

## Asbestos Awareness

## PURPOSE

The purpose of this document is to outline safety policy and procedures surrounding operation and maintenance of asbestos containing materials for **Fisher Systems Inc.**; hereafter referred to as "The Company."

#### RESPONSIBILITIES

#### Management

- Ensure all Asbestos Containing Material is identified and labeled
- Ensure training is effective for authorized employees
- Conduct medical surveillance of affected employees
- Establish engineering controls for all work with asbestos containing material
- Provide adequate and proper equipment and personal protective gear
- Ensure proper disposal of all asbestos containing material

#### **Employees**

- Qualified employees must follow the exact procedures for repair or removal of asbestos containing material, including proper use of containment equipment, clean up equipment and personal protective gear.
- Unqualified employees are to stay clear of all asbestos work areas and report any damaged asbestos containing material to their supervisor.

### POLICY

It is the policy of The Company that only qualified employees shall be involved in any asbestos repairs, maintenance, or removal. All unqualified employees shall be protected from exposure to asbestos fibers by isolating and controlling access to all affected areas during asbestos work. All tasks involving the disturbance of asbestos containing material will be conducted only after appropriate work controls have been identified and implemented. A qualified supervisor shall be available at asbestos controlled work sites during all activities. Proper personal protective equipment, vacuums and HEPA filters shall be used and properly maintained. If outside contractors are used, the company shall ensure all contractor employees have been properly trained and have been issued proper equipment and protective gear.

## TRAINING

It is the policy of all Company job sites to prevent exposure of employees/owners to asbestos.



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All Company employees are to be trained to identify material that may be asbestos. A licensed, trained asbestos abatement contractor shall perform removal or encapsulation.

## Training shall include the following information:

- Health effects associated with asbestos exposure.
- Methods of recognizing asbestos on each project.
- The nature of operations specific to each project, which could result in exposures to asbestos.
- Health Hazards from exposure to asbestos (including; Lung Cancer, Asbestosis, Mesothelioma, Colon Cancer, and Cancer of the Stomach.

All training shall be documented on the Record of Training and Meeting Form and filed in the office.

### HAZARDS

Asbestos is a common, naturally occurring group of fibrous minerals. Asbestos fibers have been used in a variety of building materials; however, The Company takes an aggressive effort to use non-asbestos containing materials in new construction and renovation projects. Generally, most asbestos is found in pipe insulation, doors, textured paints and plasters, structural fireproofing, and floor tiles. Friable asbestos (material that contains more than 0.1% asbestos by weight and can be crumbled by hand) is a potential hazard because it can release fibers into the air if damaged.

Long term exposure to airborne asbestos is necessary for chronic lung disease. Significant and long-term exposure to asbestos from activities that directly disturb asbestos-containing materials (such as asbestos mining) can lead to a variety of respiratory diseases, including asbestosis and mesothelioma (cancer of the lung lining). Asbestosis is a non-malignant, irreversible disease resulting in fibrosis of the lung. Asbestos-related cancers tend also to result from substantial long-term exposure; however, mesothelioma may result from much smaller exposures to asbestos.

Asbestos materials are used in the manufacture of:

- Heat-resistant clothing
- Automotive brake and clutch linings
- Insulation
- Soundproofing
- Floor tiles
- Roofing felts
- Ceiling tiles
- Asbestos-cement pipe and sheet
- Fire-resistant drywall
- Pipe and boiler insulation materials
- Pipeline wrap



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Sprayed-on materials located on beams, in crawlspaces, and between walls

Exposure to asbestos has been shown to cause lung cancer, asbestosis, mesothelioma, and cancer of the stomach and colon.

## HAZARD CONTROL

#### **Engineering Controls**

Engineering controls include the use of enclosures such as:

- Monitoring equipment
- Glove bags
- Tenting
- Negative pressure work areas
- HEPA filters
- Controlled vacuums
- Water misters and other equipment to ensure containment and clean-up of asbestos work areas

#### Administrative Controls

All qualified workers shall be issued proper personal protective equipment, such as respirators, disposable coveralls, gloves, etc. Written procedures and management authorizations are required for all work involving asbestos containing material

#### **Training Controls**

All qualified employees, supervisors and managers shall receive the proper level of training, as outlined in this program. Asbestos awareness training is required for employees whose work activities may contact asbestos containing material (ACM) or presumed asbestos containing material (PACM) but do not disturb the ACM or PACM during their work activities. The training will be documented and kept on file.

