

JSC Safety and Health Requirements	JPR No.	1700.1L
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Chapter 11.3 Asbestos Control Program (ACP)

11.3.1. Purpose

The purpose of the ACP is to provide a safe work environment by maintaining potential asbestos exposure hazards as low as reasonably achievable for all building occupants and service personnel. This can be achieved through a well-defined ACP that includes asbestos inspection, hazard assessment, and response actions, and by ensuring that all JSC asbestos-related work follows the requirements set forth in the remaining chapters of Part 11. Other important aspects of a comprehensive ACP include employee training (Chapter 11.5), medical surveillance (Chapter 11.5), personal protection (Chapter 11.5), work practices and procedures (Chapters 11.3 through 11.13), air and exposure monitoring (Chapter 11.8), emergency and mishap procedures (Chapter 11.14), and job-specific performance requirements (JPRs) (Chapter 11.15 and Chapter 11.16). This chapter defines the specific procedures for identifying and assessing ACM, developing appropriate response actions for mitigating its hazard potential, and conducting annual ambient air monitoring.

11.3.2. Responsibilities

The Environmental Office (JP) and Occupational Health (SD) have primary responsibility for coordinating the ACP. They will use the services and support of the facilities maintenance contractor to implement the ACP.

11.3.3. Objectives

11.3.3.1 The primary objectives of the ACP are to:

- a. Manage-in-place the ACM in JSC buildings and facilities in a manner that minimizes asbestos exposure to building occupants, service workers, and the environment. To accomplish this, the ACP is designed to:
 - (1) Remove asbestos debris that may have been released from the ACM.
 - (2) Avoid or control disturbances of the ACM during building activities to eliminate or greatly reduce the release of fibers.
 - (3) Remove or repair damaged ACM.
 - (4) Implement a program of removal of asbestos materials as part of the JSC Facility Maintenance and Construction of Facilities Programs, as feasible.
 - (5) Isolate and respond to episodic, potential fiber release incidents.
 - (6) Properly manage and dispose of asbestos waste.
- b. Identify the locations(s), type(s), and quantity of ACM.
- c. Inspect and periodically re-inspect to determine the physical condition of existing or suspect ACM.
- d. Assess the hazard potential posed by existing or suspect ACM based on a set of standard criteria.
- e. Perform routine annual ambient air sampling.

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- f. Develop and implement response actions to abate existing and potential ACM contamination.
- g. Respond to emergencies and fiber release episodes.
- h. Prevent future contamination through minimization of ACM disturbance and damage.
- i. Focus on service workers and workers involved in operations removing ACM since their activities are most likely to release asbestos fibers. These activities include building renovation, maintenance, repair work on building systems, and routine cleaning and custodial work.
- j. Provide controls for all tasks involving potential asbestos exposure. Part 11 covers the removal of even one ceiling tile in a building known to contain SAI. The degree of control depends on the potential of exposure to workers and to building occupants.

11.3.4. Program elements

11.3.4.1 To achieve program objectives, the ACP shall:

- a. Alert building occupants to the existence and location of ACM and to the need for not disturbing it through awareness training per chapter 5.7 (e.g., Hazard Communication, etc.).
- b. Establish appropriate work practices for cleaning and maintaining the buildings.
- c. Establish procedures for minimizing ACM disturbances during demolition and renovation projects.
- d. Establish procedures for removing ACM.
- e. Establish procedures for collecting and removing fibers after a release episode.
- f. Establish procedures for those workers exposed at, or above, the action level for medical surveillance, training, and compliance with the existing respiratory protection program.
- g. Establish procedures for demarcating new non-ACM thermal system insulation (TSI) and spray applied insulation (SAI).

11.3.5. ACM inspections and hazard assessments

The Environmental Office and Occupational Health shall ensure that periodic inspection and hazard assessment of suspect or confirmed ACM is accomplished in JSC facilities. The hazard assessment process uses the information contained in the inspection report and involves evaluating the degree of hazard potential that exists based on a set of criteria. The inspection or assessment process provides guidance in anticipating response actions; preparing scopes of work, cost estimates, and schedules; and in developing and prioritizing an overall asbestos management plan.

