

# EXHIBIT

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## Asbestos Containing Materials Operations And Maintenance Program

### PROPERTY

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NOVA PROJECT NO: HP21-3961  
REPORT DATE: MAY 13, 2021



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## 1.0 STATEMENT OF PURPOSE

This Operations and Maintenance (O&M) Program describes the policies, required procedures, and work practices established for the management of suspect asbestos-containing materials (ACMs) as identified in Section 3.0. This material is located at 200 Winthrop Street South in St. Paul, MN. An O&M Program minimizes the potential for facility employees, tenants, maintenance personnel, contractors/vendors, and the general public to be exposed to ACMs or airborne asbestos fibers. Asbestos is a naturally occurring mineral silicate whose fiber-like particles are known to cause mesothelioma, asbestosis, and lung cancer. Through the development and implementation of a procedural manual for company associates outlining the necessary procedures for emergency situations, associate training, periodic inspections, testing and record keeping, an O&M Program can meet the needs of the facility in the management of ACM and Presumed Asbestos Containing Materials (PACM).

The O&M Program, when implemented, provides a level of assurance that the most prudent steps are being taken to minimize, and in some instances eliminate, the potential for asbestos exposure for facility employees, tenants, maintenance personnel, vendors, and the general public. Through this directive the O&M Program becomes a document that provides evidence of the corporation's awareness of the liabilities and outlines the necessary steps to minimize exposure potential.

This ACM O&M Program shall remain in effect until further notice.

This ACM O&M Program is not designed to function as a training manual; additional information will be required of the training programs. The facility is subject to Occupational Safety and Health Administration (OSHA), United States Environmental Protection Agency (USEPA), and the State of MN asbestos-related rules and regulations.

## 2.0 GENERAL RESPONSIBILITIES OF ALL O&M PROGRAM PARTICIPANTS

The O&M Program is structured around the cooperation of building management, maintenance staff and outside Contractors who service the building(s). The roles and responsibilities of personnel in administering and implementing the O&M Program are detailed below.

### 2.1 Responsibilities of the Building Owner

- Overall design and co-ordination of the O&M Program;
- Overseeing implementation of initial and ongoing training of the O&M Program participants;
- Maintaining familiarity with building surveys and asbestos-related policies, as well as state-of-the-art removal procedures, operations and maintenance activities involving asbestos, respiratory protection for asbestos, and emergency procedures for fiber release episodes;
- Handling communication with tenants and employees;
- Authorizing expenditures for training, equipment, and outside services;
- Identifying the O&M Coordinator;
- Authorizing services to be performed by outside contractors;
- Maintaining facilities documentation and overall project files; and
- Conducting long-term monitoring and assess corrective action requirement.

### 2.2 Responsibilities of O&M Coordinator

The O&M Coordinator will administer this program, and has authority to direct all Building Maintenance Supervisors, Maintenance Employees, and outside Contractors with regard to operations and maintenance activities involving asbestos in these buildings. Specific responsibilities of the O&M Coordinator include:

- Assisting in the implementation of initial and on-going training of program participants, including maintenance employees;
- Maintaining familiarity with building surveys and asbestos-related policies, as well as state-of-the-art removal procedures, operations and maintenance activities involving asbestos, respiratory protection, and emergency procedures for release episodes;
- Arranging services to be performed by outside Contractors and maintaining required documentation;
- Sign posting and labeling when appropriate;
- Providing authorization for emergency maintenance work;

- › Visiting the proposed job site, if necessary, (or designating a supervisor to do so) to determine proper procedures for a requested maintenance activity; and
- › Maintaining project files with appropriate forms for all activities involving asbestos.

### **2.3 Responsibilities of Building Maintenance Supervisors**

- › Participating in training to maintain familiarity with asbestos control measures for operations and maintenance activities performed in the buildings.
- › Performing special work practices for maintenance activities involving asbestos.

### **2.4 Responsibilities of Building Maintenance Personnel**

- › Attending and participating in appropriate training regarding asbestos-handling procedures.
- › Taking precautions not to disturb building materials potentially containing asbestos during their work.

### **2.5 Services to be Performed by Asbestos Abatement Contractors**

This O&M Program requires the use of licensed asbestos abatement contractors for all asbestos abatement projects as defined by applicable state regulations.