#### **Asbestos Work Categories**

Signs and labels shall identify the material which is present, its location, and appropriate work practices which, if followed, will ensure that asbestos containing material (ACM) and/or presumed asbestos containing material (PACM) will not be disturbed.

**Category 1** work includes the installation or removal of non-friable asbestos in which the asbestos fiber is locked in a binder such as cement, vinyl or asphalt which holds the material together. If employees working immediately adjacent to a Class I asbestos jobs are exposed to asbestos due to the inadequate containment of such job, their employer shall either remove the employees from the area until the enclosure breach is repaired or perform an initial exposure assessment.

**Category 2** work involves work with friable asbestos that is of short duration in situations which create low levels of airborne asbestos.

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Example of category 2 work are enclosure of friable asbestos, application of tape or sealant to asbestos containing pipe insulation and minor removal of friable asbestos and minor installation, maintenance, or repair work above false ceilings where sprayed asbestos fireproofing is present on beams.

**Category 3** work involves possible exposure to friable asbestos over long periods of time or work that generates high levels of asbestos. Included in category 3 work are removal projects where relatively large amounts of asbestos are removed from a building including removal of friable asbestos from structural material, cleaning or removal of heating or air handling equipment that has been insulated with asbestos. Also included in category 3 work are cutting or grinding of asbestos-containing materials using power tools.

#### **General Rules**

- When in doubt, treat all material as containing asbestos and comply with all applicable rules and regulations and protective measures.
- All Asbestos Containing Material (ACM) will be handled by certified and licensed asbestos abatement personnel. The friability of the ACM will dictate the type of removal/maintenance required.
- Employees who are uncertified and unlicensed will not handle any ACM >1%. This will include encapsulation projects, renovations, removals and/or demolitions of any type of structure. This will prevent the potential for accidental exposure from the mishandling of any ACM.
- When an uncertified, unlicensed employee questions whether they may be handling suspect ACM, the employee will immediately contact their supervisor. The employee shall not resume working at the site until the area has been checked to verify the material is not ACM.
- Uncertified, unlicensed employees will not cross over a barrier/containment area where asbestos projects are in progress.
- Any employee who discovers ACM or suspect ACM in damaged or poor condition should report it to their supervisor, so the identified material is repaired.

### Medical Examinations

Employees assigned to asbestos removal will be given medical examinations at Company expense in compliance with <u>29 CFR 1926.1101 and 40 CFR 763 - Subpart G.</u>

- Within 30 days of first employment or assignment to a job exposing the employee to asbestos containing material
- Annually
- Within 30 days of termination of employment

Medical examination for employees assigned to asbestos removal will include:





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- Medical and work history with special emphasis directed to symptoms of the respiratory system, cardiovascular system and digestive tract.
- Medical questionnaire contained in 29 CFR 1926.1101 Appendix D.
- A physical examination including a chest roentgenogram and pulmonary function test that includes measurement of the employee's forced vital capacity and expiratory volume.

No employee shall be assigned to tasks requiring the use of respirators if an examining physician determines the employee will be unable to function normally while using it or that the employee might otherwise be impaired.

Records of all physical examinations performed for asbestos work-related activities will be maintained permanently by the Company.

## **Asbestos Inventory**

The Company has conducted surveys and prepared a written inventory of the type and locations of asbestos-containing material to:

- Allow for periodic condition inspections.
- Allow for maintenance and repair of damaged asbestos.

For each building the inventory contains the following information:

- Type of asbestos-containing material (sprayed fireproofing, texture coating, or thermal insulation).
- The location of the material.
- When it has been sampled, the type and percentage of asbestos present.
- Also included in the survey information is sampling results showing the absence of asbestos in material which might be mistaken for an asbestos-containing material.

