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

May 13,~~February 17,~~ 2009
(Revision 10.13)~~10.9)~~

TABLE OF CONTENTS

1.0 Introduction

This Environment, Health and Safety Plan ("EHSP") presents the practices and procedures that Bovis Lend Lease LMB, Inc. ("Bovis"), as the General Contractor, shall implement and enforce during the abatement and deconstruction 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 (the "Project"). 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 activities being undertaken as part of the Project, which is on-going and occurring in the following two phases:

- Phase I – Asbestos and Contaminants of Potential Concern ("COPC") Abatement and Removal
- Phase II – Structural Deconstruction

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.

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

- General area cleanup of World Trade Center ("WTC") dust and debris,
- Removal and disposal of certain 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, operation and dismantling of tower crane.

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

Phase II will include the systematic floor-by-floor deconstruction and removal of the remaining "clean" building components including the clean exterior curtain wall, CMU shafts, concrete deck, large scale mechanical equipment components and structural steel components.

Specifically, Phase II of the Project will include the deconstruction~~demolition~~ and removal of the following general components:

- Structural steel columns and beams,
- Corrugated decking,
- Concrete floor slabs,
- Non ACM portions of the curtain wall,
- Large cleaned equipment, rendered inoperable, to be recycled
- Other nonporous materials which have been left clean and in place, e.g., masonry walls, pipe (pipes associated with the standpipe will be removed and capped on a given floor in sequence with the deconstruction~~demolition~~ of that floor by a licensed plumber or~~of~~ fire suppression licensee), conduit, metal doors, etc.
- Wrapped ACM equipment (elevator motors, etc.) will remain and will be removed by the decontamination contractor in concert with deconstruction activities.
- Shaft protection, stairwells and other remnant porous material deemed non-contaminated by testing will be removed as part of deconstruction. Fireproofing remaining in the stairwells has been deemed non-contaminated for asbestos by testing and will be handled and disposed of as C&D waste as part of deconstruction, provided certain deconstruction methods and ambient air monitoring are implemented during removal to address other USEPA contaminants of potential concern specific to the fireproofing removal. (The September 7, 2005 Ambient Air Monitoring Plan (AAMP) currently in place for this project will be amended to revise those portions dealing with deconstruction and other non-abatement work activities. Until such an amendment has been reviewed and accepted by USEPA, NYSDOL and NYCDEP, work activities on or above the 11th floor will not occur unless the scaffold monitors located on the 15th floor are active and fully functional for all target parameters identified in the AAMP before such activities commence. Deconstruction while the 15th floor monitors are fully operational will not proceed below the 18th floor until such an amendment has been reviewed and accepted by USEPA, NYSDOL and NYCDEP. The 15th floor scaffold monitors may be turned off subsequent to the successful regulatory inspection of the completion of facade and column cover removal abatement activities on the 11th floor and the cleaning and clearing of Stairwell B if no

work activities are occurring on or above the 11th floor.)~~demolition.~~

- Additional shaft protection necessary for the deconstruction,~~demolition,~~ approved by the Engineer of Record, and ultimately approved by DOB will be installed in appropriate areas prior to start of deconstruction~~demolition~~ in these areas.
- Maintenance, operation and dismantling of tower crane.

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

- Provide deconstruction activities to include controlled structural steel and concrete removal, building system components removal, and miscellaneous equipment removal
- 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 deconstruction activities, e.g., plumbers, electricians, elevator operators; service personnel, etc.
- Provide site safety, security and overall general conditions services, as specified in the contract documents.

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.

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, Lower Manhattan Development Corporation ("LMDC") purchased the Building from Deutsche Bank. LMDC plans call for removing the Building and using the property for the development of the WTC complex. LMDC selected Bovis to manage the safe removal of the Building.

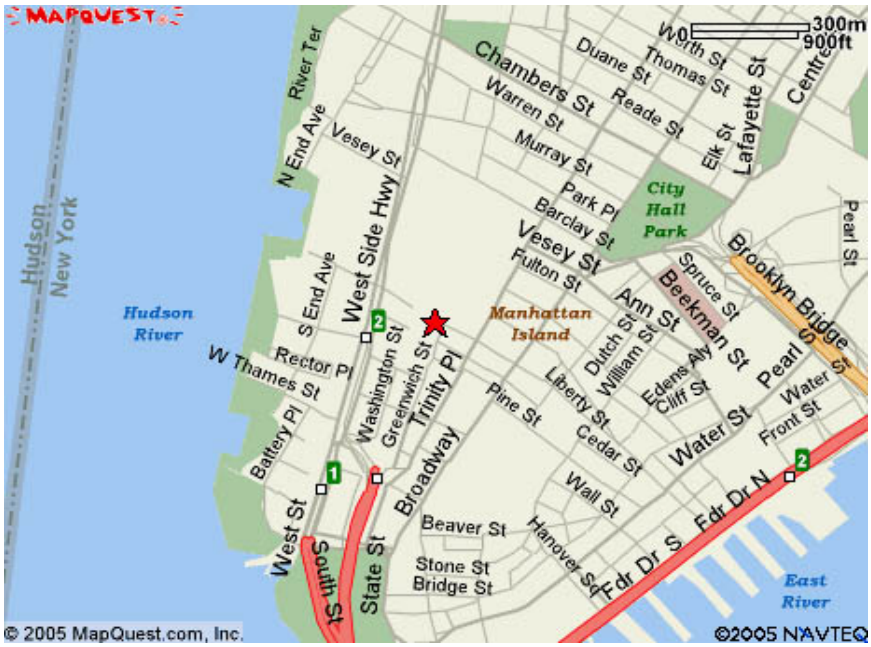
The Project began in March 2006. The Phase I abatement portion was completed to the 20th floor and the Phase II portion was completed to the 26th floor, when a fire broke out on August 18, 2007 and stopped the project. The project was under a stop work order

from August 2007 to May 2008. Among the major modifications instituted thereafter was the separation of Phase I abatement from Phase II deconstruction pursuant to a revised implementation plan that was approved by the regulators in February 2008. As a result, Phase I abatement activities restarted in May 2008. Phase II structural deconstruction portion of the Project is anticipated to restart in the third~~second~~ quarter of 2009. This plan supersedes all previous versions of Bovis's EHSP 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, 2008, 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 and structural deconstruction 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"), including the New York City Building Code 2008 and Chapter 33;~~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 ("NYSDOL"); 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 and structural deconstruction 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 has been developed to provide the minimum requirements for protecting and/or assisting project personnel, visitors, first responders (up until they assume control of an incident at the scene) and the public from the hazards that may exist during the Project. This EHSP addresses the site construction safety issues associated with the project and supplements the approved Deconstruction Plan.