### **2.6 Regulation of Other (Non-Asbestos Abatement Contractors)**

Any outside Contractor whose work may bring them into contact with asbestos in the building must be familiar with the rules and procedures outlined in this plan manual, and the laws of the State of MN concerning asbestos abatement.

### 3.0 MATERIALS MAINTAINED IN THIS PROGRAM

No inspection or sampling was performed during the preparation of this ACM O&M Program. However, suspect materials previously identified include the following: textured ceiling material; ceiling tile; wall system components; drywall and joint compound; plaster; vinyl floor tile and associated mastics; linoleum and associated mastics; carpet mastic; window/door caulk; window glazing; spray on fireproofing; thermal system insulation; and roof materials. Materials were reported to be in generally good condition throughout the Property. Based on the reported condition of the ACM and PACM, it can effectively be managed in place under the provisions of an O&M Program.

The OSHA regulation 29 CFR 1926.1101, requires certain construction materials to be presumed to contain asbestos, for purposes of this regulation. All TSI, surfacing material, and asphalt/vinyl flooring that are present in a building constructed no later than 1980 and have not been appropriately tested are PACM.

Note: There may be supplemental information (reports, addendum, etc.) that may alter the listed materials above. If so, these supplemental documents must be maintained with this O&M Program.

No known or suspect ACM or PACM shall be disturbed or involved in any work, in any way, prior to laboratory analysis for asbestos content.

## 4.0 TRAINING PROGRAM

The key element in initiating and carrying out this Asbestos O&M Program is the building maintenance staff. This group is responsible for daily awareness/inspection of ACM and PACM as they perform their tasks. The maintenance staff will report any indication of potential problems resulting from changes of ACM and PACM condition, area use, or in maintenance practices. The following elements should be presented in the training programs. The form in the Appendix should be used to document training of individuals.

### 4.1 Training for Participants in O&M Program

The O&M Coordinator shall ensure that all initial and ongoing training requirements in the O&M Program are met. Training requirements for program participants are described below.

### 4.2 Training for O&M Coordinator

The O&M Coordinator is responsible for overseeing all O&M activities. He/she must be familiar with state-of-the-art removal procedures, appropriate procedures for operations and maintenance activities involving asbestos, respiratory protection for asbestos, and emergency procedures for release episodes.

At a minimum, the O&M Coordinator shall be well-versed in the following areas:

- Information regarding asbestos and its various uses and forms;
- Information on the health effects associated with asbestos exposure, and medical surveillance requirements;
- Locations of building materials identified as potentially containing asbestos in the Phase I Environmental Assessment;
- Guidance for recognition of damage, deterioration and delamination of asbestos-containing building materials;
- Contact person for questions regarding asbestos;
- Information on the use of respiratory protection and other personal protection measures;
- Summary of regulatory requirements pertaining to asbestos operations and maintenance activities,
- Legal and liability considerations related to asbestos;
- Inspection procedures for asbestos building surveys;
- Criteria for hazard assessment of asbestos; and
- Requirements for record-keeping and report preparation concerning asbestos operations and maintenance activities.



### 4.3 Training for Maintenance Employees

All maintenance employees shall attend appropriate training on asbestos-handling procedures. At a minimum, this training will cover:

- Information regarding asbestos and its various uses and forms.
- Information on the health effects associated with asbestos exposure and medical surveillance requirements.
- Locations of building materials potentially containing asbestos.
- Guidance for recognition of damage, deterioration and delamination of asbestos-containing building materials.
- Use of Work Permit System;
- Emergency Situations; and
- Contact person(s) for questions regarding asbestos.

### 4.4 Minimum Qualifications for Asbestos Abatement Contractors

All outside Contractors and their workers performing asbestos abatement work shall be licensed and certified to perform asbestos abatement work by the State of MN.

## 5.0 O&M MANAGEMENT SYSTEM

The management system outlined in this manual addresses all maintenance which is thought likely to disturb building materials known to contain and potentially containing asbestos. Program participants must be able to recognize operations and maintenance jobs which will involve these materials and select the proper work practices required for these jobs.

### 5.1 Job Request and Approval for Maintenance Work

Before initiating any maintenance work, which may involve disturbance of building materials potentially containing asbestos, the Building Maintenance Supervisor shall submit a “Job Request for Maintenance Work Involving Asbestos” form to the O&M Coordinator. This form covers information on the location of the requested work, the type of maintenance needed, and whether the requestor is aware of any building materials potentially containing asbestos in the vicinity of the requested work which is likely to be disturbed.

