

ASBESTOS

Asbestos became a popular commercial product in the early 1900s because of the product's ability to insulate and resist heat and corrosion, and for its strength and durability. Since the mid-1970s, the use of asbestos has steadily declined due to concerns over human exposure and its related health effects. Several types of asbestos were banned by the Environmental Protection Agency (EPA) during the 1970s, including spray-applied insulation, fireproofing, and acoustical surfacing material.

Asbestos can be found in a variety of building products including insulation for mechanical components (thermal system insulation), fireproofing, acoustical and decorative treatments for ceilings and walls (surfacing materials), roofing materials, floor coverings and ceiling or wall panels (miscellaneous materials) to name a few.

Asbestos is of particular concern when it is damaged or easily susceptible to damage (friable or potentially friable materials). Intact, well-maintained and non-friable ACM's do not cause much concern unless they are disturbed by construction or maintenance activities. However, in order to control potential exposure to asbestos fibers, it is essential that all asbestos be identified in a facility, repaired if needed, or otherwise managed in place until abatement is either necessary or desired.

Health Issues

Exposure to asbestos fibers can cause serious health problems. Three well-known diseases are related to the inhalation of asbestos fibers: asbestosis (a fibrous scarring of the lungs), lung cancer and mesothelioma (a cancer of the lining of the chest or abdominal cavity). These diseases can take many years to develop in an individual previously exposed to asbestos. Construction, maintenance, custodial workers, and occupants all risk exposure in a building with ACM.

LEAD-BASED PAINT

Most enamel paint manufactured during the early and mid-1900s contained lead. Approximately ninety percent of homes built before 1978 contain significant amounts of lead-based paint (LBP). In 1978, the Consumer Product Safety Commission lowered the maximum allowable lead content in paint to 0.06% by weight. Based on the practical elimination of LBP in 1978, the EPA does not anticipate housing units built after 1978 to have a lead paint risk.

Health Issues

Lead is toxic to the body, directly impairing the body's nervous system. Health studies determined that children with elevated lead blood levels may have health problems such as lower intelligence and IQ scores, learning and reading disabilities, and reduced muscular reflexes. Studies conducted by the Department of Housing and Urban Development (HUD) found that children inadvertently ingest lead dusts generated by the deterioration of LBP.

DCA PROCESS REQUIREMENTS

Properties that have conditions that must be maintained or confirmed throughout the compliance period, affordability period, or the life of the loan (whichever is greater) must have an O&M plan. Examples include the presence of ACM, lead-based paint, or underground storage tanks.

1. A written O&M Plan must be submitted to DCA by the Applicant immediately upon the completion of any remedial actions required, no later than the Final Allocation Application. A qualified person must prepare and certify that the provisions are sufficient to maintain the property in accordance with the DCA O & M Manual, sound business practices, and any other applicable regulatory standards. A qualified person is someone who has a recognized degree, certificate, etc., or extensive experience and ability to solve the subject problems (lead or asbestos), at the worksite. DCA will review the O & M Plan and determine if it meets the standards set forth in the DCA O & M Manual. At its discretion, DCA may require additional O & M Plan provisions.
2. The Applicant must send written certification to DCA on an annual basis that certifies the property is being maintained in accordance with any applicable O & M Plans, environmental laws and regulations. The Applicant must ensure that an on-site inspection and inquiry are completed before certification. The scope of the certification must include both the buildings and grounds, and cover the activities of the Applicant, tenants, sub-lessees, their agents and any other third parties. These certifications must specifically address the ongoing effectiveness and adequacy of all current remedial and maintenance actions. Such certifications must be included as part of the annual Physical Inspection Report submitted to DCA.
3. In addition, an inspection and confirmation must be made immediately following the occurrence of events that might reasonably be expected to impact the environmental condition of the property or the efficacy of prescribed remedial or maintenance actions. Such events would include, but are not limited to fire, flood, building construction or rehabilitation, spills or leaks of hazardous wastes or substances, unusual or intense use of property facilities, and/or significant changes in custodial or management personnel.
4. If the Applicant is unable to confirm that the property is being maintained in accordance with any applicable O & M Plans, environmental laws, and regulations, the Applicant must take any and all remedial and maintenance actions necessary to correct these conditions. The Applicant must promptly confirm in writing to DCA the environmental status of the property immediately following implementation of any remedial actions.
5. The Applicant must report to DCA and the appropriate local, state, or federal authority all known violations of applicable environmental statutes and state laws on the property. In addition, the Applicant must take all necessary actions to ensure that all violations are promptly corrected, and that the property is brought back to and maintained in full compliance with appropriate environmental statutes and good management practices.

