Asbestos Operations and Maintenance Manual

Environmental Health, Safety and Risk Management
Asbestos Safety Program

November 6, 2020

Safety
Is In Everybody's Job Description

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Introduction

This document is intended for the use of The University of Texas Rio Grande Valley (UTRGV) personnel in completion of tasks involving asbestos containing building materials. The reader is to use this document as a supplement to his or her current asbestos training. Also refer to the complete Occupational Safety and Health Administration (OSHA) asbestos standards, Texas Department of Health requirements, U.S. EPA regulations the University Asbestos Policy (Appendix A), and other relevant asbestos guidance documents.

Asbestos is the name of a class of minerals that occur in fibrous form. Asbestos has been used in the manufacturing a variety of materials. Clothing, automotive brake and clutch linings, fume hoods, mastics, paint, building materials, window glazing, roofing products, flooring products, gaskets, counter tops, cement pipes, and air ducts all potentially contain asbestos. Asbestos is also present in some pipe and boiler insulation materials and in sprayed applied materials located on beams, in crawlspaces, and between walls.

Definitions

Class I Asbestos Work: Removal/abatement of thermal insulation and on surface material. All Class I work on campus is contracted to a licensed asbestos abatement contractor.

Class II Asbestos Work: Removal of floor or ceiling tiles, siding, roofing or transite panels or piping.

Class III Asbestos Work: Repair and maintenance operations where employees may disturb ACBM. An example of this work is the removal or moving of asbestos ceiling tiles while servicing above-the-ceiling utilities or running electrical or telecommunications cable. No more than a glovebag of material when ACBM should be disturbed when performing maintenance procedures.

Class IV Asbestos Work: Cleanup of ACBM waste and debris. At UTRGV, this work is done by Class II or III outside contractors.

Initial Exposure Assessment: Assessments of a job by an asbestos contractor/supervisor or building inspector to ensure all precautions are taken prior to the start of work. The assessment is based on previous exposure and area monitoring, observations and information relevant to the job.

Negative Exposure Assessments: An assessment of an asbestos job that shows exposure will be below the Permissible Exposure Level (PEL). This assessment is confirmed by historical, objective past job data (exposure monitoring) that shows airborne fibers are not released in excess of the PEL. Data should show a high degree of certainty that there was no employee exposure under similar conditions.

Permissible Exposure Level (PEL): The new PEL is 0.1fibers/cc.

Prior to disturbing any building materials within University facilities suspected of containing asbestos, contact Environmental Health, Safety & Risk Management.

The dangerous health effects from asbestos are caused by the inhalation of asbestos fibers. The potential for an asbestos-containing product to release breathable fibers depends largely on its degree of friability. Material that crumbles with hand pressure is friable. The sprayed-on materials used for fireproofing, insulation, or sound proofing are very friable, and they readily release airborne fibers when disturbed.

Materials such as vinyl-asbestos floor tile or roofing felt are non-friable if intact, and generally do not emit airborne fibers unless subjected to sanding, sawing and other aggressive operations. Therefore, these non-friable materials do not pose a significant health concern when they are in good condition and properly maintained under an O&M program. Inhaled asbestos fibers can cause disabling respiratory disease and various types of cancers.

Surveillance of Buildings

The University maintains a program of surveillance of all known or suspected asbestos containing materials when remodeling or construction activities are to occur. All accessible functional spaces with known or suspected asbestos containing materials other than flooring are included as part of UTRGV Environmental Health, Safety & Risk Management (EHSRM) routine building surveys that are conducted twice yearly. Additionally, all plant personnel are instructed to notify EHSRM if there is deterioration in the condition of any suspected asbestos containing material. If this deterioration results in a significant health risk to building occupants the deteriorated area is scheduled for hazard abatement.

Inspections are performed by individuals who are current in certification by the state of Texas as Building Inspectors, or Asbestos Workers.

Notification

Building Occupants

Buildings presumed to contain asbestos containing materials are posted with a notice sign (Appendix B) alerting occupants to the presence of asbestos and guidance on where to find further information.

Contractors

Contractors arriving on campus to work are notified about the presence of asbestos containing materials through their contract documents. Specifically, the form titled “Statement for Bids” is included in the bid documents for all construction projects. It gives notice of the possibility of encountering asbestos containing materials in University buildings.