Using this form, the O&M Coordinator shall refer to relevant sections of this Program manual to determine required work procedures. The O&M Coordinator or a designated supervisor may need to visit the site of the requested maintenance activity. The “Approval Form for Maintenance Work Involving Asbestos” is then completed to grant or deny authorization for the work. The form is then sent to the Building Maintenance Supervisor and the work may proceed, if approved. A copy of the form shall be placed in the Coordinator’s files. Applicable forms are included in the Appendix.

### 5.2 Work Performed by Asbestos Abatement Contractor

This Program also addresses work conducted by outside contractors, when the work may involve asbestos.

The O&M Coordinator shall require asbestos abatement Contractors to submit the following information with any proposal for work which may involve asbestos:

- A copy of the Contractor’s license;
- A listing of employee’s names and copies of licenses for all employees who will be involved in the work;
- A resume for the supervisor who will act as the “competent person” as defined by the OSHA Asbestos Standard 29 CFR 1926.1101;
- Historical air monitoring data presenting representative examples of the Contractor’s previous experience with similar projects;
- A description of the Contractor’s asbestos medical surveillance plan; and,
- References, including contact name and telephone number, for similar projects completed within the past year.

## 6.0 PERIODIC SURVEILLANCE ACTIVITIES

The materials potentially containing asbestos present in these buildings may deteriorate with age, the effects of building occupancy, and accidental damage. To monitor the condition of these materials in the buildings, a program of periodic inspection is necessary. This Program is designed to periodically evaluate potential airborne asbestos fiber concentrations in a building and alert the O&M Coordinator to adverse situations, which may require special corrective action.

A visual inspection of suspect materials is to be conducted periodically. These inspections will be conducted by a qualified Contractor or trained employee. The inspections will include re-evaluation of friable and non-friable materials containing asbestos, or presumed to contain asbestos, identified in Section 3.0. The materials are to be reexamined for general condition, and any signs of deterioration are to be documented. If a change is noted for the materials in a specific location, photographs shall be taken, and if necessary, abatement procedures initiated.

If suspect ACMs are discovered, which were not previously sampled, an addendum shall then be added to Section 3.0 of this O&M Program, noting the location, and condition of this material(s).

## 7.0 PROGRAM PRACTICES

### 7.1 O&M Project Files

The file information shall include copies of the following forms, filed in chronological order, by building name:

1. Job Request for Maintenance Work and Maintenance Work Approval;
2. Documentation of Emergency Work;
3. Records for all Contracted Asbestos Abatement Work; and
4. Documentation of Training.

### 7.2 Asbestos Cleaning Procedures

Maintenance staff shall avoid disturbing any suspect materials which have not been tested and determined to not contain asbestos. These disturbances may cause the release of asbestos fibers, even if the asbestos-containing materials have been encapsulated.

## 8.0 EMERGENCY PROCEDURES

In the event of the accidental disturbance of building materials containing asbestos or potentially containing asbestos, the O&M coordinator should be notified. The coordinator shall implement appropriate actions regarding the disturbance, including but not limited to, 1) Stopping the activity that is disturbing suspect or confirmed materials; 2) Determining whether the materials are asbestos-containing; and 3) Identifying what further actions are required before the activity can continue.

An example of disturbance for asbestos includes:

1. The cutting, sawing, sanding, abrasion and/or drilling through the material (such as with wallboard, joint compound, and/or wall/ceiling textures [like “popcorn ceilings”]).
2. Damage of intact material (any confirmed or suspect materials).
3. Dry buffing or dry stripping of un-waxed vinyl floor tiles (specific to floor tiles and mastics).

Suspect ACMs are summarized in Section 3.0.

Any construction materials not previously tested are presumed to contain asbestos until proper sampling and analysis proves otherwise. In addition, suspect ACMs may be located within walls, ceiling cavities and other non-accessible areas, which were not accessed during the limited surveys. Pre-caution should be used when accessing these areas and coming in contact with materials not previously tested.

