permitted to operate earthmoving equipment. Subcontractors mobilizing earthmoving equipment shall ensure that each earthmoving equipment operator is qualified to safely operate the specific equipment through appropriate training and/or experience.
- 5.3.2 Personnel shall maintain a safe distance from operating equipment and shall stay alert of equipment movement. Personnel shall avoid placing themselves between fixed objects and operating equipment and equipment pinch points, and remain outside of the equipment swing and turning radius. Personnel shall pay attention to backup alarms, but not rely on them for protection. Personnel should never turn their backs on operating equipment.
- 5.3.3 Personnel positioned in proximity to operating equipment shall maintain close communication with the equipment operator. Positioning personnel close to operating equipment is discouraged and shall only occur when absolutely necessary.
- 5.3.4 Personnel shall approach operating equipment only after receiving the operator's attention. The operator shall acknowledge the personnel's presence and stop movement of the equipment. Caution shall be used when standing next to idle equipment; when equipment is placed in gear it can lurch forward or backward. Personnel shall never approach operating equipment from the side or rear where the operator's vision is compromised.
- 5.3.5 Personnel shall not ride on earthmoving equipment unless it is specifically designed to accommodate passengers. Personnel shall only ride in seats that are provided for transportation and that are equipped with seat belts.
- 5.3.6 Personnel shall stay as clear as possible of all hoisting operations. Loads shall not be hoisted overhead of personnel.
- 5.3.7 Earthmoving equipment shall not be used to lift or lower personnel.
- 5.3.8 Personnel in areas where earthmoving equipment is being operated shall wear reflective traffic vests.
- 5.3.9 Remove, bleed, or drain any stored or residual materials and/or energy in utility lines (i.e., hydraulic, pneumatic, mechanical, oils, coolant, etc.) in accordance with the approved Waste Management Plan.

5.3.10 Protected pathways for temporary services shall be established as to not damage them during abatement.

5.3.11 Underground storage tanks shall be located and removed in accordance with NYC DOB permit and FDNY requirements, if applicable.

5.3 Excavation & Trenching

5.4.1 Only those personnel that have been authorized by the competent person shall enter excavations/trenches at or greater than 5 feet in depth.

5.4.2 Personnel shall not enter excavations/trenches where soil appears unstable or adequate cave-in protection is not in place.

5.4.3 Personnel shall not enter excavations/trenches where objects or structures above the work location may become unstable and fall into the excavation.

5.4.4 Personnel shall not enter excavations/trenches with the potential for a hazardous atmosphere until the air has been tested and found to be at safe levels.

5.4.5 Personnel shall not enter excavations/trenches with accumulated water unless precautions have been taken to prevent excavation cave-in.

5.4.6 Personnel shall not enter excavations/trenches where protective systems are damaged or unstable. Personnel may only enter to repair such conditions, and only when additional precautions are taken to ensure safe entry.

5.4.7 Personnel shall wear appropriate PPE. Gloves, coveralls, and respirators may also be required based on the location of excavations.

5.5 Exterior Site Housekeeping and Dust Control

5.5.1 Common paths of travel shall be established and kept free from the accumulation of materials.

5.5.2 All access to roads, exits and emergency equipment shall be kept free from obstructions.

5.5.3 Specific areas should be designated for the proper storage of materials as discussed in the approved Bovis Project Waste Management Plan.

5.5.4 Waste Handling – Subcontractors shall establish a waste disposal program for all subcontractor generated waste. The program shall include the disposal of solid waste and hazardous waste (if necessary). Disposal collection/storage areas will be arranged with Bovis Lend Lease personnel. Subcontractors will be required to maintain their disposal collection/storage areas in accordance with DSNY, FDNY, OSHA, EPA, NYSDEC and other applicable regulations.

5.5.5 Secondary containment shall be present at waste collection/storage areas as required by regulation based on the waste (i.e. used oil, spent solvent) being stored for disposal.

- 5.5.6 All spills shall immediately be remediated, reported to LMDC and the appropriate regulators and an investigation conducted as to the cause and consequence. All spills shall be considered reportable to LMDC's Insurers, at a minimum, and reports prepared in accordance with LMDC's Insurers reporting requirements. Adequate spill containment supplies shall be maintained in a designated, labeled location for immediate response and mitigation.
- 5.5.7 Dust associated with vehicular traffic, earthwork, or other sources shall be minimized. Dust control measures (wet methods) shall be implemented on travel roads and ramps to eliminate all visible airborne dust.
- 5.5.8 All exterior office trailers shall be cleaned at regular intervals to limit the accumulation of trash and combustible materials.

