

**OPERATIONS AND MAINTENANCE PROGRAM
FOR
ASBESTOS CONTAINING MATERIALS
IN
BUILDINGS**

A GUIDE FOR ALL PERSONNEL

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I. SPECIAL CLEANING PRACTICES

Special cleaning practices will be followed in any facility containing friable Asbestos containing material (ACM). Where the ACM is confined to a single area, cleaning that area may be sufficient. If the ACM is more widespread and/or fibers can be transported by the ventilation system or other means, special cleaning practices should be extended to the entire facility. Cleaning activity categories are:

- A. Initial Cleaning
- B. Periodic or Routine Cleaning
- C. Minor Episode
- D. Major Episode
- E. Emergencies

A. INITIAL CLEANING

The purpose of our initial cleaning is to remove all previously released asbestos debris from the facility. This includes both visible and invisible asbestos fibers that have been spread throughout the facility. The level of response to the initial cleaning must include an evaluation of any level of minor or major fiber releases discussed below.

Initial cleaning shall be according to Sub-Part E of 40 CFR, Part 763.91c, of the Federal Register, October 30, 1987. Any other cleaning procedures that apply to a particular facility, area, building or equipment are to be used.

1. High Efficiency Particulate Air (HEPA) vacuum or steam clean all equipment and associated surfaces.
2. HEPA-Vacuum or wet-clean all other floors and all other horizontal surfaces.
3. Dispose of all debris, filters, mop heads, and cloths in sealed, leak-tight containers.

The initial cleaning will be conducted at least once after completion of the inspection and at least once before initiation of any response actions in the areas where significantly damaged thermal insulation or surfacing asbestos is present.

B. PERIODIC OR ROUTINE CLEANING

Routine or periodic cleaning is normal maintenance activity, and in buildings with friable ACM or damaged thermal ACM insulation, all cleaning shall be performed according to Sub-Part E of 40 CFR, Part 763.91c, of the Federal Register, October 30, 1987. At a minimum it is suggested that monthly and semi-annual wet cleaning and HEPA vacuuming be carried out in these areas respectively. This would apply only if the material should become damaged.

C. MINOR FIBER RELEASE EPISODES

Minor fiber release episodes are events in which visible emissions or production of debris involving less than 3 square feet of ACM occur. The procedures to clean a minor fiber release episode are listed below.

This cleaning shall be done as to Sub-Part E of 40 CFR, Part 763.91f, of the Federal Register, October 30, 1987.

1. Notify the asbestos designated person.
2. Access to the area should be restricted during the clean-up.
3. Any debris should be thoroughly wetted using amended water and placed in 6 mil polyethylene disposal bags.
4. The area should be cleaned using HEPA vacuuming or steam on all equipment and areas such as carpet and by HEPA vacuuming to wet cleaning all floors and other horizontal surfaces.
5. All debris and contaminated cleaning materials such as mops, rags, and debris-containing vacuum bags should be sealed in 6-mil polyethylene bags or leak-tight drums.
6. The damaged area must be repaired with asbestos free material appropriate to the source of the release.
7. The source of the release area should be evaluated to determine if other response actions are necessary.

D. MAJOR FIBER RELEASE EPISODES

A major fiber release episode is the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACM and the response to cleaning this must be directed and carried out by persons accredited to conduct the response actions.

The response to a major fiber release episode shall be according to Sub-Part E of 40 CFR, Part 763.91f2.

1. Restrict entry into the area and post signs to prevent entry of persons other than those necessary to perform the response action.
2. Shut off or temporarily modify any air handling system to prevent the distribution of fibers to other areas in the building.
3. Notify the asbestos designated person , _____,
Phone # _____.
4. The response action for any major fiber release episode must be designed by persons accredited by the State of Texas to design response actions and conducted by persons accredited by the State of Texas to conduct response actions.

This cleaning shall be done according to Sub-Part E of 40 CFR, Part 763.91d, of the Federal Register, October 30, 1987.