## 9.0 DEFINITIONS

Accessible Material	Any material access to which can be gained by any means other than significant destruction of building components, or, for the purposes of describing building occupant activities, a material subject to disturbance by routine use or maintenance activities
Asbestos	The general name given to a number of naturally occurring hydrated mineral silicates each of which possesses a specific crystalline structure, is incombustible in air, and is separable into fibers. Asbestos includes the asbestiform varieties of Chrysotile (serpentine), Crocidolite (riebeckite), Amosite (cummingtonite - grunerite), Anthophyllite, and Actinolite.
Asbestos-Containing Material (ACM)	May be defined, as by the EPA, as any friable material or product containing greater than one percent asbestos or, by convention, as any material or product which contains >1% asbestos.
Asbestos Debris	Pieces of material that can reasonably be identified by color, texture or composition as being traceable to a known asbestos-containing application. May mean dust, if the dust is determined by analysis to be ACM.
Bulk Samples	Samples of bulk material; in the case of asbestos, suspect asbestos-containing material. Chain-of-custody formal procedures for tracking samples and ensuring their integrity.
Chatfield "Standard Operating Procedure"	A sample preparation procedure for materials other than friable insulation in which, by means of acid digestion and ashing, it is possible to separate asbestos fibers from hard-to-analyze matrices. This preparation technique is used most often in conjunction with Electron Microscopy (EM) and is considered state-of-the-art for materials such as floor tile, plaster and textured ceiling material.
Encapsulation	Treatment of ACM with a material that surrounds or embeds asbestos fibers in an adhesive or cementitious matrix to inhibit the release of fibers. The encapsulant creates a membrane over the surface of the material (bridging encapsulant) or penetrates the material or binds its components together (penetrating encapsulant).
Enclosure	An airtight, impermeable, permanent barrier around ACM to prevent the release of asbestos fibers into the air.
EPA	United States Environmental Protection Agency.
Fair	As used to describe material condition, damage is more prevalent or severe than on materials rated as good.
Fiber Release Episode	Any uncontrolled or unintentional disturbance of ACM resulting in airborne asbestos fiber emission.

Friability	The physical characteristic of any solid that describes its ability to be broken down to a powder or dust. A highly friable material is one that can be easily crumbled by hand pressure. A moderately friable material is one that can be crumbled with some difficulty by hand pressure or by mechanical means. A low friability material is one that may require mechanical means to crumble. While the condition of a material does not constitute a measure of its friability, weathering and deterioration can increase the friability of a material.
Glovebag	A plastic enclosure with built-in gloves which is placed with an airtight seal around asbestos-containing pipe lagging or other materials such that they may be removed or repaired without generating airborne fibers.
Good	As used in the context of material condition, integrity of the material is generally complete, with possible small areas of delamination or indications of limited contact or water damage. The mechanism to retain the insulation in its original position (e.g. cloth wrapping over pipe insulation) is still present.
Heating Ventilation and Air Conditioning (HVAC) System	The system of pipes, ducts, and equipment, (air conditioners, chillers, heaters, boilers, pumps, fans) used to heat, cool and filter air and move it through a building. The HVAC system is one of several mechanical systems found in most buildings.
High-Efficiency Particulate Air (HEPA) filter	A filtering system capable of trapping and retaining at least 99.97 percent of all particles 0.3 micrometers in diameter or larger.
Homogeneous Application	An application of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color, texture, and vintage of application.
Lock-down	Application of a sealing material to ensure that any residual microscopic fibers remaining following asbestos removal are prevented from becoming airborne.
Mechanical System	A building component system: can include the plumbing system, elevator system, and others. (see Heating Ventilation and Air Conditioning system (HVAC).)
NIOSH	United States National Institute of Occupational Safety and Health.
Operations and Maintenance (O&M) Program	A program of work practices and training and management procedures designed to maintain ACM in good condition. An O&M Program ensures clean-up of asbestos fibers previously released and prevention of further release by minimizing and controlling ACM disturbance or damage. An O&M program should be implemented at all buildings with ACM.
Optical Microscope	A microscope that uses the transmission of light through lenses to magnify a specimen for examination. Capable of resolution of fibers or other materials down to approximately 0.25 micrometers in diameter.
OSHA	United States Occupational Safety and Health Administration.
Phase Contrast Microscopy (PCM)	An optical microscopic technique used for counting fibers in air samples. PCM does not distinguish between asbestos and non-asbestos fiber types. The PCM method currently recognized is referred to as NIOSH 7400.
Physical Assessment	Evaluating asbestos-containing material to determine its current condition and potential for future disturbance.