5.6 Traffic Control

- 5.6.1 All personnel shall be required to wear a high visibility traffic vest when walking around the perimeter of the building and associated roadways.
- 5.6.2 Traffic control devices such as signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or bikeway shall conform to the requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways, approved by the Federal Highway Administrator as the National Standard in accordance with Title 23 U.S. Code, Sections 109(d), 114(a), 217, 315, and 402(a), 23 CFR 655, and 49 CFR 1.48(b)(8), 1.48(b)(33), and 1.48(c)(2).

5.7 Fall Protection

- 5.7.1 Fall protection systems shall be used to eliminate fall hazards of 6 feet or greater when performing abatement activities. The use of guardrail protection, lifts, nets, scaffolding, etc. is preferred as per Bovis Lend Lease's Fall Mandate Hierarchy of Fall Controls. Personal fall arrest systems (body harness with lanyard and anchorage) shall be used only where other physical means are not feasible.
- 5.7.2 Guardrails shall be provided at all working places and other locations where persons or materials could fall 6 feet or greater with a top rail height of 60 inches.
- 5.7.3 Holes, shafts, and edges from or through which persons could fall a distance of 6 feet or greater must be adequately protected by covers or barriers and be clearly marked with signage or other means.
- 5.7.4 Interior shafts shall be protected by the following options: 1) Fully planked shaft opening; 2) Installation of safety net system; or 3) Temporary guardrails (i.e. top, mid and toe boards – 60", 42", 21" and 0") augmented with debris netting from floor to top of rail.
- 5.7.5 Personnel shall remain within the guardrail system when provided. Leaning over or stepping across a guardrail system is not permitted.

- 5.7.6 Floor hole covers shall be capable of safely supporting the greater of 400 pounds or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time. This strength requirement must be met and verified.
- 5.7.7 Where floor hole covers are placed on ramps, vehicle roadways or areas where mobile equipment is used (i.e., scissor lifts, aerial lifts, pallet jacks, etc.), the cover must be designed to support two times the maximum axle load of the largest vehicle expected to cross. This strength requirement must be met and verified.
- 5.7.8 Hole covers must be secured from displacement by cleating, wiring, or nailing down. (Cleating is required where removal and replacement of covers is necessary)
- 5.7.9 Hole covers must be orange or red, or labeled "HOLE – DO NOT STEP" or "COVER – DO NOT STEP", to make them stand out from other material/debris on the floor.
- 5.7.10 Floor holes must have guardrails and toeboards installed around all sides, or planked over, as required by the Building Code and OSHA Code. Likewise, where other factors indicate higher risk (i.e., holes near to high traffic areas, holes where fall distance is greater than 15 ft., etc), guardrails should be considered.
- 5.7.11 Any floor hole cover that is damaged must immediately be repaired/replaced.
- 5.7.12 Personal fall arrest systems shall be inspected prior to each use. Personnel shall not use damaged fall protection systems at any time, or for any reason.
- 5.7.13 Personnel shall be aware of, and follow all requirements established by the competent person for the use and limitation of fall protection systems.

5.8 Delivery and Material Handling Equipment

- 5.8.1 Only authorized and trained personnel may operate forklifts, Lulls, or similar equipment used for accepting and transporting delivered material and supplies.
- 5.8.2 All material handling equipment shall be inspected by the operator prior to use.
- 5.8.3 No part of a load must pass over any personnel.
- 5.8.4 Material handling equipment left unattended must be immobilized and secured against accidental movement and forks, buckets or other attachments must be in the lowered position or be firmly supported.
- 5.8.5 No load may exceed the maximum rated load and loads must be handled in accordance with the height and weight restrictions on the load chart.
- 5.8.6 When a load is in the raised position, the controls must be attended by an operator.
- 5.8.7 If an operator does not have a clear view of the path, a signaler must be used.
- 5.8.8 Loads must be carried as close to the ground or floor as the situation permits.

- 5.8.9 Loads that may tip or fall must be secured.
- 5.8.10 Where a forklift is required to enter or exit a vehicle to load or unload, the vehicle must be immobilized and secured against accidental movement.
- 5.8.11 Material handling equipment shall not be used to support, raise or lower workers.
- 5.8.12 Material handling equipment operators shall wear seatbelts at all times, as required.
- 5.8.13 Concentrations of carbon monoxide created by motorized material handling equipment operation indoors must be monitored when the potential exists for reaching or exceeding permissible exposure limits.
- 5.8.14 Barriers, warning signs, designated walkways or other safeguards must be provided where personnel are exposed to the risk of collision.
- 5.8.15 Compressed gas cylinders, flammable/combustible materials, and other hazardous material shall be transported according to DOT regulations in approved vehicles only.

