Subject: MCAD Asbestos Operation & Maintenance Plan	**Policy # Asbestos22**
Prepared By: Mike Frigon, EHS Director	**Effective & Approved Date: 1**
Approved By: Mike Frigon, EHS Director	**Page 1 of 18**

1. Asbestos Control Overview

Purpose Statement
This Manual has been written as a source of information on asbestos control, and covers procedures for managing asbestos at Minneapolis College of Art and Design (MCAD) in Minneapolis, Minnesota.

The purpose of the Operations and Maintenance Program for Asbestos, is to establish uniform policy and minimum guidelines for the management of asbestos-containing material at MCAD in Minneapolis, Minnesota.

There are three primary objectives of this Operations & Maintenance (O&M) program:

1. Clean up existing contamination,
2. Minimize future fiber release by repairing damaged asbestos containing materials (ACM) and controlling access to ACM, and
3. Safely maintaining ACM until eventual removal.

The overall goal is to prevent contamination of buildings by airborne asbestos fibers and to protect the health of employees, outside contractors, and the public.

Employees are not expected to work with asbestos containing materials (ACM).

All direct contact maintenance operations needed are to be performed by properly licensed, trained, and insured outside contractors as determined by the MCAD EHS Director.

Asbestos-containing materials found in MCAD buildings include:

- **9” x 9” floor tile**
- **Tan wall adhesive**
- **Door caulk**
- **Floor tile under carpet**
- **Foundation sealant**
- **Floor tile mastic**
- **Chimney insulation**
- **Caulk**
- **Fitting on fiberglass**
- **Felt pipe insulation**
- **Fittings on felt pipe insulation**
- **Boiler insulation**
- **Debris**
- **White textured ceiling spray**
- **White paper**
- **Window caulk**
- **Joint compound**
- **Pipe penetration hole filler**

- **Hard white fittings on fiberglass**
- **Hard white boiler header**
- **Stucco**
- **Caulk on stairs**
- **Stairtread adhesive**
- **12” x 12” floor tile**
- **Ceramic wall tile mortar**
- **Aircell pipe insulation**
- **Brown putty**
- **Sink sound deadener**
- **Countertop**
- **Vibration damper**
- **Brown window putty/caulk**
- **Black window glazing and yellow seam duct caulk**
- **Stairwell plaster**
- **Transite**
- **White putty**

In addition, these materials:

- **Ceiling spray**
- **Blackboard/corkboard adhesive**
- **Fittings on felt**
- **Wall panel adhesive**
- **Floor tile mastic**
- **Hardwood floor backing**
- **Electric panels**
- **Boiler materials**
- **Fire doors**
- **Ceramic floor tile mortar and grout**
- **Roofing materials**
- **Ceramic wall tile mortar and grout**

are assumed to contain asbestos. Asbestos can be found in a large number of products. The Division of Environmental Health at the Department of Health has created a list of materials that could contain asbestos. Materials on this list that are found in this building should be assumed to contain asbestos until sampling and analysis can be performed.

1.1. Astestos Operations & Maintenance Manual Overview

1.1.1. Introduction

The Minneapolis College of Art and Design has been surveyed to locate asbestos-containing materials (ACM). The results of these studies should accompany this manual. General information on existing asbestos in the building can be found in Attachment A of this manual. Information on the location of or questions about asbestos-containing materials should be referred to the Director of Environmental, Health, & Safety (who is the Asbestos Program Manager), the Facilities Director, or the Vice-President of Facilities & Technology.

Any planned maintenance or renovation activity must be cleared with the Director of Environmental, Health, & Safety (Asbestos Program Manager). The EHS Director will use a work request form and a work authorization form to control these activities. After consulting the asbestos survey report, if material content is not clear, the EHS Director is responsible for ordering additional bulk samples to determine if asbestos is present and if it might be disturbed during the planned activity.

Prior to any work involving disturbance of asbestos, the EHS Director (Asbestos Program Manager) shall arrange for the work area to be cleaned. ACM will be removed prior to the

initiation of any maintenance jobs which may disturb asbestos, such as maintenance work on communication, electrical, heating, plumbing, or ventilation systems; or removal of old equipment.

The only potential for exposure to MCAD employees should be during work related to stabilization of an area in case of an emergency.

1.1.2. Program Implementation

An eight-step approach can be followed to implement this program. Please note the dates that each action was completed.

