

# Amarillo College

## Asbestos Operations and Maintenance Plan

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### Scope:

In accordance with the requirements of the Environmental Protection Agency (EPA), the Texas Commission on Environmental Quality and the Texas State Department of Health services, Amarillo College has developed and implemented an Asbestos Operation and Maintenance Plan that is designed to recognize, control and mitigate asbestos hazards in or around academic facilities, offices and college owned property.



## **Purpose:**

Amarillo College has implemented a policy to identify, inspect, control, maintain and improve our handling of asbestos related issues across the college. In an effort to reduce potential hazards, Amarillo College, under the direction of the Physical Plant and Environmental Health & Safety Office, has put together abatement, maintenance and training programs that will not only better protect the environment, but the faculty, staff, students and visitors of the college as well. Risks associated with asbestos, including alteration, construction, demolition and repair activities will be addressed in the most expeditious manner possible in an effort to reduce negative environment impact or adverse health effects to the Amarillo College community. The use of proper engineering controls, the elimination of damaged or unwanted material and the use of proper maintenance methods will all be employed in an effort to reduce potential risk and liability.

## **Applicability:**

The Amarillo College Asbestos Operations and Maintenance (O&M) Plan shall apply too not only employees of the Physical Plant but to outside contractors as well. Personnel, regardless of affiliation working at or for Amarillo College, will be held contractually accountable to the same health and safety regulations and standards that are required by the state and federal environmental protection agencies and the Amarillo College Contractor Health & Safety Guidelines. No contractor or employee working at or for Amarillo College shall be permitted to work in areas that contains or has the potential to contain damaged or significantly damaged asbestos until such the hazard has been mitigated. Training for asbestos abatement, maintenance and recognition activities shall be the responsibility of the Environmental Health & Safety Manager.

## **Definitions:**

### **Amended Water:**

Water to which a soap or other surfactant has been added to increase the ability of the liquid to penetrate asbestos.

### **Asbestos:**

Is a naturally occurring mineral that is mined throughout the world in countries such as the United States, Canada, South Africa and Australia. The most common types of Asbestos (chrysotile, amosite and crocidilite) are removed from the ground and then processed for automobile brakes, floor tiles, pipe and duct insulation, decorative plasters, spray-on fire proofing and a wide range of other products. It is this process, not the mineral itself that makes asbestos a hazard to our health and the environment.

### **Asbestos Containing Material:**

Any material (i.e. 9"x 9" floor tile, laboratory bench tops and fume hoods and insulation) that contains greater than 1% asbestos.

### **Authorized Person:**

A person authorized by Amarillo College and required by work duties to be present in a "regulated area".

### **Class Me Asbestos Work:**

Work activities, usually performed by an outside contractor that involves the removal of boiler, pipe and duct insulation and surfacing material such as spray-on fire proofing. Class I work involves the assistance of an outside contractor, specifically trained and licensed to perform such work

### **Class II Asbestos Work:**

Work activities that involve the removal of other than boiler, pipe and duct insulation or surfacing material such as spray-on fire proofing. Class II work most often involves the assistance of an outside contractor, specifically trained and licensed to perform such work

### **Class III Asbestos Work:**

Repair and Maintenance Operations can be performed by the Physical Plant at Amarillo College or by a trained and licensed outside contractor. Class III work most often means repair of damaged asbestos utilizing an enclosure or encapsulation (i.e. dip lag).

### **Class IV Asbestos Work:**

Work that involves the maintenance and custodial activities during which employees contact but do not disturb asbestos containing materials or "presumed" asbestos containing materials. It may involve the clean up of mechanical or storage areas, including dusts, waste and debris in those areas where asbestos is, was or may be present.

### **Competent Person:**

A person who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, and who has the authority to take prompt corrective action to eliminate or mitigate the hazard.

### **Blanket Notification:**

Prearranged permission through the Texas Commission on Environmental Quality for Amarillo College to remove, without a ten (10) day notification any ACM or PACM that is less than 3 square or 10 linear feet in size.

**Demolition:**

The wrecking or removal of any load-supporting structural member and any related razing, removal or stripping of asbestos containing or presumed asbestos containing materials.

**Disturbance:**

Activities that disrupt asbestos or asbestos containing materials or that generate visible debris. It includes but is not limited to; cutting, kicking, striking or otherwise breaking or damaging asbestos or presumed asbestos containing materials.