5.9 General Building Controls

- 5.9.1 Adequate illumination shall be maintained throughout the building.
- 5.9.2 Means of access/egress shall be maintained throughout the building for emergency purposes, as specified.
- 5.9.3 Emergency access/egress maintenance shall include code compliant markings, signage and illumination.
- 5.9.4 Stairways for emergency access/egress shall be constructed of appropriate fire rated materials, as specified.
- 5.9.5 Flammable and combustible materials shall not be allowed to accumulate in the building, as specified.
- 5.9.6 A main disconnect shall be established in a single location approved by FDNY on the ground level outside the building to de-energize all negative air ventilation equipment for emergency purposes. Adequate signage shall be used to identify the location of the main disconnect.

5.10 Scaffolding

- 5.10.1 During all scaffold erection and dismantling, all personnel involved in erection or dismantling shall be protected by required fall protection at all times, based on a pre-task risk assessment.

- 5.10.2 Personnel shall not access scaffolds until the competent person has completed the work shift inspection and has authorized access. A scaffold tagging system shall be in place to indicate the status of scaffold construction and maintenance.
- 5.10.3 Personnel shall be aware of and follow all requirements established by the competent person.
- 5.10.4 Personnel shall not access scaffolds that are damaged or unstable at any time and for any reason. Subcontractor personnel may only access scaffolds to repair such conditions, and only when additional precautions have been taken to ensure their safety.
- 5.10.5 Personnel shall access scaffolds only by means of a ladder, stair tower, ladder stand, ramp, integral prefabricated scaffold access, or other equivalent safe means of access. Scaffold cross-bracing shall not be used to access scaffold platforms.
- 5.10.6 Personnel shall remain within the scaffold guardrail system when provided. Leaning over or stepping across a guardrail system is not permitted.
- 5.10.7 Personnel shall not stand on objects (boxes, buckets, bricks, blocks, etc.) or ladders on top of scaffold platforms to increase their working height unless the platform covers the entire floor area of the room.
- 5.10.8 Personnel shall not work on scaffolds covered with snow, ice, or other slippery material or work on scaffolds during storms or high winds unless personal fall arrest systems or windscreens are provided and the competent person determines it is safe to remain on the scaffold.
- 5.10.9 Personnel working on suspended scaffolds/cradles/gondolas must wear and use appropriate fall prevention equipment so as to protect them effectively at all times when they are at risk from any failure of any part of the scaffold/cradle/gondola, including its suspension system
- 5.10.10 The safe working load of suspended scaffolds shall be determined and not exceeded. Abatement materials shall not be stored on suspended scaffolds.
- 5.10.11 Free-standing scaffold towers used externally must not be higher to the top platform level than three times the minimum base dimension, unless secured to a permanent structure. For internal use only, the height to platform may rise to 3.5 times the minimum base dimension.
- 5.10.12 Wheels must be locked when mobile scaffold towers are in use.
- 5.10.13 No person is permitted to remain on a mobile scaffold tower platform while a tower is being moved.
- 5.10.14 Personnel erecting and/or using scaffolds shall be trained and certified per NYCDOB regulations.

5.11 Ladders

- 5.11.1 The use of ladders shall be minimized. Where feasible, alternatives such as scaffolding, scissor lifts, and guarded work platforms shall take priority.
- 5.11.2 Ladders shall be inspected by a competent person on a periodic basis and after any occurrence that could affect their safe use. Ladders found to be defective shall be tagged and removed from service until repaired.
- 5.11.3 Ladders shall be used only for the purpose for which they were designed and shall not be loaded beyond their rated capacity.
- 5.11.4 Only one person at a time shall climb on or work from an individual ladder.
- 5.11.5 Portable ladders must extend at least 3 feet above landing surfaces.
- 5.11.6 Personnel climbing ladders shall face the ladder and maintain at least three points of contact with the ladder.
- 5.11.7 Ladder users must use both hands to climb; rope shall be used to raise and lower equipment and materials.
- 5.11.8 Straight and extension ladders must be tied off to prevent displacement.
- 5.11.9 Ladders that may be displaced by work activities or traffic must be secured or barricaded.
- 5.11.10 Stepladders are to be used in the fully opened and locked position.
- 5.11.11 Ladder users are not to stand on the top two steps of a stepladder; nor are users to sit/ straddle top of stepladder.
- 5.11.12 Ladders shall not be used within 6 feet of a fall hazard without supplemental fall protection in place.
- 5.11.13 Cross-bracing shall not be used for climbing.
- 5.11.14 Fall protection shall be required when personnel are working from extension, straight, or fixed ladders greater than six feet from lower levels and both hands are needed to perform the work, or when reaching or working outside of the plane of ladder side rails.
- 5.11.15 Straight and extension ladders must be positioned at such an angle that the ladder base to the wall is one-fourth of the working length of the ladder.

