## SECTION L Revised 4/2019

## **ASBESTOS**

## 1.0 Scope

Under the Asbestos Hazard Emergency Response Act (AHERA) of 1986, EPA published on October 30, 1987 the Asbestos-Containing Materials in Schools rule (hereinafter referred to as the AHERA rule), 40 CFR Part 763, Subpart E.

The AHERA rule became effective on December 14, 1987 and applies to all non-profit elementary and secondary schools nationwide, both public and private.

Local Education Agencies (LEAs) are responsible for ensuring compliance with the AHERA rule and are required, among other things, to develop and maintain an up-to-date Asbestos Management Plan (AMP), conduct training, inspections and sampling related to asbestos, manage asbestos properly and provide yearly notification to parents, teachers and employee organizations about the AMP and any asbestos-related activities.

## 2.0 Responsibility

- 2.1 Each local education agency (LEAs) will have a person designated to oversee all asbestos management plan activities
- 2.2 This person must receive adequate training, as required by the federal Asbestos Hazard Emergency Response Act (AHERA), about asbestos and its various uses and forms and about the health effects associated with asbestos exposure.
- 2.3 He or she also must know the locations of asbestos-containing building material (ACBM) identified in school buildings and recognize deterioration and delamination of ACBM.
- 2.4 The person also should be aware of the availability and location of the school's management plan and have knowledge of upcoming renovation projects to determine if they will impact a
- 2.5 Each LEA shall ensure the following
- 1. Anyone who conducts any inspections, reinspection or abatement projects; develops or updates management plans; or performs operations and maintenance that will disturb ACM are licensed asbestos professionals.
- 2. All custodial and maintenance staff have received two-hour asbestos awareness training and 14 hours of operations and maintenance training as described in AHERA.
- 3. The parents, teachers and employee organizations are notified on an annual basis of all inspections, response actions and periodic surveillance that are planned or in progress in regard to asbestos in each school building.
- 4. Short-term workers (e.g., telephone repair workers, utility workers or exterminators) are informed of the locations of ACBM in school buildings.
- 5. Warning signs are posted immediately adjacent to ACM in routine maintenance

areas that state, "Danger. Asbestos. Hazardous. Do Not Disturb Without Proper Training and Equipment."

- 6. Parents, teachers and employee organizations are notified in writing on an annual basis of the availability of the school's asbestos management plan.
- 7. The management plans are available for inspection in each school and the district office.
- 8. Records are properly maintained.
- 9. Each management plan contains a statement, signed by the designated person, that certifies the LEA's responsibilities have been or will be met. The statement needs to be amended for each new designated person chosen by the LEA and notification of such changes sent to SISC.
- 10. Reinspections are conducted at least once every three years after a management plan is in effect and the school reinspection form is sent to the Department within 30 days after the inspection.
  - 2.6 The LEA is required to ensure that appropriate records are kept for each activity that may disturb asbestos. These activities include periodic surveillance, cleaning, operations and maintenance activities, major response actions and fiber release episodes. The records must be kept in the building's management plan. An identical copy of the management plan must be maintained in the school office and the district office. The management plans must be maintained for the life of the building.

## 3.0 Written Management Plan

- 3.1 AHERA requires LEA's to develop and maintain an up-to-date Asbestos Management Plan (AMP)
- 3.2 The written plan should be kept at the district office, and also submitted to <u>SISC</u> for maintenance
- 3.3 The written plan should contain the following information:
- 1. District Summary
  - a. Name and address of school
  - b. School Type
  - c. Name, title, phone number and signature of designated person
- 1.1 AHERA Periodic Surveillance information
  - a. Identifying the school structure and what type of ACM is has
  - b. Have an attached map showing the location of ACM buildings

## 4.0 Inspection Report Introduction

- 2.1 Inspection Procedures
- 2.2 Sampling procedures
- 2.3 Use of Accredited Laboratory information
- 2.4 Use of Accredited Inspector statement and information