No.	Date Completed	Action Required
1		Install OSHA-required signs in mechanical rooms as described in section 2.1 and label other material as required.
2		Train staff who may come into contact with ACM as described in Section 2.2. (OSHA Class 4 training). This will include custodial and maintenance staff.
3		Set up a maintenance and renovation request and authorization system as described in section 2.4
4		Train custodial staff in proper floor maintenance procedures as described in Attachment C.
5		Retain a licensed abatement contractor to clean any ACM contamination noted in the survey or reinspection and to repair damaged ACM as described in 2.5.
6		Set up the record keeping system as described in Section 2.8.
7		Arrange for periodic inspections of ACM as described in Section 2.7. The next inspection will be due 6 months from the initial survey date.
8		Screen asbestos removal contractors and arrange for abatement services required by ongoing maintenance and repair operations or emergency fiber releases described in section 2.6.

1.2. Contacts

Key individuals with asbestos O&M responsibility include:

- Environmental, Safety, & Health Director/Asbestos Program Manager
- Facilities Director

- Vice-President of Facilities & Technology

The Facilities Director should be contacted for building specific questions. O&M program questions should be directed to the EHS Director/Asbestos Program Manager.

Key regulatory agencies are:

● Minnesota Department of Health	651-201-4620
● Region 5 EPA	800-621-8431
● Minnesota Pollution Control Agency	651-297-5847
● Minnesota OSHA	651-284-5050

1.3. Government Regulations Regarding Asbestos

1.3.1. Introduction

In Minnesota, OSHA standards are administered by Minnesota OSHA. OSHA standards 1910.1001 (general industry), 1926.1101 (construction), and 1915.1001 (shipbuilding) regulate occupational exposures to asbestos. These standards regulate asbestos abatement, building inspections, maintenance work, and custodial activities. The permissible exposure limit (PEL) for asbestos is 0.1 fibers per cubic centimeter as an eight-hour time weighted average (8-hour TWA).

1.3.2. Summary of Minnesota Department of Health Asbestos Rules

The Minnesota Department of Health (MDH) rules regulating asbestos related work apply to notification of asbestos abatement projects, asbestos abatement procedures, required air monitoring, training, and licensing. The Minnesota Department of Health licenses asbestos removal contractors, air sampling personnel, asbestos building inspectors, asbestos management planners, and asbestos project designers.

In general, MDH rules apply to any asbestos abatement project (over 160 square feet or 260 linear feet of asbestos involved) where occupied adjacent spaces exist. A state airborne asbestos standard has been established at 0.01 fibers of asbestos per cubic centimeter of air. This standard must be maintained in adjacent spaces and is used as a clearance standard following abatement. MDH rules require that anyone taking bulk asbestos samples must be licensed as an asbestos building inspector.

1.3.3. Summary of the OSHA Asbestos Standard

No employees, tenants or contractors are allowed to intentionally disturb asbestos unless they have had at least the OSHA required sixteen-hours of asbestos training. Workers are regulated under the OSHA Asbestos Standard for General Industry, 29 CFR 1910.1001. and the Asbestos Construction Standard 29 CFR 1926.1101.

All construction and maintenance work done in the facility is covered by the OSHA Asbestos Standard for Construction 29 CFR 1926.1101.

The Construction Standard applies to both MCAD employees and outside contractors performing maintenance or construction work that involves asbestos.

OSHA Requirements for Asbestos Work:

1) The standard specifies procedures and requirements for all asbestos work. Items covered, include:

    - Permissible exposure limits
    - Establishment of regulated areas
    - Exposure monitoring
    - Methods of compliance through engineering controls and work practices
    - Work methods
    - Training
    - Personal protection
    - Decontamination facilities
    - Communication of hazards to employees (includes signs and labels)
    - Medical surveillance
    - Recordkeeping