5.12 Temporary Electrical

- 5.12.1 All temporary wiring shall be installed by a licensed electrical contractor must have ground fault circuit interrupters (GFCI) installed.
- 5.12.2 Extension cords must, at a minimum, be: 1) equipped with third-wire grounding; 2) covered, elevated, or protected from damage when passing through work areas; 3) protected from pinching if routed through doorways; 4) ground fault circuit interrupters (GFCI) protected; 5) kept out of water; and 6) unplugged at the end of

the last work shift of the day, excluding critical equipment that must operate on a 24/7 basis.

- 5.12.3 Electrical power tools and equipment must be effectively grounded or double-insulated UL approved.
- 5.12.4 Electrical power tools, equipment, and cords are to be inspected for damage before use. If damaged, they should be tagged and removed from service immediately.
- 5.12.5 Only qualified personnel may work on energized equipment that is not being controlled by lockout/tagout procedures.
- 5.12.6 Subcontractors affected by the unexpected operation of equipment must develop a written lockout/tagout program, provide training on lockout/tagout procedures and coordinate its program with other affected subcontractors.
- 5.12.7 When personnel are affected by the unexpected operation of equipment they must complete lockout/tagout training. Project training may also be required on site specific lockout procedures.
- 5.12.8 Standard lockout/tagout procedures include the following six steps: 1) notify all personnel in the affected area of the lockout/tagout, 2) shut down the equipment using normal operating controls, 3) isolate all energy sources, 4) apply individual lock and tag to each energy isolating device, 5) relieve or restrain all potentially hazardous stored or residual energy, and 6) verify (test/try) that isolation and de-energization of the equipment has been accomplished. Once verified that the equipment is at the zero energy state, work may begin.
- 5.12.9 All safe guards must be put back in place, all affected personnel notified that lockout has been removed and controls positioned in the safe mode prior to lockout removal
- 5.12.10 Only the individual who applied the lock and tag may remove them.

5.13 Hoists & Lifts

- 5.13.1 Manufacturer's specifications and limitations applicable to the operation of all hoists shall be followed
- 5.13.2 A full guardrail system shall be installed at the entryway to the material hoist at all levels.
- 5.13.3 Only authorized and trained personnel are permitted to operate aerial and scissor lifts.
- 5.13.4 Aerial and scissor lifts shall be inspected prior to mobilization to the site by a third party and deemed to be safe to operate. Documentation shall be provided prior to use.
- 5.13.5 Lifts shall be inspected by the operator prior to use.

- 5.13.6 Lift controls shall be tested by the operator each day prior to use to determine that such controls are in safe working condition.
- 5.13.7 Personnel using aerial lifts shall wear a full body harness with lanyard attached to the boom or platform. For personnel using scissor lifts where a standard guardrails system is installed and personnel are working within the confines of such a system, full body harness and lanyard attachment is not required.
- 5.13.8 Personnel shall not attach a lanyard to any adjacent structures or equipment while working from an aerial lift.
- 5.13.9 Personnel shall stand firmly on the floor of the platform and shall not sit or climb on the railings of the platform or use planks, ladders, or other devices to extend their reach.
- 5.13.10 Personnel shall remain in the platform at all times and shall not leave the platform to climb to adjacent structures.

5.14 Cranes

- 5.14.1 Cranes shall only be operated by certified crane operators who meet the physical qualifications described in ANSI B30.5 Section 5-3.1.2 and/or those established by local unions.
- 5.14.2 Cranes shall be maintained and inspected as recommended by the owner/manufacture and as approved by DOB.
- 5.14.3 Crane operations manuals and load charts specific to each crane shall be on site and accessible.
- 5.14.4 Accessible areas within the swing radius of the rear of the rotating superstructure of the crane, either permanently or temporarily mounted, shall be barricaded in such a manner as to prevent an employee from being struck or crushed by the crane.
- 5.14.5 A competent person shall inspect cranes daily to ensure that they are in safe operating condition. Documentation shall be submitted to Bovis Lend Lease and the owner's representative/construction manager.
- 5.14.6 Cranes are designed for vertical lifts only and should only be used for that purpose. Attempting to pull objects along the ground from side to side, toward, or away from the crane may result in crane failure.
- 5.14.7 No part of the crane or load shall be allowed to come within 10 feet of electrical power sources rated at 50 kV or less. For power sources over 50 kV, increased clearance distance will be 4 inches for every 10 kV over 50 kV.
- 5.14.8 All personnel in the vicinity of the crane should make eye contact with the operator prior to passing through or near crane operations so as to make the operator aware of their presence.