## 2.5 Inspection/ Sample Extraction Signed Statement

## **5.0 Management Plan Introduction**

- 5.1 Reinspection Plan
  - c. In accordance with 40 CFR 763.93(a)(9) the following information is provided as to the School District's plan for compliance with the reinspection portion of 763.85.
  - d. The School District understands the need for at least tri-annual reinspections and intends to have a reinspection as per 763.85(b) of all facilities they own, lease, or otherwise use as a school building at least once every three years after the Management Plan is in effect. The LEA will utilize EPA-accredited **SISC** personnel or other EPA-accredited inspectors for this task. The results of each reinspection will be used to upgrade and revise the Management Plan. The reinspection will be conducted in accordance with 40 CFR 763.85 and will be performed at least tri-annually until all ACBM is removed.
- 5.2 Plan for Periodic Inspection
  - a. On a semi-annual basis, a walk-through inspection of each building that contains ACBM or assumed ACBM under the direction of the LEA will be undertaken.
  - b. The surveillance program will consist of a visual inspection of all materials in all areas of the facility that are identified in the Management Plan as ACBM or assumed ACBM. Materials will be inspected by individual Unified Sampling Areas, and comparisons will be made between existing conditions and the conditions of the material at the time of the previous inspection. Whenever a difference is observed to exist, it shall be recorded on the Periodic Surveillance Letter issued after each inspection.
  - c. During the inspection, the following conditions and situations will be addressed:
    - 1. Age related deterioration
    - 2. Physical damage to material due to accidental contact or vandalism
    - 3. Vibration-related deterioration
    - 4. Water damage

- d. Note will also be made of any conditions observed that may have an effect on the ACBM in the future. These notes will include observations of roof leaks in the vicinity of ACBM, physical damage to the structure or other areas in the vicinity of the ACBM and damage to any previously installed enclosures or encasements on or around the ACBM that may increase the potential for damage of the ACBM.
- e. A permanent record will be kept of all forms completed during the surveillance. These records will include the date of the surveillance, the name and position of the individuals performing the surveillance and a summary of all changes in condition of ACBM and other observations made during the surveillance. These records will be included in the Management Plan files.
- f. When the periodic surveillance indicates the need for some repair or maintenance activity, the LEA designated person will proceed to implement any actions necessary to correct the situation. Records will be maintained for all such operations and maintenance activities undertaken as a result of the periodic surveillance.
- 5.3 Operations and Maintenance Plan
  - a. In accordance with 40 CFR 763.91, the School District will implement the Operations and Maintenance Plan as set forth in the section "O&M Program" of this document.
  - b. The O&M Program will begin with an initial asbestos cleaning in those areas indicated in the plan and the provisions will be carried out on a continuing basis until all friable and non-friable ACBM as applicable are removed.
  - c. The O&M Program may be modified as necessary or the materials abated as necessary for the maximum efficiency and function ability of the program.
- 5.4 Notifications {40 CFR 763.93(e)(10)
  - a. The Local Education Agency (LEA) in accordance with AHERA regulations requires that workers, building occupants, or the children's legal guardians be notified as to various activities associated with the rule and this plan.
  - b. They must be notified once each year as to inspections, reinspections, response actions, and post-response action activity including periodic reinspections and surveillance activities that are planned or in progress.

## 5.5 Warning Labels

a. In accordance with 40 CFR 763.95 in order to further notify employees of the locations of asbestos-containing materials, a warning sticker has been placed adjacent to ACM in routine maintenance areas of each school building.

# 5.6 Inspection Report/Diagrams

- a. The LEA has on file as part of its Management Plan a report of the inspection describing the location of the ACM as well as other information concerning each material.
- b. In addition, included in the Inspection Report/Management Plan are diagrams of the floors of each school building indicating material sample locations, and material location for those materials assumed to contain ACM.

# 5.7 Resources Evaluation

- a. The AHERA regulation in 40CFR 763.93 (e)(1 l) requires the LEA and Management Planner to evaluate the resources needed to carry out the provisions planned in this program. This includes the O&M activities, various response actions, semi-annual surveillance, triannual reinspections, and training.
- b. The resources required can be divided into three categories:
  - *Personnel Required:* including consultants, abatement contractors, janitorial and maintenance staff, equipment and supplies, and administrative staff A description of these resources is outlined in Part I, "Resource Evaluation", by School District size. That portion is included in this evaluation by reference.
  - *Estimates of Abatement/O&M Costs:* SISC will assist the LEA in obtaining estimates as needed to carry out response actions that reflect "Current Market Value".
  - *Source of Abatement Funding:* can only be determined by the LEA, since the LEA and/or its governing board or agency has authority over its fiscal budgetary matters.

