

PART 1 – GENERAL**1.1 SUMMARY**

This Section covers the requirements for asbestos surveys, abatements, reporting and training regarding the work at the Airport. This Section shall be conducted in accordance with other Specification Sections, regulations promulgated by the Environmental Protection Agency (EPA) and the Occupational Safety and Health Act; guidance set forth in the National Institute for Occupational Safety and Health (NIOSH); the Texas Administrative Code (TAC); and any other applicable Federal, State, and local government regulations. Whenever a conflict or overlap of the above references may exist, the most stringent provisions are applicable. Any variances from this Section or any of the supporting documentation must have prior approval from the Airport Environmental Affairs Department (EAD).

1.2 RELATED REQUIREMENTS

- A. Section 01 74 19, Construction Waste

1.3 REFERENCES

The following is a list of standards and codes which may be referenced in this Section:

- A. Texas Administrative Code (TAC): Title 25 Part 295 Chapter C Texas Asbestos Health Protection Rules.
- B. Code of Federal Regulations (CFR):
 - 1. Occupational Safety & Health Act:
 - a. Title 29 Part 1926.1101, Construction Asbestos
 - b. Title 29 Part 1926.134, Respiratory Protection
 - 2. Environmental Protection Agency (EPA):
 - a. Title 40 Part 61, Subpart M, National Emission Standards for Asbestos (NESHAP).
 - b. Title 40 Part 763, Asbestos Hazard Emergency Response Act of 1986 (AHERA).
 - 3. Department of Transportation: Title 49 Part 171 & 172, Transportation of Hazardous Materials.

1.4 DEFINITIONS

- A. Asbestos: Asbestiform varieties of Chrysotile, Amosite (Cummingtonite-grunerite), Crocidolite (Riebeckite), Anthophyllite, Actinolite, and Tremolite.
- B. Asbestos-Containing Material (ACM): Any material containing more than one percent asbestos.
- C. Poly Sheeting: Six (6) mil. poly sheeting.
- D. Preparation for Abatement Work: The Texas Department of State Health Services (TDSHS) defines the term preparation as including, but not limited to:
 - 1. Pre-cleaning; sweeping; wet wiping; High Efficiency Particle Arresting (HEPA) vacuuming; sealing penetrations and openings; installing polyethylene; installation of isolation barriers (critical barriers, demising/dividing walls, etc.);

installation of any part of a decontamination enclosure system or any part of the water line connections to the shower, drains, and/or filtration; installation, set-up, or use of any load-out/bag-out systems; installation, maintenance, or selection of respiratory systems or fiber reduction systems (i.e.: misting, spraying, etc.); positioning of warning signs; or

2. Installation of engineering controls (local exhaust ventilation equipped with HEPA filter dust collection systems, constructing enclosures or isolation mechanisms to control processes producing asbestos dust, ventilation of the regulated area to move contaminated air away from the breathing zone of employees and toward a filtration or collection device equipped with a HEPA filter); installation of scaffolding (in an area that may disturb asbestos during the installation); installation, set-up, calibration, and etc. of monitoring devices (including sampling systems and manometers); or
 3. Removal of any item from a space within a public building, once the Contractor, or the Abatement Subcontractor, takes control of that space. Removal of an item (fixture, furnishing, etc.) that is in no way contaminated with asbestos, or does not pose a risk of asbestos disturbance by its removal, is permitted if done prior to allowing the Contractor, or the Abatement Subcontractor, to occupy or take control of the space.
- E. Presumed Asbestos-Containing Material (PACM): Any material, yet to be sampled using Polarized Light Microscopy (PLM), containing an unknown amount of asbestos.

1.5 SUBMITTALS

- A. Asbestos Survey Requests. The Contractor shall fill out and submit an "Asbestos Survey Request Form". This form may be located at the following link:
https://www.dfwairport.com/cs/groups/webcontent/documents/webasset/p2_952134.pdf
- B. Abatement Submittals: If the Contractor requires PACM or ACM removed on the Project, the Contractor shall submit the following:
1. Abatement Notification. The Contractor, or the Abatement Subcontractor, shall provide the following information to the EAD, at least 20 Working Days prior to the abatement start date.
 - a. Type of abatement work
 - b. Abatement Work Schedule
 - c. Demolition Work Schedule – OPTIONAL
 - d. Asbestos Amounts
 - e. Abatement Subcontractor Information
 - f. Abatement Subcontractor Supervisor Information
 - g. Abatement worker Information
 - h. NESHAP Training Individual Information
 - i. Demolition Subcontractor Information – OPTIONAL
 - j. Waste Transporter License
 2. Contractor Pre-Abatement Submittals. The Contractor, or the Abatement Subcontractor, shall provide the EAD with current copies of the following

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documents listed below at least 20 Working Days prior to the abatement start date.