2) Under the OSHA asbestos standard, building owners must make all outside contractors aware of ACM in the building. A contractor notification form is supplied with this program.
3) The OSHA permissible exposure limits (PELs) are 0.1 fibers/cc as an 8-hour time-weighted average (TWA) and 1.0 f/cc averaged over a 30-minute sampling period.
4) The minimum respiratory protection allowed by OSHA for asbestos protection is a half-face, air-purifying respirator equipped with HEPA/P100 cartridges. Respirator fit testing is required at least annually.
5) OSHA Asbestos Requirements for Building Owners:
    - Identification of asbestos-containing materials (ACM) and presumed asbestos-containing materials (PACM).
    - Before work begins, the building owner must identify all thermal system insulation (TSI), surfacing materials, and resilient flooring and associated mastic in pre-1981 buildings and treat these materials as asbestos-containing unless they are sampled and found to contain 1% or less asbestos.
6) Minnesota OSHA requires:
    - An asbestos inspection before a renovation or demolition project
    - ACM must be maintained in good condition.
7) Communication of Hazards - The building owner must notify the following parties, in writing, of the presence, location, and quantity of asbestos-containing materials in the building:
    - Contractors bidding work in the building
    - Building employees
    - Contractors working in adjacent areas
    - Tenants who will occupy the areas
8) Asbestos warning signs are required in mechanical rooms or areas that contain asbestos. Signs must identify the materials that are present, their location, and appropriate work practices that will ensure that ACM/PACM will not be disturbed. Asbestos signs or labels are required on installed materials which contain asbestos under all three standards.
9) Vacuum cleaners used to clean up dust and debris that might contain asbestos must be equipped with HEPA filters.

Employee Training Requirements

1) Class III Asbestos Work

Workers who will disturb ACM or PACM must get sixteen hours of asbestos training on:
   - Recognition of ACM and PACM
   - Health effects and personal protective equipment
   - Appropriate work practices
   - Asbestos regulations

2) Class IV Asbestos Work
   Maintenance and custodial workers who may come in contact with ACM or PACM must get at least two hours of training on:
   - Location of ACM and PACM in building
   - How to recognize damage
   - How to avoid exposure

3) Annual Refresher Training
   Class III and IV workers must get two-hour annual refresher training.

Record Keeping Requirements
Building owners must accumulate and preserve records of the location, identification, and quantity of ACM/PACM in the buildings. Asbestos records must be maintained by the building owner for the duration of ownership and transferred to successive owners.

1.3.4. Summary of EPA Standards

The EPA regulates asbestos as an air pollutant under the National Emissions Standard for Hazardous Air Pollutants (NESHAPs) for asbestos (40 CFR 61, subpart M). These regulations are enforced by the Minnesota Pollution Control Agency (MPCA).

To determine which portions of the standard apply, the facility must be inspected for the presence of asbestos. Certain requirements depend upon whether the quantity of friable asbestos-containing material is greater than 160 square feet or 260 linear feet.

The major requirements of this regulation are summarized below:

Notification
Prior to the removal of over 160 square feet, 260 lineal feet, or 1 cubic meter of asbestos-containing materials from a building being or in the case of any building being demolished, the EPA must be notified in writing. Notification must include the following information:

- The name, address and phone number of both the facility owner/operator and the asbestos removal contractor owner/operator
- Description of the facility or the affected part of the facility including the size, age, and present and prior use of the facility
- Procedure, including analytical methods used to detect the presence of asbestos
- Approximate amount of asbestos to be removed and amount of nonfriable asbestos to be left in place
- Location and street address of the building
- Scheduled starting and completion dates of removal work and dates of demolition or renovation project

- Methods to be used and description of affected building components
- Name and address of asbestos disposal site
- Certification that at least one trained person will supervise the asbestos work

Asbestos Disposal
All asbestos-containing materials must be disposed of by first wetting them, then sealing them in leak-tight containers (usually 6-mil polyethylene bags are used).

Containers are to be labeled with the **name of the waste generator** and the **location where the waste was generated**. Containers must also be labeled with the following warning:

DANGER

Contains asbestos
Avoid opening or
Breaking container
Breathing asbestos is Hazardous
to your Health

The containers are then disposed of at an EPA-approved landfill.

Waste shipment records are provided to the disposal site operator at the time of delivery. The waste generator must receive signed copies within 45 days. Copies of all waste shipment records are to be retained by the waste generator for at least two years.

Demolition
Prior to demolition of all or part of a structure (demolition of load-bearing walls), all friable asbestos-containing materials must first be removed.

Procedures for Emission Control
The EPA standard requires that "no visible emissions" of asbestos fibers be released into the ambient air. To control such emissions, EPA requires that wet methods be used for removal of asbestos-containing materials.

2. Asbestos Operations & Maintenance Program

2.1. Notification and Labeling

OSHA requires that the entrance to all mechanical rooms or rooms with exposed thermal system insulation or surfacing material have signs posted. The signs should indicate the materials present, its location, and a warning not to disturb the material. The primary materials included in this category are the hard fittings on pipes in the building. The warning sign should have the following warning:

DANGER
THE LISTED MATERIALS CONTAIN ASBESTOS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2.2. Training

2.2.1. Introduction

This Operations and Maintenance manual sets forth policies and procedures which are intended to minimize asbestos exposures to MCAD employees and the public having access to the buildings. Implementation of the management plan requires training for building personnel.