### 6.0 Material Status & Material By category Reports

- 6.1 Includes a list of all school buildings that contain:
  - Friable ACBM
  - Non-Friable ACBM
  - Friable Assumed
  - Non-Friable Assumed
  - No suspect Material

6.2 Include a List of Materials Addressed by Category

In accordance with 40 CFR 763.85 a list of the homogeneous Materials must be addressed by unified sampling areas (USA) and are classified into one of the three categories:

- Surface Material
- Thermal Insulation
- Miscellaneous Material

### 7.0 New Site/New Building

7.1 AHERA and EPA requires that a district notify them when any new buildings (including portables) or school sites are added if the district relies on documentation from the architect or contractor that there is no asbestos in the building.

7.2 If the district hires a certified inspector to sample materials and inspect the building, no notice is necessary.

### 8.0 Operations & Maintenance Program

#### 8.1 Introduction

*a.* With the enactment of the Asbestos Hazard Emergency Response Act regulations, Local Education Agencies are charged with producing a plan of action that will facilitate the safe and effective management of asbestos materials in their school systems. The most effective way of managing the problem is to completely remove all asbestos-containing materials from the building, thus removing the problem in its entirety. In some cases, however, this wholesale removal is not economically feasible or even

desirable from a building usage standpoint. Therefore, when asbestos-containing materials are not completely removed, a comprehensive Operations and Maintenance Program as required by 40 CFR 763.91 will allow the local education agency to control the asbestos problem until removal of the materials is feasible.

b. Self-Insured Schools of California as well as Environmental Protection Agency (EPA) advocates "manage-in-place" as an effective and appropriate way to manage asbestos in schools.

8.2 Definitions

Several definitions pertinent to an Operations and Maintenance Program are identified in 40 CFR

763.83. These are as follows:

Asbestos-Containing Material (ACM) when referring to school buildings means any material that contains more than one tenth of one percent asbestos.

*Asbestos-Containing Building Material (ACBM)* means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a school building.

*Asbestos Debris* means pieces of ACBM that can be identified by color, texture, or composition; or means dust, if the dust is determined by an accredited inspector to be ACM.

Asbestos Hazard Emergency Response Act (AHERA) refers to 40 CFR 763.

*Authorized Person* means any person authorized by the employer and trained according to this program and required by work duties to be present in regulated areas.

*Competent Person* means in addition to one who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them, one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them. For Class III work, one who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a)(2).

**Disturbance** means activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

*Excursion Limit* an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 flee) as averaged over a sampling period of thirty (30) minutes.

*Fiber Release Episode* means any uncontrolled or unintentional disturbance of ACBM resulting in visible emissions.

*Friable* when referring to material in a school building, means that the material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. Included are previously non-friable materials after such materials become damaged to the extent that, when dry, they may be crumbled, pulverized or reduced to powder by hand pressure.

*Glove Bag* means an impervious plastic bag like enclosure affixed around not more than 60 x 60" asbestos-containing material, with glove-like appendages through which material and tools may be handled.

*High-Efficiency Particulate Air (HEPA)* refers to a filtering system capable of trapping and retaining at least 99.97% of all non-dispersed particles 0.3 microns in diameter or larger.

*Intact* means that the ACM has not crumbled, been pulverized, or otherwise deteriorated so the asbestos is no longer likely to be bound with its matrix.

*Local Education Agency (LEA)* is the equivalent to "School District" for the purpose of this program.

*Miscellaneous Material* IS any material that <sub>IS</sub> neither surfacing material or thermal system insulation.

*Negative Initial Exposure Assessment* means a demonstration by the employer, that employee exposure during an operation is expected to be consistently below the PEL.

**Operations and Maintenance (O&M) Program** means a program of work practices to maintain friable ACBM in good condition, to insure cleanup of asbestos fibers previously released, and to prevent further release by minimizing and controlling damage to friable ACBM. An O&M program is also essential in preventing nonfriable materials from becoming damaged or friable.

*Permissible Exposure Limit (PEL)* a concentration 0.1 fiber per cubic centimeter of air as an eight (8) hour time weighted average (TWA).

