

JUNE 1993
ASBESTOS OPERATIONS & MAINTENANCE PROGRAM
BOYS' OLD GYMNASIUM
PREPARED BY EHS

ASBESTOS
OPERATIONS and MAINTENANCE
PROGRAM
Logan High School - Boys' Old Gymnasium
162 West 100 South
Logan, Utah 84321

Prepared For:

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June, 1993

Logan High School - Boys' Old Gymnasium

Asbestos Operations and Maintenance Program

Introduction:

This operations and maintenance (O&M) program provides specific procedures and practices which shall be applied during cleaning, maintenance, renovation, and general operation of the building to maintain the building as free of asbestos contamination as possible. This O&M program draws heavily on information generated during the initial building inspection and subsequent reinspection(s) and becomes a key component of the management plan. The O&M program shall remain in effect until all asbestos-containing material (ACM) is removed from the facility.

Objectives of the Asbestos Operations and Maintenance Program:

There are three primary objectives of this O&M program: (1) clean up existing asbestos contamination, (2) minimize future asbestos fiber release by controlling access to ACM, (3) maintain ACM until it is eventually removed.

This O&M program shall be implemented as part of an overall asbestos management plan that has as its goal the elimination of asbestos exposure within the facility. Since large abatement projects require extensive planning and technical expertise, this O&M program does not set forth the means by which full-scale asbestos abatement is accomplished. Rather, it addresses the intentional disruption of ACM and shall be limited to repair or removal of small areas of significantly damaged ACM, or small areas where removal is necessary to facilitate maintenance/renovation activities. However, limited encapsulation and enclosure could be used to enhance an O&M program by reducing the likelihood for contact with this ACM.

Elements of the Asbestos Operations and Maintenance Program:

The specific elements of this O&M program are: notification and labeling, employee training, employee protection programs, specialized cleaning procedures, maintenance/renovation permit system, special equipment necessary to disturb ACM, special work practices for maintenance activities, emergency response procedures, asbestos waste disposal, special work practices for renovation, periodic surveillance and reinspection, and record keeping.

Each of these elements will be discussed in the following sections.

Notification and Labeling:

Once the presence of asbestos-containing materials has been established within a facility, a notification and warning program shall be initiated. The notification and warning program serves two purposes: (1) it alerts affected parties to potential hazards within the building; and (2) it provides basic information pertinent to the hazard. Building occupants, employees, and others who are aware of the presence of ACM are less likely to disturb the material and cause fiber release.

Notification

Notification of building occupants and other affected individuals may be accomplished distributing notices and/or holding awareness seminars.

Regardless of the notification format chosen, building occupants shall be provided with the following information:

- What asbestos is and how it is typically used;
- Health effects associated with exposure;
- What type(s) of ACM are present in the facility;
- The exact location(s) of these materials;
- How individuals can avoid disturbing ACM;
- How to recognize and report damage;
- Methods which custodial and maintenance personnel employ to prevent asbestos fiber release;
- What will be done periodically and over the long run to ensure the health and safety of building occupants; and
- Name and telephone number of the person responsible for managing asbestos related activities in the facility.

Labeling and Signs

Under AHERA, the posting of warning labels is mandatory adjacent to friable and non-friable ACM and suspected ACM in routine maintenance areas such the boiler room(s) at each school building. Labeling is usually in the form of posted signs or notices, which are often found either directly attached to ACM or at entrances to areas where ACM is prevalent. In accordance with AHERA, the warning label shall read CAUTION: ASBESTOS, HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT.

Warning signs used in conjunction with small renovation or repair that involves the disruption of ACM should be posted at entrances and around the perimeter of the project and in accordance with the OSHA Asbestos Standard for the Construction Industry (29 CFR 1926.58).

Training:

Training of service (custodial and maintenance) workers is one of the most important aspects of an effective operations and maintenance program. Training serves to establish proper awareness and understanding of work practices that are vital to the success of the program. In those schools that contain friable ACM, training must be adequately developed and offered on two levels (per AHERA).

General Awareness Training

All service personnel who work in a building that contains friable ACM must receive two hours of awareness training. This training session should include, at a minimum, all the information outlined in the section of notification.