Employee training needs will vary with the risk of asbestos exposure. Annual asbestos awareness training must be provided to all maintenance and custodial employees to prevent accidental disturbance of ACM. A program will be established to meet employee-training needs. This program will encompass two of three possible tiers of training.

OSHA Class IV Worker Training

OSHA class IV worker or **awareness training** is intended for personnel whose daily work does not involve any intentional contact with ACM, but who may accidentally come into contact with ACM. The majority of MCAD employees are not included in this category. Maintenance and custodial workers often fall in this class. This is a two-hour course that must be repeated annually.

The contents and goal of first tier training will be to provide a general orientation and awareness to the potential hazards associated with asbestos in the workplace. Topics should include: examples of ACM commonly used in building construction, medical information and other current health hazard information, a summary of applicable regulations, a summary of policy regarding management of ACM, and people or offices to whom additional questions or concerns can be directed.

OSHA Class III Worker Training

OSHA class III worker training is intended for **maintenance** staff whose work involves disturbance of ACM. This is generally maintenance staff who must work with or repair ACM materials. This is a 16-hour class with an annual refresher.

This training should include all the information of first tier training. In addition, more emphasis and detail must be given regarding specific ACM applications which they would be most likely to encounter, including a hands-on component. Other topics should include distinguishing different types of ACM, signs of deterioration or damage to ACM which could result in fiber release, avoidance of work procedures which unnecessarily disturbs ACM (for instance, not lifting ceiling tiles when they might be contaminated by asbestos), and reporting procedures in case they observe damaged ACM or their work assignment involves potential disturbance of ACM.

OSHA Class I&II Worker Training

This level or training qualifies a worker to perform **asbestos abatement.** It requires four or five days of initial training with annual refresher training. It is not anticipated that any member of the staff needs to receive this training.

2.2.2. Implementation of Training

Overall responsibility for assessing Training and Education needs for a category of employees rests with the EHS Director/Asbestos Program Manager.

2.3. Work Practices

Approved work practices can be found in the National Institute for Building Standards operations and maintenance work practices manual, which can be provided, for a fee, upon request.

General Prohibited Activities

- Holes must not be drilled into asbestos-containing materials except by outside contractors who have been properly trained to perform such procedures.
- Plants or pictures must not be hung on structures covered with asbestos-containing materials.
- Do not saw, sand or drill asbestos-containing floor tiles.
- Do not damage asbestos-containing materials while moving furniture or other objects.
- Do not install curtains, drapes, or dividers in such a way that they damage asbestos-containing materials.
- Do not dust floors, ceilings, moldings, or other surfaces in asbestos-contaminated environments with a dry brush or sweep with a broom.
- Do not use an ordinary vacuum to clean up asbestos-containing debris.

When non-friable ACBM is about to become friable as a result of activities performed in the building, the material must be treated as if it were friable.

2.4. Maintenance/Renovation Request for Work Permit System

All work requests that have the potential to impact ACM shall go through the Maintenance Manager. The individual requesting the project will fill out a Maintenance/Renovation request form. The form will be reviewed and completed by the Maintenance Manager. Once the request form is reviewed, the Maintenance Work Authorization Form is issued describing how the project is to be carried out.

The Maintenance Manager will consult the Asbestos Building Survey and may order samples to be taken of any suspect materials in the area where maintenance work is planned to verify if asbestos is present. The manager will order abatement to remove ACM prior to the initiation of any maintenance work that may disturb asbestos. Licensed asbestos abatement firms will carry out these projects.

If a project is approved without removing asbestos, any outside contractor entering the building must be made aware of the building O&M plan and sign the Outside Contractor Asbestos Notification Form provided in section 2.9.

The manager will retain the completed Request and authorization forms and a copy will be forwarded to the Asbestos Program Manager. All outside contractor forms will be retained by the manager.