*Presumed Asbestos Containing Material (PACM)* means thermal system insulation and surfacing material found in buildings constructed no later than 1980.

*Removal* means the taking out or the stripping of substantially all ACBM from a damaged area, a functional space, or a homogenous area in a school building.

*Repair* means returning damaged ACBM to an undamaged condition or to an intact state so as to prevent fiber release.

*Response Action* means a method, including removal, encapsulation, enclosure, repair, operations and maintenance that protects human health and the environment from friable ACBM.

*Routine Maintenance Area* is an area, such as a boiler room or mechanical room, that is not normally frequented by students and in which maintenance employees or contract workers regularly conduct maintenance activities.

*Surfacing Material* means material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purpose).

*Thermal System Insulation (TSI)* means ACM applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain.

8.3 Scope of Work

The California Occupational Safety and Health Administration (Cal-OSHA) governs worker protection as it applies to asbestos abatement as well as small scale asbestos disturbance or clean up. Maintenance and repair activities involving ACM are also covered. Specifically, Cal-OSHA identifies four work classes, which include:

- **Class I:** activities that involve the removal of TSI, surfacing ACM and PACM where the waste debris involves more than one waste or glove bag.
- **Class II:** activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.
- **Class III:** repair and maintenance operations, where ACM, including TSI and surfacing ACM and **P**ACM, is likely to be disturbed.
- Class IV: maintenance and custodial activities during which employees contact but do not disturb ACM or PACM, and activities to clean up dust, waste and debris resulting from Class I, II, and III.

Small-scale repair and maintenance activities involving materials identified under Class II work shall be considered Class III work under this program. School personnel are only authorized to conduct small-scale short duration activities as well as respond to minor fiber release episodes. (See Section Q). For the purpose of this program, only Class III worked shall be addressed. School personnel are not trained nor authorized to conduct Class I and II activities which are considered removal and/or response actions. Class IV activities involving debris /waste cleanup from Class I or II work.

# 8.4 Training

Prior to the implementation of any operations and maintenance provisions of the Management Plan, all members of the maintenance and custodial staff who, during the performance of their duties, may work in a building containing ACBM will receive general awareness training of not less than two hours in duration. Such training will be given to all new maintenance/custodial personnel within 60 days of their start date. As per 40 CFR 763.92, the training shall include as a minimum:

- Information on asbestos, its forms, and uses.
- Information on the health effects of asbestos exposure.
- Locations of ACBM in the school buildings in which they work.
- Recognition of damage, deterioration, and delamination of ACBM.
- Name and telephone number of the person designated to carry out LEA responsibilities under 40 CFR 763.84.
- Availability and location of the Management Plan.

The above training is meant as awareness training only and does not authorize an individual to remove or disturb ACM or PACM, or to clean up asbestos containing debris.

All members of the maintenance/custodial staff who are likely to conduct any activities that may disturb ACBM will receive the previously described general awareness training and an additional 14 hours as required by 40 CFR 763.92 (2)(i-iv). This level of training shall include as a minimum:

- Descriptions of proper methods of handling ACBM
- Information on the use of respiratory protection as contained in the EPA/NIOSH Guide to Respiratory Protection for the Asbestos Abatement Industry, September 1986 (EPA 560- OPTS-86-001), and other personal protective equipment and measures.
- The provisions of the following pieces of legislation:
- 40 CFR 763.91, Appendices A, B, C, D of Subpart E

- EPA regulations in 40 CFR Part 763, Subpart G
- EPA regulations in 40 CFR Part 61, Subpart M
- OSHA regulations in 29 CCR Title 8 1529
- Information regarding the nature of operations that could result in exposure to asbestos
- Information regarding necessary protective controls to minimize exposure, as applicable, engineering controls, work practices, respirators, housekeeping procedures, hygiene, protective clothing, decontamination procedures, emergency procedures, and waste disposal procedures
- Information regarding medical surveillance/monitoring
- Information regarding signs and labels

The combination of all training described above authorizes an individual to perform operations and maintenance work (Class III work) involving ACM and PACM pursuant to 40 CFR 763 and CCR Title 8 1529.