- 5.14.9 Only one person shall signal the crane operator. This person shall be thoroughly familiar with all of the crane's operation and shall be able to communicate with the crane operator with the appropriate hand signals and radio communication. The signal person shall wear a reflective traffic vest to be easily identified.
- 5.14.10 No personnel shall be permitted on or under a load lifted by crane or hoist at any time.
- 5.14.11 Always consider weather conditions when lifting operations are to be performed. Lifting operations shall be limited whenever wind speeds exceed 30 mph, or if other environmental conditions could hinder those operations.
- 5.14.12 Critical lift criteria shall be established for the project and a lifting plan submitted. As a minimum, a lifting plan shall be considered for two-crane picks, for lifts at or above 75% of crane capacity, or the load requires exceptional care in handling due to size, weight, close-tolerance during removal, high susceptibility to damage, excessive public exposure, long lead time for replacement or other unusual project factors.
- 5.14.13 Tower crane shall be inspected prior to use to determine all appropriate safety devices are in place.
- 5.14.14 The main boom line shall not be used for lifting material to the crane deck area.
- 5.14.15 Temporary electrical service to the tower crane shall not be via portable generator.
- 5.14.16 The entire deck of the tower crane shall be protected with a guardrails system.
- 5.14.17 The hatchway opening in the turntable area shall be protected by a hatchway cover.
- 5.14.18 Ladder access to the tower crane deck and cab shall include required landings, guardrails and hatchway opening protection.

5.15 Rigging

- 5.15.1 Chokers, chains, slings, and other rigging equipment shall be inspected prior to use. Defective rigging shall be removed from service.
- 5.15.2 Rated capacities of rigging equipment shall not be exceeded.
- 5.15.3 Rigging equipment shall only be used for the purpose it was designed and intended.
- 5.15.4 Rigging equipment, when not in use, shall be stored in an area free from damaged caused by environmental elements, hazardous substances, and other factors that may compromise equipment integrity and performance.
- 5.15.5 Multiple tag lines shall be attached to every load being made by the crane
- 5.15.6 All loads shall be rigged by a qualified rigger.

- 5.15.7 Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook.
- 5.15.8 Multiple lift rigging shall not be permitted.
- 5.15.9 Routes for suspended loads shall be pre-planned to ensure that no personnel are required to work directly below a suspended load.

5.16 Fire Prevention Plan

- 5.16.1 The dry standpipe system shall be pressurized with air and alarmed to identify loss of integrity, when approved by NYCDOB and FDNY. The General Contractor shall file signed and sealed drawings for the design of the alarm system with NYCDOB.
- 5.16.2 The dry standpipe system will be inspected everyday by the Site Safety Manager walking the entire system and the inspection will be documented in a log book and a daily standpipe system report which will be transmitted to the owner's representative/construction manager.
- 5.16.3 Fire guards/fire watches will conduct hourly inspections of the building 1 hour after cessation of operations until 1 hour prior to restarting operations. The inspection will be documented both electronically by time clock system and manually in a log book.
- 5.16.4 All fire inspection logs books including print out of the electronic time clock system will be made available for weekly inspection by FDNY personnel.
- 5.16.5 A lock box containing updated floor plans, a copy of the MSDS sheets and other documentation for FDNY will be located at the main site entrance. Access to this box will be restricted to FDNY personnel and site safety personnel.
- 5.16.6 All personnel performing hot work shall be certified by the appropriate FDNY requirements.
- 5.16.7 All flammable and combustible liquids required for abatement shall be stored in a location approved by FDNY personnel not subject to damage or ignition due to abatement activities.
- 5.16.8 Temporary heating devices shall be U.L. approved, connected to GFCI outlets, and located to avoid overturn or damage.
- 5.16.9 A strict no smoking policy shall be in effect.
- 5.16.10 All fire protection equipment (i.e., standpipe system components, extinguishers, etc.) shall be protected as abatement proceeds.
- 5.16.11 The dry standpipe system shall not be removed nor shall paint be removed from any system component during abatement operations.
- 5.16.12 Clear access to the building for fire-fighting and emergency purposes shall be maintained.

- 5.16.13 Fire extinguishers shall be provided in compliance with the Fire Prevention Code, OSHA Code, and Rules of the City of New York. Based on the size of the floors in the building, 11 extinguishers will be placed on a typical floor. When 5 gallons or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet.
- 5.16.14 Extinguishers must be maintained in a fully charged and operable condition, be visually inspected each month, and undergo a maintenance check each year.
- 5.16.15 The areas in front of extinguishers must be kept clear.
- 5.16.16 Extinguisher locations will be clearly marked.
- 5.16.17 Combustible materials stored outside should be at least 10 feet from the building.
- 5.16.18 Flammable/combustible liquids must be kept in approved metal containers
- 5.16.19 FDNY Certified fire guard is required for all hot work operations and as directed by FDNY personnel and Owner's Representatives. This may require simultaneous fire guard on multiple floors.
- 5.16.20 This fire prevention plan shall be implemented prior to abatement. This fire prevention plan shall be periodically updated based on risk assessment.