2.4.1. Maintenance Work Request Form

Name: _____ Date: _____

Email: _____ Telephone: _____ Work Order No: _____

Requested Work Start Date: _____ Anticipated Work Finish Date: _____

Location of Work: Building: _____ Room Number: _____

Description of Work Area: _____

_____

Description of Work to Be Performed: _____

_____

Description of Asbestos-Containing Material(s) that may be affected: _____

_____

Name/Email/Telephone of Project Supervisor:

_____

Name/Email/Telephone of On-Site/Work Supervisor:

_____

Application Submitted To (Check All That Apply):

	EHS Director	**Approved? Yes No**	**Date:**	**Initials:**
	Facilities Director	**Approved? Yes No**	**Date:**	**Initials:**
	VP of Facilities & Tech.	**Approved? Yes No**	**Date:**	**Initials:**

NOTE: An application must be submitted for all maintenance work whether or not asbestos-containing material(s) may be affected. An authorization must then be received before any work can proceed.

Conditions for work approval: _____

_____

2.4.2. Maintenance Work Authorization Form

Authorization is given to proceed with the following maintenance work:

Presence of Asbestos-Containing Materials or Possible Asbestos-Containing Materials:

	ACM/PACM are not present in the vicinity of the work.
	ACM/PACM is present but disturbance is not anticipated. If conditions change, the Asbestos Program Manager will re-evaluate the work request prior to proceeding.
	ACM/PACM is present and may not be disturbed.

Work Practices to minimize disturbing ACM/PACM if present:

_____

_____

Personal Protection to be used if ACM/PACM are present (including clothes):

_____

_____

Special Practices, Procedures, and/or Equipment Required:

_____

_____

_____

Signed: _____ Date: _____

EHS Director/Asbestos Program Manager
Director of Facilities
Vice-President of Facilities & Technology

2.5. Specialized Work Practices

The methods are provided to illustrate the steps necessary for successful asbestos maintenance operations. Methods are provided for maintenance operations only. Large-scale removals will be performed according to custom specifications utilizing large enclosures. Detailed work practices for all O&M activities can be found in the National Institute for Building Standards operations and maintenance work practices manual, which can be provided, for a fee, upon request.

2.5.1. Initial Cleaning

Cleaning up existing asbestos contamination within this facility is one of the primary objectives of the O&M program. Dry brooms, mops, dust cloths and standard vacuum cleaners simply re-suspend asbestos fibers in the air. Therefore, it is essential that specialized cleaning procedures be implemented.

NOTE: Initial cleaning of asbestos debris found in the buildings needs to be completed as soon as possible following the guidelines in this manual. This cleanup has taken place with the exception of a couple places.

Workers shall be equipped with high efficiency air purifying respirators, and disposable suits at a minimum.

A combination of wet mopping/wiping and vacuuming should be used to clean all surfaces in the area. Irregular surfaces, such as curtains, books, furniture, and carpeting should be cleaned using HEPA-equipped vacuum cleaners. Many manufacturers offer several "nozzles" to make HEPA vacuuming of irregular surfaces less difficult. Carpeting may also be cleaned using steam cleaners. Care should be taken to ensure that the liquid waste generated during steam cleaning is disposed of as asbestos contaminated waste (discussed late in this section).

Other surfaces, such as walls, non-carpeted floors, light fixtures, equipment housings, the exterior of air handling ducts, and file cabinets should be cleaned using mops and/or dust cloths and rags that are wetted with amended water. Amended water is a mixture of water and a non-sudsing surfactant. A dust suppressant should be used on mops.

2.5.2. Routine Cleaning

The Asbestos Program Manager should determine whether routine additional cleaning is needed. This determination should be based on the rate of dust build up.

Periodic or routine cleaning is less rigorous than the initial cleaning and is implemented, when needed, on a regular schedule depending on the extent of the ACM within the facility and the level of contamination. Surfaces should be wet wiped and/or HEPA vacuumed. Respiratory protection may not be required for the custodial crew performing periodic cleaning. However, areas where ACM is frequently disturbed may warrant continued use of respiratory protection.

2.5.3. Small Scale Repair

The following work practices will guide performance of the small-scale maintenance or repair by outside contractors:

This work may only be performed by employees trained as an OSHA Class I, II or III workers. All other employees who are not directly involved in the task must be excluded from the floor or room and any approaches such as a stairway or hall.

Warning signs shall be placed at approaches to the restricted work area so that non-essential personnel are excluded. The following wording, or equivalent, will be used:

Danger
Contains Asbestos Fibers
Cancer and Lung Disease Hazard
Authorized Personnel Only
Respirators and Protective Clothing Are Required In This Area

The air handling system shall be shut down or temporarily blocked, or other methods employed to inhibit air circulation and minimize the spread of asbestos fibers.