Bovis shall implement and execute the scope of work in accordance with this EHSP, the Contract Documents, the Deconstruction Plan and the Building Code.

The Bovis Site Safety Manager shall require and direct his/her site safety management team to conduct daily inspections to determine that the work is conducted in accordance with this EHSP and the Deconstruction Plan and shall issue reports to the owner's representative on the status of the implementation of this EHSP and the Deconstruction Plan.

2.0 Environment, Health & Safety Management System

2.1 Responsibilities, Authority & Accountability

2.1.1 All project personnel, all persons entering the Building and all persons working in and around the Building 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: Gregory Gelish - Senior Project Manager; Ernest John Ignacio - Project Manager; Jonathon Kraft – Senior Project Superintendent and alternate Contractor Emergency Coordinator (CEC); Raymond Master – Project Health & Safety Director and CEC.

2.1.7 For purposes of New York City Department of Buildings Site Safety Plan compliance, Mark Beatini is the designated NYC DOB licensed Site Safety Manager. Mr. Kraft is the alternate designated NYC DOB licensed Site Safety Manager in Mr. Beatini's absence. The designated or alternate Site Safety Manager must be full-time Site Safety Manager when they have site safety responsibility.

2.1.8 For purposes of New York City Department of Buildings Special Inspection compliance, Thornton Tomasetti is the designated Special Inspection Agency and a Special Inspector (approved by the NYCDOB) with the required NYCDOB qualifications from Thornton Tomasetti will perform or witness the particular special inspections required by code.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.

2.1.9 All subcontractors are responsible for identifying and controlling hazards relative to their operations. Bovis shall monitor field conditions to determine the effectiveness of subcontractor compliance. Any subcontractor deficiencies identified by Bovis shall be communicated to the subcontractor for immediate corrective action. Bovis shall manage all activities in accordance with this EHSP.

2.2 Abatement and Deconstruction Risk Assessment

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

2.2.2 The Bovis Residual Risk Register (RRR) shall be completed to facilitate the risk assessment. A copy of the RRR is contained in Appendix 7.2.

2.2.3 The RRR shall be used as a guide in reviewing subcontractor pre-task safety plan submittals.

2.2.4 The RRR shall be reviewed and updated as needed.

2.3 Contractor EHS Qualification Process

2.3.1 Bovis 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 and perform the task(s) in accordance with applicable standards. Prior to subcontractor's workers commencing work onsite, they will all be instructed in their safe method of work and an awareness of safe measures for other tasks that may occur near them to eliminate the risks of the operation they are to undertake via pre-task plans. In addition to this, all workers shall receive at least one task-related training session per month for those tasks that are long duration.

2.4 Pre-Mobilization 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. Subcontractors shall be required to pass information to their workers.

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. Subcontractors shall be required to pass information to their workers.

2.6 Daily Safety Inspections

2.6.1 Daily inspections shall be conducted to determine adherence to the site EHSP. Bovis shall document all inspections and any meetings or corrective actions that result.

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 Safety Planning

2.7.1 Subcontractor supervision/foremen shall submit to Bovis pre-task safety plans that outline the new and/or revised tasks to be performed.

2.7.2 Each pre-task safety plan shall list the task steps, hazards and hazard controls associated with work activities.

2.7.3 The Bovis project team shall review and approve the plans to determine that appropriate health and safety measures are being used for the tasks and shall provide copies of the plan to the owner's representative for review and comment. Bovis shall revise pre-task plans based on comments from owner's representative.

2.7.4 Approved pre-task plans shall be maintained on site for review by regulatory agencies.

2.8 Quarterly Audits

2.8.1 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.

2.8.2 Bovis' Global Audit protocol shall be used to conduct the audit. A copy of the protocol is contained in Appendix 8.

2.9 Training

2.9.1 New-Hire Health & Safety 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 independent 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/deconstruction procedures and general safety issues. After completing the orientation, all employees and visitors must sign an EHSP and EAP training acknowledgment form prior to beginning work and issuance of access credentials.

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. 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 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 certificates. Personnel entering these areas to conduct other work ancillary to the asbestos abatement work must have the appropriate "Allied Trades Asbestos Training and Certification" 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 to regulated areas of the building that have not yet been abated or are undergoing abatement. Appropriate asbestos certificates will be required for all personnel conducting regulated tasks which warrant certification.

2.9.5 Emergency Action Plan – The details of the site emergency action plan shall be communicated to all project personnel and visitors. Periodic drills shall be conducted at a minimum monthly with appropriate regulatory agencies.

2.9.6 Incident & Injury Free Work – Project supervision and foremen will be required to attend the Bovis Incident & Injury Free Supervisors Skills Workshop. Workshops will be conducted prior to the start of deconstruction and periodically as needed during deconstruction.

2.9.7 The effectiveness of all training identified in this section shall be determined based on field observations made by Bovis. Workers will be retrained if necessary.

2.10 Disciplinary Action Program

2.10.1 All subcontractors are required to implement an effective disciplinary action program for the enforcement of project requirement relative to environment, health and safety.

