1.0 Introduction

The Weill Cornell Medicine (WCM) Asbestos Management Program protects the WCM community from the health hazards related to asbestos exposure. This is accomplished through management of the material that is in place as well as material being abated as a result of construction and renovation projects.

Asbestos is a mineral rock mined from the earth in much the same way as metals and other minerals. Asbestos was used heavily in the construction industry due to its unique properties that demonstrate resistant to heat, fire, chemical, and moisture erosion. Asbestos is a fibrous material that can easily become airborne. As a result of its resistance properties, asbestos was used in a variety of ways in building construction:

- Thermal system insulation (pipes, tanks, ducts) – heat, cold
- Surfacing materials (ceilings, walls) – fire resistance, acoustical purposes
- Other products (floor and ceiling tiles, glues and adhesives, fireproofing in doors)
- Roofing – weather resistance.

Asbestos or Asbestos Containing Material (ACM) is not hazardous if kept in place and remains in good condition. It becomes a potential health hazard when the material is disturbed and is rendered friable. Friability is when the material becomes damaged, becomes airborne and respirable. This can arise from daily elements of physical or mechanical pressure or through abatement (removal) of the material. This program will address these issues and outline the management of the ACM to eliminate the potential hazard to the WCM community and meet all regulations on the federal, state and city levels.

2.0 Table of Contents

1.0 Introduction .................................................. 1
2.0 Table of Contents ........................................... 1
3.0 Objective ...................................................... 1
4.0 Applicability .................................................. 2
  4.1 Locations .................................................... 2
  4.2 Type of Work .............................................. 2
5.0 Responsibilities ............................................. 3
  5.1 Environmental Health and Safety (EHS) ............... 3
  5.2 Senior Directors of Engineering & Maintenance and Capital Planning ... 3
  5.3 Project Directors and Project Managers ............... 3
  5.4 Engineering & Maintenance Personnel .............. 4
  5.5 Independent Monitors .................................. 4
  5.6 Asbestos Abatement Contractors ..................... 4
  5.7 Non-Asbestos Contractors ............................ 4
6.0 Asbestos Categories ........................................ 4
  6.1 Not Potential Asbestos-Containing Material ....... 4
  6.2 Surfacing Materials ..................................... 4
  6.3 Thermal System Insulation ............................ 4
  6.4 Miscellaneous Materials ............................... 4
7.0 Asbestos Identification and Surveys .................... 5
  7.1 Building Review .......................................... 5
  7.2 Visual Inspections ....................................... 5
  7.3 Bulk Sampling ........................................... 5
  7.4 Laboratory Analysis .................................... 5
  7.5 Air Sampling ............................................. 5
8.0 Regulatory Written Notification ......................... 5
  8.1 EPA Requirements ...................................... 5
  8.2 New York State Requirements ....................... 5
  8.3 New York City Requirements ........................ 6
3.0 Objective
Since most WCM buildings were constructed when ACM was still allowed in building materials, Environmental Health and Safety (EHS) has developed this Asbestos Management Program. This program shall serve as the official procedure for WCM which has a policy of in-place management. Hence, ACM is only disturbed or removed when absolutely necessary. This means only during building renovations, demolition, or when the material is found to be damaged or have a potential for damage. In recognizing the health impact associated with asbestos, WCM is committed to the Asbestos Management Program. This program shall be implemented by EHS.

4.0 Applicability

4.1 LOCATIONS
This asbestos management program covers the entire campus of WCM including the following (and new properties as they are acquired):

- A, B, C, D, LBRC, E, Whitney, (1300 York Avenue)
- Olin Hall (445 East 69th Street)
- Lasdon House (420 East 70th East Street)
- S Building (515 East 71st Street)
- S Citigroup Imaging Center (516 East 72nd Street)

Rental space renovation is also covered under this plan (including but not limited to):

- Oxford House (422 East 72nd Street)
- 418 East 71st Street
- F Building (Baker Tower – 525 East 68th Street)
- Finance Offices (100 Broadway)
- MRI Center (St James Tower – 416 East 55th Street)
- DV Building (425 East 61st Street)
- The Blood Center (310 East 67th Street)
CONTINUED: Asbestos Management Program

4.2 TYPE OF WORK
Work that is covered by this plan includes but is not limited to:

- Planned renovation and demolition projects.
- In-house repairs.
- General maintenance of asbestos materials in visible areas.