All types of training will emphasize the necessity to not disturb ACBM or assumed ACBM during routine maintenance activities. Employees will be instructed on the following at a minimum:

- Avoid performing any activities on ACM or assumed ACM that may cause abrasion or physical deterioration of the material. This includes sanding, nailing, drilling, cutting, or otherwise damaging the material.
- Avoid damaging ACM during maintenance activities <u>NOT</u> directly involving the ACM such as installing drapes, installing and/or removing carpets, moving furniture, etc.
- To always use a HEPA-vacuum and wet methods to clean up asbestos dust or debris. <u>NEVER</u> use a regular vacuum or dry method.
- To avoid any activities that may inadvertently release asbestos fibers into the air such as removing ventilation filters, drying and/or shaking the filters, and removing suspended ceiling tiles below ACM without taking the proper precautions and using the proper personal protective equipment.
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# 8.5 Air Monitoring

A requirement of 40 CFR 763.91 is that the LEA ascertain, through monitoring or historical data, the airborne concentration of asbestos fibers during all maintenance and repair activities involving ACBM or assumed ACBM. This same requirement is addressed in Title 8  $1529(\pm)$  "exposure assessments and monitoring".

## 8.6 Exposure Assessments and Monitoring

It is essential for LEAs to conduct exposure assessments to ascertain expected, and actual, airborne concentrations of asbestos to which employees may be exposed. Exposure

determinations shall be representative of an 8-hour time-weighted average (TWA) representing full-shift exposures. Samples representing 30-minute exposures, which are identified as most likely to produce exposures above the excursion limit, shall also be conducted.

Assessments shall be conducted pursuant to Title 8 1529.

It is not anticipated, nor intended, that any work conducted within the scope of this program will expose employees above the PEL.

All air monitoring will be done in accordance with 40 CFR 763.121 including collection on 0.8- micron 25-millimeter filters mounted in an open-face filter holder and analysis using the NIOSH 7400 method. The samples will be taken for the determination of the 8-hour time weighted average concentrations and ceiling concentrations of asbestos fibers.

Following analysis of the air filters, results of all analyses should be recorded on the Operations and Maintenance Activity Form for inclusion in the Management Plan.

Exposure assessment forms are included in the "Operation and Maintenance Activity Forms" section of the Management Plan.

## 8.7 Medical Monitoring

Medical monitoring will be provided for all employees who conduct Class III work pursuant to this program. The examinations shall be performed under the supervision of a licensed physician, according to the requirements of CCR Title 8 1529(m).

8.7.1 This medical monitoring will be provided to all persons at the cost of the LEA as required by the regulations. The program will consist of the following elements:

- **Preplacement Examination** will be provided within 30 days of commencement of employment, unless records show the employee has been examined pursuant to the standard within the past one-year period.
- Annual examinations will be provided at least annually.
- **Termination Examination** will be provided within 30 days pre- or post-termination date.

8.7.2 Where determined by medical examination that an individual cannot work while wearing a respirator, that person will not be required or allowed to perform maintenance activities involving ACBM.

8.7.3 Medical records will be maintained in the personnel files and be made available to the Environmental Protection Agency, the Assistant Secretary of Labor for Occupational Safety and Health, the Director of **NIOSH**, authorized physicians, and upon the request of the employee (or former employee) to his physician. All records will be maintained for the duration of an individual's employment plus thirty (30) years.

8.8 Building Inventory - An ACM and PACM

See "List of School Buildings and ACM Status" in Section: Management Plan Introduction, for the inventory of ACM and PACM at district locations.

# 8.9 Warning Labels

Warning labels should be attached immediately adjacent to any friable and non-friable ACBM and assumed ACM located in routine maintenance areas as per 40 CFR 763.95. The labels will be of a size, print, and color which is readily visible to persons entering an area containing ACBM. The labels must read as follows:

# 

HAZARDOUS.

# DO NOT DISTURB WITHOUT PROPER

TRAINING AND EQUIPMENT

9.0 Methods of Compliance

The LEA shall use the following methods, for all Class III activities, regardless of the levels of exposure.

- Vacuum cleaners equipped with HEPA filters.
- Wet methods, or wetting agents, to control employee's exposures (except where wet methods are infeasible).
- Prompt clean up and disposal of wastes and debris in leak-tight containers.
- Where the disturbance involves drilling, cutting, abrading, sanding, chipping, breaking or sawing of **TSI** or surfacing material, impermeable drop cloths shall be used, and the operation shall be conducted in a glove bag system pursuant to Section Q-3.