2.10.2 Subcontractor 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:

- No smoking, possession of cigarettes, matches, lighters, or other flame/spark producing items within the perimeter of the site or building
- No tampering with fire protection equipment (e.g., fire extinguishers or standpipe system)
- No tampering with air monitoring equipment

- No tampering with safety and security equipment, critical barriers, isolation barriers, negative pressure ventilation systems, or other building safety systems
- No fighting
- No use or possession of drugs, alcohol or other controlled substances during work hours
- No possession of weapons on site
- No assaulting, harassing, intimidating or otherwise failing to cooperate with security guards, health & safety staff, owner or owner's representative, regulatory inspectors, supervision or co-workers
- No unauthorized removal of equipment or materials from the site

2.10.5 Bovis shall determine the effectiveness of subcontractor 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.

2.11 BuildSafeNYC Codes of Conduct

2.11.1 Bovis 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.

2.11.3 A copy of the BuildSafeNYC Codes of Conduct is contained in Appendix 7.3

2.12 Personal Protective Equipment (PPE)

2.12.1 All personnel, upon entering the site, shall adhere to the minimum personal protective equipment (PPE) requirements when on site as follows:

- ANSI compliant Hard Hats at all times
- Construction-type Work Boots at all times
- Long Pants and shirts with at least short sleeves at all times (no shorts or tank tops)
- ANSI compliant Eye Protection shall be required in all regulated areas of the building. For all other areas, personnel shall have eye protection in their possession and used as needed
- Adequate Hearing Protection in their possession and used as needed
- High-visibility traffic vests at street level and when around heavy equipment

2.12.2 Additional PPE may be required as outlined in pre-task safety plans developed for specific tasks.

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, as required, prior to receiving access privileges. Access requirements include the following:

- New-hire Health & Safety Orientation, to include Emergency Action Plan
- OSHA 10 Hour Construction Safety Course
- Asbestos and COPC Awareness Training
- NYC and NYS Asbestos Abatement Certification
- Medical Surveillance and Respirator Fit Test
- HAZWOPER Training Verification
- FDNY Fire Guard /Watch Certification
- FDNY Cutting/Burning Certification

All personnel who have fulfilled the access requirements will be issued a Photo ID card. Employees will be required to present ID cards and personal items will be subject to search 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 and shall be manned by security until the work requiring the breach is completed.

3.3 Enhanced Security Protocol

3.3.1 All personnel will be required to relinquish all smoking materials at the front gate.

3.3.2 All personnel entering/leaving the site are subject to a search of all bags and other carry items and person.

3.3.3 The Bovis No Smoking Policy is contained in Appendix 7.4

3.3.4 All vehicles will be searched prior to entry/exit from the site.

3.3.5 All visitors are subject to approval by Bovis for access to the site.

3.3.6 All personnel and vehicles may be subject to additional security requirements of other project sponsors sharing the project site.

3.4 Emergency Access

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

3.4.2 The Bovis Contractor Emergency Coordinator (CEC) will act as the onsite representative to First Responders.

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

3.4.4 The Emergency Action Plan is presented in Section 6.0.

4.0 Incident Reporting

4.1 Incident Reports

4.1.1 The CEC shall immediately notify the owner and the owner's representative via email or phone of the occurrence of any incident or near-miss.

4.1.2 An Incident Investigation Report shall be completed and submitted to the owner, the owner's representative and appropriate regulatory agencies within 24 hours (or any more expeditious timeframes required by applicable laws and regulations) following all reported occurrences or as soon as practicable thereafter. A copy of the Incident Investigation Report is contained in Appendix 7.5.

4.1.3 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 7.5.

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 approved 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 and regulations is mandatory. Each subcontractor/employer is responsible for compliance with all applicable laws and regulations. Bovis's oversight does 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 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 – each contractor or subcontractor shall inspect all its equipment and provide proper documentation to Bovis prior to mobilization to the project site to determine that it is safe to operate on site and environmentally compliant.

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 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 and deconstruction. Bovis recommended actions shall be

discussed with appropriate City agencies, including NYPD, FDNY, NYCDOB and NYCDOT, prior to implementation.

5.2.2 All facilities installed for public and adjacent property protection (e.g., sidewalk sheds, barriers, fences, scaffold, netting, window fencing, etc) shall be inspected according to the frequencies spelled out in Chapter 33 of the NYCBC 2008~~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 or~~,~~ buildings opened to the public or over occupied~~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 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 All electric, gas, water, steam, sewer, and other services lines must be shut off, capped, or otherwise controlled, at or outside the building prior to abatement and deconstruction activities, as required.

5.3.10 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.

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

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

5.4 Excavation & Trenching

5.4.1 A competent person shall inspect all trenches, in accordance with OSHA requirements. 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 keep materials at least two feet from the edge of a trench or excavation.

5.4.8 No truck or machinery shall come within 2 feet of an unsupported wall of a trench or excavation. Ramps or ladders shall be installed for excavations deeper than 4 feet.

5.4.9 Trenches shall be sloped, benched or shored.

5.4.10 Barricades shall be installed at the edges of trenches when necessary.

5.4.11 Personnel shall not work on the sides or edges of an excavation when other workers are present in the excavation.

5.4.12 If people or equipment must cross over an excavation, an appropriate crossover is required.

5.4.13 Prior to entering a trench or excavation, personnel shall examine the surfaces for signs of ground movement. Personnel shall remain aware of signs the ground may be moving throughout their tasks.

5.4.14 Personnel shall wear appropriate PPE (hard hats, safety shoes, reflective vests, lifelines, etc). 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 (not building deconstruction debris). The program shall include the disposal of solid waste and hazardous waste (if necessary). Disposal collection/storage areas will be arranged with Bovis 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 Any employee who witnesses or discovers a spill shall report it immediately to Bovis. All spills shall immediately be remediated by trained personnel, reported to 911, 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 Physical barriers shall be used to form pedestrian routes around the site as a means to separate where vehicles operate in close proximity. Pedestrian crossing points shall be provided across vehicle routes to access main entry ways to the building.

5.6.3 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 and deconstruction activities. The use of guardrail protection, lifts, nets, scaffolding, etc. is preferred as per Bovis's Fall Mandate Hierarchy of Fall Controls. Personal fall arrest systems (body harness with lanyard and anchorage) shall be used only where other 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. Climbing on, leaning over or stepping across a guardrail system is not permitted.

5.7.6 Covers for holes in floors, roofs and other walking/working surfaces shall be constructed in accordance with OSHA 29.1926.502(i)(2) and shall be capable of supporting, without failure, at least twice the weight of employees, equipment and materials that may be imposed on the cover at any one time. Covers shall be designed or approved by the engineer of record to support the above requirements.

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 constructed in accordance with OSHA 29.1926.502(i)(1) and

designed to support two times the maximum axle load of the largest vehicle expected to cross. Covers shall be designed or approved by the engineer of record to support the above requirements.

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 color-coded 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 greater than 4' x 8' must also have guardrails and toeboards installed around all sides. 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. Holes smaller than 4' x 8' shall be covered in accordance with Section 5.7.6 above.