5.0 Responsibilities

5.1 ENVIRONMENTAL HEALTH AND SAFETY (EHS)
- Serves the WCM Asbestos Coordinator.
- Coordinates and maintains blanket contracts with vendors for small projects.
- Acts as the emergency contact in all matters pertaining to asbestos.
- Establishes, implements, and maintains the Asbestos Management Program.
- Assigns Independent Monitors to perform asbestos surveys.
- Oversees all asbestos surveys.
- Approves and maintains the listing of all consultants, contractors, and laboratories that are used for any asbestos activities.
- Coordinates bidding process with independent monitor and abatement contractors.
- Provides annual training to WCM Engineering and Maintenance (E&M) employees who may come in contact with ACM.
- Provides information to all employees and students in matters pertaining to asbestos.
- Directly supervises the asbestos independent monitors with regards to surveys, sampling and management of asbestos abatement projects.
- Interacts with asbestos contractors to ensure practices meet standards of WCM.
- Oversees and interprets all monitoring and survey data.
- Authorizes all Asbestos Notification Forms (e.g. ACP-7).
- Provides required notification prior to asbestos abatement (postings).
- Retains all required recordkeeping.

5.2 SENIOR DIRECTORS OF ENGINEERING & MAINTENANCE AND CAPITAL PLANNING
- Ensure the requirements of the Asbestos Management Program are followed by personnel under their supervision.
- Ensure all WCM employees that may come into contact with potential ACM receive annual training as required by OSHA (OSHA 1910.1001(j)(iv)).

5.3 PROJECT DIRECTORS AND PROJECT MANAGERS
- Notify EHS of all new projects regardless how small or minor the project. Assist EHS in reviewing all projects to determine if ACM will be disturbed.
- Provide architectural project drawings and written work scope to the Independent Monitor.
- Assure adequate funding is included in project budgets to address all required abatement.
- Prevent the disturbance or removal of potential ACM material until verified as non-ACM by EHS.
- After receiving Independent Monitor’s written report of survey results, coordinates asbestos contract management activities including bid solicitation and contract award.
- Coordinates all contracts with abatement contractors for large jobs not covered by a blanket contract.
- Provide general project oversight during the asbestos project in the form of shutdowns, access, and security notifications.
- Notify EHS of any changes to the scope of the project.
- Ensure no asbestos abatement activities are performed without an Independent Monitor present.
- Inform EHS during the course of the project if any suspect ACM is disturbed.
5.4 ENGINEERING & MAINTENANCE PERSONNEL
- Inform supervisors of any potential ACM material.
- Prevent the disturbance or removal of potential ACM material until verified as non-ACM by EHS or Independent Monitor.
- Inform EHS of location of suspect material as part of the Operations and Maintenance portion of this Management Program.

5.5 INDEPENDENT MONITORS
- Perform surveys and prepare asbestos abatement specification documents ("bid documents") for assigned projects as directed by EHS.
- Provide written report of survey scope and results to Project Manager and EHS.
- Perform the duties of a project monitor and air monitoring of designated asbestos abatements.
- Maintain all required licenses and certifications (refer to Appendix A).
- Ensure compliance with all federal, state and local requirements during asbestos activities.
- Keep EHS informed on all matters relating to asbestos projects.
- Use only approved laboratories and licensed monitors for asbestos activities.
- Provide air monitoring results to EHS
- Provide EHS close-out report packages at completion of abatement activities.

5.6 ASBESTOS ABDATION CONTRACTORS
- Maintain all required licenses and certifications (refer to Appendix A).
- Ensure compliance with all federal, state and local requirements during asbestos activities.
- File documentation with regulatory agencies as needed and provide copies to EHS.
- Follow recommendations of Independent Monitors.
- Coordinate service connections and disconnections with Project Manager (e.g., electrical and water connections and HVAC shutdowns).
- Keep EHS and Project Managers informed on all matters that concern WCM with regards to the project.
- Provide EHS required close-out packages with necessary documentation upon completion of the project (to include all waste manifests, filings, etc.).