Training for Cleaning and Custodial Work

Service personnel who conduct any activities that will result in the disturbance of ACM must receive the two hours of general awareness training and 14 hours of additional instruction (per AHERA). Information to be presented in this training session should include proper cleaning techniques, appropriate practices for handling ACM, proper use of respirators and other protective equipment, including hands-on training.

One of the main objectives of the O&M program is to clean the facility of existing asbestos contamination. This training program instructs participants in proper cleaning techniques that involve the use of wet methods, HEPA vacuuming, protective equipment, and proper waste disposal methods. Elements of specialized cleaning and recleaning are discussed later in the chapter.

Maintenance Work

Maintenance workers are often required to use specialized asbestos control procedures when working around ACM. Most maintenance work is conducted entirely by in-house staff, entirely by outside contracted help, or a combination of these two options.

If routine or even infrequent maintenance involves the possibility of significant disturbance of ACM, worker should be involved in a more extensive training program (16 hours total). Depending on the type of material maintenance workers will need to be trained in local isolation of the work area, isolation of the work area from non-work areas (through the use of warning signs, etc.), vacuuming, the use of wet methods to reduce fiber release, glove-bag techniques for working around pipe insulation, personal decontamination procedures, and ACM disposal procedures. In addition, maintenance workers in this category will need to be involved in respiratory protection and medical surveillance programs.

With respect to outside contractors (e.g., electrical, plumbing, and other service contractors), building owner should require evidence that the contractor is familiar with the O&M program, has experience and/or training in working with ACM and has adequately trained work crews. It is often preferable to have a member of the in-house staff trained to oversee all maintenance performed by outside contractors.

Employee Protection Programs:

According to the OSHA Asbestos Standard for the Construction Industry (29 CFR 1926.58), the OSHA Asbestos Standard for General Industry (29 CFR 1910.1001, and the U.S. EPA Worker Protection Rule (40 CFR 763.120), any employee exposed to at least 0.1 f/cc of asbestos (8 hour time-weighted average) for more than thirty days per year must be involved in a medical surveillance program. Likewise, any employee who works in an environment where a negative pressure respirator is part of his or her job must be included in a respiratory protection program. In this O&M program, the use of negative pressure will dictate involvement in the medical surveillance program for most maintenance workers. Although fiber levels may not be high enough to trigger respiratory protection program, establishing such a program is recommended.

Specialized Cleaning Procedures:

Cleaning up existing asbestos contamination within a 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 into the air and shall not be used. Therefore, it is essential that specialized cleaning procedures be implemented.

Specifically trained and properly equipped custodial workers should conduct a thorough initial cleaning in the building as soon as the O&M program is in effect and before the initiation of any response action. These workers should be equipped with high efficiency air purifying respirators, at a minimum. A combination of wet mopping/wiping and vacuuming should be used on all horizontal surfaces within the building. Irregular surfaces, such as curtains, book cases and carpeting should be cleaned using HEPA-equipped vacuum cleaners. Carpeting may also be cleaned using steam cleaners; however, steps should be taken to ensure that the liquid waste generated during steam cleaning process is disposed of as asbestos contaminated waste.

Other surfaces, such as walls, non-carpeted floors, light fixtures, exterior HVAC duct work, and filing cabinets shall be cleaned using mops and rags which are wetted with an amended water solution. Amended water is a mixture of water and non-sudsing surfactant.

Periodic or routine cleaning is less rigorous than the initial cleaning. This type of cleaning procedure shall be implemented when needed and on a regular basis depending upon the type of ACM and the level of contamination. The use of respiratory protection may not be required by custodial crews performing the routine cleanings. However, ACM's which are frequently disturbed may warrant the use of respiratory protection.

Maintenance/Renovation Permit System:

Minimizing the inadvertent disruption of ACM during maintenance and renovation operations is often one of the most difficult tasks faced by the asbestos program manager. By implementing a permit system, where work orders are approved by the asbestos program manager, damage to ACM's within the area may be minimized or avoided.