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 for the equipment 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 so they do not tip or fall.~~.~~

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 Powered pallet jacks shall not be used above the ground floor of the building and shall not be used in any lifts or other vertical transport devices.

5.8.12 Material handling equipment shall not be used to support, raise or lower workers.

5.8.13 Material handling equipment operators shall wear seatbelts at all times, as required.

5.8.14 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. An audible alarm will sound to indicate the detection of carbon monoxide at or in excess of 35ppm.

5.8.15 Barriers, warning signs, designated walkways or other safeguards must be provided where personnel are exposed to the risk of collision.

5.8.16 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 in the approved Bovis Implementation Plan.

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 in the approved Bovis Implementation Plan.

5.9.5 Flammable and combustible materials shall not be allowed to accumulate in the building, as specified in the approved Bovis Implementation Plan.

5.9.6 Existing façade glass/plywood shall be inspected weekly and maintained in a secure fashion until such time as it is removed. Bovis shall monitor weather conditions and take appropriate precautions to protect against façade failure during normal and anticipated inclement weather conditions such as high winds, rapid temperature changes, snow, rain, etc.

5.9.7 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. Negative air ventilation equipment shall have a dedicated power supply.

5.10 Scaffolding

5.10.1 During scaffold erection and dismantling, all personnel involved in erection or dismantling shall be protected by adequate fall protection at all times.

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 All personnel working on scaffolding shall have appropriate scaffold user training, Bovis shall verify that scaffold workers have had the training prior to their working on scaffolds. All scaffold workers must demonstrate proof of training upon demand by DOB.~~training.~~

5.10.5 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.

5.10.6 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.

5.10.7 Personnel shall remain within the scaffold guardrail system when provided. Climbing on, leaning over or stepping across a guardrail system is not permitted.

5.10.8 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.

5.10.9 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.

5.10.10 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

5.10.11 The safe working load of suspended scaffolds shall be determined, posted and not exceeded. Abatement and deconstruction materials shall not be stored on suspended scaffolds.

5.10.12 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.

5.10.13 Wheels must be locked when mobile scaffold towers are in use.

5.10.14 No person is permitted to remain on a mobile scaffold tower platform while a tower is being moved

5.10.15 A three (3) color tagging system shall be used to determine the suitability of scaffold usage.

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. Personnel shall inspect ladders prior to use (e.g. for broken or damaged parts).

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 electrical work shall be designed and performed by a licensed electrical contractor.

5.12.2 All electrical systems equipment/services shall be inspected and maintained by a licensed electrical contractor.

5.12.3 Temporary power and temporary lighting shall be separate circuits.

5.12.4 Temporary string lighting shall have cages to protect bulbs from breakage.

5.12.5 Reasonable precautions shall be taken to protect all electrical equipment from physical damage and water infiltration.

5.12.6 All temporary wiring, including extension cords must have ground fault circuit interrupters (GFCI) installed.

5.12.7 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; and 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.

5.12.8 Electrical power tools and equipment must be effectively grounded or double-insulated UL approved.

5.12.9 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.

5.12.10 Only qualified personnel may work on energized equipment that is not being controlled by lockout/tagout procedures.

5.12.11 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.

5.12.12 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.

5.12.13 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.

5.12.14 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

5.12.15 Only the individual who applied the lock and tag may remove them.

5.13 Hoists & Lifts

5.13.1 Hoist installation, operation, maintenance and inspection shall be in compliance with NYCBC and ANSI A10.4.Manufacturer's specifications and limitations applicable to the operation and maintenance of all hoists shall be followed.

5.13.2 Hoists shall be inspected and maintained weekly by the ~~designated~~ engineer of record for the hoists.~~.~~

5.13.3 All modifications to the hoists shall be performed under the direction of the ~~designated~~ engineer of record for the hoists.~~.~~

5.13.4 Only authorized and trained personnel are permitted to operate the hoists and shall be in compliance with NYCBC 27-1005.A full protected entryway/landing shall be maintained to the hoists at all levels

5.13.5 No personnel shall enter the hoist travel path to perform any task, including jumps, without first having all hoist cars de-energized and locked out of service.

5.13.6 Steel plates used to bridge the gap between hoist platforms and landings shall be in compliance with NYCBC regulations.

5.13.7 One hoist shall be available as an elevator in readiness at all times for FDNY and other emergency personnel for emergency use.

5.13.8 Safe distance from the hoists shall be maintained for crane and other equipment installations.

~~5.13.6~~5.13.9 NYCDOB Elevator Division shall be notified 3 days in advance for hoist jump/down (dismantle) and for the 90 day drop test.Only authorized and trained personnel are permitted to operate aerial and scissor lifts. A list of authorized personnel shall be provided to Bovis.

~~5.13.7~~5.13.10 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.

~~5.13.8~~5.13.11 Lifts shall be inspected by the operator prior to use.

~~5.13.9~~5.13.12 Lift controls shall be tested by the operator each day prior to use to determine that such controls are in safe working condition.

~~5.13.10~~5.13.13 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.

~~5.13.11~~5.13.14 Personnel shall not attach a lanyard to any adjacent structures or equipment while working from an aerial lift.

~~5.13.12~~5.13.15 Personnel shall stand firmly on the floor of the lift platform and shall not sit or climb on the railings of the platform or use planks, ladders, or other devices to extend their reach.

~~5.13.13~~5.13.16 Personnel shall remain in the lift 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 NYC licensed crane operators who meet the physical qualifications described in ANSI B30.5 Section 5-3.1.2, the NYCBC 2008, Chapter 19.2 and/or those established by local unions.

5.14.2 Cranes shall be maintained and inspected on~~at~~ a daily basis prior to use,~~minimum weekly,~~ in conformance with the owner/manufacturer and as approved by NYC DOB.

5.14.3 All tower crane jumps shall be performed under the direction of the ~~designated~~ engineer of record for the crane and in accordance with the Bovis Global Alert on Crane Erection, Climbing and Dismantling and the most recent NYC DOB requirements for the same.

5.14.4 Crane operations manuals and load charts specific to each crane shall be in the crane cab and accessible. The Crane Notice (CN) drawings and Crane/Derrick/Mobile Work Platform Approval and Operation Application/Certificate (CD-2) for the crane must also be on site.~~on site and accessible.~~

5.14.5 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.