Plastic barriers (6 mil. polyethylene) will be constructed to segregate the immediate work area and to contain any release of fibers. Plastic will be placed on the floors.

The ACM will be sprayed with a surfactant solution to minimize fiber release. All damaged ACM will be painted with CP-11 or some other binding material.

A HEPA vacuum will be available to help gather any ACM debris generated during the maintenance work.

All movable furniture and equipment will be HEPA vacuumed or wet wiped and moved out of the immediate work area or outside of the plastic barriers. All remaining horizontal surfaces must be HEPA vacuumed or wet wiped and covered with plastic.

General work practices associated with handling ACM will follow the principles of training received in the Asbestos Workers classes. The details of each particular task cannot be completely anticipated here. It is necessary to consult with the Asbestos Project Manager, Industrial Hygiene Consultant or other appropriate safety personnel whenever choosing appropriate work practices.

2.5.4. Large Scale Removal

For removal of ACM (more than 3 feet of pipe insulation - 3 square feet of surface material) an outside contractor specialized in asbestos removal should be retained.

An asbestos removal specification and procedure should be used in all large-scale removals.

2.6. Emergency Response Actions

Of the materials found to contain asbestos in the buildings, chimney insulation, fittings on fiberglass, felt pipe insulation, fittings on felt pipe insulation, boiler insulation, debris, textured ceiling spray, white paper, joint compound, hard white fittings on fiberglass, hard white boiler header, aircell pipe insulation, fittings on aircell pipe insulation, sink sound deadener, countertop, vibration damper, plaster, Transite, blackboard/corkboard adhesive, wall panel adhesive, fire

doors are friable. The only event that might create an emergency would be large-scale damage to the hard pipe fittings. If a large amount of debris is created, a hazard exists. The standard response upon recognizing this situation is to seal the room and to retain a licensed abatement contractor to clean the debris and to repair the damaged fittings. If HVAC systems may spread airborne fiber, fans should be shut down.

OSHA class 3 (16 hour) trained employees using the methods described in this program may clean small quantities of debris.

2.6.1. Mechanical Rooms

In the event of an emergency involving asbestos, in house personnel will be responsible for sealing off all entrances to the room and contacting the retained asbestos abatement contractor.

2.6.2. Other Rooms

In the event of an emergency involving asbestos, in-house personnel will be responsible for turning off building fans, sealing off all entrances to the room, and contacting the retained asbestos abatement contractor.

2.7. Periodic Inspections

The asbestos-containing materials in the MCAD buildings are subject to deterioration with aging, the effects of building occupancy, and accidental damage. To monitor the condition of these asbestos-containing materials in the building, a program of periodic inspection has been adopted. This program includes 6-month reinspections by in-house personnel.

This section applies to all ACM that has been scheduled for removal, repair or encapsulation and ACM that has been identified but as yet unscheduled for removal, repair or encapsulation.

The MCAD maintenance manager or an employee designated by the manager will conduct periodic visual inspections of identified ACM and maintains vigilance for the possibility of locating new ACM.

A written record of periodic inspections will be kept by the Asbestos Program Manager which includes the following information:

1) Date of inspection
2) Inspector
3) Locations inspected, such as floor level, room names, room numbers, etc.
4) Nature of ACM (pipe wrap, transite board, etc.) and friability
5) Whether adequate labeling is still intact
6) Changes of status since last inspection (e.g. new damage, water damage, etc.)
7) Recommended action

A photographic record may also supplement written description.

The most recent inspection should be used as the basis for this survey. The first survey to be used was conducted in Winter of 2006/2007.

The survey lists each type of material found in each room of the building. The condition of each material is listed as good, fair or poor. If any damage is observed on the listed materials, list it and plan to have it repaired.

2.7.1. Asbestos Inspection Form

MCAD SEMIANNUAL INSPECTION

DATE: _____ BLDG NAME: _____

ROOM NUMBER/AREA ID: _____ INSPECTOR: _____

The most recent accredited AHERA inspection is used as a basis for this survey

Asbestos Materials	**Unchanged?**		**Contact Damage?**		**Water Damage?**	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**

COMMENTS: _____

_____

_____

ACTION(S) TAKEN: _____

_____

ACTION(S) APPROVED BY: _____ DATE: _____

Locate and report any tears or breaks in the wrap on hard pipe fittings, or any water damage to the fittings. Asbestos flooring with water damage (loose tiles), cracked tiles, or broken tiles should be noted. A contractor should repair damage.