This permit system requires all maintenance and renovation activities to be controlled by the asbestos program manager. Prior to issuance of the permit, the asbestos program manager shall review all available documentation regarding the presence of ACM within the area impacted. If no ACM's are present then the permit is approved. In the event ACM's are present, the asbestos program manager will dispatch properly trained maintenance workers or an asbestos abatement contractor depending upon the quantity of ACM's impacted. Once the asbestos hazard is removed, the maintenance/renovation permit will be approved by the asbestos program manager.

Special Equipment Necessary for Maintenance Operations which Disturb ACM:

Special equipment shall be available to properly trained school district employees for use during any asbestos-related activity. This equipment shall be readily available and stored in a centrally located and dedicated area. The list below is considered a minimum.

1. Asbestos Identification Labels
2. Standard Asbestos Warning Signs/Posters
3. NIOSH/MSHA Approved Respirators and Filters
4. Disposable Coveralls with Hoods and Boots
5. Rubber Work Gloves
6. 6-mil Polyethylene Sheeting
7. Standard Asbestos Glove-Bags
8. Duct Tape 2" and 3"
9. Wetting Agent (Surfactant)
10. Low Pressure Water Sprayer
11. Appropriate Hand Tools
12. 6-mil Asbestos Disposal Bags
13. HEPA Vacuum and Accessories

Special Work Practices for Maintenance Activities:

Normal maintenance activities can disturb ACM and raise the levels of airborne asbestos within the building. Maintenance workers shall be cautioned against conducting any maintenance work which may disturb ACM. Work practices shall be tailored to reflect the likelihood that ACM will be disturbed and asbestos fibers released. Three basic categories of potential disturbance pertinent to this O&M program are:

1. Contact with ACM is very unlikely.
2. Accidental disturbance of ACM is possible.
3. Contact with ACM is likely.

Detailed work practices relating to asbestos-containing surfacing materials, thermal system insulation, and miscellaneous materials are provided in the remaining portions of this section.

Surfacing Materials

1. **Contact with surfacing ACM is very unlikely**

In many cases, routine maintenance activities can be conducted without contacting, jarring, or otherwise disturbing the ACM's. For example, changing light bulbs in a fixture on a ceiling with asbestos-containing acoustical plaster if the top of the fixture is wet cleaned prior to changing the bulb to remove any settled fibers. As a precaution, maintenance workers shall know the exact location of respirators and a HEPA vacuum within the building if needed.

2. **Accidental disturbance of surfacing ACM is possible.**

When lights fixtures, plumbing fixtures and pipes, air registers, HVAC ducts and other accessible items are located near friable surfacing ACM, maintenance work may unintentionally disturb the ACM and release asbestos fibers. For example, maintenance work on ventilation ducts in an air handling room where asbestos-containing fire proofing on structural beams is located. The fire proofing could be disturbed accidentally during the course of the work. The following precautions should be taken if accidental disturbance of asbestos-containing surfacing materials is possible:

- A. Obtain a work permit for the asbestos program manager.
- B. Schedule the work after normal working hours or restrict access into the work area by locking doors and posting warning signs such as "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER".
In the event that airborne asbestos concentrations trigger the OSHA regulations (equal to or greater than the permissible exposure level), post the warning sign "DANGER - ASBESTOS: CANCER AND LUNG DISEASE HAZARD: AUTHORIZED PERSONNEL ONLY: RESPIRATORS AND PROTECTIVE CLOTHING REQUIRED IN THIS AREA".
- C. Shut down or temporarily modify the air handling system to prevent the distribution of asbestos fibers to other areas in the building.
- D. At a minimum, workers shall wear half face air purifying respirators with HEPA filters, disposable coveralls with hoods and boots, and gloves.
- E. A 6-mil polyethylene drop cloth shall be placed beneath and extend at least 10 feet beyond all sides of the work area. Alternatively, a mini enclosure constructed of 6-mil polyethylene sheeting may be installed beneath the maintenance area.
- F. Shut down and lock-out the electrical system within the maintenance area.
- G. Apply an amended water solution to the ACM via a low pressure airless sprayer.
- H. Following completion of the maintenance work, wet clean and HEPA vacuum all exposed surfaces (fixtures, ducts, etc.), tools, ladders, and polyethylene sheeting of asbestos-containing debris.
- I. Workers shall HEPA vacuum respirators and disposable coveralls.
- J. Place polyethylene sheeting, rags, disposable coveralls, gloves, HEPA vacuum bags and filters in a properly labeled and sealed asbestos disposal bag.
- K. Workers shall proceed to a shower room with respirators on. In the shower room, workers will decontaminate themselves as well as their respirators (respirator filters shall be disposed of as asbestos waste).