5.14.6 A competent person shall inspect cranes daily to ensure that they are in safe operating condition. Documentation shall be submitted to Bovis and the owner's representative/construction manager.

5.14.7 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.

5.14.8 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.

5.14.9 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.

5.14.10 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.

5.14.11 No personnel shall be permitted on or under a load lifted by crane or hoist at any time.

5.14.12 All personnel shall stay alert and pay attention to warning signals from overhead lifting equipment. Personnel shall never stand or walk under a load whether moving or stationary.

5.14.13 Always consider weather conditions when lifting operations are to be performed. Lifting operations shall be suspended or will not begin~~limited~~ whenever sustained wind speeds exceed 30 mph, or if other environmental conditions could hinder those operations.

5.14.14 Critical lift criteria shall be as stated in Rule #9 of the NYCBC, specifically loads that: (1) are at or above 95% of approved rated capacity of the crane or rigging equipment; (2) are asymmetrical or have a wind sail area exceeding 500 square feet; (3) may present a problem because of clearance, drift or other interference; (4) are fragile or of thin shell construction and are not provided with standard rigging ears; (5) require multiple cranes or derricks (tandem picks); or (6) require out of the ordinary rigging equipment, methods or setup.

~~5.14.14~~5.14.15 Tandem picks will not be performed on this project.~~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.~~

~~5.14.15~~5.14.16 Tower crane shall be inspected prior to use to determine all appropriate safety devices are in place.

~~5.14.16~~5.14.17 The main boom line shall not be used for lifting material to the crane deck area.

~~5.14.17~~5.14.18 Temporary electrical service to the tower crane shall not be via portable generator.

~~5.14.18~~5.14.19 The entire deck of the tower crane shall be protected with a guardrails system.

~~5.14.19~~5.14.20 The hatchway opening in the turntable area shall be protected by a hatchway cover.

~~5.14.20~~5.14.21 Ladder access to the tower crane deck and cab shall include required landings, guardrails and hatchway opening protection.

5.15 Rigging

5.15.1 All rigging shall be reviewed and approved by a licensed master rigger and shall be in conformance to NYCBC and ASME standards.~~.~~

5.15.2 Chokers, chains, slings, and other rigging equipment shall be inspected by the master rigger's designated competent person prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging shall be removed from service.

5.15.3 Softeners shall be used to pad slings from sharp edges.

5.15.4 Rated capacities of rigging equipment shall not be exceeded. All rigging must be tagged/labeled.

5.15.5 Rigging equipment shall only be used for the purpose it was designed and intended.

5.15.6 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.

5.15.7 Multiple tag lines shall be attached to every load being made by the crane

5.15.8 Rigging procedures will be reviewed and approved by a licensed Master Rigger and a foreman designated by the Master Rigger will be present for all picks, except for critical picks, as defined by the Building Code, for which the presence of the licensed Master Rigger will be required.~~All loads shall be rigged by a qualified rigger.~~

5.15.9 Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook.

5.15.10 Multiple lift rigging shall not be permitted.

5.15.11 Routes for suspended loads shall be pre-planned to ensure that no personnel are required to work directly below a suspended load.

5.15.12 No polyester or nylon slings shall be allowed for the purposes of rigging or for tower crane assembly, jumping or dismantling activities, in accordance with NYCDOB requirements.~~unless authorized by the NYC DOB.~~

5.16 Fire Prevention and Protection

5.16.1 The dry standpipe system shall be maintained up to one floor below the lowest deconstruction~~demolition~~ floor, pressurized with air and alarmed to identify damage.

5.16.2 Any modifications to the standpipe shall be performed by a NYC licensed master plumber.

5.16.3 The standpipe will be inspected everyday by a DOB licensed Site Safety Manager walking the entire system and the inspection will be documented in a

log book. A daily standpipe inspection report will be transmitted to the owner's representative/construction manager.

5.16.4 The dry standpipe system shall not be removed nor shall paint be removed from any system component during abatement operations.

5.16.5 FDNY certified fire guards/fire watches will conduct hourly inspections of the building from 1 hour after cessation of operations until 1 hour prior to restarting operations. The inspection will be documented both electronically by the time clock system and manually in a log book.

5.16.5 All fire inspection log books including print outs of the electronic time clock system will be made available for weekly inspection by FDNY and NYPD personnel.

5.16.6 A lock box containing updated floor plans, a copy of the MSDS sheets and other documentation for FDNY and NYPD will be located at the main site entrance. Access to this box will be restricted to FDNY and NYPD personnel and site safety personnel.

5.16.7 Any fire that ignites material, irrespective of the cause or size, must be immediately called into 911. If the fire can be extinguished locally, it is acceptable to do so by appropriate trained individuals. The Bovis Contractor Emergency Coordinator or designee will meet an FDNY representative at the Albany Street entrance and escort them to the location of the fire.

5.16.8 All personnel performing hot work shall be certified by the appropriate FDNY requirements.

5.16.9 All flammable and combustible liquids and gases required for abatement/deconstruction shall be stored in a location approved by FDNY, not subject to damage or ignition/heat sources due to deconstruction activities.

5.16.10 Flammable and combustible liquids and gases shall not be stored inside the building.

5.16.11 Combustible materials shall be stored away from construction equipment exhausts.

5.16.12 All moveable fire hazards in the vicinity of welding, cutting or heating operations shall be removed to a safe distance.

5.16.13 Fire-rated structures shall be removed last prior to structural deconstruction.

5.16.14 A strict, zero tolerance No Smoking policy shall be in effect at all times throughout the site.

5.16.15 All fire protection equipment (i.e., standpipes, extinguishers, etc.) shall be protected as deconstruction proceeds.

5.16.16 Clear access to the building for fire-fighting and emergency purposes shall be maintained.

5.16.17 Compressed gas cylinders shall be firmly secured in an upright position at all times. Valve caps shall be in place when cylinders are not in use.

5.16.18 Compressed gas cylinders must be in carts when used inside the building

5.16.19 Compressed gas cylinders shall ~~not~~ be transported via tower crane utilizing a crane cage specifically designed for the movement of compressed gas cylinders.~~.~~

5.16.20 When stored, fuel~~Fuel~~ gas and oxygen cylinders shall be separated by 20 ft. or provided with adequate fire barrier at least 5 feet high with a ½ hour fire rating.