**Emergency Waiver:**

Permission which is granted by the Texas Commission on Environmental Quality that allows the College (only in cases of emergency) to remove asbestos that may pose a risk to health and safety and / or to the environment, without having to go through the normal ten (10) day notification period

**Friable:**

Material that contains more than 1% asbestos that can crumbled or reduced to powder by hand and finger pressure

**HEPA (High Efficiency Particulate Air):**

A filter, normally found inside a respirator, HEPA vacuum or other type of filtering system that traps or retains 99.97% of all particles that are 0.3 micrometers or greater in diameter.

**Presumed Asbestos Containing Material (PACM);**

Thermal system insulation such as boiler, duct and pipe covering and surfacing material found in buildings that were constructed before 1980 that has not been tested to confirm whether or not it contains asbestos. Until proven by air or bulk sample analysis as being non-asbestos, any material not yet tested is considered to be presumed asbestos containing material.

**Regulated Area:**

An area established by Amarillo College or the outside contractor that clearly delineates areas where Class I, Class II and Class III work activities are conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is reasonable possibility they may exceed permissible levels.

## **Asbestos Operation and Maintenance Goals**

### ***A. Objectives of the Asbestos Operations and Maintenance Plan.***

The primary objective of the Asbestos Operations and Maintenance Plan is to control building occupant and employee exposure to asbestos fibers. In addition, the O&M Plan shall attempt to minimize any potential hazard posed by asbestos containing materials during cleaning, maintenance, renovation and general operation activities.

### ***B. Secondary objectives.***

Secondary objectives of the O&M Plan include...

1. The removal of existing contamination and deterioration that is beyond the scope of normal maintenance or repair activities.
2. The minimization of known or potential release
3. The maintenance (encapsulation, enclosure) of in place asbestos until it is to be removed.

### ***C. Identifications made by the Asbestos O&M Plan.***

The Asbestos Operation and Maintenance Plan shall include area, building and site specific inspection surveys of academic, maintenance, storage and residential properties on campus. The assessment shall identify...

1. Asbestos containing materials (ACM)
2. Presumed asbestos containing materials (PACM)
3. Non-asbestos containing materials
4. Existing conditions
5. Engineering controls
6. Plan of action for:
  - monitoring;
  - removal;
  - repair

### ***D. Posting of the Inspection Report***

Areas, rooms, equipment and other contents in or around buildings that have been inspected for asbestos containing materials and those that are presumed to be asbestos containing shall be identified on the Amarillo College Operations and Maintenance Plan

inspection report. The completed inspection report is then posted (when applicable) on the inside of the door to a maintenance, mechanical or storage room in compliance with OSHA 29 CFR 1926.1101.

- The inspection report is posted for employee assistance. It is designed to aid in the identification of asbestos containing materials, or those that are presumed to be asbestos containing.

### **E. Training and the Asbestos O&M Plan.**

Training is another component of the Amarillo College Operations and Maintenance Plan. The objective is to establish proper awareness and understanding of work practices for each any every employee who does or may come into contact with asbestos containing materials (ACM) or those that are presumed to be asbestos containing materials (PACM).

## **Asbestos Identification**

### ***A. Examples of Potential ACMs***

Asbestos is found in numerous materials. Identification can be difficult because the appearance may change between rooms. Asbestos and those materials that may contain asbestos have been identified throughout the campus. Examples include:

- Caulking
- Ceiling Tiles
- Cement
- Cooling Tower Baffles
- Door Interiors
- Electrical Cloth.
- Elevator Brakes
- Floor Linoleum and most 9" x 9" Tiles
- Insulation
- Laboratory Furniture and Hoods
- Insulation (wide variety)
- Joint Compound
- Plaster, both Decorative and Non-Decorative

### ***B. ACM Bulk Sample Analysis***

Because it can be very difficult to identify, Amarillo College Physical Plant has decided to test (bulk sample analysis) all material that is suspect ACM and to then record those results in a database for future reference

- The asbestos database will be maintained by the Physical Plant. At the request of an employee, supervisor or at least quarterly a report will be generated that identifies by building those areas that have been tested for asbestos and the results that were obtained.
- The results will indicate that a sample was either positive or negative and shall reveal percentage of asbestos in the sample

### ***C. Procedure for Solicited Sample Analysis***

Samples will be taken by the Physical Plant during inspections or at the request of any employee who has been asked to perform work in an area that does or may contain asbestos. After the "bulk" sample has been taken, the material is sent to a TCEQ accredited laboratory for analysis. The laboratory will provide the results in the number of days determined by the Amarillo College Environmental Health and Safety Office. Depending on the urgency, the results (cost dependent) can be obtained in

- 24 hrs
- 3 days
- 5 days

## **Asbestos Hazards**

### ***A. Hazardous Asbestos States.***

Asbestos is most hazardous to health when it is friable and airborne. The most friable material is sprayed on fire-proofing that which is normally applied to ceilings and structural metal supports to provide a fire rating, or pipe covering on heat and steam lines that has become damaged.

