

Asbestos Containing Material MANAGEMENT PLAN

Introduction

Extensive research has shown exposure to asbestos containing material (ACM) when it becomes airborne (commonly referred to as friable) poses a serious health problem. The inhalation of ACM has been directly linked to cancer initiation and respiratory illnesses such as asbestosis of the lung in humans. Public Health Agencies across the country have developed regulations to prevent airborne exposure of ACM by building occupants. The Texas Department of State Health Services (DSHS) is the state agency in Texas that regulates asbestos containing material (ACM) in public buildings. Building owners such as the University under the DSHS regulations bear the primary responsibility for the identification of ACM in their respective buildings and taking measures to prevent ACM material from becoming airborne (friable) within the occupied portions of their buildings. These regulations are comprehensive and can be found in the Texas Administrative Code (TAC) section 295.31 – 295.73. These regulations involve the license of all persons working on an asbestos abatement project, procedures for conducting abatement or encapsulation and record-keeping requirements. The goal of this plan is to prevent exposure to friable ACM to the building occupants at University of Houston, unless they are asbestos licensed personnel working on asbestos projects.

Training

All new employees who may come in contact with ACM during the function of their duties must be trained about ACM. These employees include Custodial, Building Maintenance, Utilities, IT/Telecom technicians, and Project Managers involved in renovation or demolition projects. This training will be provided by Environmental Health Life Safety (EHLS) and is required to be repeated every two years.

Potential Disturbance of ACM

The disturbance of ACM includes grinding, cutting, drilling, sawing, etc. of suspect material. ACM can be found in floor tiles, mastic, carpet glue, baseboard and baseboard glue, sheetrock/joint compound, and ceiling tiles. Suspect asbestos containing materials also include thermal system insulation (TSI), fireproofing insulation, ceiling deck, moisture barriers, roofing, and Transite pipes or siding.

Facility Maintenance Work Orders

Facilities Management personnel who use work orders shall see either ACM Free or ACM Found in the Tracking 2 field of the Work Order page. If the Tracking 2 field states ACM Free, then the work can proceed (see example below).

Work Order

WO Number: W0258471 HVAC BOILER, HOT WATER, OIL, UP TO 120 MBH MONTHLY
 Parent WO:

Main Attributes Tasks Crews Parts Tools PO's Routing Readings Closing

Asset
 Asset Class:
 Equipment: 5050342001 DOMESTIC HOT WATER TANK -- RM M3313

General Information
 Type: PREVENTIVE
 Priority: 3
 Method:
 Assigned To:
 Outage Class:

Current Status / Dates
 Status: OPEN
 Material Status:
 Start Date: THU JAN 30, 2014
 Due Date: FRI FEB 28, 2014
 Completed:

Tracking 1
 Tracking 2: ACM FREE
 Non-Available:
 Travel Time:

Primary Labor
 Crew: HVAC
 Craft:
 Crew Size: 2
 Est Hrs: .71
 Current Est Hrs:

Location
 Site: 00730
 Building: 0505
 Floor: 03
 Room: 3313

Library
 Request
 Related WO
 Create WO
 Billing
 Estimates
 Dates
 Conv to Proj...
☐ Print Ticket On Next Batch Run

If, however, the Tracking 2 field states ACM Found, (as shown below) then additional steps are necessary.

Work Order

WO Number: W0258636 HVAC FAN COIL UNIT QUARTERLY
 Parent WO:

Main Attributes Tasks Crews Parts Tools PO's Routing Readings Closing

Asset
 Asset Class:
 Equipment: FCU 557 HVAC FAN COIL UNIT

General Information
 Type: PREVENTIVE
 Priority: 3
 Method:
 Assigned To:
 Outage Class:

Current Status / Dates
 Status: OPEN
 Material Status:
 Start Date: THU JAN 30, 2014
 Due Date: FRI FEB 28, 2014
 Completed:

Tracking 1
 Tracking 2: ACM FOUND
 Non-Available:
 Travel Time:

Primary Labor
 Crew: HVAC
 Craft:
 Crew Size: 2
 Est Hrs: .84
 Current Est Hrs:

Location
 Site: 00730
 Building: 0557
 Floor:
 Room:

Library
 Request
 Related WO
 Create WO
 Billing
 Estimates
 Dates
 Conv to Proj...
☐ Print Ticket On Next Batch Run

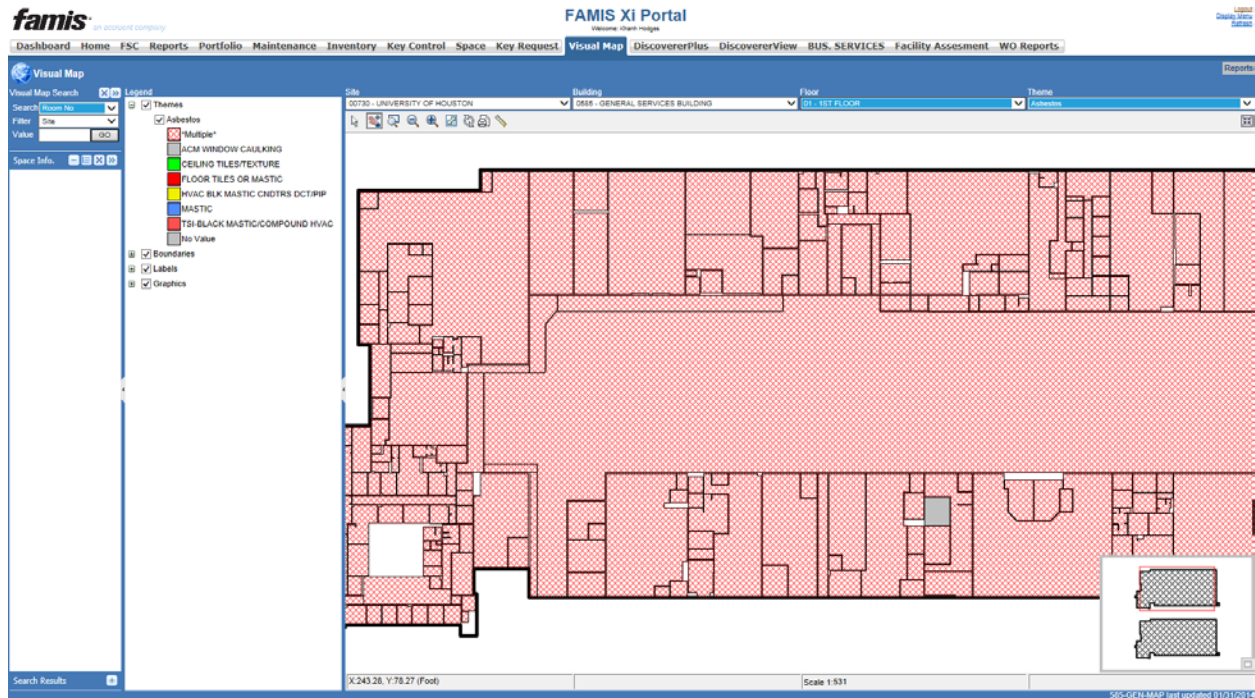
The first step is to determine if the work involves the potential disturbance of ACM such as grinding, cutting or sawing into suspect materials. If Facilities Management personnel are not going to disturb the asbestos containing material such as by painting the walls, changing a lock, shampooing carpet, or changing a light bulb, or other non-disturbance activities then the work can proceed. It is important that Facilities Management personnel be aware that ACM is found in many campus buildings but poses no threat unless it is disturbed.

If the work does involve the potential disturbance of ACM the issuing supervisor must check Visual Map for the current ACM locations. To check go to FAMIS, click on the Visual Map tab and you will be able to see the type and locations (see example below).