- a. Abatement Subcontractor
 1. TDSHS Asbestos Abatement Contractor License
 2. Respirator Protection Program
 - b. Materials specification, including Safety Data Sheets (SDS) for chemical used for abatement activities.
 - c. Equipment certificates
 - d. One million dollars of insurance coverage for environmental spills and releases.
 - e. Waste Transporter
 1. TDSHS waste transporter license
 2. One million dollars of insurance coverage for environmental spills and releases.
3. Post Abatement Documentation. The Contractor, or the Abatement Subcontractor, shall provide all abatement relate documentation to the EAD within THIRTY (30) Calendar Days of the abatement end date.
- a. Abatement Supervisor(s)/Worker(s)
 1. TDSHS licenses/registrations
 2. EPA certifications/accreditations
 3. TDSHS Physician's Written Statements
 4. Respiratory Fit Tests
 5. Any specialized training – IF APPLICABLE
 6. Any amendments to the abatement project submittals

C. Safety Data Sheets

The Contractor shall submit an electronic version of the SDS for all building materials to the Owner's Authorized Representative (OAR) for review by the EAD prior to closure of the building permit.

D. Correspondence between the regulatory agencies and the Contractor (and/or any Subcontractor) regarding Work at the Airport.

1. The EAD shall be the sole agency to correspond to the TDSHS regarding any work at the Airport.
2. All correspondence received by the Contractor related to work at the Airport shall be submitted to the EAD within 24 hours.

1.6 QUALIFICATIONS

A. General Construction Work

All onsite construction personnel who potentially work near ACM are required to have two (2) hours Asbestos Awareness training as required by 29 CFR 1926.1101.

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B. Asbestos Abatement Areas

All asbestos abatement personnel shall be appropriately licensed or registered in accordance with the Texas Asbestos Health Protection Rules (TAHPR). Onsite personnel shall have their current license and supporting documentation while onsite and readily available upon request.

C. Asbestos Transport

The Contractor, or the Abatement Subcontractor, shall be appropriately licensed in accordance with the TAHPR while transporting any asbestos waste.

D. Competent Person

The Contractor, or the Abatement Subcontractor, shall designate a “competent person” having the qualifications and authority required by 29 CFR 1926.1101.

1.7 ASBESTOS SURVEYS & ASBESTOS REMOVAL PLANS

- A. If required for the Project, an Asbestos Survey will be provided by the OAR prior to the start of the abatement work. The document will discuss the areas that were inspected, materials that were observed, any PACM/ACM that was discovered, the condition of any PACM/ACM and locations of the PACM/ACM. The document shall be communicated with the Contractor, the staff, all Subcontractors, and shall be onsite and readily viewable to all Project employees.

If the abatement work extends outside of the current Project site or new materials are revealed during the performance of the abatement work, it is the Contractor's responsibility to notify the OAR. The Contractor, Subcontractors, and all personnel shall refrain from disturbing any unsurveyed areas or materials prior to obtaining an ACM Survey.

- B. If the Contractor determines ACM/PACM will be disturbed, an abatement project design will be provided through the OAR by the EAD. The document will come in the form of a project manual that will outline the type(s) of asbestos; abatement methodologies; personal protective equipment to be employed; and waste handling and disposal by the Contractor or the Abatement Subcontractor.

1.8 REGULATORY REQUIREMENTS

- A. The Contractor, or the Abatement Subcontractor, shall comply with all Federal, State, and local laws and regulations governing asbestos abatement, including, but not limited to, regulations listed in subsection 1.3.
- B. General construction personnel shall not disturb any PACM or ACM without appropriate asbestos licensing/training and approval from the EAD.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 GENERAL WORK ACTIVITIES

The Contractor, or the Abatement Subcontractor, shall follow these measures while conducting work if PACM/ACM are present in the Project site.

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- A. Instruct workers where the PACM/ACM is known to be located and instruct them not to disturb the material. New workers shall be informed prior to working in the Project site.
- B. Instruct workers on emergency procedures should PACM/ACM become dislodged or accidentally disturbed.

In the event PACM/ACM become dislodged or disturbed, the Contractor, or the Abatement Subcontractor, shall perform the following:

- 1. Remove all persons from the room. All personnel shall be removed, and the area secured to prevent entry.
 - 2. Contact the Airport Operations Center (AOC) at 972-973-5572, and report the location, time of the release, and quantity of the dislodged material. EAD will contact the Contractor with further instructions.
 - 3. Minimize further migration of asbestos fibers by isolating the HVAC system to the affected room. EAD will contact the Contractor and provide further direction.
- C. The Contractor shall ensure that all abatement work areas have been surveyed for ACM prior to any disturbance. If the abatement work extends outside of the current Project site or impacts materials that have not been addressed in the ACM survey, it is the Contractor's responsibility to notify the OAR. The Contractor shall refrain from disturbing any unsurveyed areas or materials prior to obtaining a new ACM Survey in accordance with subsection 1.5.
- D. Review the SDSs to ensure that no asbestos mineral forms are installed at the Airport.