3. **Disturbance of surfacing ACM is Likely:**

Some maintenance and repair activities will disturb ACM's. For example, pulling telephone or video cables through areas where ACM's are present is likely to dislodge pieces of ACM's or disturb ACM debris and dust thus elevating the level of airborne asbestos fibers. Depending upon the quantity of disturbed ACM, the disturbance may either be small or large. Specific precautions and procedures are outlined below and shall be implemented for each size of asbestos disturbance.

Small Disturbances:

The following procedures are appropriate for maintenance activities which involve small scale (less than three square feet) removal of surfacing ACM's or when disturbances of ACM dust and debris or unintentional contact with surfacing ACM's is likely.

- A. Obtain a work permit for the asbestos program manager.
- B. Schedule the work after normal working hours or restrict access into the work area by locking doors and posting warning signs such as "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER".
In the event that airborne asbestos concentrations trigger the OSHA regulations (equal to or greater than the permissible exposure level), post the warning sign "DANGER - ASBESTOS: CANCER AND LUNG DISEASE HAZARD: AUTHORIZED PERSONNEL ONLY: RESPIRATORS AND PROTECTIVE CLOTHING REQUIRED IN THIS AREA".
- C. Shut down or temporarily modify the air handling system to prevent the distribution of asbestos fibers to other areas in the building.
- D. At a minimum, workers shall wear full face air purifying respirators with HEPA filters, disposable coveralls with hoods and boots, and gloves.
- E. A 6-mil polyethylene drop cloth shall be placed beneath and extend at least 10 feet beyond all sides of the work area. Alternatively, a mini enclosure constructed of 6-mil polyethylene sheeting may be positioned underneath maintenance area.
- F. Shut down and lock-out the electrical system within the maintenance area.
- G. Personal air sampling surveys shall be conducted as required by OSHA.

- H. Apply an amended water solution to the ACM via a low pressure airless sprayer.
- I. During the course of the work, any ACM which is removed shall be collected via HEPA vacuuming.
- J. Following completion of the maintenance work, wet clean and HEPA vacuum all exposed surfaces (fixtures, ducts, etc.), tools, ladders, and polyethylene sheeting of asbestos-containing debris.
- K. Workers shall HEPA vacuum respirators and disposable coveralls.
- L. Place polyethylene sheeting, rags, disposable coveralls, gloves, HEPA vacuum bags and filters in a properly labeled and sealed asbestos disposal bag.
- M. Workers shall proceed to a shower room with respirators on. In the shower room, workers will decontaminate themselves as well as their respirators (respirator filters shall be disposed of as asbestos waste).

Large Disturbances:

Any maintenance work which involves the removal of three or more square feet of friable surfacing ACM's is considered a large scale disturbance surfacing ACM. Projects involving large scale disturbances of friable surfacing ACM shall be designed and conducted by persons accredited to conduct response actions under the EPA AHERA regulations. These individuals are: AHERA Asbestos Project Designers, AHERA Asbestos Contractors and Supervisors, and AHERA Asbestos Workers.

Should the large scale disturbance of friable surfacing ACM's be greater than 160 square feet, the project shall be performed in accordance with the EPA NESHAP's asbestos regulations.

The protection of workers performing the removal of large scale disturbances of friable surfacing materials is governed by OSHA. The OSHA regulations set forth work practice, medical surveillance, respiratory protection, and exposure monitoring guidelines.

In addition to the EPA's AHERA and NESHAP's and OSHA's regulations regarding the disturbance of ACM's the asbestos response action shall also be conducted in accordance with the regulations put forth by state and local governments.