This section does not apply to asbestos abatement contract specifications or contractor "release" criteria.

2.7.2. Unschedule Air Monitoring

Air monitoring may be performed when deemed appropriate by the O&M Program administrators as a supplement to periodic inspections of ACM and scheduled air samples recommended by this plan. Personal air samples will be taken whenever employees are covered under 29 CFR 1926.1101 and "who are, or may reasonably be expected to be exposed to airborne concentrations at or above the action level" of 0.1 fibers per cc of air as measured by Phase Contrast Microscopy (PCM). This sampling may be done in the event of an emergency fiber release and for employees of outside contractors working in these areas.

Air samples may be taken by qualified personnel designated by the O&M Program administrators.

Personal air samples shall be analyzed by PCM, using the NIOSH-approved 7400 method. Area air samples collected following an emergency shall be analyzed PCM or by an approved Transmission Electron Microscopy (TEM) method and results reported as PCM-equivalent TEM.

Laboratories selected for air sampling analysis must be participants in an intra-laboratory and inter-laboratory quality control program that includes at a minimum two other independent laboratories. Accredited laboratories with the AIHA/NIOSH PAT Program or listed on the AIHA. Asbestos Analysis Registry will be utilized preferentially unless unusual circumstances make it impractical, such as when transport to a lab would delay identification for a length of time which could result in a higher risk of employee exposure to asbestos.

When area air sample results exceed established baseline or PCM-equivalent TEM baseline levels, a re-evaluation of ACM shall be performed immediately. If a comparison with previous data indicates a statistically significant increasing trend in airborne levels, then additional maintenance and cleaning activity will be initiated until a significant reduction of airborne fiber levels has been achieved.

2.8. Documentation

An effective record keeping system must be established and maintained in order to document all aspects of the Asbestos Operations and Maintenance plan.

2.8.1. Record Keeping

All documents containing information pertaining to renovations, repairs, incidents, abatement projects, or other events where exposure to airborne asbestos fibers is known to or may have occurred, should be maintained for at least 30 years from the date of exposure.

Some of the documents are subject to the requirements of the OSHA regulations and thus record retention is mandatory. Documents required by OSHA include employee exposure records and medical examination records, both of which must be retained for 30 years. The regulations also require that these records be provided on request of the affected employees, their designated representatives, the OSHA Director, and for medical records, the Director of NIOSH.

2.8.2. Records To Be Maintained

The record keeping system at MCAD will track three types of data:

- Data on identification and location of ACM
- Data with regard to actions taken on ACM, and
- Information on personnel involved with asbestos

At a minimum, the following record files shall be created and maintained at MCAD:

1) Descriptions
    a) Inspection reports
    b) Names of consultants and contractors
    c) Types and concentrations of asbestos present and removed
2) Description of Execution
    a) Removal/repair project start-up procedures
    b) Method of removal/disposal
    c) Cleanup procedures
    d) Maintenance/renovation requests
    e) Fiber release episodes
3) Personnel Records
    a) Records of worker training
4) Notifications
    a) Letters to respective agencies, EPA, OSHA, etc.
    b) Permits
    c) Signs
5) Disposal Records
    a) Disposal log
    b) Trip tickets
    c) Vehicle description
6) Testing and Analysis Records
    a) Bulk sampling description/custody forms
    b) Laboratory analysis forms/reports
    c) Air sampling records
7) Contract Documents
    a) Agreement
    b) Posted set of specifications which reflect changes and actual work performed

8) Emergency Documentation
    a) Project plan/procedures
    b) Written reports of incidents where asbestos fiber release is expected
    c) Emergency occurrences
    d) Accidents
9) All documentation generated by outside consultants
10) Correspondence and Safety Data Sheets

2.8.3. Outside Contractor Notification Form

Company Name: _____

Company Officer & Title: _____

Planned Activity: _____

_____

I have reviewed and understand the asbestos operations and maintenance plan for MCAD. My company will perform its work in accordance with this plan and all applicable standards.

Signature: _____
(Contractor)
Date: _____

Signature: _____
(MCAD Asbestos Program Manager)
Date: _____

You must be aware of the location of asbestos in the building and agree not to contact or damage these materials. If work cannot be accomplished without damaging asbestos, the MCAD Asbestos Program Manager must be notified prior to the project so that other plans can be made