### ***B. Guidelines for Asbestos Exposure Prevention.***

Although asbestos can enter the body in different ways, it is most hazardous when it is inhaled. To prevent or reduce your exposure, follow these suggested guidelines.

1. Contact the Office of Environmental Health & Safety to determine whether or not the area contains asbestos, or
2. Ask the Office of Environmental Health & Safety to test the material to determine the presence of asbestos
3. If the area contains damaged asbestos, the Office of Environmental Health and Safety can repair the damage or have the material removed by an outside asbestos abatement contractor.
4. In areas that do or may contain asbestos for which entry has to be made the use of respiratory protection may be required.
  - Contact Environmental Health and Safety to determine level of protection.

- For additional information of respiratory requirements, see the Respiratory Protection section of the Environmental Health & Safety Manual.
- 5. If asbestos debris or the potential for debris is or may be present, Amarillo college employees are required by OSHA regulations to either;
  - Wet mop the mechanical room floor, or
  - HEPA vacuum the area, or
  - Sweeping of mechanical room floors shall not permitted
- 6. Lastly, in areas where electricity is not an issue, the use of amended water is acceptable. When misted over any area or misted on top of either ACM or PACM, water will hold asbestos fibers down. The use of water reduces airborne asbestos concentrations significantly, lowering the risk of exposure.

## **Labeling, Notification and Signage**

### ***A. Asbestos Exposure Concerns***

Most asbestos issues at Amarillo College will be directly related to Physical Plant personnel and the work that they perform. Since the greatest majority of the asbestos (excluding non-friable floor tile) is in mechanical rooms, steam tunnels and other areas not frequented by the public, the exposure concern is greater with employees.

### ***B. Bulk Sample Asbestos content analysis***

As areas are inspected, a survey for asbestos related issues is performed. At those locations where problems have been identified, the Office of Environmental Health & Safety will take bulk samples and have them analyzed for asbestos content. When the results are returned to the College by the outside accredited testing facility, the information is transferred over to the database for inclusion into the program and then disseminated to the employees through the shop or division supervisor.

### ***C. Asbestos content notification***

In areas where the likelihood of finding asbestos is greater (i.e. Mechanical Room) an official Amarillo College posting will be placed behind the door, inside that particular room. This means of notification shall be used by the appropriate trades to determine if the equipment or material they are working on contains asbestos or is presumed to contain asbestos. Although the list may not be all inclusive, it will alert the Amarillo College Physical Plant employees to the potential for asbestos so that they may take appropriate action.

1. The checklist contains at least 60 different items that have been known to contain asbestos. Only those items that could be found at this college have been included on the list.

2. The checklist has a "blank" space to the left side of the equipment, item, material, pipe, valve etc. In the blanks, the inspector shall indicate the presence or lack of asbestos using three (3) different letter designations. (N, P,Y). Only those items that have been tested or those that have the necessary literature available to prove that it is or is not asbestos can be recorded on the inspection report. The designations for the inspection report are as follows:

**N – Does Not Contain Asbestos**

**P – Presumed to Contain Asbestos**

**Y – Does Contain Asbestos**

#### ***D. Procedure for Asbestos Abatement in public areas.***

When asbestos abatement activities are to be carried out in buildings that are frequented by the public, or where faculty, staff, students outside contractors and visitors may be present, the College shall notify the occupants of the building, the appropriate member of the Presidents Cabinet, the Department of Human Resources (when applicable), the Amarillo College Police, the Physical Plant Service Desk and the employees from the Physical Plant who may be involved in the work by distributing Project Notification Sheets.

#### ***E. Labeling policy for Abatement Procedures.***

Labeling and the posting of warning signs are required at certain areas where asbestos abatement is being carried out. In those areas the outside contractor shall assume the responsibility.