3.2 ASBESTOS ABATEMENT

The Contractor, or the Abatement Subcontractor, shall follow the following measures when conducting work that disturbs PACM/ACM.

A. Work Preparation

No activities including preparation work shall commence at the abatement project site until:

- 1. All submittal requirements in subsection 1.5 have been fulfilled and approved.
- 2. An asbestos abatement design has been provided by the EAD.
- 3. The start date on the asbestos abatement notification submitted to the TDSHS.

B. Emergency Precautions

The Contractor, or the Abatement Subcontractor, shall:

- 1. Establish emergency and fire exits from the abatement work area and train employees and Subcontractors with evacuation procedures.
- 2. Be prepared to administer first aid to injured and contaminated personnel. When an injury occurs, stop Work and implement fiber reduction techniques (e.g., water spraying) until the injured person has been removed safely from the Work area. Treat seriously injured personnel immediately or evacuate without delay for decontamination.
- 3. Prominently post the location of the nearest telephone, as well as the telephone numbers of all emergency response personnel in the Clean Room.

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C. Signs & Labels

The Contractor, or the Abatement Subcontractor, shall post signs and labels as required by the TAPR and 29 CFR 1926.1101 regulations.

D. Personal Protection and Decontamination

The Contractor, or the Abatement Subcontractor, shall provide necessary protective and safety equipment to all staff to carry out the abatement operations stated in the asbestos project design. In addition, the Contractor, or the Abatement Subcontractor, shall provide to authorized visitors and Inspectors:

1. Protective disposable clothing, eye protection, and hard hats as required by job conditions and;
2. Respiratory protective equipment approved by NIOSH and the Mine Safety and Health Administration (MSHA).
3. Decontamination: Shower and bath water shall have hot and cold water mixing faucets. Wastewater shall either be filtered or collected and discarded as asbestos waste. Provide soap and shampoo to aid in removing dust from the entrant's skin and hair.

E. Abatement Preparation

The Contractor, or the Abatement Subcontractor, shall prepare for the abatement work by:

1. Clearing all personnel and all moveable objects from the abatement area before the abatement work commences unless specified otherwise. The removal and the replacement of removed items upon completion of the abatement shall be the sole responsibility of the Contractor.
2. Securing the area and provide adequate protective controls for the HVAC system, mechanical systems, electrical systems and plumbing systems.

3. Disabling HVAC Systems

The HVAC system(s) that service the regulated area shall be deactivated and locked off. All ducts, grills, access ports, and vents shall be sealed off with two layers of Poly Sheeting to prevent entrainment of contaminated air.

4. Shared HVAC Systems

If components of an HVAC system are connected to a system that will service another zone during the project, the portion of the duct in the regulated area shall be sealed and pressurized. Additional precautions shall include but are not limited to caulking and covering all duct joints, and other openings in the HVAC system with two layers of Poly Sheeting. The duct shall remain pressurized throughout the duration of the project to prevent entrainment of contaminated air.

5. Sealing Elevators

If an elevator shaft is in the regulated area, it shall be shut down and isolated with two layers of plastic sheeting. The sheeting shall provide enough slack to accommodate the pressure changes in the shaft without breaking the air-tight seal.

6. Removing Mobile Objects

Cleaning all movable objects and remove from the abatement work area before an enclosure is constructed unless moving the objects creates a hazard. Mobile objects shall be assumed to be contaminated and shall be either cleaned with amended water and a HEPA vacuum and then removed from the area or wrapped and disposed of as regulated waste.

7. Cleaning and Sealing Surfaces

Cleaning all surfaces with water and a HEPA vacuum prior to constructing the enclosure. Covering surfaces of stationary objects with two layers of Poly Sheeting secured with duct tape or an equivalent method to provide a tight seal around the object.

F. Enclosure

1. The Contractor and the Abatement Subcontractor shall follow the EAD provided abatement project design regarding enclosure construction. The enclosure shall protect all building systems not planned for abatement removal. Enclosures shall be both airtight and watertight except for those openings designed to provide entry and/or air flow control. Enclosures shall be constructed, monitored, maintained in accordance with TAHPR and 29 CFR 1926.1101 requirements.
2. The Contractor, or the Abatement Subcontractor, shall construction each enclosure to contain a work area, a decontamination area, and waste storage area and meet the following requirements.
 - a. Structural Integrity

Frames shall be constructed to support all unsupported spans of sheeting. The walls, ceilings and floors shall be supported in such a manner that portions of the enclosure will not fail during normal use.
 - b. Openings

All necessary openings into the enclosure shall be constructed with one or more airlocks that will automatically close in the event the enclosure loses negative pressure. Charcoal filters shall be used to mitigate any nuisance odors.