Thermal System Insulation

1. Contact with Asbestos Thermal System Insulation is very unlikely

Maintenance activities or repairs which can be conducted without contacting, jarring, or otherwise disturbing the ACM's with little more than normal care and good workmanship. For example, valves which are either uncovered or covered with non-asbestos insulation can be repacked or repaired without disturbing asbestos insulation on nearby pipes. As a precaution, maintenance workers shall know the exact location of respirators and a HEPA vacuum within the building if needed.

2. Accidental disturbance of Asbestos Thermal System Insulation is possible.

Even maintenance activities that involve no direct contact with ACM's may unintentionally disturb the ACM's and release asbestos fiber. For example, Vibrations created by maintenance work on one part of the piping network may be transmitted to other parts. These vibrations may cause asbestos fibers to be released from insulation which is exposed or damaged. If in doubt about the possibility of fiber release, thoroughly inspect the thermal system insulation prior to undertaking the maintenance or repair work. Then, either correct any potential problems or assume that the work will cause an accidental disturbance. The following precautions should be taken if accidental disturbance of asbestos-containing thermal system insulation is possible:

- A. Obtain a work permit for the asbestos program manager.
- B. Schedule the work after normal working hours or restrict access into the work area by locking doors and posting warning signs such as "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER". In the event that airborne asbestos concentrations trigger the OSHA regulations (equal to or greater than the permissible exposure level), post the warning sign "DANGER - ASBESTOS: CANCER AND LUNG DISEASE HAZARD: AUTHORIZED PERSONNEL ONLY: RESPIRATORS AND PROTECTIVE CLOTHING REQUIRED IN THIS AREA".
- C. Shut down or temporarily modify the air handling system to prevent the distribution of asbestos fibers to other areas in the building.
- D. At a minimum, workers shall wear half face air purifying respirators with HEPA filters, disposable coveralls with hoods and boots, and gloves.

- E. A 6-mil polyethylene drop cloth shall be placed beneath and extend at least 10 feet beyond all sides of the work area and install a standard glove bag refer to OSHA's 29 CFR 1926.58 subpart G for information regarding the proper use and limitations of glove bags. Alternatively, a mini enclosure constructed of 6-mil polyethylene sheeting may be positioned around the maintenance area.
- F. Shut down and lock-out the electrical system within the maintenance area.
- G. Apply an amended water solution to the ACM via a low pressure airless sprayer.
- H. Following completion of the maintenance work, wet clean and HEPA vacuum all exposed surfaces (fixtures, ducts, etc.), tools, ladders, and polyethylene sheeting of asbestos-containing debris.
- I. Workers shall HEPA vacuum respirators and disposable coveralls.
- J. Place glove bags, polyethylene sheeting, rags, disposable coveralls, gloves, HEPA vacuum bags and filters in a properly labeled and sealed asbestos disposal bag.
- K. Workers shall proceed to a shower room with respirators on. In the shower room, workers will decontaminate themselves as well as their respirators (respirator filters shall be disposed of as asbestos waste).

3. Disturbance of Asbestos-containing Thermal System Insulation is Likely:

Where asbestos-containing thermal system insulation must be removed in order to maintain the thermal system (plumbing or HVAC), the maintenance activities will disturb the thermal system's insulation and elevate the level of airborne asbestos fibers. Depending upon the quantity of disturbed ACM, the disturbance may either be small or large. Specific precautions and procedures are outlined below and shall be implemented for each size of asbestos disturbance.

Small Disturbances

The following procedures are appropriate for maintenance activities which involve small scale (less than three square feet or linear feet) removal of friable asbestos-containing thermal system insulation.