OPERATIONS AND MAINTENANCE PLANS

The EPA defines an Operations and Maintenance (O&M) Plan as “a formulated plan of training, cleaning, work practices and surveillance to maintain hazardous building materials (ACM & LBP) in good condition.” O&M Plans offer an economic alternative to removal (abatement) of hazardous building materials by managing hazardous building materials in place. If a building’s occupants and staff are properly prepared regarding the issues associated with managing ACM or LBP in place, the potential for

release of asbestos fibers or lead dust into the environment is minimized and consequently the health risk to building occupants can be reduced to a negligible level.

While this document discusses all of the major categories of ACM and LBP found in buildings, it will focus on building materials that are typically found in multi-family housing. *Please note, however, that asbestos, lead paint surveys and O&M Plans prepared for DCA must address all suspected hazardous building materials.*

This document will describe:

- The preliminary steps to take before developing a DCA O&M Plan;
- The objectives of a DCA O&M Plan; and
- The steps for preparing and implementing a DCA O&M Plan.

I. PRELIMINARY STEPS

Minimum procedures:

1. Interview a knowledgeable person at the facility for information regarding dates of construction, etc.
2. Review available plans and specifications for the building
3. Tour representative buildings on the property
4. Obtain multiple samples of suspect materials identified
5. Report condition, accessibility, location and approximate quantity of ACM and LBP at each sampling location
6. Obtain sample analysis services from a qualified laboratory
7. In a thorough manner, report the findings of the building inspection, by providing detailed discussion of procedures and results and supporting documentation such as sample locations and lab data
8. Require report to be prepared by a trained asbestos and lead paint inspector and require a review by a Qualified Environmental Professional.

Inspections

Prior to the development of the DCA O&M Plan, if the date of construction is consistent with the potential existence of these materials, a qualified environmental professional must perform a thorough inspection of the facility for friable and non-friable ACM and lead-based paint. All consultants that perform asbestos or lead paint consulting services must be EPA certified and submit their qualifications and supporting documents, as set forth in the DCA Environmental Manual, for review.

A minimum of ten percent or one unit per building, whichever is greater, of similarly constructed housing units must be inspected for ACM or LBP, as well as all other common building areas (clubhouse, office, etc.) on the property. Lead-based paint (LBP) inspections must follow the EPA's latest guidance document for pre-purchase requirements involving HUD funds. However, DCA may, at their discretion, elect to perform an alternative sampling protocol.

For phased developments, the consultant must consider each phase of the community as an entirely separate area and sample representative areas accordingly.

The inspector must interview a knowledgeable person to obtain the following:

1. Relevant information regarding building unit types
2. Dates of construction
3. Construction plans
4. A tour of the facility

Multiple samples of each type of suspect hazardous building material must be collected during DCA building inspections. One sample of a suspect material from a housing unit must never be considered representative of that material type for the entire facility.

Most of the ACM encountered in a multi-family housing community will be surfacing materials or miscellaneous materials, such as textured ceiling material, floor coverings, wallboard or ceiling panels, patching compounds and roofing materials. The inspector may encounter other suspect ACM, such as some insulated domestic water lines.

LBP was primarily used on building materials exposed to wear, abuse or weather such as cabinets, doors and door frames, windows and window frames, trim-work or moldings, exterior siding, exterior clap boards and porches. Lead paint was added less frequently to wall and ceiling paints.