• Where there is no "negative exposure assessment" or where monitoring results reveal the PEL has been exceeded the LEA shall use impermeable drop cloths and isolation controls as listed above.

In addition to the above, the LEA shall use the following control methods to achieve compliance with the PEL and excursion limit as necessary.

- Local exhaust ventilation equipped with HEPA filter dust collection
- Enclosure or isolation of process that produces asbestos dust
- Ventilation of the regulated area to move contaminated air away from the breathing zone of the employee and toward a HEPA equipped filtration device

Regardless of the exposure levels, the following work practices and controls are prohibited:

- High-speed abrasive disc saws that are not equipped with a point-of-cut ventilator or enclosures with HEPA filtered exhaust
- Compressed air to remove asbestos, or asbestos materials, unless it is part of a system specifically designed to capture the dust cloud created by the use of compressed air
- Dry sweeping, shoveling of the dry cleanup of asbestos containing dust and/or debris
- Employee rotation as a means of reducing employee exposure to asbestos

## 10.0 Regulated Areas

All Class III work conducted under this program shall be done within a regulated area. For the purpose and scope of this program, the regulated area shall include:

• **Signage:** The work area shall be posted in a manner sufficient to notify untrained/unauthorized person's form entering the area. At a minimum, the warning sign shall bear the following information:

# DANGER ASBESTOS CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY

# RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

- Access: Access to regulated areas shall be limited to trained and authorized persons.
- **Respirators:** Although some instances do not require the use of respiratory protection, it is nonetheless desirable to reduce exposure to asbestos fibers as much as possible. Therefore, all Class III work shall require the use of respiratory protection. All such use shall be pursuant to the districts Respiratory Protection Program.
- **Prohibited Activities:** The following activities are prohibited in regulated areas: eating, drinking, smoking, chewing tobacco, gum, or applying cosmetics.
- **Competent Persons:** All work performed in regulated areas shall be supervised by a Competent Person as defined in Section B.
- **Decontamination area:** An area adjacent to the regulated area shall be established for the decontamination of employees and their equipment. The area shall be covered with an impermeable drop cloth. All equipment, protective clothing, tools, containers, etc., shall be cleaned and decontaminated (if not disposed of) prior to the items leaving the area.

## 11.0 Protective Clothing

The LEA shall provide protective clothing such as coveralls or similar whole-body clothing, head covering, gloves, and foot coverings for work conducted where there is no negative exposure assessment.

Although some instances do not require the use of respiratory protection, it is nonetheless desirable to reduce exposure to asbestos fibers as much as possible. Therefore, all Class III work shall require the use of respiratory protection. All such use shall be pursuant to the district's Respiratory Protection Program.

## 12.0 Equipment List

An Operations and Maintenance Plan involves "specialized" equipment and supplies to resolve and/or control the problems. The materials can be purchased from a number of asbestos or industrial safety supply houses and some can be found in hardware stores. The following materials and equipment are commonly associated with successful operations and maintenance planning.

Operations and Maintenance Planning Materials and Equipment List:

1. Tyvek disposable coveralls

2. Rubber gloves

- 10. Asbestos disposal bags (six-mil)
- 11. I
- 3. Half-face dual cartridge negative
- 11. Fiber or metal disposal drums
- 12. Glove bags

pressure respirators with **NIOSH**attachments approved cartridges

- 4. Safety goggles
- 5. Surfactant
- 6. Misting spray bottle
- 7. Misting spray tank
- 8. Dust mop/broom
- 9. Polyethylene sheeting (six-mil)

- 13. HEPA vacuum with
- 14. Duct tape
- 15. Hand tools
- 16. Warning signs and labels
- 17. Scrim cloth for pipe wrap
- 18. Foil tape for pipe wrap
- 19. Encapsulant-bridging and penetrating
- 20. Smoke tubes

### 13.0 Waste Disposal

All asbestos containing or contaminated materials shall be disposed of in sealed, labeled, impermeable bags (or containers). Such materials include asbestos waste, scrap, debris and/or other contaminated items.

The waste shall be stored in a controlled location until disposal. Disposal of wastes shall be conducted according to local, state, and federal hazardous waste regulations.