In Visual Map

- 1) Select a building from the Building dropdown list
- 2) Select a floor from the Floor dropdown list
- 3) Select Asbestos from the Theme dropdown list

You will see something like this:



If the ACM locations are not showing up per room as you hover over the map, then take these steps:

1. Click on the Plus sign located before the Labels Box.
2. Go to Tool Tip select Asbestos from Theme Values in the first drop down menu.
3. Go above to Floorplan and in first drop down menu and select Asbestos from Theme Values.
4. Then go again to Floor Plan and change Asbestos selection to Space Sub Category.

Then the ACM locations will be described as you move the cursor over the drawing. There is a list of the ACM building locations codes at the end of this document.

If you still cannot see the ACM locations after doing these steps contact IT support for assistance.

If personnel are going to disturb the asbestos or have concerns or questions about potential disturbance, then contact your supervisor or the Asbestos & Safety Coordinator (A&SC) before proceeding with the work.

Renovation, Construction and Demolition Projects

FP&C managers involved in any renovation or demolition activities on campus must submit the Asbestos Containing Material (ACM) Checklist prior to the start of the project. This checklist is available on the EHLS website <http://www.uh.edu/ehls/general/general-safety/asbestos/> . The first step is to review the building ACM locations in FAMIS-Visual Map as outlined above.

If the information is insufficient to identify the location of ACM then the A&SC must be contacted for assistance. Further investigation of historical abatement records or possible confirmation sampling will be done by the A&SC to verify if ACM is present.

Small abatement projects may be conducted using the University's Operations & Maintenance (O&M) Notification. These projects involve less than 160 square feet or less than 260 linear feet of ACM removal. The A&SC must be contacted prior to starting an O&M project and a licensed abatement contractor must be used.

In abatement projects involving greater than 160 square feet or greater than 260 linear feet, the Project Manager must hire a DSHS licensed asbestos consultant, DSHS licensed asbestos contractor and submit the 10-day Notification to DSHS prior to starting the project.

Once the abatement is completed, all the ACM project documents must be sent to the A&SC by the Project Manager. A&SC annotates most recent ACM locations in FAMIS-Visual Map to reflect changes of the ACM removed during the project. The most recent locations will be updated accordingly by the A&SC in FAMIS-Visual Map. Project documents will be downloaded into the ACM building related document files by building number and year. The goal is to have accurate and updated ACM locations and project documentations of all buildings at University of Houston.

Fees

All projects that involve 10-Day Notifications will incur fees. These fees will be invoiced from DSHS sometime after the project is completed. The fees invoices must be paid in a timely manner or DSHS will send a Notice of Violation (NOV) for failure to pay.

In order to ensure proper payment of all asbestos related fees, including notifications written by General Contractors or any other delegated contractors, please follow these steps;

On the DSHS 10-Day Notification Form, on page 2 "PROJECT INFORMATION A FACILITY OWNER" (see below):

PROJECT INFORMATION

☐..... A. FACILITY OWNER

Fill in this section as follows

Facility Owner Name: University of Houston

Attention: Mr. Dash Khambhati

Mailing Address: Environmental Health & Life Safety 4513 Cullen Blvd. Ste. 201

City: Houston State: Texas Zip: 77204-1005

AHERA Assessments

The Charter School and the Daycare Center are regulated by the (Texas) DSHS and the Child Protection Services, respectively. Every 3 years a re-inspection of ACM, that may still be remaining at the locations must be done by the A&SC according to the Asbestos Hazard Emergency Response Act (AHERA) rules by the EPA. AHERA covers schools grades K through 12. A&SC will provide the oversight.

.

New Construction

University policy prohibits the use of asbestos containing building material in new construction. A certificate signed and dated by either the contractor or the architect stating that no asbestos was used in the construction of the building is sufficient. The certificate can be found on Plant Operations website via e-manual. A copy of the certificate must be emailed to A&SC at <mailto:dpkhambhati@uh.edu>

General ACM Guidelines

Labels and Signs

An approved danger label shall be affixed to all ACM areas within a building that is accessible to maintenance staff. Buildings where ACMs are distributed extensively throughout the mechanical rooms, utility closets, IT closets, etc. may meet the requirement by posting a large label at appropriate places, such as on pipe insulations or on walls or on doors on the interior. EHLS will monitor the ACM labeling on campus. The following type of label is sufficient.