Regardless of the anticipated outcome, a thorough inspection for all suspect ACM and LBP must be performed. Suspect materials that are not sampled, but which are suspect in appearance, must be considered ACM or LBP. *Material locations, accessibility, friability, current condition, potential for damage and the approximate quantity of the identified ACM and LBP must be documented in chart form and included in the inspection report.* The condition of hazardous building materials is especially important and must thoroughly reviewed and documented at all locations.

After identification and evaluation of ACM or LBP, a decision must be made regarding management in place, repair or abatement alternatives. Abatement must be conducted if construction plans are scheduled that will disturb the ACM and LBP or if significantly damaged materials are encountered during the inspection.

II. DCA O&M PLAN OBJECTIVES

Principle objective: To minimize or eliminate exposure of all building occupants to asbestos and lead paint.

Work practices to accomplish objective:

1. Help to maintain ACM and LBP in good condition
2. Ensure proper cleanup of hazardous dust or debris previously released and repair of damaged materials
3. Minimize further release of asbestos fibers or lead dust
4. Monitor periodically the condition of ACM and LBP

Three categories of hazardous building materials, if present, must be addressed:

1. Surfacing Materials - examples include asbestos fireproofing, asbestos-containing decorative or acoustical treatments to walls or ceilings and lead-based paint on walls, doors, ceilings, windows or any other identified building surface.

2. Thermal System Insulation – examples include asbestos insulation applied to pipes, boilers, ducts and tanks.
3. Miscellaneous Materials – examples include asbestos floor coverings, ceiling panels, wallboard, siding and roofing products.

Hazard Management

Specific instructions on how to appropriately manage each of these categories, if present, must be included in the DCA O&M Plan. Certain factors such as material friability, condition and accessibility to building occupants (potential for damage/exposure) are important and will need to be considered when developing the O&M Plan. For ACM and LBP that are highly friable or damaged, limited access and frequent monitoring may be appropriate. However, abatement must be conducted if:

1. The material is highly friable;
2. The ACM or LBP has a significant potential for damage;
3. The ACM or LBP is already substantially damaged; or
4. The ACM or LBP would be difficult to manage, from an occupant exposure point of view.

O&M Manager

To centralize procedures at the facility and ensure that the O&M Plan objectives are met, a recommendation to appoint a O&M Manager at the property must be included in the O&M Plan. This person will need to oversee all hazardous building material activities at the facility. A maintenance supervisor or property manager usually holds this responsible position. The O&M Plan must require certification of the O&M Manager in the basics of asbestos or lead paint hazards and to familiarize this person with the locations of all identified materials at the facility.

The O&M Manager guides custodial and maintenance staffs, contractors, outside service vendors and residents with regard to activities that could potentially disturb asbestos or lead paint. The O&M Manager is responsible for periodic inspections of identified ACM and LBP to document their condition over time. When damage is observed, the O&M Manager must arrange for repair or cleanup of damaged ACM or LBP and limit access to the damaged area. Further, the O&M Manager is required to keep documents and records on file of all activities relating to asbestos or lead paint issues on the property, including work permits in areas containing ACM or LBP, emergency responses and the like.

III. PREPARING AND IMPLEMENTING THE DCA O&M PLAN

The success of an O&M program is dependent upon its proper preparation and the commitment of key personnel at the facility to implement its procedures. In order to achieve the greatest potential for successful implementation of the O&M program, it will be important that staff properly administer the provisions of the O&M Plan. Also the building tenants and outside contractors will need to be educated on the locations of ACM and LBP and on the policies of the O&M Plan.

DCA O&M Plan preparation must:

1. Be tailored to the asbestos or lead paint inspection findings at the facility;
2. Identify the roles of responsible parties who will implement the program; and
3. State clearly the O&M policies and procedures for the facility.