5.7 NON-ASBESTOS CONTRACTORS
- Alert Project Managers immediately of potential asbestos situations discovered in the course of their work.
- Prevent the disturbance or removal of potential ACM material until verified as non-ACM by EHS.

6.0 Asbestos Categories
According to the U.S. Environmental Protection Agency (EPA), ACM is material that contains greater than 1% asbestos. ACM is classified into the following categories:

6.1 NOT POTENTIAL ASBESTOS-CONTAINING MATERIAL
Wood, metal, and glass are the only materials not classified as potential ACM. All other materials are classified as potential ACM.

6.2 SURFACING MATERIALS
ACM sprayed, troweled or otherwise applied to surfaces (walls, ceilings, members) for acoustical, decorative or fireproofing insulation.

6.3 THERMAL SYSTEM INSULATION
Insulation used to exhibit heat transfer to prevent condensation of pipes, boilers, tanks, ducts, and various other compounds, of hot and cold water systems and Heating Ventilation and Air Conditioning (HVAC) systems. Examples include pipe lagging, pipe wrap, block, boiler insulation, gaskets, and ropes.
6.4 MISCELLANEOUS MATERIALS
Other products and materials which include floor tiles, ceiling tiles, roofing felt, concrete pipe, outdoor siding, and fabrics (which can be friable or non-friable).

7.0 Asbestos Identification and Surveys
Due to the large amount and diversity of ACM found within the College, several approaches to asbestos identification are utilized. These include building review, visual inspection, bulk sampling of suspect materials, and the assumption that certain materials commonly found in the WCM facilities contain asbestos. Laboratory analysis of samples is the final confirmation step in identifying ACM. Asbestos surveys can only be conducted by certified and licensed asbestos contractors.

7.1 BUILDING REVIEW
The first step is to review the building history to determine when the building was constructed. If the building’s original construction commenced on or after January 1, 1974, an asbestos survey is not required. All buildings listed in section 4.0 of this manual must be surveyed prior to any work.

7.2 VISUAL INSPECTIONS
A visual inspection of the building by a qualified professional is used to quantify the amount of ACM in the building if the suspect material is found to contain asbestos. Visual inspection information from confirmed ACM is then used to demarcate areas to be resurveyed on a periodic basis. Changes in the condition of the ACM can then be tracked over time. If the material is seen to be deteriorating, funding is requested for removal or repair, whichever best suits the situation.

7.3 BULK SAMPLING
To ascertain a positive asbestos identification and assess the composition, it is required that a bulk sample be taken. This sample is sent to an independent laboratory certified to analyze samples of this nature. To avoid possible non-survey personnel exposure, the concern areas are sampled when not occupied whenever possible. Samples are collected by a certified individual from either EHS or an asbestos consultant.

7.4 LABORATORY ANALYSIS
Laboratory analysis is the final confirming step in identifying a substance as ACM. This entails the use of Polarized Light Microscopy (PLM) which will determine asbestos content from other building materials.

7.5 AIR SAMPLING
Air sampling is performed before, during and after an asbestos abatement project and to monitor air, when needed, in the event of an accidental asbestos fiber release. Air samples will be collected by a designated asbestos consultant. Samples are sent to an accredited laboratory as with bulk samples. Results will be reported to EHS for evaluation.

8.0 Regulatory Written Notification

8.1 EPA REQUIREMENTS
The US EPA requires that an abatement contractor notify the EPA regional office ten business days prior to the abatement of a large ACM project involving friable material. This notification must be in writing.