### **Asbestos Identification**

An asbestos identification system shall be used to alert people to the presence of asbestos. Asbestos is identified by tags, stickers, pipe labels, signs and other high visibility means. Where feasible, stickers indicate the presence of asbestos in thermal insulation, in asbestos board and tiles and in other locations. Warnings may also be placed near the entrances of rooms -particularly mechanical rooms where unusually large amounts of asbestos may be present.

The Company shall make sure warning signs containing specified language are in areas that have asbestos exposure above the PEL or EL. Proper PPE shall be provided and used to prevent exposure.

No smoking, eating, or drinking should occur in these areas. Separate decontamination and lunch areas with proper hygiene practices must be provided to workers exposed above the PEL to avoid contamination.



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#### Short Term Effects

May cause irritation and itching to the skin, coughing may occur.

#### Long Term Effects

Over exposure can result in lung cancer asbestosis, mesothelioma, colon cancer, and cancer of the stomach. Common symptoms include difficulty in breathing (if you climb a flight of steps and are out of breath) cough chest pains, clubbing of the fingers, (this common in advanced stages), risk for lung cancer is or multiplied if the worker exposed to asbestos also smokes.

#### POTENTIAL EXPOSURE LIMIT (PEL)

For asbestos, the PEL is 0.1 fiber per cubic centimeter of air as an eight-hour time-weighted average (TWA), with an excursion limit (EL) of 1.0 asbestos fibers per cubic centimeter over a 30-minute period. The Company shall ensure that no one is exposed above these limits.

Assessment of workplaces must be completed to determine if asbestos is present and if the work will generate airborne fibers by a specific method under each standard.

Monitoring shall be done to detect if asbestos exposure is at or above the PEL or EL for workers who are or may be expected to be exposed to asbestos.

Frequency depends on work classification and exposure.

Both the assessment and monitoring shall be done by a competent person.

## MAJOR SOURCES OF POTENTIAL EXPOSURE

- Opening boxes containing asbestos materials
- Cutting insulation, transite, or asbestos/cement pipe with hand or power tools
- Mixing asbestos with cement or fireproofing materials
- Removing or installing asbestos roofing and siding (i.e. transit)
- Removing asbestos leak sealant material
- CAD welding
- Asbestos friction pad or brake work
- Using asbestos fire blankets or hot gloves
- Removing old insulation from lines and vessels
- Grinding or sanding on gaskets, floor tiles/mastic, ceiling tile, or paints/coatings containing asbestos

#### HOUSEKEEPING

All surfaces must be maintained as free as practicable of accumulations of asbestos containing dust and waste.



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Floors and other surfaces contaminated with asbestos should only be cleaned by vacuuming and/or wet cleaning methods. Where vacuuming and/or wet cleaning is not feasible, shoveling, dry sweeping and dry clean-up of asbestos may be used.

The use of compressed air for cleaning purpose is prohibited. Asbestos waste, scrap, debris, bags, containers, and equipment must be disposed of in sealed impermeable bags or containers.

#### DEFINITIONS

**Asbestos** - Asbestos is a generic term describing a family of naturally occurring fibrous silicate minerals. As a group, the minerals are noncombustible, do not conduct heat or electricity and are resistant to many chemicals. Although there are several other varieties that have been used commercially, the most common asbestos mineral types likely to be encountered in buildings are chrysotile (white asbestos), amosite (brown asbestos), and crocidolite (blue asbestos). Among these, white asbestos is by far the most common asbestos mineral present in buildings.

**Friable Asbestos** - Friable asbestos material means finely divided asbestos or asbestoscontaining material or any asbestos-containing material that can be crumbled, pulverized or powdered by hand pressure. Individual fibers in friable asbestos-containing material can potentially become airborne and can then present a health hazard.

Three types of friable material commonly used in buildings are:

- 1. Sprayed fibrous fireproofing
- 2. Decorative or acoustic texture coatings
- 3. Thermal insulation

**Non-Friable Asbestos -** Non-friable asbestos includes a range of products in which asbestos fiber is effectively bound in a solid matrix from which asbestos fiber cannot normally escape. Non-friable asbestos includes a variety of products including asbestos cement tiles and boards and asbestos reinforced vinyl floor tiles. Cutting, braking, sanding, drilling of similar activities can release asbestos fiber from even non-friable asbestos materials.