5.16.21 Welding hoses, power cables, leads, and cords shall be adequately covered, elevated, or protected from damage when passing through work areas.

5.16.22 Flow gages and regulator shall be inspected prior to use and removed from cylinders when not in use.

5.16.23 Spark/flow-back arrestors shall be installed at the point of connection of hoses to torches and gages.

5.16.24 Welding and cutting operations shall be shielding by noncombustible or flame-resistant screens.

5.16.25 Flame-resistant blankets shall be used to control sparks produced by welding and cutting operations from traveling to lower levels or adjacent surfaces.

5.16.26 Suitable fire extinguishing equipment shall be immediately available in the work area.

5.16.27 Proper ventilation shall be provided as to maintain the level of contaminants in the breathing zone of welders below applicable permissible exposure limits. An exposure assessment shall be conducted to assess the efficacy of ventilation and other controls and to determine appropriate personal protective equipment (PPE) for a given task.

5.16.28 Welders shall wear suitable PPE to include welding hoods, goggles, gloves, and protective clothing.

5.16.29 Hot work cannot begin on or near any container or equipment that does contain or did contain flammable or combustible liquids/gases until the fire and/or hazard has been eliminated and/or protected.

5.16.30 An adequate supply of fire extinguishers (minimum 11 per floor) shall be provided and maintained in fixed locations within the building. Specifically, a fire extinguisher, rated not less than 2A, shall be provided for each 3,000 square feet of the protected floor area. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed 100 feet. Fire extinguishers must be maintained in a fully charged and operable condition and be visually inspected each month. Documentation shall be provided to Bovis.

5.16.31 When 5 gallons or more of a flammable or combustible liquid is being used, an extinguisher must be within 50 feet.

5.16.32 Extinguishers must be maintained in a fully charge and operable condition, be visually inspected each month and undergo a maintenance check each year.

5.16.33 The areas in front of extinguishers must be kept clear.

5.16.34 Extinguisher locations will be clearly marked.

5.16.35 Combustible materials stored outside should be at least 10 feet from the building.

5.16.36 Flammable/combustible liquids must be kept in approved metal containers

5.16.37 During all burning or other hot work operations, Bovis shall provide one FDNY-certified fire watch per torch operator~~operation~~ on the deconstruction floor, one FDNY-certified fire watch per torch operator~~operation~~ on the floor below and one FDNY-certified fire watch on each of the four floors below that. After each burning operation is completed, an FDNY-certified fire guard will be stationed at the point of the burning operation and conduct a first inspection for at least 30 minutes and an FDNY-certified fire guard will remain on the floors below for an additional 30 minutes after the completion of the first inspection.

5.16.38 Hoses utilized during fire watch operations will have adequate length to reach the farthest distance on a specific floor and will be connected to the domestic riser.

5.16.39 All fire watch personnel shall be required to wear a high visibility vest identifying them as fire watch.

5.17 Confined Space Entry

5.17.1 Confined space entry will only be conducted by certified personnel and training records shall be verified prior to entry.

5.17.2 Prior to entry into confined spaces, a permit must be completed identifying entry requirements.

5.17.3 Entrants must review the permit prior to each entry to verify the requirements have been satisfied.

5.17.4 The atmosphere in the space must be tested with appropriate air monitoring equipment

5.17.5 Rescue and retrieval equipment shall be available at the entry point.

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 aloft.

5.18.6 All power tools, grinders, saws and similar equipment shall be provided and operated with appropriate safety guards, shields or attachments recommended by the manufacturer.

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. All safety devices shall be inspected prior to use.

5.18.11 Worker's using powder actuated tools shall be provided with appropriate personal protective equipment, i.e. head, 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 Personnel shall not rest powder actuated tools against their bodies.

5.18.14 Before firing, workers should make sure others in the area are clear and wearing appropriate PPE (i.e. eye protection).

5.18.15 When not in use, powder actuated tools should not be left unattended.

5.18.16 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.

5.18.17 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. Personnel must familiarize themselves with what is behind the surface they are working on.

5.18.18 Only trained operators shall use powder actuated tools.

5.18.19 In case of a misfire, follow manufacturer's specifications for clearing the misfire.

5.18.20 Tools that are not in proper working order shall be removed from service.

5.18.21 All tools shall be used with the manufacturer's specified guard, shield, or other attachment.

5.18.22 Powder actuated tools shall not be used in explosive or flammable atmospheres.

5.18.23 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 as determined by DOB that are unprotected by sidewalk sheds will be cleared of personnel and secured by a 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 During Phase I, 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 adequately training and equipped with appropriate personal protective equipment (e.g., gloves and eye protection).

5.20 Pre-Deconstruction Survey

5.20.1 Prior to commencing deconstruction activities on any floor, a full walk-through inspection shall be conducted with representatives of Bovis, deconstruction subcontractor, Engineer of Record and NYC DOB licensed Site Safety Manager and Owner's representative to identify and mitigate any condition that may interfere with the safe execution of deconstruction.

5.20.2 The owner's representative will attend the walk-through inspection to monitor that it is comprehensive.

5.20.3 This inspection shall include, but not be limited to, the following:

- Adequate perimeter fall protection has been properly installed.
- Personnel and equipment fall protection has been properly installed.
- Material/debris protection has been properly installed
- Required fire protection systems are in place and operational.
- All non-structural risers have been removed
- All pipes that may have been cut during abatement operations have been removed from the lowest floor where they were cut, up to the floor where deconstruction is set to commence.

5.21 Steel Deconstruction

5.21.1 Tag lines shall be used on all loads. Tag lines shall be of adequate length to allow workers to control loads at a safe distance but not be too long as to

present the hazard of entanglement. Personnel controlling tag lines shall wear appropriate gloves. Tag lines shall never be wrapped around a worker's hand for extra grip.

5.21.2 All structural steel shall be lowered, not dropped.

5.21.3 Structural members being dismantled shall not be put under undue additional stress.

5.21.4 During steel deconstruction, continuing exposure assessments shall be made by a competent person to determine compliance with the EHSP.

5.21.5 All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement.

5.21.6 Routes for suspended loads shall be pre-planned to ensure that no personnel are required to work directly below a suspended load

5.21.7 A pre-determined drop zone shall be established which allows loads to be lowered to the ground while maintaining a safety distance from adjacent structures, equipment, other operations and personnel.