Plenum	A space in a building, other than a duct or shaft, designed to transport air. Plenums are commonly the space between a suspended ceiling and the floor above.
Polarized Light Microscopy (PLM)	An optical microscopic method for the identification of asbestos in bulk samples in which the sample is illuminated with polarized light.
Poor	As used in the context of material condition, material is obviously damaged with evidence of delamination or inadequate adhesion of the material to its substrate.
Presumed Asbestos Containing Material (PACM)	Presumed Asbestos Containing Material means thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as "PACM" may be rebutted pursuant to paragraph (k)(5) of 29 CRF 1926.1101.
Quality Assurance (QA)	A process designed to provide confidence that the quality control program is being applied effectively. The process includes an auditing procedure designed to evaluate all known policies and procedures that affect the quality of results.
Quality Control (QC)	A program comprised of the operational procedures to ensure that data are of known and acceptable precision and accuracy.
Response Action	Any method, including removal, encapsulation, enclosure, repair, or Operations and Maintenance Program that minimizes harm to human health and the environment from the hazards and effects of ACM.
Scanning Electron Microscopy (SEM)	Magnification 450-15,000x. Analytical technique used for air and bulk sample analysis. May use Energy Dispersive Spectroscopy (EDS) to positively identify chemical elements present in the sample. Method involves counting fibers (discriminating between fibers less than and greater than 5.0 microns length) in a known surface area of a filter or bulk material.
Specifications	A written set of standards, procedures, and materials for the abatement of asbestos. Includes contract documents detailing the Scope of Work of the project and defining Contractor, Building Owner and Consultant responsibilities.
Transite	A trade name for asbestos cement wallboard or pipe.
Transmission Electron Microscopy (TEM)	State-of-the-art analytical method for air and bulk sample analysis. Uses high magnification (typically 15,000x) to identify asbestos fibers. May utilize Energy Dispersive Spectroscopy (EDS) and/or Selected Area Electron Diffraction (SAED) to confirm asbestos and to identify the type of asbestos present. Recommended for final clearance air samples and for bulk analysis of samples with difficult-to-analyze matrices (e.g., plaster, vinyl tile). Provides the most definitive analysis of asbestos currently available.



# **APPENDIX A: GENERAL SAFETY CONSIDERATIONS**

## GENERAL SAFETY CONSIDERATIONS

(This section is reprinted from Appendix D of the EPA's White Book for use by personnel performing O & M activities, and is supplied for informational purposes only)

**Ronald L. Stanevich**  
**NIOSH Division of Safety Research**

This guide was primarily developed to provide recommendations concerning worker respiratory protection within the asbestos abatement industry. However, employers must not lose sight of the safety hazards their employees are exposed to in performance of their work. Asbestos abatement operations can take place in a variety of industrial, commercial and public settings. Each has unique potential safety hazards that the employer must control. However, nearly all abatement operations have some common safety hazards. With proper job planning and supervision, the employer can control both the health hazards and the safety hazards faced by their workers. The more common safety hazards associated with abatement operations and general recommendations to control them are discussed below. Sources for more specific safety information are listed to supplement and support the applicable OSHA regulatory standards.

### I. ELEVATED WORK SURFACES

The nature of asbestos abatement tasks usually requires workers to work from ladders, scaffolds, manlifts, or other elevated surfaces, which creates the potential for fall injuries. Slips and falls from ladders, scaffolds, and other elevated surfaces result in a major portion of the construction industry injuries. Many of these can be prevented by implementing a few control measures:

#### A. General

- (1) Avoid use of makeshift work platforms by providing portable ladders and scaffolds.
- (2) Ensure that job-built elevated work surfaces are inspected by a competent person other than the individual who erects it.
- (3) Avoid working from elevated surfaces where possible. Consider use of wands for spraying amended water or scrapers with extended handles.

#### B. Ladders

Eighty percent of ladder-related accidents result from improper use or application.

- (1) Workers should face the ladder when climbing up, down, or working from it.
- (2) Workers should not carry objects in their hands while ascending or descending ladders. While working from a ladder they should hold on with at least one hand.
- (3) Ladders should not be used as a substitute for planks, runways, or walkboards.
- (4) Ladders should be maintained in good condition. Defective ladders should be destroyed so that no one uses them by mistake.
- (5) Ladders should have safety feet in good condition to keep the ladder from slipping and cutting through polyethylene floor covers.
- (6) Ladder rungs/steps should be kept free of contaminants such as amended water and buildup of asbestos waste.
- (7) Employees should work no higher than the fourth step/rung from the top of the ladder.
- (8) Employees should not attempt to "reach" distant objects from a ladder; other platforms should be used.
- (9) Wood or fiberglass ladders should be provided to help control exposure to electrical hazards.
- (10) Employees should not straddle the space between a ladder and another object.