Eight Required Elements

- | | |
|-------------------------------------|--------------------------------|
| 1. <i>Notification and Labeling</i> | 5. <i>Record Keeping</i> |
| 2. <i>Periodic Surveillance</i> | 6. <i>Worker Protection</i> |
| 3. <i>Controls</i> | 7. <i>Training</i> |
| 4. <i>Work Practices</i> | 8. <i>Emergency Procedures</i> |

Each of the eight elements must be emphasized in the DCA O&M Plan and constitute the basic core of the document.

Additionally, the O&M Manager must periodically review the written O&M plan to determine whether it needs to be updated. For example, after removal or renovations affecting ACM and/or LBP the O&M program must be revised accordingly. The O&M program must remain in effect as long as there is ACM and/or LBP present in the building.

1. Notification and Labeling

All persons that could be potentially affected by ACM or LBP at the facility must be:

1. Notified regarding the location of ACM and LBP;
 - A. Their potential health effects; and
 - B. Issues associated with how and why its disturbance must be avoided.

This communication must be directed towards building residents, occupants, on-site staff, and outside vendors and be provided within 15 calendar days of evaluation for ACM or LBP, presumption that ACM or LBP is present, and hazard reduction activities are conducted. The communications must be provided in the occupants' primary language. Not only do building occupants have the right to be informed of potential hazards in their environment but also, if notified, these persons will be less likely to disturb the ACM or LBP. A record of notices sent, meetings held and recipients of information must be kept permanently on file at the facility by the O&M Manager.

Communication must be accomplished by:

- A. Conducting group meetings;
- B. Distributing written notices to affected occupant units and posting in centrally located common areas; and
- C. Posting caution signs in areas where ACM and LBP are located.

At a minimum, the following information must be provided:

1. Instruction on the basics of exposure, including the fact that ACM and LBP are hazardous only when inhaled or ingested;
2. How one is to evaluate reasonable hazards presented by ACM or LBP;
3. The nature and scope (ei. locations, types and current condition) of ACM and LBP that have been identified at the community, with particular emphasis on areas that could be easily disturbed, that are in poor condition, and which present an immediate asbestos or lead paint hazard;
4. The dates and results of ACM AND LBP evaluation and hazard reduction activity;
5. Activities to avoid in areas that contain ACM or LBP on the property;
6. The need to notify the O&M Manager regarding incidents of damaged ACM on LBP;
7. The commitment of the management staff to closely monitor the ACM and LBP, engage in proper work practices to prevent damage to ACM and LBP and protect the health and well being of all building residents and workers;

8. A contact name, address, and telephone number for more information.
9. Properties with LBP hazards must distribute EPA's "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" pamphlet.

Establishing residents' comfort about the asbestos and lead paint issues on the property and management's ability to properly handle the situation will promote trust and cooperation in the plan's implementation.

Caution labeling and warning signs must be placed at all entrances to areas containing ACM or LBP and up to 20 feet away from the perimeter of the work area. The materials themselves must also be labeled so that persons reading the caution signs are thoroughly advised of the potential hazards in that area. For example, these signs are often found in mechanical areas. If an area contains damaged, friable ACM or LBP, warning tape, prohibiting the access of unauthorized persons, must be placed over all access points until the damaged areas are repaired. The entrances to these areas must be kept locked at all times with limited access to only authorized, protected personnel.

Never permit resident access to work areas while work disturbing known or presumed ACM or LBP, or cleanup of ACM or LBP materials, is underway. Residents must be relocated if the work in their unit will last more than a short time and is unable to be appropriately contained (see DCA's *Relocation Manual*). Residents are not allowed to reoccupy the work area until a clearance exam, or cleaning verification, as applicable, is passed.

2. Periodic Surveillance

Periodic surveillance to monitor the physical condition of ACM and LBP must be included in the DCA O&M Plan. The visual re-inspection must be:

- Performed or supervised by the O&M Manager;
- Photo-documented or recorded for record keeping; and
- Recorded as part of the permanent records of the facility.

In a multi-family residential setting, the re-inspection process will be time consuming, if ACM or LBP was identified in numerous units. The condition of ACM and LBP in each and every unit must be recorded in some manner as part of the surveillance program. Informed residents could play a part in the periodic surveillance program by filling out and returning specific questionnaires that request observation of ACM and LBP for indications of damage.