For successful contractors, there is a form titled “Notice to Contractors of Asbestos Containing Materials in University Buildings”. This form is included with letters sent by Purchasing to successful vendors.

Information pertaining to asbestos is also included in the University Construction Manual.

Training of Employees

All Physical Plant employees are responsible for attending the following training conducted by EHSRM.

Awareness Training

This is the most basic level of training, and is required for custodial and maintenance employees within 30 days of initial assignment to a building containing asbestos or presumed asbestos containing materials, and annually thereafter. The departments who are to be trained would include are outlined below:

1. Electricians
2. Electronics
3. HVAC
4. Maintenance Workers
5. Plumbers
6. Preventative Maintenance
7. Carpenters
8. Masons
9. Painters
10. Construction
11. Custodians (General Awareness

In-house Work involving RFCI Which May Disturb Asbestos Containing Materials

To initiate a project the Physical Plant Project Manager completes the Asbestos Project Notification Form (APNF, Appendix C) and submits it to the EHSRM. An EHSRM representative will then accompany the Project Manager to evaluate the sight.

EHSRM will provide the necessary notifications to the Texas Department of Health. With the exception of emergency projects, this notification must be given a minimum of ten working days prior to the beginning of the project.

The University Asbestos Program Manager will review the submittal, and will indicate approval by verifying the worker qualification, record-keeping and notification information on the MAPS. The work may begin after the approved MAPS have been returned to the Competent Person. The second page of the MAPS is to be completed by the Competent Person as a report of the work.

The Competent Person must assess the expected exposures during planned work. This assessment provides information necessary to assure that all control systems planned are appropriate for that operation and will work properly. All projects must have a Negative Exposure Assessment (NEA) in accordance with the OSHA regulations for asbestos in construction, or special written permission of the Asbestos Program Manager to be carried out.

During the project, the Competent Person maintains the daily log and checklist for activities at the project site. It is the responsibility of the Competent Person to arrange for necessary project monitoring and final clearance air testing.

Within one week of completing site activities the Competent Person will need to obtain, if applicable, a copy of the air monitoring report, and attach it to the MAPS. The Competent Person will then make copies of the MAPS, along with any attachments, for him or herself and the Division Representative, and send the original MAPS with attachments to the University Asbestos Program Manager at Environmental Health, Safety & Risk Management. An amended APNF should be included if corrections have been made to the original information.

After site activities are completed, bagged waste will normally be taken to an approved landfill. Temporary storage site on campus until sufficient wastes have been accumulated to make it cost effective to visit the landfill. These sites are selected by, and the responsibility of the Competent Person.

When waste materials are temporarily stored on campus the Competent Person will identify the storage site on the MAPS. These sites must be secured and have limited access, and provided with appropriate warning signs as required under State and OSHA regulations.

When waste materials are taken to the landfill, the Competent Person shall send a copy of the landfill waste receipt to the University Asbestos Coordinator. The University Asbestos Program Manager shall attach the receipt to the MAPS. When a single landfill receipt covers wastes generated during multiple O&M projects the Competent Person must provide one copy of the receipt for each project, and indicate to the University Asbestos Coordinator, which projects were associated with the receipt (the waste site manifest could serve this purpose).

Administrative Procedures Contracted Work

To initiate a project the Physical Plant Project Manager will complete an Asbestos Project Notification form (APNF, Appendix C) and submit it to EHSRM. EHSRM will then evaluate the records to determine if the proper asbestos survey has been completed. EHSRM will then select an approved abatement contractor, and if necessary, a licensed consultant. The procedure is outlined in appendix D.

Within 30 days of completing site asbestos activities the Project Manager will need to obtain project reports from the asbestos contractor, and if applicable the licensed asbestos consultant, and provide them to EHSRM. An amended APNF should be sent if corrections have been made to the original information.

Maintenance of Asbestos Containing Materials

All asbestos work on campus is to be conducted in compliance with the applicable OSHA standard: 29 CFR 1926.1001 or 1910.1001 depending on the type of work. OSHA enforces these standards for contractors and consultants, and the US EPA enforces them under the Worker Protection Rule 40 CFR 763 for University employees.