1. Restrict entry into the area by persons other than those necessary to perform the maintenance project, either by physically isolating the area or by scheduling.
2. Post signs to prevent entry by unauthorized persons.
3. Shut off or temporarily modify any air-handling system and restrict other sources of air movement.
4. Use work practices or other controls, such as wet methods, protective clothing, HEPA vacuuming, mini-enclosures, and glove-bags as necessary to inhibit the spread of any released fibers.
5. Clean all fixtures or other components in the immediate work area.
6. Place the asbestos debris and other cleaning materials in a sealed, leak-tight container.

E. EMERGENCIES

Emergency cleaning is not explicitly discussed in the regulations, but emergencies can and will occur in buildings containing ACM. Emergency response action can be either a minor or major fiber release episode.

MINOR EMERGENCY FIBER RELEASE EPISODES are events that involve small quantities of ACM which do not come in contact with the occupants, but facility occupants or workers are present during the event.

1. Non-trained personnel should be evacuated from the area.
2. Notify the designated person
3. The steps for a Minor Fiber Release Episode according to Sub-Part E of 40 CFR, Part 763,91f, of the Federal Register, October 30, 1987 will be followed.
 - A. Thoroughly saturate the debris using wet methods.
 - B. Clean the area using wet-methods, HEPA vacuums, and protective clothing.
 - C. Place the asbestos debris in sealed, leak-tight container.
 - D. Repair the area.

MAJOR EMERGENCY FIBER RELEASE EPISODE is the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACM. Major emergency fiber release episodes can be grouped into three general categories. They are:

1. Those that occur immediately prior to a planned occupant activity (such as reoccupying of an area).
2. Those occurring while occupants are in the facility but none are present at the time of the release.
3. Those occurring when occupants are present.

The response actions in each of these types of activities must be executed in a manner to minimize additional exposure to the facility occupants.

EMERGENCY EXAMPLE 1

1. Isolate the area.
2. Call the asbestos designated person.
3. Follow the steps for major release episode.

EMERGENCY EXAMPLE 2

1. Isolate the area.
2. Call the asbestos designated person.
3. Designated person will notify the appropriate officials
4. Trained personnel with the proper protective equipment shall employ wet cleaning methods and HEPA-vacuuming as described in the Federal Register, October 30, 1987 according to Sub-Part 40 CFR, Part 763.91c.
5. Occupants are to be evacuated without going through the contaminated area. (Examples of this evacuation would be through windows, fire escapes, or other doors away from the area).

EMERGENCY EXAMPLE 3

1. Calm should be maintained.

2. People should not brush the debris from their clothing. This will only increase the airborne fiber count.
3. Non-contaminated occupants should be removed from the area immediately, and contaminated occupants should be taken to an area where the debris can be HEPA vacuumed or wet-wiped from their clothing and skin.
4. If shower facilities are available, the contaminated persons should take showers and put on fresh clothing. Contaminated clothing will be picked up by qualified workers.
5. Call asbestos designated person.
6. Restrict access to contaminated area.
7. Qualified workers will clean area and repair.

II. PRACTICES FOR MINIMIZING DISTURBANCE OF ASBESTOS DURING ROUTINE MAINTENANCE

Practices for maintenance work will address four types of projects:

- A. Those which are unlikely to involve contact with ACM.
- B. Those which may cause accidental disturbance of ACM.
- C. Those which involve small scale projects of ACM.
- D. Those which involve large scale projects of ACM.

These work practices are tailored to the likelihood and severity of ACM disturbance and the potential for exposure of workers and other facility occupants to airborne asbestos. Special work practices are required where disturbance of ACM is likely. For example, simply changing light bulbs in fixtures located near ACM will normally create little chance of disturbance. Likewise, work around non-friable ACM is not likely to cause fiber release unless the ACM is directly manipulated, such as by drilling or cutting. However, if any doubt exists about the possibility of disturbing ACM during maintenance activities, call the asbestos manager. The four maintenance activity categories are discussed below.