The O&M Plan must stipulate the required frequency of re-inspections and the procedures to accomplish those tasks. Visual assessments must be conducted by trained individuals at least once a year, when a complaint is received regarding deterioration of surfacing materials, thermal insulation, or miscellaneous materials or other ACM and/or LBP hazards in a dwelling unit or common area, whenever the dwelling unit turns over or becomes vacant, and whenever significant damage occurs.

The O&M Plan must include provisions for instances when encapsulated friable, or damaged ACM or LBP may become exposed. Provisions must include sampling and analysis of settled dust and/or periodic air monitoring to supplement the efforts of a visual re-inspection of these areas. If air monitoring is conducted, a baseline study must be performed as a comparison value for future air monitoring events. Visual inspections can recognize situations and anticipate future exposure, whereas air monitoring can only detect a problem after it has occurred. However, these supplemental methods may provide

management with an early warning of deterioration or disturbance of the ACM or LBP. Because of the need for particular sampling equipment and the specialized nature and training required to perform this supplemental testing, a professional engineering firm with these capabilities must be consulted to conduct these services.

3. Controls

A system to control all work that may disturb ACM or LBP, must be a part of the DCA O&M Plan. To do so, develop a work permit system whereby all work requests need to be approved by the O&M Manager. The procedure of submitting work requests for approval, prior to actual maintenance or construction activities, can:

- Minimize unauthorized access to restricted areas;
- Minimize potential disturbance of ACM and LBP; and
- Reduce the possibility for release of asbestos fibers or lead paint dust.

The O&M Manager must review all work requests for the property and review the maintenance records for the facility to evaluate the potential for ACM or LBP disturbance. *If asbestos or lead paint is present in the requested work area, procedures to minimize the release of asbestos fibers or lead paint dust must be stipulated on a work authorization form.* These work conditions must include a written description of specific work practices that will and will not take place, isolation of work areas and provisions for clearance inspections prior to job completion.

The O&M Manager is responsible for ensuring that contractors working in areas where ACM and LBP could be disturbed have the appropriate training, respiratory protection and that the stipulated work practices are employed during the project. The O&M Manager must use a work evaluation form to document observations of approved work activities. The O&M Manager must have the authority to stop all work if deviations from stipulated work practices are observed.

4. Work Practices

Detail appropriate work practices for custodial, maintenance and construction personnel that will be working near areas which contain ACM or LBP. The work practices must be tailored to the likelihood that ACM or LBP would be disturbed.

Specific procedures to minimize and/or contain asbestos fibers and lead paint dust must be described. These procedures could include:

1. Wetting ACM prior to disturbance;
2. Use of isolated enclosures;
3. Avoidance of certain maintenance activities such as sawing, sanding, drilling, cutting, abrading, or chipping ACM and LBP.

Additionally, cleaning practices such as dry sweeping, dry wiping and regular vacuuming of areas, where fallout of asbestos fibers or lead paint dust are possible, must be stipulated in the O&M Plan as practices to be avoided. Rather, special vacuums with high efficiency particulate air (HEPA) filters and wet cleaning methods must be employed in these areas. A HEPA vacuum must be purchased for facilities which identified friable ACM or LBP.

Asbestos or lead paint waste (i.e., debris, dust, dirty rags, mop heads, HEPA vacuum filters) must be disposed of in a specially marked plastic bag as hazardous waste. The consultant must recommend special cleaning of potentially contaminated areas as a part of the O&M Plan. A small supply of pre-labeled 6-mil-thick plastic waste bags must therefore be purchased and made available for contaminated waste disposal.

Special cleaning techniques must supplement, not replace, repair or abatement actions.

The O&M Plan must include special work practices for each type of ACM or lead paint identified at the facility and for each type and category of maintenance activity likely to be performed in that area. Different situations require different levels of basic O&M procedures to minimize asbestos fiber or lead paint dust release. It is at the discretion of the O&M Manager to evaluate the level of precautionary procedures that need to be employed. For instance, there are situations when disturbance of ACM or LBP is unlikely, those when disturbance is possible and those when disturbance is intentional. Each situation requires different levels of precautionary work procedures.