5.17 Confined Space Entry

- 5.17.1 Bovis will assess the building to identify any confined spaces. In the event any confined space is identified, Bovis shall mark all such confined spaces, prohibit entry to such confined spaces and thereafter develop a plan for entry into such confined spaces.

5.18 Portable Tools and Equipment

- 5.18.1 All cord-connected, electrically operated tools and equipment shall be effectively grounded or of the approved double insulated type.
- 5.18.2 All cord-connected, electrically operated tools and equipment shall be used with ground fault circuit interrupters (GFCI) at the source.
- 5.18.3 All sledge hammers shall be of one-piece fiberglass construction such that heads cannot separate from handles.
- 5.18.4 All portable hand grinders shall be operated with safety glasses, goggles, or a face shield.
- 5.18.5 Hand tools shall be secured at all times with lanyards when working on engineered scaffolding.
- 5.18.6 All power tools, grinders, saws and similar equipment shall be provided and operated with appropriate safety guards, shields and HEPA attachments.
- 5.18.7 Pneumatic and hydraulic hoses on power operated tools shall be checked regularly for deterioration or damage.

- 5.18.8 Connection points for pneumatic and hydraulic hoses shall be fitted with appropriate devices to prevent separation.
- 5.18.9 Connection points for pneumatic and hydraulic hoses shall be fitted with whip restraint devices.
- 5.18.10 Powder actuated tools shall be inspected or tested each day before they are loaded per manufacturer's instruction.
- 5.18.11 Worker's using powder actuated tools shall be provided with appropriate personal protective equipment, i.e. eye, face and hearing protection.
- 5.18.12 Tools shall never be pointed at other workers whether empty or loaded. Tools shall not be loaded until just before use.
- 5.18.13 Fasteners shall not be driven into very hard or brittle materials such as, cast iron, glazed tile, surface-hardened steel, glass block, live rock, face brick, or hollow tile.
- 5.18.14 Avoid driving fasteners into easily penetrable materials unless backing is provided. Pins or fasteners can otherwise become flying missiles when they pass right through such materials.
- 5.18.15 Only trained and manufacturer-certified operators shall use powder actuated tools.
- 5.18.16 Tools that are not in proper working order shall be removed from service.
- 5.18.17 All tools shall be used with the manufacturer's specified guard, shield, or other attachment.
- 5.18.18 Powder actuated tools shall not be used in explosive or flammable atmospheres.
- 5.18.19 Portable compressors and similar equipment shall be evaluated for noise levels and appropriate engineering controls shall be utilized to minimize noise exposure.

5.19 Glass Removal Program

- 5.19.1 Exterior areas located beneath sites where glass removal operations are being conducted that are unprotected by sidewalk sheds will be cleared of personnel and secured by flagperson to prevent personnel from entering during glass removal operations.
- 5.19.2 The glass removal operations will be conducted in a manner to minimize fragmentation of glass and shall include safeguards to prevent glass from falling.
- 5.19.3 If required by building Phase I - Asbestos and COPC Abatement operations, all openings will be sealed after glass removal to maintain appropriate containment of the building.
- 5.19.4 Personnel handling glass and glass fragments shall be equipped with appropriate personal protective equipment (e.g., gloves and eye protection).

5.20 Steel Deconstruction

5.20.1 Reserved

5.21 Concrete Deconstruction – Compromised Bay Slabs

- 5.21.1 Fall protection shall be installed prior to deconstruction activities that create fall hazards (i.e., floor deconstruction).
- 5.21.2 The storage of waste material and debris on any floor shall not exceed the allowable floor loads.
- 5.21.3 Mechanical equipment shall not be used on floors or working surfaces unless such floors or surfaces are of sufficient strength to support the imposed load.
- 5.21.4 Floor openings shall have curbs or stop-logs to prevent equipment from running over the edge.
- 5.21.5 During concrete deconstruction, continuing inspections by the Engineer of Record and the Structural Stability Controlled Inspector shall be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material. No employee shall be permitted to work where such hazards exist until they are corrected by shoring, bracing, or other effective means
- 5.21.6 During concrete deconstruction, continuing exposure assessment shall be made by a competent person to determine compliance with the EHSP.
- 5.21.7 The deconstruction subcontractor shall submit a site specific plan to detail additional deconstruction hazard controls.