Prohibited Practices

The following work practices shall not be used for any work that disturbs asbestos containing materials, regardless of measured levels of asbestos exposure or the results of initial exposure assessments:

- Compressed air used to remove asbestos, or materials containing asbestos;
- Dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM and PACM;
- Employee rotation as a means of reducing employee exposure to asbestos.

Projects without a negative exposure assessment shall not be carried out**.**

Routine Maintenance and Cleaning

It is important to minimize the disturbance of asbestos-containing materials and the subsequent release of asbestos fibers. This can be accomplished by staying out of physical contact with materials that contain, or are presumed to contain, asbestos. Dust and debris in an area containing visibly deteriorated ACM shall not be dusted or swept dry, or vacuumed without using a HEPA vacuum filter. This cleaning shall only be carried out by certified asbestos workers.

Asbestos-Containing Flooring Material

All vinyl and asphalt flooring material shall be maintained according to this paragraph unless it has been demonstrated the flooring does not contain asbestos.

Sanding of flooring material is prohibited. Stripping of finishes shall be conducted using low abrasion pads at a speed lower than 300 rpm and employing wet methods.

Burnishing or dry buffing may be performed only on flooring that has sufficient finish so that the pad cannot contact the flooring material, and the tiles and adhesives remain intact throughout the process.
See appendix G for specific requirements when replacing glued down carpet over vinyl asbestos tiles.

Removing or Disturbing Asbestos Containing Materials

Final Clearance Air Monitoring

When friable asbestos containing material is removed or non-friable asbestos containing materials becomes friable during removal, and the amount of material is 3 square or linear feet or greater, final air clearance sampling must be conducted. For Projects 3 linear or square feet to 260 linear or 160 square feet, PCM clearance is required. For projects over 260 linear or 160 square feet, TEM is required.

Class I Work

This is work involving the removal of thermal system insulation, or surfacing material, and typically will not be performed by University employees.

Class II Work

Where a negative exposure assessment cannot be documented, or where during the job conditions indicate there may be exposure above the PEL, or where the asbestos containing material cannot be removed in a substantially intact state, a negative pressure enclosure must be used. These barriers are necessary to prevent the migration of airborne asbestos from the regulated area. The effectiveness of the barriers should be verified by perimeter area monitoring or visual surveillance.

Class II work also may be performed using a method allowed for Class I work, and glove bags are allowed if they fully enclose the Class II material to be removed. Impermeable drop cloths must be placed on surfaces beneath all removal activity.

For Class II work the competent person must be specially trained in a course that meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for project supervisor, or its equivalent.

Specialized Class II Work

Removing Vinyl and Resilient Flooring Materials

Vinyl and resilient flooring materials are exempted from the 160 square foot limit. This work requires specialized training provided, or approved, by The University of Texas Rio Grande Valley Asbestos Program Manager.

Flooring or its backing is not to be sanded, ground abraded or intentionally broken or chipped. Vacuums equipped with HEPA filter, disposable dust bag, and metal floor tool (no brush) shall be used to clean floors.

Resilient sheeting shall be removed by cutting with wetting of the snip point and wetting during removal. Rip-up of resilient sheet floor material is prohibited. All scraping of residual adhesive and/or backing shall be performed using wet methods.

Dry sweeping is prohibited. Mechanical chipping is prohibited unless performed in a negative pressure enclosure. Tiles must be removed substantially intact. Mastic shall be removed.

The procedures for conducting RFCI materials are outlined in RFCI Operations and Procedures.

Roofing Material

Roofing materials are exempted from the 160 square foot limit. This work requires specialized training provided, or approved, by EHSRM.

When removing roofing material that contains asbestos, remove the roofing material in an intact state to the extent feasible.

Cutting machines shall be continuously misted during use, unless the competent person determines that misting substantially decreases worker safety. All loose dust left by the sawing operation must be HEPA vacuumed immediately. Cutting of cement asbestos (Transite) is prohibited without the written permission of the University Asbestos Program Manager.

Unwrapped or un-bagged roofing material must be immediately lowered to the ground by way of covered, dust-tight chute, crane or hoist, or placed in an impermeable waste bag or wrapped in plastic sheeting and lowered to ground by the end of the work shift.

Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner to preclude the dispersion of dust. Roof level heating and ventilation air intake sources shall be isolated or the ventilation system shall be shut down.

Cementitious Asbestos Siding & Transite Panels

These materials are limited to 160 square feet per project, for maintenance purposes only. This work requires specialized training provided, or approved, by the University of Texas Rio Grande Valley Asbestos Program Manager. Cutting, abrading or breaking siding, shingles, or transite panels, is prohibited unless the competent person can demonstrate that methods less likely to result in asbestos fiber release cannot be used. All non-roofing cement asbestos materials with exposed asbestos surfaces shall be sprayed with amended water, or encapsulated before removal.

Gaskets

If a gasket is visibly deteriorated and unlikely to be removed intact, removal shall be done within a glove bag. The gasket shall be thoroughly wetted with amended water before its removal. The wet gasket shall be immediately placed in a disposal container. Any scraping to remove residue must be performed wet. This work requires specialized training provided, or approved, by EHSRM.

Requirements for Asbestos Contractors

Work is to be performed in accordance with the ASTM E 1368-00, *Standard Practice for Visual Inspection of Asbestos Projects*, in addition to accepted industry work procedures, and applicable Federal, State, and County regulations. On site superintendent must be a "competent person" as defined in 29 CFR 1926.32 (f). Superintendent must be on the job site full time during the entire contract period of work execution. Superintendent must have a minimum (3) three years' experience in type(s) of work and products specified for this project. All work, for all routine projects is to be conducted with asbestos exposures at or below the OSHA permitted exposure level (PEL). Written approval by the University Asbestos Program Manager is required for projects that are intended to exceed the PEL.

Insurance

Contractor must comply with the liability insurance and other pre-job submittal requirements listed in Appendix D.

Requirements for Licensed Asbestos Consultants

Work is to be performed in accordance with the ASTM E 1368-00, *Standard Practice for Visual Inspection of Asbestos Projects*, in addition to accepted industry work procedures, and applicable Federal, State, and County regulations. On site representatives must be a "competent person" as defined in 29 CFR 1926.32 (f).

If the on-site representative is not able to perform his or her duties due to any contractor created safety or health hazard at the site, the representative must direct the contractor to correct the hazard. If the contractor cannot, or will not correct the hazard, the on-site representative shall notify the University Project Manager, and shut the project down until the hazard can be corrected.

Air monitoring by the licensed asbestos consultant shall include adequate personnel samples to confirm contractor's compliance with the NEA.

The on-site representative shall have the necessary training, equipment and experience to verify that the contractor is maintaining adequate diminished pressure and air changes per hour in the NPE.

When proposing asbestos removal or air monitoring activities, clearly identify those that are recommended as opposed to activities required by Federal, State, or local regulations and standards.

ASBESTOS OPERATIONS AND MANAGEMENT PLAN

Appendices

Appendix A

Asbestos Policy

Asbestos is a recognized health hazard. Activities involving asbestos containing materials are regulated by Federal and State criteria. To ensure compliance with these regulations and to minimize the potential exposure of students, employees and the public the following University Policy is promulgated.

Management Responsibilities

Environmental Health, Safety & Risk Management (EHSRM)

EHSRM has been assigned responsibility for administrative decisions regarding asbestos control and abatement at the University of Texas Rio Grande Valley. All activities involving asbestos require prior approval from EHSRM. EHSRM will provide consultative and technical assistance to campus groups involved in asbestos related activities. EHSRM will provide quality control/quality assurance for the asbestos control program through monitoring of the different program elements. EHSRM will serve as the University liaison with regulatory agencies and serve as the clearinghouse for the dissemination of regulatory and University requirements and new information to groups involved in asbestos related activities.

Physical Plant Divisions and Departmental Maintenance Organizations

It is the responsibility of the physical plant to ensure that EHSRM is aware of all construction or remodeling projects that may disturb Asbestos Containing materials (ACM's). EHSRM will in turn conduct the proper assessment and abatement activities. Divisions shall identify individuals whose job activities require working in asbestos contaminated areas. These individuals shall be provided appropriate training and participate in medical surveillance and respiratory protections programs. The division director shall be responsible for compliance of his division and his contractors with all federal, state and local regulations and University policy.