1. It shall be the abatement company's responsibility to post signs at all the entrances of the regulated area. The signage shall meet the requirements outlined in the OSHA Asbestos Standard for the Construction Industry (29 CFR 1910.1101)
2. Bags, both glove and black polyethylene bags used for the containment and disposal of asbestos shall be clearly marked. The word "Asbestos" and the appropriate warnings must be imprinted on the bag.

### **Special Work Activities**

#### ***A. The OEHS and Construction-related Activity***

Buildings that are under consideration for additions, alterations, demolition or renovation are to be brought to the attention of the Office of Environmental Health & Safety. The initial training is two (2) hours in length. The training can become more specialized depending on the type and frequency of work that needs to be performed.

The Office of Environmental Health & Safety conducts the training within the Physical Plant.

### ***B. Custodial Department Training***

Training for the Custodial Department shall consist of the following:

1. Types and uses of asbestos
2. Hazards associated with asbestos
3. Proper cleaning techniques
4. Appropriate levels of personal protective equipment
5. Proper engineering controls
6. Regulatory requirements
7. Appropriate handling practices for asbestos, and
8. Hands on training.

### ***C. Restricted Custodial Activity***

Because of the hazards involved, custodial activities can no longer include:

1. Dry buffing floors in buildings that were built before 1980, unless the floor linoleum or tile has been replaced
2. Scraping floors in buildings that were built before 1980, unless the floor linoleum or tile has been replaced
3. Sweeping or dry brushing a mechanical room or storage area where the presence of asbestos containing material is possible.
4. Removing ceiling tiles in buildings that were built before 1980, if there is a possibility pipes with asbestos insulation may be present.

### ***D. Custodial Staff Guidelines for working in Asbestos-containing environments***

Whenever possible, if working in a room or area that may contain asbestos, the custodial staff should...

1. Utilize wet methods in areas where asbestos in good condition may be present or is presumed to be present.
  - In areas where the asbestos is in fair to poor condition, the Office of Environmental Health & Safety should be notified before work is initiated.
2. Incorporate the use of the HEPA vacuum.
  - The HEPA vacuum eliminates the possibility of displacing asbestos fibers into the air where they can be inhaled.
  - To obtain additional information on the care, use and maintenance of the HEPA vacuum, please consult the HEPA Vacuum Policy.

## **Operations Staff**

### ***A. Operations Staff Asbestos Training***

Operations Staff (Carpenters, HVAC, Electricians, Locksmiths, Painters and Plumbers) shall be trained to the "Awareness Level" for asbestos.

1. The initial training is two (2) hours in length. The training can become more specialized depending on the type and frequency of work that needs to be performed.
  - The Office of Environmental Health & Safety conducts the training within the Physical Plant.

### ***B. Operations Staff Training Scope***

Training for the Operations Staff shall consist of the following;

1. Types and uses of asbestos
2. Hazards associated with asbestos
3. Proper cleaning techniques
4. Appropriate levels of personal protective equipment
5. Proper engineering controls
6. Regulatory requirements
7. Appropriate handling practices for asbestos, and
8. Hands on training.

### ***C. Restricted Operations Staff Activities***

Because of the hazards involved, the following activities can no longer be performed;

1. Cutting or drilling holes in plaster ceilings and walls in buildings that were built before 1980, unless the ceiling and walls have tested asbestos free.
  - Exception - if other engineering controls are used (i.e. water / HEPA vacuum), then the work can be performed, provided the scope of work is limited.
2. Dry scraping or sanding of plaster walls in buildings that were built before 1980, unless the floor linoleum or tile has been replaced
3. Sweeping or dry brushing a mechanical room or storage area where the presence of asbestos containing material is possible.
4. Removing ceiling tiles in buildings that were built before 1980, if there is a possibility pipes with asbestos insulation may be present (i.e. Merrill Science).

## ***D. Operations Staff Guidelines for working in Asbestos-containing environments***

Whenever possible, if working in a room or area that may contain asbestos, the operations staff should...

1. Utilize wet methods in areas where asbestos in good condition may be present or is resumed to be present.
  - In areas where the asbestos is in fair to poor condition, the Office of Environmental Health & Safety should be notified before work is initiated.
2. Incorporate the use of the HEPA vacuum.
  - The HEPA vacuum eliminates the possibility of displacing asbestos fibers into the air where they can be inhaled.
  - To obtain additional information on the care, use and maintenance of the HEPA vacuum, please consult the HEPA Vacuum Policy

## **Medical Surveillance**

### ***A. Medical Surveillance during Asbestos-related activities***

Medical surveillance for employees is not required for asbestos related work, except for the Office of Environmental Health & Safety.