- A. The maintenance activities which are unlikely to involve any contact with ACM can be conducted by custodial and maintenance staff who have had the 2 hours of worker training. These workers are knowledgeable in the presence and location of the ACM in the facility and how to control it. Being familiar with the location of the ACM, the worker should be careful not to bump or scrape it. Because of this knowledge, the worst event would be a minor fiber release episode. At that point the worker would restrict access to the area and call the asbestos designated person.
- B. Maintenance activities which may cause accidental disturbance of ACM should be conducted by personnel who have the additional 14 hour training program. Although disturbance will be accidental and therefore unlikely, these personnel will be trained in the proper response actions and will be more aware of the potential impact of their activities. If a fiber release episode occurs, the worker will restrict access to the area and call the asbestos designated person.
- C. The manipulation or removal of small amounts of ACM (under 3 square

or 3 linear feet) requires custodial and maintenance personnel to contact the asbestos manager. These projects will be contracted to a licensed asbestos contractor.

- D. The manipulation or removal of large amounts of ACM (over 3 square or 3 linear feet) requires custodial and maintenance personnel to contact the asbestos manager. These projects will be contracted to a licensed asbestos contractor.

III. PROCEDURES FOR AVOIDING DISTURBANCE OF ASBESTOS DURING NORMAL BUILDING USE

In order to avoid disturbing ACM during normal facility use, it is essential that facility occupants, maintenance workers, custodial personnel and outside contractors:

1. Be aware of the location of the ACM in the building.
2. Be informed of the need to avoid disturbing it.

A. Building Occupants

The best way to prevent accidental disturbance of ACM is to inform all employees and other occupants that might come in contact with it.

1. Inform the people under his/her charge as to the location of ACM in their facility. The location of ACM in the facility is defined in the Asbestos Management Plan.
2. Inform his/her people as to the need not to disturb the ACM.
3. See that asbestos warning signs have been posted by proper authorities in maintenance areas where ACM is present.
4. This awareness training will be confirmed by sending confirmation notice, appendix a, to the facility asbestos designated person.

B. Maintenance and Custodial Workers

Follow the above instructions.

C. Outside Contractors.

Before a private contractor begins work, he will receive:

1. Asbestos work authorization.
2. Information as to the location of ACM in the facility.
3. Information as to the need to avoid disturbing ACM.
4. Instruction in case of fiber release by his workers.

The private contractor will provide the asbestos designated person the assurance in writing that all workers under his direction have been informed of the presence of ACM, have received proper training and are qualified asbestos workers if they are to come into contact with ACM during their course of work.

IV. PROCEDURES FOR DEALING WITH ACCIDENTAL DISTURBANCE OF ASBESTOS

CUSTODIAL AND MAINTENANCE WORKERS

1. A dislodged material is found.
2. Consult the asbestos management plan in the main office to see if it is ACM.
3. If it is ACM restrict access to the area and call the designated person.

MINOR FIBER RELEASE EPISODE is the falling or dislodging of three square or three linear feet or less of friable ACBM.

1. Thoroughly saturate the debris using wet methods.
2. Clean the area using Federal Register procedures.
3. Place the asbestos debris in a sealed, leak-tight container.
4. Repair the area of damaged ACM with materials such as asbestos-free spackling, plaster, cement, or insulation, or immediately have the appropriate response action implemented as required in the Federal Register.

MAJOR FIBER RELEASE EPISODE is the falling or dislodging of more than three square or three feet of friable ACBM.

1. Restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.
2. Shut off or temporarily modify any air-handling system to prevent the distribution of fibers to other areas in the facility.
3. The response action of any major fiber release episode must be designed by persons accredited to design response actions and conducted by persons accredited to conduct response actions.