Program Elements

Awareness

Asbestos control or abatement projects utilizing University employees shall be carried out in full compliance with state and federal law. Supervisors and all involved employees shall be provided with appropriate training.

Notification

All activities involving asbestos require prior approval from EHSRM ten days prior to the commencement of the project. (See attached document) Please file an Asbestos Project Notification Form (Appendix D or E of the O&M).

<u>Emergency Notification</u>

Emergency project notification should be made to the proper regulatory authority and EHSRM as soon as possible but no longer than 48 hours after commencement.

In-House Activity Restrictions

Only properly trained/certified personnel shall engage in asbestos abatement.

Asbestos Abatement by Contractor

- The University shall employ only experienced/certified asbestos abatement contractors.
- On site superintendent must be a "competent person" as defined in 29 CFR 1926.32 (f).
- Contractor must comply with the liability insurance requirements as described in Appendix F of the Asbestos Operations and Maintenance plan.

Licensed Asbestos Consultant

- Asbestos consultant is to comply with ASTM E 1368-00, Standard Practice for Visual Inspection of Asbestos Projects, in addition to accepted industry work procedures, and applicable Federal, State, and County regulations.
- On site representatives must be a “competent person” as defined in 29 CFR 1926.32 (f).

Record Keeping

EHSRM is responsible for maintaining complete records for all abatement projects conducted. The location in which asbestos records are stored is at the following location:

Laura De Jesus, CSP
Program Manager – Asbestos Operations and Maintenance Program
The University of Texas Rio Grande Valley
Environmental Health, Safety & Risk Management
EEHSB 1.112
Edinburg, Texas 78539
(956) 665-3690

Appendix B

Potential Asbestos Hazard

Students, employees, and building occupants

Several UTRGV buildings include asbestos containing materials. Possible asbestos containing materials might include, but are not limited to: pipe insulation, spray applied ceilings, fireproofing, fume hood liners, lab tops, table tops, plaster, or floor tile. Asbestos in its undisturbed state poses no significant health concerns. Before disturbing or removing any suspect building material, verify its content please contact EHSRM at (956) 665-3690. Report any damage to EHSRM at (956) 665-3690.

Appendix C

The University of Texas Rio Grande Valley - Asbestos Project Notification Form (APNF)

Building #: _____ Building Name: _____

Project #: _____

Description of Work:

Material to be removed

[ ] Thermal System Insulation (TSI)	Linear /Square ft. _____
[ ] Asbestos cement (Transite)	Square ft. _____
[ ] Surfacing	Square ft. _____
[ ] Vinyl floor tile	Square ft. _____
[ ] Duct Insulation/Mastic	Square ft. _____
[ ] Gyp board	Amount: _____

Type of Project

[ ] Planned [ ] Specification [ ] Emergency [ ] Open End [ ] Maintenance

Project Dates

Estimated/ Actual Start: _____ Estimated/Actual End: _____

Project Costs

Estimated/Actual Contractor Costs: _____ Estimated/Actual Consultant Costs: _____

Asbestos Contractor: _____

Asbestos Consultant: _____

General Contractor: _____

UTRGV Project Manager: _____

Form submitted by: _____ Date: _____

Appendix D

Asbestos Contractor General Liability Insurance Policy

The University of Texas Rio Grande Valley require asbestos contractors doing work for the University to carry asbestos general liability insurance in addition to all other insurance coverage (including but not limited to automobile and workers compensation) required by the bid and contract documents. The asbestos related insurance policy must be procured through an underwriter with an A.M. Best rating of A- or better lawfully authorized to do business in Texas. The insurance policy shall provide that The University of Texas Rio Grande Valley is named as an additional insured. The University shall not be responsible for any sums of money associated with the policy, including any deductible. Coverage shall be on "occurrence" basis, rather than "claims made" and must protect Contractor from all claims arising out of the Contractor's asbestos abatement work for the University. The minimum limits of liability for the asbestos contractor general liability are:

Each Occurrence	Limit $1,000,000
Personal Injury and Advertising Injury	Limit $1,000,000
Fire Damage	Limit (any one fire) $50,000
Medical Expense	Limit (any one person) $5,000
Products and Completed Operations Aggregate	Limit $1,000,000
Aggregate (Other than Products/Completed Operations)	Limit $1,000,000

The Contractor shall file with the University a certificate of insurance and a copy of the policy acceptable to the University prior to the commencement of the work. The policy shall remain in force without interruption from the date of the commencement of the work until the work is completed and the Contractor is off site. The certificate and policy shall indicate that coverage afforded under the policy will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the University.