8.2 NEW YORK STATE REQUIREMENTS
New York State requires that an abatement contractor notify the Department of Labor (DOL) ten days prior to the abatement of a large ACM project. This notification must be in writing and must be accompanied by a fee.
8.3 NEW YORK CITY REQUIREMENTS

8.3.1 ACP-7 Notification

New York City requires the abatement contractor to notify the Department of Environmental Protection (DEP) 7 days (one week minimum) prior to the start of the project (ACP-7). Depending on the size of the project, different fees are required. If an ACP-7 is required to be filed, sufficient time must be allowed for the development, review and signing of the form before work is scheduled to begin. The ACP-7 requires the review and signature of the Abatement Contractor, Independent Monitor, Asbestos Coordinator (EHS) and the Executive Vice Provost.

8.3.2 Worksite Safety Plan

The development and submission of a work site safety plan is required whenever abatement negatively impacts fire or life safety systems such as sprinklers, alarms or egress routes. The plan must be signed by a licensed Engineer or Architect and may take up to six weeks to obtain approval.

8.3.3 ACP-9 Notification

If there are any deviations to RCNY Title 15/Code 56 procedures for abatement, the contractor must file an ACP-9 which allows for a variance in the procedures of the project but must be made two weeks in advance of the proposed start date.

8.3.4 ACP-8 Notification

Any modification to the information provided on the ACP-7 (change of project dates, amount of ACM, location of project, contractor, owner, and/ or consultant) must have an ACP-8 filed 24 hours prior to the start of the project or that portion of the project being modified.

8.3.5 ACP-5 Notification

The asbestos consultant will submit an ACP-5 for all work filed with the Department of Buildings, or to EHS for non-filed work, in the event that:

- Asbestos is not present in the work area.
- Asbestos is present but will not be disturbed in the work area.
- Less than 25 LF or 10 SF of ACM will be disturbed.

8.4 SUMMARY OF NOTIFICATIONS

<table>
<thead>
<tr>
<th>Project Size</th>
<th>US EPA</th>
<th>NYS Code 56</th>
<th>NYC Title 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>10 business days (friable only)</td>
<td>10 days</td>
<td>7 days</td>
</tr>
<tr>
<td>≥ 160 SF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 260 LF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td>NONE</td>
<td>NONE</td>
<td>7 days</td>
</tr>
<tr>
<td>&gt; 25LF, &lt;260 LF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 10SF, &lt;160 LF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td>NONE</td>
<td>NONE</td>
<td>NO, but ACP 5 may apply</td>
</tr>
<tr>
<td>≤ 25 LF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 10SF</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.5 POSTING OF NOTIFICATIONS

It is the responsibility of EHS to post the DOL required notifications of abatement for large abatement projects 10 days prior to the abatement. The written notification shall be posted at all entrances to the work area on the same floor, in adjacent spaces, by the elevator on the same floor, one floor above and below, and inside the elevator servicing the floor. Postings for small and minor projects are not required but remain optional depending on the circumstances.
9.0 Types of Asbestos Occurrences

The three types of asbestos occurrences at WCM are as follows:

- Planned Asbestos Projects
- Emergency Abatement Work
- Operations and Maintenance Work (O&M)

9.1 PLANNED PROJECTS

Planned projects occur when an area is designated for renovation or construction. The Asbestos Survey / Abatement Process Flow for Projects process flow diagram (Appendix B) further illustrates this process.

