



City of New York Department of Design and Construction

WTC EMERGENCY PROJECT

Environmental Health and Safety Protocol 06-1

June 13, 2002

HANDLING OF WTC RECOVERY MATERIAL FROM 130 LIBERTY STREET

130 Liberty sustained damage as a result of the World Trade Center towers attacks on September 11, 2001. As a result of the collapse of the towers, materials were deposited on several floors in the building. There was an initial search of the material by uniform services and ultimately the building was returned to the owner, Deutsche Bank. Recently, human remains were identified in materials located at 90 West Street. Based on this discovery, FDNY requested to re-enter buildings along Liberty Street. Several buildings were re-entered and the remaining WTC recovery materials in those buildings were searched. As part of this process, a scope of work was developed for 130 Liberty.

After the property at 130 Liberty was returned to Deutsche Bank, the bank began evaluating their property using environmental consultants. Preliminary testing was conducted and as a result of FDNY's interest in certain areas of the building, Deutsche Bank conducted additional testing of the WTC recovery material. The results of the environmental sampling are attached to this protocol.

Removal of WTC recovery materials in outlying buildings to the WTC Emergency site has been handled in accordance with the WTC Emergency Project Environmental Safety and Health Plan, Revision 1, February 7, 2002. This protocol applies to Bovis Lend Lease (BLL) employees, subcontractors, and other WTC recovery personnel performing WTC recovery material removal from 130 Liberty Street, as a continuation of work activities associated with the WTC Emergency Project. In order to accommodate concerns of Deutsche Bank, this protocol was prepared. At the same time, Deutsche Bank has filed with NYC DEP an Asbestos Project Notification for additional work in the building not related to the removal of recovery materials. These are two separate projects and this protocol does not apply to work covered under the notification.

Medical Surveillance

- No special medical surveillance requirements specific to this protocol exist beyond the need for respiratory medical qualifications and fit testing associated with the use of negative pressure air-purifying half-mask respirators.

Safety Protocols are considered a part of the WTC Emergency Project ESH Plan.

Training and Qualifications

- All material handlers, supervision, and support personnel must have completed the site orientation-training program including respiratory protection training.
- Any additional training necessary to complete tasks safely.
- All training must be documented. All records must be available for review.
- All material handlers preparing material to be transferred from 130 Liberty to Fresh Kills shall possess qualifications equivalent to those required for similar operations. As a best practice, the material handling subcontractor shall provide personnel with New York City and State asbestos handler certification or equivalent.
- Only qualified and trained operators shall be authorized to operate any construction equipment.

Qualified and Competent Person Requirements

- A qualified person(s) (i.e., FDNY) is required to oversee the collection and removal of the WTC recovery material. If human remains are identified prior to the removal of the WTC recovery material, only said qualified personnel shall handle the human remains.
- A competent person(s) (i.e., subcontractor supervision) shall supervise the material handling and removal operations and provide strict adherence to this protocol.

Safety Equipment**130 Liberty Street**

- PPE - Double disposable full body coveralls; hard hats, safety glasses, and respiratory protection.
- Respiratory Protection -
 - General Area - Half facepiece respirator with P-100, acid gas, organic vapor cartridges/filters.
 - Areas Containing Mold - Full facepiece respirator with P-100 filter.
- Full-body harness with lanyard attached to an approved anchorage point for employees exposed to fall hazards greater than 6 feet above a lower level.
- Hearing protection as needed when working in close proximity to equipment generating noise levels at or above the OSHA action level and PEL.

Fresh Kills

- PPE - Disposal full body coveralls; hard hats, safety glasses, and respiratory protection.
- Respiratory Protection - Half facepiece respirator with P-100, acid gas, organic vapor cartridges/filters.

Project Planning

- All personnel involved in the execution and implementation of this protocol shall read and understand the contents of this protocol prior to commencing operations within the scope of this protocol.
- The site emergency action plan shall be in place and executed as needed. Provisions of the plan shall be communicated to all affected parties.

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- Representative samples of WTC recovery material must be collected for TCLP analysis following standard US EPA sample collection methods and submitted to a qualified environmental laboratory by the end of shift.

Project Execution

Safe Work Operations and Practices at 130 Liberty

- All work inside 130 Liberty will be performed in accordance with safety and health procedures established by Deutsche Bank for their building.
- Each floor shall be handled as its own work area.
- Work area segregation on each floor shall utilize the construction barriers already in place along the North core wall. The scope of this work activity shall not extend south of the North core wall boundary.
- Only WTC recovery material shall be removed from the building. No other materials shall be handled.
- The subcontractor shall require a lockable storage area (approximately 1,000 sf) to stage operations.
- Electrical power, including required lighting, shall be available on each work floor.
- Lighting within the work area shall be provided via halogen light stands, or equivalent, except within PPE change-out areas where incandescent light strings shall be utilized.
- All power brought into the work area shall be GFCI protected.
- Water shall be available on each floor.
- Water waste generated during the operation shall be drummed and removed in accordance with applicable requirements, or filtered to 5 microns and discharged into nearby sanitary sewers.
- Where required, all polyethylene, wood, and other materials used on the project shall be fire retardant.
- The East-West barrier, along the North side of the core shall be completed, where required, to prevent the potential spread of recovery material into the South side of the building.
- An elevator shall be designated for use to transport bagged recovery material to the transport containers. The elevator and the path to the elevator shall be plasticized.
- In the event of power failure or other unforeseeable circumstances, the use of a crane w/skip pan for unloading material shall be available.
- All WTC recovery material within work areas shall be misted with water during handling to minimize the generation of dust.
- Large obstructions on the floors shall be moved to an area to allow access for the recovery material removal.
- Recovery material shall be collected and placed into clear polyethylene bags and double bagged prior to transport to collection containers.
- Bags shall be labeled with the appropriate floor numbers for identification.
- All PPE used during the operation shall be handled as conventional waste.
- Each work area shall be cleared of all visible recovery material only.
- Sampling of the workers and work environment will be routinely conducted to insure worker safety.
- FDNY personnel shall declare areas complete after final acceptance.

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Safe Work Operations and Practices at Fresh Kills

In addition to standard operating procedures for the handling of WTC recovery material, the following additional requirements will be implemented to address concerns of Deutsche Bank:

- WTC recovery material prepared for FDNY search shall be on nonporous tarps.
- WTC recovery materials will be sifted using equipment at the landfill.
- After sifting, the materials from 130 Liberty will be segregated and protected from weather until it can be repackaged in a manner consistent with how it was shipped to fresh kills.
- Materials will be repackaged in a manner consistent with how it was removed from 130 Liberty.
- Packaged material will be immediately loaded on a truck provided by Deutsche Bank and removed from the landfill.
- Deutsche Bank will relocate the material to a Class 1 hazardous waste facility of its choosing.

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