- A. Obtain a work permit for the asbestos program manager.
- B. Schedule the work after normal working hours or restrict access into the work area by locking doors and posting warning signs such as "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER".
In the event that airborne asbestos concentrations trigger the OSHA regulations (equal to or greater than the permissible exposure level), post the warning sign "DANGER - ASBESTOS: CANCER AND LUNG DISEASE HAZARD: AUTHORIZED PERSONNEL ONLY: RESPIRATORS AND PROTECTIVE CLOTHING REQUIRED IN THIS AREA".
- C. Shut down or temporarily modify the air handling system to prevent the distribution of asbestos fibers to other areas in the building.
- D. At a minimum, workers shall wear half face air purifying respirators with HEPA filters, disposable coveralls with hoods and boots, and gloves.
- E. A 6-mil polyethylene drop cloth shall be placed beneath and extend at least 10 feet beyond all sides of the work area and install a standard glove bag refer to OSHA's 29 CFR 1926.58 subpart G for information regarding the proper use and limitations of glove bags. Alternatively, a mini enclosure constructed of 6-mil polyethylene sheeting may be positioned around the maintenance area.
- F. Shut down and lock-out the electrical system within the maintenance area.
- G. Apply an amended water solution to the ACM via a low pressure airless sprayer.
- H. Following completion of the maintenance work, wet clean and HEPA vacuum all exposed surfaces (fixtures, ducts, etc.), tools, ladders, and polyethylene sheeting of asbestos-containing debris.
- I. Workers shall HEPA vacuum respirators and disposable coveralls.
- J. Place glove bags, polyethylene sheeting, rags, disposable coveralls, gloves, HEPA vacuum bags and filters in a properly labeled and sealed asbestos disposal bag.
- K. Workers shall proceed to a shower room with respirators on. In the shower room, workers will decontaminate themselves as well as their respirators (respirator filters shall be disposed of as asbestos waste).

Large Disturbances

Any maintenance work which involves the removal of three or more square or linear feet of friable asbestos-containing thermal system insulation is considered a large scale disturbance. Projects involving large scale disturbances of friable asbestos-containing thermal system insulation shall be designed and conducted by persons accredited to conduct response actions under the EPA AHERA regulations. These individuals are: AHERA Asbestos Project Designers, AHERA Asbestos Contractors and Supervisors, and AHERA Asbestos Workers.

Should the large scale disturbance of friable asbestos-containing thermal system insulation be greater than 160 square feet or 260 linear feet, the project shall be performed in accordance with the EPA's NESHAP's asbestos regulations.

The protection of workers performing the removal of large scale disturbances of friable asbestos-containing thermal system insulation is governed by OSHA. The OSHA regulations set forth work practice, medical surveillance, respiratory protection, and exposure monitoring guidelines.

In addition to the EPA's AHERA and NESHAP's and OSHA's regulations regarding the disturbance of ACM's the asbestos response action shall also be conducted in accordance with the regulations put forth by state and local governments.

Miscellaneous Asbestos-Containing Materials

Miscellaneous asbestos-containing materials include asbestos floor coverings (tiles and linoleum), ceiling tiles, asbestos cement board or transite (counter tops, wall board, ceiling panels, fume hood linings) caulks, adhesive, fabrics, etc. Disturbance of these materials shall be avoided. When this is not possible, the removal procedures as outlined for surfacing materials and thermal system insulation shall be implemented. In accordance with OSHA and the EPA's NESHAP's regulations, these materials shall not be subjected to forces such as sanding, grinding, cutting, or abrading while in-place or when being removed.

Additional Measures:

Whenever friable asbestos-containing materials are present in a building, special procedures should be followed when changing HVAC system filters. The filters shall be misted with an amended water solution as they are removed, placed in plastic bags, sealed, appropriately labeled, and disposed of as asbestos-containing waste. Workers performing this task shall at a minimum wear a half face air purifying respirator.

Emergency Response Procedures:

Emergency response procedures become necessary when asbestos-containing materials within a building are damaged to the extent that asbestos fibers have potentially been released into the air. Such an event is referred to as fiber release episode. Fiber release episodes may result from unintentional or uncontrolled acts such as, routine maintenance activities, renovation projects, vandalism, or natural disaster.

Fiber release episodes may be either minor or major depending upon the quantity of friable asbestos-containing materials involved. In order to protect the safety, health, and well being of the building occupants specific emergency response procedures shall be implemented for minor and major fiber release episodes.

Minor Fiber Release Episode

The falling or dislodging of up to three square feet of friable asbestos-containing surfacing material or up to three linear feet of friable asbestos-containing thermal system insulation.