1. Project Manager notifies EHS of the project including written project scope.
2. EHS will conduct initial assessment to determine if there is a potential asbestos project which requires further investigation.
   - If determined not to be a potential asbestos project, EHS will inform the Project Manager that they can proceed.
   - If an ACP-5 is required for a Department of Buildings’ filing, then an Independent Consultant will be assigned by EHS to survey, sample and complete an ACP-5 form.
   - If determined to be a potential asbestos project, then EHS will designate an Independent Monitor to perform a complete survey for the project scope area as specified by the Project Manager.
3. Independent Monitor will perform a full survey of all areas that are impacted by the project. An asbestos survey report will be prepared by the Independent Monitor and provided to EHS and the Project Manager.
4. Independent Monitor will prepare asbestos abatement project specification documents (“bid documents”) if asbestos is present, which address abatement in all areas proposed for project. Bid documents will be provided to EHS.
5. EHS will provide the bid documents and a list of approved Asbestos Abatement Contractors to the Project Manager to initiate the bid and award process.
6. Project Manager coordinates the abatement contract award process, including identifying the bidder list from the EHS-approved asbestos abatement contractor list, bid solicitation process with Independent Monitor, and contract award. Asbestos Abatement Contractors will submit bid proposals to the Project Manager for the project.
7. Asbestos Abatement Contractor, Project Manager, Independent Monitor and EHS will establish a start date for the project. No work will begin until all parties are in agreement on the start date.
8. Requests to expedite any portion of the abatement process must be made in writing from the Project Manager to EHS.
9. EHS, WCM and the Independent Consultant will complete all required filings which are initiated by the asbestos contractor.
10. EHS will post Department of Labor required postings 10 days prior to the start of the project.
11. Project Manager is responsible for all shut downs, hookups and security notifications.
12. Independent Consultant oversees the Asbestos Abatement Contractor and monitors for compliance with all federal, state, and local requirements for asbestos activities. Independent Consultant will keep EHS and the Project Manager apprised of the asbestos abatement progress and/or related issues.
13. EHS will visit and enter the worksite as needed.
14. Asbestos Abatement Contractor will provide asbestos abatement close-out reports including waste manifests with waste type and quantity to EHS. EHS will also approve both the hauler and waste site where the waste is taken.
15. Independent Monitor will provide air monitoring and asbestos abatement close-out reports to EHS.
16. EHS maintains asbestos close-out documentation and other regulatory documentation.
17. If any additional asbestos work is needed during the course of the project, the project manager will coordinate with EHS.

9.2 EMERGENCY PROJECTS

In the event of an accidental asbestos fiber release episode (asbestos material rendered friable), it is essential that all work operations cease and EHS is notified immediately. This condition may be due to a steam pipe explosion, a water line break or leak, or a fire, among other incidents. It is imperative that E&M, Capital Planning, and other departments affected be notified immediately. EHS will determine if the situation should be classified as an emergency and suggest the best course of action to be taken.

If necessary, an enclosure must be built with airtight walls, ceilings, or barriers around the ACM. The purpose of constructing an enclosure is to isolate ACM from building occupants and the building environment. The following steps must be taken to minimize the risk of exposure to asbestos fibers in emergency scenarios.
9.2.1 Emergency Procedure

In the event of an emergency, EHS shall:

- Respond and investigate the work area.
- Close the area off immediately.
- Contact an approved asbestos abatement contractor and consultant.
- Prepare a site-specific Emergency Asbestos Resolution Plan.
- Coordinate the notification of regulatory agencies by the asbestos abatement contractor.
- Notify the EPA when more than one pound of ACM is released into the environment which may result in exposure to employees, tenants, or visitors as per the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)(SARA Title III).
- Allow re-occupancy of the area once final air monitoring verifies safe occupancy.

9.3 OPERATIONS AND MAINTENANCE

EHS has developed an operations and maintenance program to track and monitor those areas where asbestos containing materials are and to institute a repair program to ensure the safety of all personnel who access these areas.

9.3.1 Notification

- Mechanical Equipment Rooms and other areas that contain visible asbestos will have signs indicating the presence of ACM.
- A sampling strategy will be developed to identify all sampled material as either non-asbestos or ACM.
- Signs will be posted to notify occupants of scheduled asbestos abatement projects in adjacent areas.
- EHS will be notified by E&M in the event ACM is found or work needs to be done which involves the disturbance of potential ACM or if damaged ACM is found in the area where personnel will be working.

9.3.2 Surveillance

- All areas that contain visible ACM will be regularly surveyed to assess the condition of the material on a scheduled basis.
- ACM in poor condition will be remediated as soon as possible.
- Any department, in-house staff or Project Manager (notified by contractors) that observes damaged ACM will notify EHS as soon as possible.