V. RESPIRATORY PROTECTION PROGRAM

PURPOSE

The purpose of this operating policy is to establish a respiratory protection program to comply with the Federal Occupational Safety and Health Act (OSHA), the Environmental Protection Agency (EPA) and the Asbestos Hazard Emergency Response Act (AHERA).

INTENT

The intent of this policy is to help reduce employee and/or private contractor exposure to asbestos fibers.

A. RESPONSIBILITIES AND DUTIES

The safety director is responsible for determining what specific applications require the use of respirator equipment and determines proper respiratory equipment to meet the need of each specific application. He is responsible for overall program administration.

The asbestos manager is responsible for:

1. Identification and location of ACM.
2. Initial selection, training and testing of the respirators used by employees and private asbestos contractors.
3. The asbestos manager shall see that supervisors, foremen, or group leaders for all operations are proficient in the use of the respiratory protection requirements. Supervisors are also responsible for ensuring that their subordinates comply with all facets of the respirator program.
4. It is the responsibility of all private contractors and their employees to have an awareness of the respiratory protection requirements for their work areas. Their workers are responsible for wearing the appropriate equipment according to proper instructions and for maintaining the equipment in a clean, operable manner.

NO WORKER IS TO WEAR A RESPIRATOR WITHOUT THE PROPER MEDICALS, FIT TEST, AND LICENSE.

B. MONITORING

Employee Medical Monitoring

1. Pre-employment physical examinations will be conducted on those workers whose jobs may require the regular use of respirators to assure that they are physically able to perform their work and use respiratory equipment as required.
2. If at any time a physician determines that a worker is unable to function normally wearing a respirator or that the worker's safety and health or that of others would be affected by the worker's use of the respirator, the supervisor will assign that worker to another job or give the worker the opportunity to transfer to a different job which does not require a respirator.

Work Area Monitoring

1. Work area monitoring of the respiratory protection program will be conducted as per AHERA guidelines to provide for a continuing healthful environment for workers. Personal sampling equipment will be used in accordance with AHERA guidelines to sample each work area where friable asbestos is present. The results of these samples will provide guidelines for respirator selection.

C. RESPIRATOR SELECTION

Because asbestos fibers are released during asbestos abatement and are often released during other types of work such as repair and maintenance operation, the risk of breathing airborne asbestos fibers is high in areas where such work is done. The potential harm from even a minimum exposure to asbestos fibers has been well documented. Since it is important to provide workers with the maximum feasible level of respiratory protection, pressure-demand Type C air will be used until fiber count is established. It shall be the responsibility of the asbestos manager to determine when other types of respirators may be used.

D. TRAINING AND EVALUATION

Each worker, upon assignment to an area requiring respirators, must be instructed by his supervisor as to need, limitation, and care of his respirator.

Workers required to wear a respirator must be fitted properly and tested for a face seal prior to the use of the respirator in a contaminated area. Qualitative fit testing is acceptable for most hazards in the work place.

If it is determined that an individual cannot obtain an adequate fit of face seal with any negative pressure respirator, a powered air purifying or air supplied respirator will be required instead.

E. RESPIRATORY INSPECTION AND MAINTENANCE

The following points must be considered for respirator inspection and maintenance.

1. The wearer of a respirator will inspect it daily when it is in use.
2. Supervisors will periodically spot check respirators for fit usage, and condition.
3. Respirators not discarded after one shift use will be cleaned on a daily basis.
4. Respirators not discarded after one shift use will be stored in a suitable container away from areas of contamination.
5. When respirators are not discarded after one shift use they will be marked or stored in such a manner as to assure that they are worn only by the assigned employee. If use by more than one employee is required, the respirator will be cleaned between used.
6. Respirators should not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, or temple pieces on glasses. Also the absence of one or both dentures can seriously affect the fit of a face piece. The worker's supervisor will periodically check this fit.