1. Ensure that the individual(s) performing the clean-up of the minor fiber release episode have received the 16 hours of asbestos training require under the AHERA regulations.
2. At a minimum, workers shall wear half face air purifying respirators with HEPA filters.
3. Thoroughly saturate the debris using wet methods (low pressure airless type sprayer with an amended water solution).
4. Clean the area by HEPA vacuuming and wet wiping the affected area.
5. Place asbestos-containing debris including rags, sponges, etc. in a sealed leak tight containers.
6. Repair the area of damaged asbestos-containing material with asbestos-free materials or seal with latex paint or encapsulant or immediately implement an appropriate response action (enclosure, encapsulation, or removal).
7. Dispose of the asbestos-containing waste in accordance with the guidelines set forth in 40 CFR Part 61 National Emissions Standard for Hazardous Air Pollutants.

Major Fiber Release Episode

The falling or dislodging of greater than three square feet of friable asbestos-containing surfacing material or greater than three linear feet of friable asbestos-containing thermal system insulation.

1. Restrict entry into the area and post warning signs to prevent entry into the area by persons other than those necessary to perform the response action.
2. Shut off or temporarily modify the air-handling system to prevent the distribution of asbestos fibers to other areas of the building.
3. Ensure that the response action for any major fiber release episode is designed and conducted by persons accredited to conduct response actions. In addition, ensure that the response action is conducted in accordance with EPA's AHERA and NESHAP's regulations and OSHA's asbestos regulations.

Individual(s) who have received only 16 hours of asbestos training shall not conduct the response action for major fiber release episodes.

Asbestos Waste Disposal:

Asbestos waste must be properly handled, containerized, labeled, transported, and disposed of. Asbestos waste includes the asbestos-containing materials from the building, any cleaning materials, such as rags, sponges, or cleaning water, and any other material that may have become contaminated with asbestos fibers and cannot be fully decontaminated.

The asbestos waste must be thoroughly wetted before containerizing. It should be sprayed with water and surfactant under light pressure until it is completely saturated. The material should then be placed in a heavy (6-mil) plastic bag which is sealed with duct tape. The bag should not be more than half full and should not contain any extra air. The bag should be labeled with NESHAP's, OSHA, and DOT warning labels. The bag of asbestos waste should be placed inside another container, either a second plastic bag or a plastic lined drum. Contaminated water should be placed in a drum which is lined with a heavy plastic bag.

All asbestos waste should be transported to the disposal site as soon as is practical. The containerized waste is to be transported from the work site to the asbestos waste facility in a covered and locked vehicle.

A commercial transporter with experience in handling asbestos waste should be contracted to pick up the asbestos waste and deliver it to the disposal site. The transporter should be informed that the material contains asbestos. The material must be transported in a covered and secured vehicle and handled in such a way as to ensure that no dust is created.

The asbestos waste should be taken to a landfill that is approved by the state to accept asbestos waste. Arrangements should be made with the landfill prior to transporting the waste in order to ensure that waste shipment records are properly prepared. After the waste has been received by the landfill, the receiving landfill shall provide the school district with a signed copy of the waste shipment record. This and all other disposal records must be added to the management plan.

Special Work Practices for Renovation and Remodeling:

Building renovation or building system replacement can cause a major disturbance to asbestos-containing materials. Moving walls, adding wings, and replacing the HVAC system all involve breaking, cutting, or otherwise disturbing the ACM's which may be present. Removal of asbestos-containing materials is highly recommended prior to engaging in a renovation project. Removal of regulated (friable or will be rendered friable) ACM is required by NESHAP's if the amount of regulated ACM likely to be disturbed is greater than 160 square feet or 260 linear feet. A key step in considering a renovation project is determining the location and type of asbestos-containing materials that may be affected.

Remodeling or redecorating implies a less dramatic structural alteration. However, disturbance of asbestos-containing or asbestos-contaminated materials is still possible. When the remodeling involves direct contact with asbestos-containing materials (e.g. painting or wall papering over the asbestos-containing material) all of the procedures and precautions required by the EPA and OSHA for asbestos removal shall be followed.