DANGER

ASBESTOS

Asbestos Floor Tile and Mastic

1. Carpet Installation

a. It is university policy (and industry standard) that floor tiles/and mastic containing asbestos shall be abated prior to carpet installation/removal.

b. In the situation where only the mastic glue of the floor tiles contains asbestos, the practice will be to remove the floor tile and mastic by DSHS licensed contractors and consultant. This is the best business practice to avoid the occurrence of tiles breaking and releasing the asbestos-containing mastic/glue from its matrix in the future.

Resilient Floor Coverings Institute (RFCI)

It is the University of Houston's policy that RFCI methods are highly discouraged and requires advanced approval by the A&SC

.

Asbestos Roofing Material

1. Before any roofing project begins, the material should be tested to confirm asbestos content of tar, felt, flashing and patching tar.

2. An initial asbestos surveys that indicates 1-2 percent asbestos should be further analyzed by the point counting method. If the original samples are not available; then three negative point counting samples must be obtained of the sample material and in the same location of the previously analyzed positive sample.

3. All ACM activities must comply with the OSHA worker protection rules and the EPA regulations prohibiting visible emissions.

4. Personnel air monitoring is required whenever asbestos is disturbed to confirm airborne fiber concentrations.

5. The University of Houston requires the hiring of an accredited company with accredited asbestos trained workers and supervisors to conduct removal of roofing materials. The workers must wear disposable coveralls and respirators, which in turn require medical examinations and respirator training. Double suiting is an acceptable practice while working with asbestos roofing materials. At least one person on-site must meet the OSHA requirement for a "competent person."

6. Area monitoring samples shall be collected downwind and at ground level during asbestos removal to document that fiber levels were not elevated in publicly accessible areas.

Transite Pipe

1. Transite piping whether in the interior or exterior of the building, if detected, shall be removed using DSHS licensed contractors and consultants.
2. Proper procedures for air monitoring, following OSHA and EPA regulations is required. Clearance sampling is required for pipes inside a building.

Thermal System Insulation (TSI)

1. TSI of piping whether in the interior or exterior of the building, if detected, shall be removed using DSHS licensed contractors and consultants.
2. Proper procedures for air monitoring, following OSHA and EPA regulations is required. Clearance sampling is required for pipes inside a building.

Sheetrock and Joint Compound

1. ACM Sheetrock and Joint Compound removal must be contracted to DSHS licensed contractors and consultants.
2. The consultant will provide asbestos abatement project management oversight. The A&SC will provide guidance to the University of Houston project managers.

List of ACM Building Location Codes

Materials	Code	Location
Asbestos Insulated Piping	TSIP	Building
Ceiling Tiles	ACT	Room & Floor
Floor Tiles & Mastic	AFT	Floor & Room
Wall Joint Compound/Sheetrock	ASR	Floor & Room
Spray on Fireproofing Material	AFM	Floor & Room
Exterior Waterproofing	AEW	Building
Exterior Roofing	AER	Building
Exterior Roofing Mastic	ARM	Roof
Vibration Isolators on Air Handler Units	AVI	Room
Doors with ACM Insulation	ADI	Floor & Room
HVAC Mastic – Non Black	TSI-NBM	Room, Roof & Bldg.
HVAC Insulated Ducts	TSID	Floor & Room
HVAC Black Mastic Connectors for ducts and pipes	TSI-BM	Floor&Room
Transite Panel Sidings	ATS	Building
Carpet Mastic/Glue	ACG	Floor & Room
Baseboard/Cove base Mastic/Glue	ABM	Floor & Room
ACM Window Caulking	AWC	Room & Bldg.
Wall Tiles	AWT	Floor & Room
Mastic	AM	Floor & Room
Transite Pipes	ATP	Building

Equipment	Code
Lab Bench Table Tops	ATI
Transite Panels in Fume Hoods	ATPH
Mastic Coated Sinks	AS