5.22 Demobilization

- 5.22.1 Subcontractor personnel shall surrender access badges prior to permanently leaving the site.
- 5.22.2 Subcontractors shall remove all equipment, materials, and wastes associated with their operation.
- 5.22.3 Prior to leaving the site, subcontractor personnel shall submit results of exit medical surveillance.

5.23 Hearing Conservation

- 5.23.1 Subcontractors will monitor all work areas with potential excessive noise utilizing hand held decibel meters.
- 5.23.2 If any subcontractor exposes his employees to noise levels above 85 dBA, the subcontractor must establish a written Hearing Conservations Program developed by a competent person as required by 29 CFR 1926.101 and 29 CFR 1910.95.
- 5.23.3 The Program will include awareness training concerning the hazards of noise and the procedures to properly use and maintain hearing protection.

- 5.23.4 The Program will include a baseline audiometric evaluation in accordance with 29 CFR 1926.52 and 101 for personnel exposed to noise levels above 85 dBA.
- 5.23.5 The Contractor must prepare and have on-site a noise mitigation plan with the Department of Environmental Protection, consistent with recently enacted noise regulations.

6.0 Emergency Action Plan

This section describes the actions that will be taken in the event of an on-site emergency to minimize the effect of that "event" or emergency on on-site personnel, the neighboring community and the environment. This section incorporates by reference the most recent revision of the Deconstruction Plan. The contact information provided in this document, however, supersedes the contact information provided in Appendix 7.1.

The details of the Bovis Lend Lease Emergency Action Plan shall be illustrated on updated drawings posted throughout the project site.

6.1 Reporting Emergencies

- 6.1.1 Upon any project incident (fire, spill, injury, near miss, death, etc.), immediately notify the Bovis Lend Lease Site Safety Manager/CEC. Mr. Ray Master is the Bovis Site Safety Manager/CEC; Mr. Jon Kraft is the alternate Site Safety Manager/CEC.
- 6.1.2 All site personnel, upon discovering an emergency situation, shall immediately call 911. The Bovis Lend Lease Project CEC shall be notified immediately thereafter and will assume responsibility as the onsite representative to the First Responders and meet them at the South Gate – Main Entrance.
- 6.1.3 The Bovis Lend Lease CEC shall immediately notify LMCCC's Project Manager (Kevin Finnegan). LMCCC Project Manager will as necessary activate the community notification plan as presented in Appendix F of the September 7, 2005 LMDC Deconstruction Plan, Section 3, Appendix F.
- 6.1.4 In the event of an emergency situation resulting in the implementation of any aspect of the EAP, the Bovis Lend Lease CEC will call 911, and will notify the appropriate City, State and Federal Agencies.
- 6.1.5 All construction incidents and accidents shall be reported to the Chief of BEST by the Site Safety Manager. All fatalities and catastrophes shall be reported to OSHA by the Contractor.

6.2 Evacuation Plan

- 6.2.1 Bovis Lend Lease personnel, subcontractors and visitors shall exit the project site upon notification of an emergency.
- 6.2.2 Any explosion, regardless of size or type, any structural failure, fires and certain power failures will require a complete building evacuation. 911 will be notified.
- 6.2.3 Evacuation from the inside the building will be conducted via internal emergency Stairwells A & B. These stairs are enclosed in fire rated walls and will remain enclosed throughout abatement operations. These stairs will not be blocked in any manner, except for the polyethylene barrier separating the 19th and 20th floor. Upon reaching the ground floor personnel will follow the evacuation maps to the

designated assembly point. The stairwells will remain as contaminated throughout abatement operations.

- 6.2.4 Personnel shall assemble at either of the following two assembly points listed below for a head count.

Primary Location – Southwest corner of Rector Street and Washington Street
Alternate Location - West Side of Trinity Place and Thames Street

- 6.2.5 The Bovis Lend Lease Emergency Coordinator shall designate, at the time of the incident, whether the Primary or Alternate assemble location shall be used. This will be communicated to each Subcontractor Emergency Coordinator during the building evacuation process. Each Subcontractor Emergency Coordinator shall be responsible to report on the head count of personnel under their span of control and identify any personnel that may be missing and are presumed to still be in the building. Subcontractor daily manpower reporting shall be used to verify the number of workers on each crew, to be cross referenced with security badge scan records. During an emergency, these two documents shall be used to facilitate head count verification at assembly points.

- 6.2.6 Emergency evacuation routes shall be posted throughout the site.