9.3.3 Work Practices

- No disturbance of ACM is allowed by WCM personnel and contractors. Asbestos abatement will only be conducted by an approved licensed asbestos abatement company. Entrance to the asbestos worksite before and during abatement can only be done by qualified designated individuals wearing the appropriate personal protective equipment.
- EHS must be notified for any maintenance work that may disturb ACM.
- For accidental disturbance of ACM, emergency procedures must be followed (see 9.2)
- Cleaning of vinyl asbestos tiles using buffers will only be conducted using speeds below 300 rpm. Stripping of these floors will use these low speed buffers and wet cleaning methods.
- Prior to entering above ceiling areas (or crawl spaces) that contain ACM (those that have been identified as containing spray-on insulation), EHS should be contacted to evaluate the space. Before work is to proceed, the area should be blocked off. After work, the ceiling should be replaced.

10.0 Training

Asbestos Awareness training for E&M, Housing (e.g., Custodial Services) and Facilities Development will be provided on an annual basis. Training for other departments and contractors will be provided as needed.
11.0 Record Retention and Availability

1. EHS will maintain all reports from surveys, monitoring and abatement projects, and training reports and records.
2. EHS will be responsible for determining the distribution of all reports.
3. Workforce Health and Safety will maintain records of medical surveillances related to asbestos and respiratory protection. These records must be retained for 30 years after the employee’s last date of employment.

12.0 Definitions

**Abatement** shall mean any and all procedures physically taken to control fiber release from asbestos-containing materials. This includes removal, encapsulation, enclosure and repair.

**Abatement Activities** shall mean all activities from the initiation of work area preparation through successful clearance air monitoring performed at the conclusion of an asbestos project or minor project.

**Aggressive Sampling** shall mean a method of sampling in which the individual collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.

**Air Sampling** is the process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure utilized for asbestos follows the NIOSH Standard Analytical Method 7400 or the provisional transmission electron microscopy methods developed by the USEPA and/or National Institute of Science and Technology which are utilized for lower detectability and specific fiber identification.

**Ambient Air Sampling** shall mean measurement of determination of airborne asbestos fiber concentrations outside but in the general vicinity of the worksite.

**Area Air Sampling** is any form of air sampling or monitoring where the sampling device is placed at some stationary location.

**Asbestos** is any hydrated material silicate separable into commercially suitable fibers, including but not limited to chrysotile (serpentine), amosite, crocidolite, tremolite, anthrophyllite, and actinolite.

**Asbestos-Containing Material** (ACM) is asbestos or any material containing more than 1% asbestos.

**Asbestos-Containing Waste Material** is asbestos-containing material requiring disposal.

**Asbestos Contaminated Object** is any objects that have been contaminated by asbestos.

**Asbestos Handler** is an individual certified to disturb, remove, encapsulate, repair, or enclose asbestos material.

**Asbestos Supervisor** is an individual certified to supervise the handlers during asbestos projects and ensures the proper and safety procedures are being adhered to.

**Asbestos Investigator** certified by the DEP as having satisfactorily demonstrated his/her ability to identify the presence and evaluate the condition of asbestos.

**Asbestos Inspector** certified by the DOL as having satisfied his/her ability to sample and evaluate the presence of asbestos.

**Asbestos Project** is any form of work performed in connection with the alteration, renovation, modification, or demolition of a building or structure which will disturb (e.g., remove, enclose, encapsulate) more than 25 linear feet or more than 10 square feet of asbestos containing material

**Authorized Visitor** is the building owner and his/her representative, and any representative of a regulatory agency having jurisdiction over the project.

**Clearance Air Monitoring** is the employment of aggressive air sampling technique with a volume of air collected to determine the airborne concentration of residual fibers and shall be performed as the final abatement activity.

**Commissioner** is the commissioner of the NYC Department of Environmental Protection.

**Contractor** is any public authority or any other governmental agency or instrumentality thereof, self-employed person, company, unincorporated association, form, partnership or corporation any owner or operator thereof, which engages in an asbestos project or employs individuals engaged in an asbestos project(s).

**Demolition** is the dismantling of a building, including all operations for which a demolition permit from the NYC Buildings Department is required.
DEP is the New York City Department of Environmental Protection.

Disturb is any action taken to alter, change or stir, such as but not limited to the removal, encapsulation, or repair of ACM.