5.21.8 Approved fall protection as required in Section 5.7 above~~Perimeter safety cables~~ shall be installed at the interior and exterior perimeters prior to deconstruction activities that create fall hazards greater than 6 feet from lower levels.

5.21.9 The deconstruction subcontractor shall submit a pre-task safety plans for identified high hazard activities to detail additional deconstruction hazard controls.

5.22 Concrete Deconstruction

5.22.1 An exposure assessment shall be conducted to assess the efficacy of engineering controls and to determine appropriate personal protective equipment (PPE) for a given task.

5.22.2 Fall protection shall be installed prior to deconstruction activities that create fall hazards (i.e., floor deconstruction). Personnel shall be clear of the areas immediately below the deconstruction activities.

5.22.3 The storage of waste material and debris on any floor shall not exceed the allowable floor loads.

5.22.4 When debris is planned to be dropped through holes/shafts in the floor/walls without the use of chutes, the area onto which material is dropped shall be completely enclosed with barricades as required.

5.22.5 All floor openings, not used as material drops, shall be covered over with materials substantial enough to support the weight of any load, which may be imposed.

5.22.6 Any opening cut in a floor for the disposal of material shall be no larger than 25 percent of the aggregate of the total floor area unless the lateral supports of the floor system remain in place.

5.22.7 Walkways,~~Safe walkways,~~ not less than 18 inches wide, formed of fire resistant planks not less than 2 inches thick if wood, or of equivalent strength if metal, shall be provided and used by workmen when necessary to enable them to reach any point without walking upon exposed beams. Planks shall be secured to the structure.

5.22.8 Stringers of ample strength shall be installed to support the flooring planks, and the ends of such stringers shall be supported by floor beams or girders, and not by floor arches alone.

5.22.9 Planks shall be laid together over solid bearings with the ends overlapping at least 1 foot.

5.22.10 When floor arches are being removed, employees shall not be allowed in the area directly underneath, and such an area shall be barricaded to prevent access to it.

5.22.11 Deconstruction of floor arches shall not be started until they, and the surrounding floor area for a distance of 20 feet, have been cleared of debris and any other unnecessary materials.

5.22.12 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.

5.22.13 Floor openings/leading edges shall have curbs or stop-logs to prevent equipment from running over the edge. Additionally, equipment cabs will be kept a minimum of 4 feet from leading edges. The 4 foot perimeter will be painted on the slab.

5.22.14 During concrete deconstruction, continuing inspections by a competent person from the deconstruction subcontractor, a safety person from Bovis, a professional engineer from the engineer of record and a safety person and a professional engineer from the owner's representative 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

5.22.15 During concrete deconstruction, continuing exposure assessment shall be made by a competent person designated by the deconstruction subcontractor to determine compliance with the EHSP.

5.22.16 Masonry walls, or other sections of masonry, shall not be permitted to fall upon the floors of the building in such masses as to exceed the safe carrying capacities of the floors.

5.22.17 No masonry wall section, which is more than one story in height, shall be permitted to stand alone without lateral bracing, unless such wall was originally designed and constructed to stand without such lateral support, and is in a condition safe enough to be self-supporting. All walls shall be left in a stable condition at the end of each shift.

5.22.18 Employees shall not be permitted to work on the top of a masonry wall greater than 6 feet in height without adequate fall protection.

5.22.19 No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected and specifically instructed by the engineer of record.~~.~~

5.22.20 All materials chutes or sections thereof, at an angle of more than 45 deg. from the horizontal, shall be entirely enclosed, except for openings equipped with closures at or about floor level for the insertion of materials. The openings shall not exceed 48 inches in height measured along the wall of the chute. At all stories below the top floor, such openings shall be kept closed when not in use.

5.22.21 The entrance to the drop zone area shall be protected with a timber barrier moved with the help of a bulldozer, or similar equipment, to provide access into that area. A competent employee shall be assigned to control the operation of the barrier and control access to personnel during the operation.

5.22.22 When operations are not in progress, the area surrounding the discharge end of a chute shall be securely closed off.

5.22.23 Any chute opening, into which workmen dump debris, shall be protected by netting, toeboards and a substantial guardrail approximately 42 inches above the floor or other surface on which the men stand to dump the material. Any space between the chute and the edge of openings in the floors through which it passes shall be solidly covered over.

5.22.24 Where the material is dumped from mechanical equipment or wheelbarrows, a securely attached toe board or bumper, not less than 4 inches thick and 6 inches high, shall be provided at each chute opening.

5.22.25 Chutes shall be designed and constructed of such strength as to eliminate failure due to impact of materials or debris loaded therein.

5.22.26 The deconstruction subcontractor shall submit to Bovis a pre-task safety plan for identified high hazard activities to detail additional deconstruction hazard controls. Bovis shall review and submit the deconstruction subcontractor's pre-task safety plan to the owner's representative.

5.23 Noise and Hearing Conservation

5.23.1 Subcontractors will monitor all work areas with potential excessive noise utilizing hand held decibel meters and submit the results to Bovis and the owner's representative.

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 1910.101, 29 CFR 1910.95 and 29 CFR 1926.52.

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 Bovis must prepare and file a noise mitigation plan with the NYC Department of Environmental Protection, consistent with recently enacted noise regulations. The deconstruction subcontractor shall provide information for the completion of this plan and is required to comply with its contents.

5.24 Demobilization

5.24.1 Subcontractor personnel shall surrender access badges prior to permanently leaving the site.

5.24.2 Subcontractors shall remove all equipment, materials, and wastes associated with their operation.

5.24.3 Prior to leaving the site, subcontractor personnel shall submit results of exit medical surveillance, where applicable.

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 Emergency Action Plan shall be illustrated on updated drawings posted throughout the project site.

6.1 Reporting Emergencies

6.1.1 All site personnel, upon discovering an emergency situation, shall immediately call 911 or, if they are unable to call 911 (e.g. – they are in containment), notify their foreman who will contact the Bovis CEC to call 911. The Bovis Project CEC shall assume responsibility as the onsite representative to the First Responders and arrange for an escort at the South Gate – Main Entrance.