Work procedures in some areas may only require the use of wet methods in an effort to reduce the potential for fiber or dust release. The work procedures in these areas may include wetting of the material prior to work activities, damp wiping, mopping or HEPA vacuuming. Care must be used when changing HEPA vacuum filters because of the potential for fiber release. Other work procedures may require the use of drop cloths, respirators or protective clothing. More significant disturbance activities may actually require an enclosure of the work area and the services of an abatement contractor. Whatever the conditions may be, the O&M Plan must detail specific work practices to be employed when actions are taken that could potentially disturb ACM or LBP.

All of the facility's asbestos or lead paint-related management documents must be retained in a safe and secure location at the facility. *The O&M Plan must itemize particular documents that need to be retained by the facility.* Because certain exposures can have a latency period, the records must be kept for at least 30 years. Particular documents that must be retained by the facility include:

1. The asbestos and lead paint inspection reports;
2. The O&M Plan and any revisions thereto;
3. ACM and LBP damage and emergency response reports;
4. Notices to proceed;
5. Safety equipment issued to personnel;
6. Work permits issued to contractors;
7. Training and notification sessions held and attendee logs;
8. Certifications of renovators, Program Manager(s), and all other persons performing ACM or LBP activities;
9. Medical examination reports of personnel that work near ACM or LBP on a regular basis;
10. ACM or LBP abatement or repair reports.

The O&M program must provide example record keeping forms to facilitate orderly Record Keeping procedures by the facility.

5. Worker Protection

The O&M Plan must provide a worker protection program that includes provisions for respiratory protection and possibly, protective clothing, for personnel who will have regular contact with ACM or lead paint. A written respiratory protection program is required by the Occupational Safety and Health Administration (OSHA) regulations whenever an O&M Plan specifies that service workers wear respirators or where respirators are made available to employees. A properly trained O&M Manager is capable of preparing this document. Otherwise, the environmental consultant must be able to meet this need.

In the case that the encapsulated ACM or LBP becomes exposed, the O&M Plan must include an element for respiratory protection. A qualified health and safety professional (perhaps a representative from the respiratory equipment distributor) or a properly trained O&M Manager must provide instruction on the proper use and care of respirators. Attendees of a respirator training session must be documented. Additionally, a supply of protective clothing (disposable type suits) must be maintained on the premises in the event that certain situations arise which require their use. When in doubt about exposure during certain work operations, building owners must provide respiratory protection and protective clothing to their employees.

The O&M Plan must require individuals, who have respirators available for their use, complete a medical questionnaire and submit to medical examinations at the beginning and end of their employment period. The employer is required by law to pay for the medical examination. These procedures will provide valuable information about the individual's ability to function while wearing the respirator and document medical test information.

A wide variety of respirators are available. The O&M Plan must require only respirators that are approved for protection against asbestos fibers or lead paint dust by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA). Generally, a half-face, negative pressure respirator should provide adequate protection to maintenance workers in the residential setting. These respirators are designed to provide a level of protection that is roughly equal to ten times that of an unprotected person. The environmental consultant must make a specific respirator selection recommendation in the O&M Plan, if conditions warrant their use.

Smoking, eating, drinking, chewing, and applying cosmetics must never be allowed in the work area. Performing these activities with asbestos or lead on their hands puts the employee's health at risk.

6. Training

The O&M Plan must include provisions for appropriate training of personnel who may come in contact with ACM or LBP at the facility. If these persons are not adequately trained, O&M tasks may not be performed properly or at all, possibly resulting in the spread of contamination to other areas or human exposure. The O&M Plan must provide specific guidelines for Level I Awareness Training (see below). This training can be provided by the facility's O&M Manager or other certified individual, who must be qualified and available to conduct Level 2 training for those individuals who require more in-depth knowledge on handling asbestos or lead paint at the property. The consultant that prepares the O&M document must be involved with the training session(s) because of their expertise and familiarity with the facility.