(11) Employees should make a visual inspection of ladders before each shift.

**Additional information sources:**

**Ladders** -- publication no. ISBN 0-919465-05-6

Construction Safety Association of Ontario, 74 Victoria Street, Toronto. Ontario Canada M5C 2A5

**Safety Requirements for Portable Wood Ladders** -- ANSI A14.1 - 1982

**Safety Requirements for Job-Made Ladders** -- ANSI A14.4 - 1979

**Safety Requirements for Portable Reinforced Plastic Ladders** -- ANSI A14.5 - 1982

American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018

**Portable Ladders** -- Industrial Safety Data Sheet #665, National Safety Council, 444 North Michigan Avenue, Chicago Illinois 60611

**C. Scaffolds**

Falls from scaffolds result in about 2,000 injuries per month in the United States. These can be reduced by

- (1) providing guardrails around the perimeter of the work surface regardless of scaffold height
- (2) securing scaffold decks against slippage
- (3) keeping scaffold uprights vertical and pinned together when stacked
- (4) ensuring vertical members are braced to keep the scaffold plumb and level
- (5) decking the entire top portion of the work surface in lieu of using minimum planking dimensions
- (6) extending planks at least 6" (150 mm) over their support and cleating or restraining them from movement
- (7) ensuring that manufacturer built-in ladders are in good condition
- (8) maintaining mobile scaffold casters in good condition with position locking devices secured when employees are working from the scaffold
- (9) keeping mobile scaffolding height less than four times the minimum base dimension and with adequate cross-bracing
- (10) never interchanging scaffolding pans from different units
- (11) never using defective scaffolding
- (12) designating only "Competent" persons to perform scaffolding repairs.

**Additional information sources:**

**Manually Propelled Mobile Ladder Stands and Scaffolds**--ANSI A92.1 - 1977

**Manually Propelled Elevating Work Platforms** -- ANSI A92.3 - 1980

**Self-propelled Elevating Work Platforms** -- ANSI A92.6, American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018

**II. ELECTRICAL HAZARDS**

Asbestos abatement is often related to renovation or remodeling activities. Normally the equipment, machinery, overhead lighting fixtures, and auxiliary furnishings are removed to facilitate the abatement work. However, it is becoming more common that industrial and commercial buildings remain partially occupied while abatement operations are performed. In either situation, the abatement operator must take positive actions to protect employees from accidentally coming into contact with energized electrical circuits.

**A. General**

- (1) Perform a pre-work walk-through of the abatement area to look for pre-existing electrical hazards involved with the work.
- (2) De-energize as many circuits as possible.
- (3) Verify that the circuits have been de-energized with a "Field Current Sensing Device" circuit tester. Either lock out/tag out all de-energized circuits to prevent them from accidentally being energized.
- (4) Use non-conductive tools such as scrapers and vacuum attachments made of wood, plastic, or rubber.
- (5) Provide workers with non-conductive rubber boots and/or gloves when work must be done around energized wiring or equipment.
- (6) Prohibit accumulation of puddles of water on the floor. Workers should be trained in the intelligent use of amended water. No water should be used around energized circuits.

**B. Permanent Building Circuitry**

- (1) Ensure that all permanent circuits are provided with a grounding system. This can be determined with a portable ground tester.
- (2) Ensure that electrical outlets are tightly sealed and taped to avoid water spray.
- (3) Determine what equipment must remain energized during the abatement process.
- (4) Insulate or guard energized equipment and Wiring from employee contact and other conductive objects.
- (5) Avoid damaging permanent building wiring during the work.
- (6) Consider dry removal methods in the vicinity of electrical equipment which must remain energized.

**C. Temporary Power**

1. All temporary circuits provided by the abatement operator must be provided with a grounding system and protected by ground fault circuit interrupters.
2. Avoid stringing temporary wiring across floors
3. Elevated wiring should not be fastened with staples, nails, or wire.
4. Use care not to damage the wiring insulation during Installation or abatement work.