- Asbestos abatement is performed only by an outside contractor.

### ***B. Medical Surveillance for personnel with respirators***

Medical surveillance is required for personnel that are required to wear either a 1/2 or full face respirator.

- Information on the types, uses limitations of respirators can be found in the Respiratory section of the Personal Protective Equipment Standard Operating Guidelines.

### ***C. Duration of medical record maintenance for college employees exposed to asbestos.***

All medical records for employees that have either worked with asbestos on campus, or may have been adversely exposed will be maintained by the Office of Environmental Health & Safety for a period of 30 years plus duration of employment

## **Asbestos Condition Classification**

### ***A. ACM Physical Assessment***

During a hazard assessment / survey, the Asbestos Inspector or Management Planner will be determining hazard potential for the ACM and PACM in that area. As part of that survey the inspector / management planner will be performing a "physical assessment" of known or suspect material for one of the following action plans:

1. Repair
2. Encapsulation / Enclosure
3. Removal, or
4. No Action Required

### ***B. ACM Classification Guidelines***

As part of the inspection, the Inspector / Management Planner will be identify the type of asbestos (air cell, mag, transite etc.), its condition, potential disturbance and a priority level for the action plan.

1. Asbestos ranking for hazard range is a numerical value from 1 to 7.
  - 1 = least hazardous
  - 7 = most hazardous
2. Asbestos ranking for hazard potential is on a scale from good to Significantly Damaged.
3. Removal or Repair Priority is also a numerical value on a scale from 1 to 7.
  - 1 = most important
  - 7 = least important

## **Emergency Response Procedures**

### ***A. Handling of Asbestos***

Asbestos in good condition should not be disturbed.

- Exception: in those areas where alteration, demolition and renovations are being performed. Asbestos removal should be considered.

### ***B. Notification of the Office of Environmental Health & Safety***

In areas where damage to asbestos has occurred, the Office of Environmental Health & Safety shall be notified.

1. Monday - Friday (7 a.m. to 3:30 p.m.) 345-5542 or 654-2933; For Emergency Response (after hours)
  2. Non-Business Hours 654-2933
  3. Cell 654-2933
- After notification of the incident has been reported to the Office of Environmental Health & Safety, the Asbestos Inspector / Site Supervisor shall report to the scene to determine the most appropriate response action;
1. Asbestos abatement using an outside contractor,
  2. Encapsulate or Enclose,
  3. Repair,
  4. No Action Required.

### ***C. Notification of the Amarillo College Asbestos Abatement Contractor.***

If the company or person who identifies the damage is unable to contact the Office of Environmental Health & Safety, he/ she should contact the Amarillo College Asbestos Abatement Contractor;

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### ***D. Asbestos Release Response Action***

Response Actions for Asbestos Release must include...

1. Evacuating the area where the incident has occurred
  2. Requesting that the HVAC system be shut down to limit spread of Contamination
  3. Keeping those persons who were exposed or could have been exposed in an area that would not promote asbestos contamination spread.
- Persons who have or might have been exposed should wait for EH&S or Abide to arrive on the scene so that proper treatment and decontamination can be performed.
  - All persons that were exposed or could have been exposed will be required to complete the Amarillo College Incident Report.

## Recordkeeping

The following records must be available for inspection by the local, state and federal government. These records and other additional information can be reviewed by the Texas Commission on Environmental Quality, Texas State Department of Health Services, the Federal Environmental Protection Agency and the Inspection Services Division of the City of Amarillo. These records include:

- Written O&M Plan - Environmental Compliance Manual
- Building Plans and Drawings - Physical Plant
- Survey data and associated database - Physical Plant
- Copies of Notifications and Warnings - Physical Plant
- Descriptions, times, dates, and attendees for training - Physical Plant
- Written Respiratory Protection Program - All Env. Health & Safety Guidelines
- Medical Surveillance Records - Physical Plant, and Environmental health and Safety Department
- Copies of all Permits and Documentation - Physical Plant
- Periodic ACM / PACM Surveillance Records

Tags:

- asbestos
- environmental health and safety
- health safety
- maintenance