VI AWARENESS TRAINING

MAINTENANCE AND HOUSEKEEPING

The asbestos awareness program is an integral portion of OSHA's hazard communication standard. It requires that we, as an employer with workers working around asbestos, hold a 2-hour awareness program for all maintenance and custodial workers. The maintenance and housekeeping sections will hold for each employee, who could be exposed to asbestos or any other hazard, proper training on how to protect himself from the potential hazard.

All new employees will go through an orientation which will include asbestos awareness. The training should take place within 60 days from the date of their employment.

All contractors used for asbestos related projects are to furnish asbestos certification before a work order is issued. If they are not asbestos certified, contracts are not to be issued.

The two-hour asbestos awareness training will be the video program, "Asbestos Awareness Training," by Carl R. Steklenburg. This production is approved by the Federal Environmental Protection Agency. Complete documentation of worker training will be kept in the safety director's office. An equal training program may be substituted if it covers all of the Federal guideline requirements.

VII. REGULAR SURVEILLANCE OF ACM

A key element of any asbestos operation and maintenance is to plan a regular surveillance of the ACM. Inspection should be made at 6-month intervals.

Inspections will be used to evaluate each homogeneous area of surfacing, thermal and miscellaneous ACM. The assessment factors are:

1. Evidence of physical damage.
2. Evidence of water damage.
3. Evidence of delamination or other deterioration
4. Degree of accessibility
5. Degree of activity near ACM.
6. Location of air supply to ACM.
7. Other observations.

In addition to the six-month surveillance, all areas of identified asbestos or assumed asbestos must be inspected by a licensed inspector every 12 months and must have this inspection entered into the management plan by a licensed management planner.

VIII. RECORDKEEPING

The administrative office should maintain a complete, updated copy of a management plan. The management plans shall be available during normal business hours without cost or restriction, for inspection by those that might come in contact with it.

1. For any response action to preventative measures taken for ACBM: a detailed description of the actions and information on sample analysis.
2. For each person required to be trained: his name and job title, as well as information on his training.
3. For each periodic surveillance that is conducted: the name of each person performing the surveillance, the date of the surveillance, and any changes in the condition of the material.
4. For each re-inspection: the name and accreditation information of the inspector, the date of the re-inspection, and any changes noted in the condition of the material.
5. For each required cleaning: the name of the person performing the cleaning, the date of the cleaning, the locations cleaned, and the methods used.
6. For each small-scale and short-duration operation and maintenance activity: the name and signature of the person performing the activity, the activity start and completion dates, the precise location, a description of the activity and any preventative measures taken and, if ACBM is removed, the name and location of the storage or disposal site.
7. For maintenance activities other than small-scale and short duration

activities: the name and signature of the person performing the activity, his State of accreditation and, if applicable, the accreditation number of each person doing the activity; the activity start and completion dates; the precise locations; a description of the activity and any preventative measures; and, if ACBM is removed, the name and location of the storage and disposal site.

8. For each fiber release episode: the date and location of the release, the method of repairing, the preventative or response actions taken, the name of each person performing the work and, if ACBM is removed, the name and location of the storage and disposal site.

IX DESIGNATED PERSON/PROGRAM MANAGER'S RESPONSIBILITIES

1. Manage all asbestos within the property.
2. Supervise and regulate all work involving asbestos.
3. Insure that all people that perform work that might disturb ACM have at the very least the required two hour awareness training.
4. Insure that all personnel that in any way remove, encapsulate, encase or remove asbestos have a state license and the proper certification from the State of Texas and work under the management of a licensed, certified asbestos consultant.
5. Conduct a six month inspection of all asbestos containing material. In addition each space within the property should be inspected each time it becomes vacant.
6. Should the property contain friable ACM it should be inspected each twelve month period by a licensed, certified asbestos consultant.
7. Issue work orders to all outside contractors should their work bring them in contact with ACM.
8. Keep records of all work involving ACM.
9. Inform all occupants of the location of ACBM and the location of the Management and Operation plan.
10. Provide the necessary two hour awareness training for all custodial and maintenance personnel and keep a percent record of this training.