**D. Electrical Cords and Tools**

- (1) Provide extension cords which have a ground conductor.
- (2) Ensure that cords are not damaged, contain no splices, and that the grounding lug on the male plug is intact.
- (3) Position extension cords to eliminate stumbling/tripping hazards and to protect them from damage by moving scaffolds.
- (4) Provide electrical tools which are either grounded or of the double-insulated type
- (5) Use shatterproof, guarded bulbs and heavy duty wiring for temporary lighting.
- (6) Where plugs enter receptacles, ensure that the connection is protected by use of duct tape or by other means.

**Additional information sources:**

***National Electrical Safety Code*** -- ANSI C2-1984

**National Electrical Code** -- ANSI/NFPA 70-1984, American National Standards Institute, Inc.,1430 Broadway, New York, NY 10018

**Temporary Electric Wiring for Construction Sites** -- Industrial Safety Data Sheet #515, National Safety Council, 444 North Michigan Avenue, Chicago, Illinois 60611

# APPENDIX B: TRAINING FORM



# **APPENDIX C: JOB REQUEST FORM (MAINTENANCE WORK)**



JOB REQUEST FORM FOR MAINTENANCE WORK			
Name		Date	
Telephone No.		Job Request No.	
Requested Start Date		Anticipated Finish Date	
Address		Building No.	Room No(s)
Description of Work:			
Description of any asbestos-containing material that might be affected. If known include location and type			
Name of Requestor	Telephone No	Name of Supervisor	Telephone No
Submit this application to			
Asbestos Program Manager			
<b>Note: An application must be submitted for all maintenance work whether or not ACM might be affected. An authorization must them be received before any work can proceed</b>			
<input type="checkbox"/> <b>Granted</b>		<input type="checkbox"/> <b>With Conditions*</b>	<input type="checkbox"/> <b>Denied</b>
Job Request No.		*Conditions:	

# **APPENDIX D: MAINTENANCE WORK AUTHORIZATION FORM**

<b>MAINTENANCE WORK AUTHORIZATION FORM</b>	<b>NO.</b>
<b>AUTHORIZATION</b>	
Authorization is given to proceed with the following maintenance work:	
<b>PRESENCE OF SUSPECT ACM, PACM AND/OR ASBESTOS-CONTAINING MATERIAL (ACM)</b>	
<input type="checkbox"/>	Suspect ACM or PACM, and/or ACM is not present in the vicinity of the maintenance work
<input type="checkbox"/>	Suspect ACM or PACM, and/or ACM is present but its disturbance is not anticipated; however, if conditions change, the Asbestos Program Manager will re-evaluate the work request prior to proceeding.
<input type="checkbox"/>	Suspect ACM or PACM, and/or ACM is present and may be disturbed
<b>WORK PRACTICE IF SUSPECT ACM, PACM AND/OR ASBESTOS-CONTAINING MATERIALS ARE PRESENT</b>	
The following work practices shall be employed to avoid or minimize disturbing asbestos:	
<b>PERSONAL PROTECTION IF ASBESTOS-CONTAINING MATERIALS ARE PRESENT</b>	
The following equipment/clothes shall be used/worn during the work to protect workers: <i>(Manuals on personal protection can be referenced)</i>	
Special Practices and/or Equipment Required:	

Signed:

\_\_\_\_\_  
Asbestos Program Manager

\_\_\_\_\_  
Date

# APPENDIX E: EVALUATION OF WORK AFFECTING ACM

**EVALUATION OF WORK AFFECTING PACM,  
SUSPECT AND/OR ASBESTOS-CONTAINING MATERIALS**

This evaluation covers the following maintenance work:

Location of work (address building, room number(s), or general description of work.

**General Description:**

Address

Building

Room Number(s)

Description of work

Date(s) of work

Work Approval Form Number

Evaluation of work practices employed to minimize disturbance of asbestos

Evaluation of work practices employed to contain released fibers and to clean up the work area

Evaluation of equipment and procedures used to protect workers

**PERSONAL AIR MONITORING RESULTS (LICENSED ASBESTOS CONTRACTOR TO SUPPLY**

Worker Name

Results

Worker Name

Results

Handling of storage of ACM waste

\_\_\_\_\_  
Asbestos Program Manager  
Signature

\_\_\_\_\_  
Date

# **APPENDIX F: PREVIOUS SURVEYS / ANALYTICAL RESULTS**



Nova  
Group

# Carbon Neutral Report

[novagroupgbc.com/carbonneutral](http://novagroupgbc.com/carbonneutral)