In the residential setting there are levels of worker training that are considered appropriate for persons who may come in contact with ACM or LBP:

Level 1 - Awareness Training:

Involves two to eight hours of training concerning background information on asbestos or lead paint, health effects, worker protection, locations of ACM and LBP on the property, the elements of the O&M Plan and emergency response actions. This level of training is usually provided to those who will be involved in cleaning and simple maintenance tasks where ACM or LBP may be accidentally disturbed.

Example: Awareness training must be provided to a maintenance person who needs to replace broken or damaged ceiling tiles, behind which, is located an asbestos-containing spray-applied fireproofing material. Likewise, awareness training would be applicable to a maintenance person that is responsible for painting of interior or exterior building areas where lead paint has been identified.

Level 2 - Special O&M Training:

Involves 16 hours of training concerning the aspects presented at Level 1 as well as coverage of regulations, work practices, waste handling and disposal, respirator use, care and fit testing, protective clothing, exercises in limited removal glove bag work, HEPA vacuum use and documentation procedures. This level of training is usually provided to maintenance workers who will be significantly involved with general maintenance and repair tasks.

Example: Special O&M training must be required for a maintenance person who removes a section of ACM pipe insulation in order to repair a broken pipe valve.

Level 3 – Abatement Training:

A third level of training prepares an individual to abate ACM or LBP. However, if abatement becomes necessary, the O&M Plan must recommend that the services of a qualified abatement contractor be retained. If the abatement is not properly performed, the situation could become worse, resulting in a larger area of contamination and a potentially greater number of exposed persons.

At a minimum, the awareness training must be included as part of the O&M Plan. If significant quantities of friable asbestos or damaged lead paint are identified then, the 16 hours of specialized O&M training is required for select personnel.

The O&M Manager must also be aware of the levels of training held by contractors who are brought in to perform various tasks that could potentially disturb the ACM or LBP. It must be stipulated in the O&M Plan that appropriate training will be verified prior to the release of outside vendors to perform services which may disturb asbestos or lead paint.

The O&M Plan must identify the level of training required at the facility. The O&M Plan must also specify those job classifications for which training is a requirement prior to employment.

7. Emergency Procedures

A major fiber release for asbestos is defined by the Environmental Protection Agency (EPA) as one, which involves more than 3 square or linear feet of disturbed material. Certain specific management practices and emergency work procedures must be outlined in the O&M Plan, in the event that a release

of asbestos or lead dust occurs on a DCA-funded property. These emergency response procedures will vary according to:

1. The amount of ACM or LBP affected;
2. The extent of the release;
3. The area in which the release has occurred;
4. The relationship of the release area to the air handling system of the building;
5. Access to the area by building occupants.

In general, losing doors, windows, and HVAC systems to restrict airflow in the affected area isolates areas, which have had a release of asbestos or lead dust. Signs must be posted and restrictive barriers installed that identify the problem and allow entrance only to authorized personnel. Persons that are assigned to clean up hazardous material debris must wear respiratory protective equipment and possibly protective clothing and employ specialized cleaning procedures.

Different levels of training are needed for workers involved with release episodes. The O&M Plan must stipulate the level of training required. A major release will generally require abatement worker training. An abatement contractor and a qualified engineering firm must be consulted to address these situations. For major releases, a visual inspection and clearance air monitoring must be conducted, following the removal of bulk material.

The consultant must prepare this section of the O&M Plan to provide specific guidance with respect to emergency procedures that need to be employed, and also to provide the O&M Manager with options regarding contacts to make when in need of assistance from abatement contractors or engineering consultants.

8. Certification

The O&M Plan must provide a signed certification statement from the reviewing registered engineer or architect. The certification must state:

I certify that this document and all attachments were prepared under my direction or supervision in accordance with the DCA O&M Guidance Manual, dated [insert year], and that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Signature: _____
Printed Name: _____
Title: _____
Date: _____