ELAP is the Environmental Laboratory Approval Program administered by NYS Department of Health.

EPA is the U.S. Environmental Protection Agency.

Fiber is an acicular single crystal or a similarity elongated polycrystalline aggregate which displays some resemblance to organic fibers by having such properties as flexibility, high aspect ratio, silky luster, axial lineation and others, and which has attained its shape primarily through growth rather than cleavage.

Fixed Object is an object which cannot be removed from the work area.

Friable Asbestos is any asbestos or ACM that can be crumbled, pulverized or reduced to powder when dry, by hand or other mechanical pressure.

HEPA Filter is a high efficiency particulate air filter capable of trapping and retaining 99.97% of particles greater than 0.3micrometers.

HEPA Vacuuming is vacuuming equipment with a HEPA filter.

Large Asbestos Project is a project involving the disturbance of 260 linear feet or more of ACM or 160 square feet or more of ACM.

Minor Project is a project involving the disturbance of LESS than 25 linear feet or 10 square feet of ACM.

NIOSH is the National Institute for Occupational Safety & Health.

NYSDOH is the New York State Department of Health.

NYSDOL is the New York State Department of Labor DOL is the NYS Department of Labor who administers Code 56.

OSHA is the U.S. Occupational Safety & Health Administration.

Personal Protective Equipment (PPE) includes, but is not limited to gloves, eye protection, footwear, head gear, and respiratory protection.

Phase Contrast Microscopy (PCM) shall mean the measurement protocol for the assessment of fiber content in air. (NIOSH Method 7400).

Polarize Light Microscopy (PLM) is the measurement protocol for the assessment of the asbestos content in bulk materials.

Project Monitor is any person other than asbestos contractor or an employee or agent thereof, who oversees the scope, timing, phasing, and/or remediation methods to be utilized on any asbestos project shall possess a valid project monitor certificate and shall have such certificate or a copy thereof in his/her possession at all times while working on the project.

Removal shall mean the stripping of any asbestos-containing materials from surfaces or components of a facility or taking out structural components in accordance with 40CFR 61 Subparts A and M.

Renovation is an addition or alteration or change or modification of a building or the service equipment thereof, that is not classified as an ordinary repair as defined in §27-125 of the Administrative Code of the City of New York.

Repair shall mean the corrective action using specified work practices e.g., glovebag, plastic ten procedures, etc. to minimize the likelihood of fiber release from minimally damaged areas of ACM.

Replacement Material is any material used to replace ACM that contains less than .01 percent asbestos.

Small Asbestos Project is a project involving the disturbance of more than 25 and less than 260 linear feet of ACM or more than 10 and less than 160 square feet of ACM.

Transmission Electron Microscopy (TEM) is the measurement protocol for the assessment of the asbestos fiber content of air.

Variances shall mean permission applications from the regulating agency stating that for specific reasons the regulations as they are written need to be altered due to the particular situation. In order to be granted a variance, it must demonstrate why procedures cannot be followed as written. Copies of all variances must be conspicuously posted.

Visible Emissions shall mean any emissions containing particulate material that is visually detectable without the aid of instruments.
Work Areas are designated rooms, spaces, or areas of the building or structure where asbestos abatement activities take place. For glovebag procedures, the work area shall also include the areas contiguous to where the procedure takes place.

Worker is an asbestos handler and/or asbestos handler supervisor.

13.0 References

Occupational Safety and Health Administration (OSHA)

Environmental Protection Agency (EPA)
http://www.epa.gov/ttn/atw/eparules.html

New York State
Industrial Code Rule 56 (12NYCRR Part 56).
http://www.labor.state.ny.us/business_ny/employer_responsibilities/safety/s56.htm

New York City
RCNY Title 15, Chapter 1.
Appendix A – Required Asbestos Certifications

Personnel Certifications

The following personnel Certifications are required as part of the Asbestos Management Program in order to perform asbestos-related work at WCM facilities.