Bid Submittals

Contractors who have not successfully provided similar work and products for a University of Texas Rio Grande Valley project in the last two years must provide a minimum of (3) positive written references from clients to whom the contractor has provided similar work and products

Pre-Job Submittal and Consultant's Approval

The contractor's pre-job submittals must include an original copy of the certificate of insurance and a copy of the policy acceptable to the University prior to the commencement of the work. The contractor's other pre-job submittals must be approved by the project's asbestos consultant, EHSRM must receive a written statement of approval of the submittals from the asbestos consultant 10 business days prior to project start-up.

Contractor's Superintendent

Contractor's superintendent must be on the job site full time during the entire contract period of work execution. Superintendent must have a minimum (3) three years' experience in type(s) of work and products specified for this project. Documentation of work experience must be submitted in the pre-job submittals. Written notice of any proposed change in the Contractor's designated superintendent must be provided to the University; the University reserves the right to exercise all available legal remedies including cancellation of the contract in the event that a successor superintendent fails to meet the requirements of this provision.

Forward: A Guide To Reducing Asbestos Exposure

A list of important points to remember:

Do Not Disregard The Hazard

Asbestos related diseases are not just another "dust in the lung" disease. Asbestos is a unique product with sharp fibers much smaller than average dust particles. They can cause disabling and life shortening health problems with a long latency period between damage and illness. Each individual is affected to a different degree.

Do Not Over-Estimate The Hazard

All types of asbestos containing material can be dangerous if handled improperly; however, all types can be properly contained. Exposure can be prevented by containment, regular inspections, and proper precautions when working around or with the material. The majority of all asbestos products effectively immobilize the asbestos fibers by mixing them into a strong binding material such as cement or epoxy (e.g. vinyl floor tile, transite). These so called "hard" asbestos materials do not generally create exposure problems unless machined, sawed or sanded.

Know How To Recognize Asbestos Hazards

Soft, loosely bound, "friable" asbestos containing materials are the most hazardous type. These can cause contamination of the air and exposure problems. Some asbestos products are applied in this manner, but most hazards are a result of old asbestos containing material becoming worn, damaged, vandalized, or loose, thereby releasing asbestos fibers into the environment.

Know Where To Look For An Asbestos Hazard

Asbestos has been used in over 3000 different products in industry. Hazardous asbestos should be expected whenever you see torn, damaged, or deteriorated "friable" materials on walls, ceilings, pipe and tank insulation, and fire doors.

Do Not Handle Or Disturb Friable Asbestos

If asbestos damage is suspected, notify your supervisor and/or the Environmental Safety Officer of the location and nature of the problem. Vacate the room and wait for an inspection and determination to be made.

Do Not Be Hesitant To Ask For Sampling Or Protective Equipment

If you see loose friable materials or are planning a renovation or messy cleanup job which may disturb some suspicious looking material, ask your supervisor to check it, and submit an asbestos sample request to the Environmental Safety Office.

Use Proper Protection When Handling Asbestos Hazards

Minimal exposure will be encountered if you wear the proper protective equipment when handling asbestos. When taking a sample, always wear a respirator, and if the substance is touched with your hands, wash them thoroughly.

Appendix E

Abatement Contractors

Dallas Environmental
1721 W. Highway 107
McAllen, Texas 78504
(956) 235-5366

R.L Abatement, Inc.
P.O Box 332
Weslaco, TX 78599
(956) 968-2265

Consultants

Terracon Consultants Inc.
1506 Mid Cities Drive
Pharr, TX 78577
(956) 283-8254

All Points Environmental, L.L.C.
500 N Water Street
Suite 401
Corpus Christi, TX 78471
(361) 882-3393