G. Enclosure Airflow

The Contractor, or the Abatement Subcontractor, shall ensure:

1. All negative pressure devices are in good working order and maintained properly through the entire duration of the abatement.
2. Air exhausted from the enclosure shall pass through HEPA filter during the entire duration of the abatement.
3. All HEPA filters used are in accordance with the manufacturer's requirements.
4. The HEPA filters shall be replaced when the air flow volume is reduced by the build-up of dust in the filtration material.
5. Exhaust air from the negative pressure unit shall be directed away from the public, adjacent workers and intakes for HVAC systems.

H. Tools and Equipment

The Contractor, or the Abatement Subcontractor, shall provide, prepare, and maintain any tools and equipment used in the abatement work as follows:

1. Any contaminated equipment or tools brought to the abatement work area shall be sealed inside two layers of Poly Sheeting and appropriately labeled. The tools or equipment shall not be unsealed until they are placed inside of an operational negative pressure enclosure.
2. Scaffolding, as required to accomplish the abatement work, shall meet all applicable Federal, State, and local safety regulations.
3. Transportation Equipment
Equipment used to transport contaminated materials shall be suitable for loading, temporary storage, transport and unloading of contaminated waste without exposure to persons or property.
4. Vacuum Equipment
All vacuum equipment utilized in the abatement work area shall utilize HEPA filtration systems.
5. High-speed abrasive disc saws shall be equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.

I. Exposure Monitoring and Medical Surveillance

1. The Contractor, or the Abatement Subcontractor, shall be responsible for all exposure monitoring and medical surveillance for all personal. Monitoring shall be performed in accordance with TACPR and 29 CFR 1926.1101 requirements.
2. Negative exposure assessments must be reviewed and approved by the EAD and their asbestos consultant, if any, prior to use.
3. Exposure monitoring and/or medical surveillance shall be provided to the EAD, or their asbestos consultant, upon request within 24 hours.

J. Abatement Monitoring and Inspection

1. The performance and execution of the abatement work shall be monitored by an EAD appointed asbestos consultant and or asbestos project manager/air monitoring technician. This consultant or their staff shall not be employed by the Contractor, or the Abatement Subcontractor, for the Occupational Safety and Health Administration (OSHA) personnel exposure monitoring during the duration of the Project.
2. The frequency of monitoring will be at the discretion of the asbestos consultant.
3. The Contractor, or the Abatement Subcontractor, shall cooperate with and support the asbestos consultant throughout the abatement process.
4. The asbestos consultant will provide copies of the sample results to the Contractor and the Abatement Subcontractor.
5. Aggressive air sampling for clearance of the containment area and completion of abatement will be based on results of ambient air sampling inside the containment area, conducted by the asbestos consultant.

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6. If clearance monitoring fails, the Contractor shall be solely responsible for any costs of additional sampling.

K. Asbestos Removal

The Contractor, or the Abatement Subcontractor, shall:

1. Be responsible for managing emissions and contaminated media in accordance with TACPR and 29 CFR 1926.1101 to prevent asbestos exposure during the asbestos abatement.
2. Keep materials adequately wetted with amended water to prevent fiber emissions.

L. Cleaning

The Contractor, or the Abatement Subcontractor, shall:

1. Manage debris within the regulated area in accordance with TACPR and 29 CFR 1926.1101 requirements.
2. Ensure all surfaces within the enclosure shall be cleaned and HEPA vacuumed before the exhaust ventilation system is deactivated and the enclosure is disassembled. An approved encapsulant shall be sprayed onto areas after the visible dust has been removed.

M. Disposal Activities

1. The Contractor, or the Abatement Subcontractor, shall manage all asbestos wastes in accordance with the TACPR, 29 CFR 1926.1101 and Section 01 74 19, Construction Waste Management.
2. The asbestos waste disposal facility will be listed in the asbestos project design. Any variance from the facility must be approved by the EAD prior to transporting the waste materials.
3. Asbestos waste shall be secured until the waste is received by the approved disposal facility.
4. A universal waste manifest will be provided by the EAD.
5. All waste manifests shall be signed by an authorized designee of the EAD.

N. Repair and Restoration

1. The Contractor shall be responsible for repair of any damages incurred to the finishes, floor, walls, or any other item or fixture during the execution of the Work.
2. A pre-construction inspection report and videotape may be used as the basis for the assessment of damages.

PART 4 - MEASUREMENT AND PAYMENT

Not Used.

- END OF SECTION -