- 6.2.7 Evacuation Drills shall be pre-scheduled and conducted on a monthly basis. The Contractor Emergency Coordinator will be responsible for setting up and coordinating evacuation drills. During such drills, workers in the contaminated areas will use stairwells A and B for egress to the ground floor, where they will properly decontaminate. After completion of each drill and prior to resumption of work, the Contractor shall re-seal the stairwell doors using low-adhesive tape. For the duration of the deconstruction work, such drills involving all occupants of the building will occur as warranted. The Contractor Emergency Coordinator will notify LMDC in advance of the drills so that appropriate notification to City, State, and Federal government agencies as well as the community can be given.

- 6.2.8 Notification shall be conducted through a hand-held radio communication system as follows:

Two (2) long blasts of siren/air horn, repeated:
IMMEDIATELY EVACUATE AREA

One (1) long blast:
STOP WORK/REMAIN SILENT

One (1) long blast with two (2) short blasts:
RESUME WORK

- 6.2.9 During an emergency, designated personnel shall remain to operate critical equipment needed for the response. Specifically, a skills support resources crew of operating engineers, security personnel, electricians, general laborers and

construction management staff shall be available during an emergency to assist the incident commander.

6.3 Designated Assembly Areas

6.3.1 In the event of an evacuation the designated assembly points for site personnel are:

Primary Location – Southwest corner of Rector Street and Washington Street

Alternate Location – West Side of Trinity Place and Thames Street

A map of the assembly areas is located in Appendix 7.3. Copies will be posted around the site.

6.3.2 During the EAP orientation, all personnel will be instructed to locate and assemble in a manner that will allow for decontamination of employees and to assemble in a manner that will not impede the operations of any business or agency in the area.

6.3.3 No visitors or trade personnel shall leave the assembly point until directed by the Bovis Lend Lease Emergency Coordinator.

6.3.4 Following an evacuation, no personnel shall be allowed to re-enter the Building until cleared by appropriate First Responder, safety, agency or technical personnel investigating the impact of the incident to the Building.

6.3.5 The Bovis Lend Lease Emergency Coordinator will provide the “all clear” signal to the Subcontractor Emergency Coordinators once it is safe to return to normal work operations.

6.3.6 A map of the hospital (St. Vincent’s) route is located in Appendix 7.4. Copies will be posted around the site.

Directions to St. Vincent’s are:

1. Start out going South on Greenwich Street toward Cedar Street.
2. Turn RIGHT onto Carlisle Street.
3. Turn RIGHT onto West Street/West Side Highway
4. Turn RIGHT onto Clarkston Street
5. Turn LEFT onto Hudson Street
6. Continue onto 8th Avenue
7. Turn RIGHT onto West 12th Street

6.4 Emergency Contacts

<p>Medical Emergency – 911 St. Vincent’s Hospital and Medical Center 170 West 12th Street New York, NY 10011 Main Number: (212) 604-7000</p>	<p>LMCCC Project Manager Name: Kevin Finnegan Phone: 646-739-1358 Mobile: 914-393-8218</p>
<p>Fire/Spill Emergency – 911</p>	<p>LMCCC Acting Executive Director Name: Robert Harvey Phone: 212.442.4350 Mobile: 646.784.1836</p>
<p>Police – 911</p>	<p>Bovis Site Safety Manager/Contractor Emergency Coordinator Name: Ray Master Phone: 646.235.5642</p>
<p>DOB & NYC BEST SQUAD Name: Andrey Vishev (BEST) Phone: 212. 669. 7043 Name: Robert Iulo Phone: 917 543-0353 (DOB)</p>	<p>LMCCC Owner’s Representative URS Corp. Name: Jaime Daniels Cell Phone: 914. 574. 1373 Trailer: 212-227-2280</p>
<p>Utilities Emergency Water: 911 and 311 Gas: 911 and 1.800.75.CONED Electric: 911 and 1.800.75.CONED</p>	<p>Community Emergency Response Team (“CERT”) Name: S. Baumgarten Phone: 646. 338. 8371</p>
<p>Bovis Alternate Site Safety Manager/Contractor Emergency Coordinator Name: Jon Kraft Phone: 917.578.5882</p>	

6.5 Site Logistics

6.5.1 A Site Logistics map is located at Appendix 7.5 as a reference.

7.0 Appendices

- 7.1 The Deconstruction Plan (available at LMDC's website www.renewnyc.com)**
- 7.2 [intentionally omitted]**
- 7.3 Assembly Points Map**
- 7.4 Hospital Route Map**
- 7.5 Site Logistics Map**
- 7.6 BuildSafeNYC Codes of Conduct**
- 7.7 Bovis Residual Risk Register**
- 7.8 Bovis Global Audit Protocol**
- 7.9 Bovis Incident Investigation Report and Flash Report**