If miscellaneous asbestos-containing materials are to be removed as part of the renovation or remodeling project, the removal shall be conducted such that these materials are not rendered friable.

Periodic Surveillance and Reinspection:

At least once every six months after the management plan is in effect, the local education agency shall conduct periodic surveillance in each building it leases, owns, or otherwise uses as a school building that contains asbestos-containing or assumed asbestos-containing materials. The periodic surveillance shall include a visual inspection of all areas that are identified in the management plan as ACM or assumed ACM, a record the date of the surveillance, a record of who performed the surveillance, and any

changes in the condition of the materials. A copy of the surveillance report shall be submitted to the designated person (asbestos program manager) for inclusion into the management plan.

At least once every three years after the management plan is in effect, the local education agency shall conduct a reinspection of all friable and nonfriable known or assumed asbestos-containing materials in each school building that it leases, owns, or otherwise uses as a school building. The reinspection shall be performed by an AHERA accredited inspector. The inspector shall visually reinspect and reassess the condition of all friable known or assumed asbestos-containing materials, visually reinspect materials previously considered non-friable to determine whether they have become friable, identify homogeneous areas with materials that have become friable since the last inspection, assess the condition of newly friable materials in areas that are assumed to be asbestos-containing materials, and reassess the condition of friable known or assumed asbestos-containing materials. A copy of the reinspection report shall be submitted to the designated person (asbestos program manager) for inclusion into the management plan.

Record Keeping:

Under AHERA, records are required to be collected and maintained for each homogeneous area where all ACM has been removed, for each preventative measure or response action involving friable or nonfriable known or assumed ACM, personnel training records, periodic surveillance inspection reports, three year reinspection reports, for each O&M activity involving friable ACM, for each asbestos response action, and for each fiber release episode.

These records shall be located in the administration office of both the school and the local education agency as part of the management plan. The local education agency shall ensure that these documents remain of file for at least three years after all ACM has been removed.

Logan City School District

Asbestos Management Plan

ASBESTOS CLEANING INSTANCE

1. Address, building, and room(s) where the cleaning was required:

2. Description of the material (Surfacing, TSI, Miscellaneous): _____

3. Describe the clean-up procedures used: _____

4. Clean-up was performed by _____
on _____ at _____
(Date) (Time)

Report Reviewed By: _____ Date: _____
(Asbestos Program Manager)

Logan City School District

Asbestos Management Plan

ASBESTOS FIBER RELEASE EPISODE

1. Address, building, and room(s) where the fiber release episode occurred:

2. Fiber release episode was reported by _____
on _____ at _____
(Date) (Time)

3. Description of the fiber release episode: _____

4. The asbestos-containing material was ___ / was not ___ cleaned-up in accordance with the procedures outlined in the operations and maintenance program. Describe the clean-up procedures used: _____

5. Clean-up was performed by _____
on _____ at _____
(Date) (Time)

Report Reviewed By: _____ Date: _____
(Asbestos Program Manager)

Logan City School District

Asbestos Management Plan

ASBESTOS OPERATIONS and MAINTENANCE PLAN

1. Address, building, and room where the O&M shall occur: _____

2. Description of the work to be performed and preventative measures to be taken:

3. Trained personnel to be performing the O&M task: _____

4. The O&M task is to be performed:
on _____ at _____
(Date) (Time)
5. The name and location where the asbestos waste generated during the O&M task will be disposed of: _____

6. Has a copy of the asbestos waste shipment record been received? _____

Report Reviewed By: _____ Date: _____
(Asbestos Program Manager)

Logan City School District

Asbestos Management Plan

PREVENTATIVE MEASURES and RESPONSE ACTIONS

1. School Name: _____ Date: _____
2. Description of the problem and the type of materials involved : _____

3. Location within the school: _____

4. Justification for the response action implemented: _____

5. Methods employed for the safe removal of ACM: _____

6. Name of the certified asbestos abatement contractor: _____

7. Name and location of the asbestos disposal landfill accepting the asbestos waste: _____

8. Has a copy of the asbestos waste shipment record been received? _____

Report Reviewed By: _____ Date: _____
(Asbestos Program Manager)