<table>
<thead>
<tr>
<th>Function</th>
<th>Required Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Sampling</td>
<td>• NYSDOL Asbestos Inspector</td>
</tr>
<tr>
<td></td>
<td>• NYCDEP Asbestos Investigator</td>
</tr>
<tr>
<td>Air Monitoring during abatement</td>
<td>• NYSDOL Asbestos Air Sampling Tech.</td>
</tr>
<tr>
<td>Abatement project design</td>
<td>• NYSDOL Project Designer</td>
</tr>
<tr>
<td>Project Monitoring</td>
<td>• NYSDOL Asbestos Project Monitor</td>
</tr>
<tr>
<td>Removes asbestos containing materials</td>
<td>• NYSDOL Asbestos Handler/Supervisor</td>
</tr>
<tr>
<td></td>
<td>• NYCDEP Asbestos Handlers License</td>
</tr>
<tr>
<td>Supervisor of ACM removal</td>
<td>• NYSDOL Asbestos Supervisor,</td>
</tr>
<tr>
<td></td>
<td>• NYCDEP Asbestos Supervisors License</td>
</tr>
</tbody>
</table>

Company / Contractor Certifications

The following regulatory (NYSDOL, NYCDEP, NYSDEC, ELAP, NVLAP, NYSDOH, and US EPA) certifications are required by consultants or companies that perform asbestos-related work at WCM facilities.

<table>
<thead>
<tr>
<th>Function</th>
<th>Required Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Abatement Contractor:</td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td>• NYSDOL Asbestos Contractors Handling License</td>
</tr>
<tr>
<td>Personnel</td>
<td>• NYSDOL Asbestos Handler/Supervisor</td>
</tr>
<tr>
<td>Crew Supervisor</td>
<td>• NYSDOL Asbestos Supervisor</td>
</tr>
<tr>
<td>Asbestos Consultant (Air Monitoring):</td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td>• NYSDOL Asbestos Contractors Handling License</td>
</tr>
<tr>
<td>Personnel</td>
<td>• NYSDOL Asbestos Project Monitoring and/or</td>
</tr>
<tr>
<td></td>
<td>• NYSDOL Asbestos Air Sampling Tech</td>
</tr>
</tbody>
</table>

Laboratory Certifications

All laboratories must be able to demonstrate proof of accreditation as required by NIOSH in order to analyze bulk or air samples taken from WCM facilities.

<table>
<thead>
<tr>
<th>Function</th>
<th>Required Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarized Light Microscopy (PLM) (Bulk Samples)</td>
<td>• PAT program for PLM Analysis</td>
</tr>
<tr>
<td></td>
<td>• NYSDOH ELAP for solid and hazardous waste (PLM asbestos)</td>
</tr>
<tr>
<td>Transmission Electron Microscopy (TEM)</td>
<td>• PAT program for TEM Analysis</td>
</tr>
<tr>
<td>(Non-friable organically bound bulk samples)</td>
<td>• ELAP for solid and hazardous waste (PLM asbestos)</td>
</tr>
<tr>
<td></td>
<td>• NIST NVLAP for analysis of asbestos fibers</td>
</tr>
<tr>
<td></td>
<td>• ELAP for air and emissions (PCM2 analyte fibers and TEM analysis for asbestos)</td>
</tr>
<tr>
<td>Phase Contrast Microscopy (PCM)</td>
<td>• PAT program for PCM analysis</td>
</tr>
<tr>
<td></td>
<td>• ELAP for air and emissions (PCM2 analyte fibers and TEM analysis for asbestos)</td>
</tr>
<tr>
<td>Lab Analyst</td>
<td>• NIOSH 582 certificate</td>
</tr>
</tbody>
</table>
### Waste Haulers / Landfill Requirements

<table>
<thead>
<tr>
<th>Function</th>
<th>Required Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Waste Hauler</td>
<td>• NYSDEC Waste Transporter Permit</td>
</tr>
<tr>
<td></td>
<td>• DOT Permits</td>
</tr>
<tr>
<td>Asbestos Waste Landfill</td>
<td>• EPA approved landfill</td>
</tr>
<tr>
<td></td>
<td>• When applicable, landfill must have local authorization/approval</td>
</tr>
</tbody>
</table>