6.1.2 In the event of an emergency situation resulting in the implementation of any aspect of the EAP, Bovis will notify the owner, the owner's representative and the appropriate City, State and Federal Agencies. The owner will then implement the relevant sections of the Community Notification Plan.

6.1.3 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 Emergency Evacuation Plan

6.2.1 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.

6.2.2 In the event the standpipe alarm sounds and a determination is made that the system is not operational, all work within the building will be shut down with a systematic evacuation implemented.

~~6.2.2~~6.2.3 In the event of a power failure that requires a building evacuation, both Stairway A and B are equipped with battery backup emergency egress lighting. Additionally, photoluminescence exit signs are located throughout the building at stairway and egress door locations. Battery backup emergency egress lighting leading to and directing personnel to the alternate emergency egress stairway, located outside the Coin Vault area has been installed. In the event work will be performed at night, battery backup emergency egress lighting shall be installed above the door entrances of both stairways on the floor side prior to the commencement of night work. All site personnel and visitors shall exit the building upon notification of an emergency should the Bovis CEC determine an

evacuation to be warranted. The Bovis CEC shall contact the SECs via radio when such a determination has been made.

~~6.2.3~~6.2.4 Evacuation from the inside the building will be conducted via internal Stairways A & B, except during deconstruction, as provided in paragraph~~s~~ 6.2.~~6.2.4 and 6~~.2.5 below. At least one code compliant internal means of access/egress shall be maintained at all times using a combination of Stairwells A and B and transfer corridor(s). These stairs and corridor(s) will not be blocked in any manner during deconstruction operations.

~~6.2.4~~6.2.5 ~~During deconstruction activities, the upper elevations of the stairways may require re-routing personnel to exterior scaffold for access/egress to/from the deconstruction floor.~~

~~6.2.5~~6.2.6 The external scaffold shall be available as a means of access to and egress from the building.

~~6.2.6~~6.2.7 Upon reaching the ground floor, personnel shall report to the designated assembly point. The Bovis CEC shall review the location of assembly points as necessary for their suitability (e.g. – accessible, enough space, etc).

~~6.2.7~~6.2.8 Personnel shall assemble at either of the following assembly points listed below for a head count:

- On site Assembly
  Main yard Northwest of North Loading Dock
- Off-Site Assembly Points
  Primary Location – Southwest corner of Rector and Washington Street
  Alternate Location - West Side of Trinity Place and Thames Street

~~6.2.8~~6.2.9 The Bovis CEC shall designate, at the time of the incident, which assembly location shall be used. This will be communicated to each Subcontractor Emergency Coordinator (SEC) during the building evacuation process. Each SEC shall be responsible to report to the CEC on the personnel accountability received from Supervisors/Foremen for personnel under their individual span of control and identify any personnel that may be missing and are presumed to still be in the building. The CEC shall report personnel accountability information to first responders upon their arrival on site.

~~6.2.9~~6.2.10 Subcontractor daily manpower reports, badge drop folders at hoist, and security access badge scan records shall be utilized to verify Supervisor/Foremen accountability.

~~6.2.10~~6.2.11 All assembly point locations and emergency evacuation routes shall be posted throughout the site. See Appendix 7.6.

~~6.2.11~~6.2.12 Evacuation drills shall be conducted on a monthly basis.

~~6.2.12~~6.2.13 The CEC will be responsible for setting up and coordinating evacuation drills. During such drills, stairwells A and B will be utilized for egress to the ground floor.

~~6.2.13~~6.2.14 The CEC 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.

~~6.2.14~~6.2.15 Emergency notification during an actual emergency shall be conducted through a hand-held radio communication system. As a redundancy, air horn blasts shall be used via the hoist operators as follows:

- Continuous long blasts of air horns, repeated:
  IMMEDIATELY EVACUATE THE BUILDING

~~6.2.15~~6.2.16 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.

~~6.2.16~~6.2.17 No personnel shall leave the assembly point until their supervisors are directed by the Bovis CEC that it is safe to leave.

~~6.2.17~~6.2.18 Following an evacuation, no personnel shall be allowed to re-enter the Building until cleared by appropriate First Responder, safety, agency and technical personnel investigating the impact of the incident to the Building.

~~6.2.18~~6.2.19 The Bovis CEC will provide the "all clear" signal via radio to the SECs once it is safe to return to normal work operations.

6.3 Emergency Contacts

Medical Emergency – 911 St. Vincent's Hospital and Medical Center 170 West 12th Street New York, NY 10011 Main Number: (212) 604-7000	**LMDC/LMCCC Project Manager** Name: Kevin Finnegan Phone: 646-739-1358 Mobile: 914-393-8218
Fire/Spill Emergency – 911	**LMDC/LMCCC Director of Construction** Name: Rick Livingston Phone: 212.442.3780 Mobile: 347.585.5856
Police – 911	**Bovis Project Health & Safety Director/Contractor Emergency Coordinator** Name: Ray Master

	Phone: 646.235.5642
NYC Department of Buildings Name: Chief of BEST Phone: 212-669-7043 Name: Dmitri Dits~~Robert Iulo~~ Phone: 917-709-6186~~-543-0353 (DOB)~~	**Owner's Representative** **URS Corp.** Name: Jaime Daniels Cell Phone: 914. 574. 1373 Trailer: 212-227-2280
Utilities Emergency Water: 911 and 311 Gas: 911 and 1.800.75.CONED Electric: 911 and 1.800.75.CONED	**Community Emergency Response Team ("CERT")** Name: Anthony Notaro~~S. Baumgarten~~ Phone: 646.270.0114~~-338- 8371~~
Bovis Alternate Site Safety Manager/Alternate Contractor Emergency Coordinator Name: Jon Kraft Phone: 917.578.5882	**Bovis Site Safety Manager** Name: Mark Beatini Phone: 646.302.7122

6.4 Site Logistics

6.4.1 A Site Logistics map, with emergency evacuation routes, is located in Appendix 7.7 as a reference.

7.0 Appendices

7.1 The Deconstruction Plan (available at LMDC's website www.renewnyc.com)
7.2 Bovis Residual Risk Register
7.3 BuildSafeNYC Codes of Conduct
7.4 Bovis Lend Lease No Smoking Policy
7.5 Bovis Incident Investigation Report and Flash Report
7.6 Emergency Egress Plan/Assembly Points Map
7.7 Site Logistics Map