11.3.6. Bulk sampling

11.3.6.1 Bulk sampling verifies the presence or absence of asbestos in a particular building or facility material. At JSC, the ACM of primary concern is the SAI or fireproofing on the structural members and decking, but you may also find ACM in a wide variety of other building materials. The following requirements apply:

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- a. Always presume the presence of asbestos when there are no bulk sample analyses or other information to confirm or refute the presence or absence of ACM.
- b. Collecting bulk samples of ACM can cause significant damage and fiber release. Only individuals designated by Occupational Health, who are trained and certified in the proper sampling techniques, are allowed to collect samples. The Environmental Office has designated both Occupational Health and the facilities management contractor's industrial hygiene staff as having trained personnel to perform this sampling. Other contractors shall request this designation from Occupational Health.
- c. Analyze bulk samples by EPA-approved methods listed in 40 CFR 763.
- d. Respiratory protection (or the use of wet methods when appropriate) is required while obtaining bulk samples of suspect ACM to prevent inhaling fibers.

11.3.7. Routine building ambient air sampling

11.3.7.1 The following air sampling occurs at JSC:

- a. **Annual and quarterly ambient air sampling.** Occupational Health conducts routine annual and quarterly ambient air sampling in buildings known to have ACM SAI and exposed ACM asbestos acoustic or decorative material. Occupational Health samples:

- (1) In areas readily accessible to building occupants.
- (2) At least annually in each of the JSC buildings known to contain ACM SAI.
- (3) At least quarterly in buildings and areas with exposed ACM acoustical or decoration materials or exposed ACM SAI.

NOTE: The data collected from past sampling has shown that **no** significant quantity of airborne asbestos fibers exists within JSC facilities and that levels are far below EPA and OSHA limits.

- b. **Asbestos abatement project air sampling.** Occupational Health has primary responsibility for air sampling during asbestos abatement projects and particularly the final clearance air sampling. The abatement contractor or an outside consultant conducts personnel and other air sampling during the performance of a particular project, as required.
- c. Occupational Health collects and analyzes all ambient air samples using the National Institute for Occupational Safety and Health (NIOSH) Method 7400 or 7402. As Occupational Health obtains additional sample data, it adds the results to the existing database. For additional information about air sampling requirements, refer to Chapter 11.8.

11.3.8. Response actions

11.3.8.1 You shall follow these requirements for asbestos response:

- a. The Environmental Office (JP) and Occupational Health (SD) are responsible for all response actions. The EPA has defined "response action" to mean "a method including removal, encapsulation, permanent enclosure, repair, operations and maintenance that protects human health and the environment from friable ACBM" (40 CFR 763).

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- b. At JSC, only trained workers are allowed to perform one of the following four types of responses when notified about damaged ACM or when notified of a minor or major fiber release:
- (1) **Cleanup of ACM.** This response is appropriate when loose ACM dust or debris is encountered. This is a nonemergency, scheduled activity that is normally completed within 48 hours from notification.
 - (2) **Repair of ACM.** This response is appropriate whenever ACM is found in a damaged, delaminated, or deteriorated condition over a relatively small area.
 - (3) **Removal of ACM.** This response is appropriate whenever ACM is found in a damaged, delaminated, or deteriorated condition over a relatively large area and poses a potential exposure hazard to building occupants. In addition to removing asbestos due to its condition or hazard potential, it shall also be removed before any construction, renovation, or demolition in structures containing friable asbestos or asbestos that will be made friable by these activities. In addition, no asbestos removal in excess of 160 square feet of surfacing material or 260 linear feet of pipe insulation or 35 cubic feet of any ACM will be performed without prior written notification to the Texas Department of State Health Services (TDSHS) (see Chapter 11.6).
 - (4) **Emergency response.** Cleanup and containment of a spill or release of known or suspected ACM that presents a potential hazard to building occupants. The Environmental Office and Occupational Health are notified of any emergency involving significant damage to ACM resulting in the release of asbestos fibers. This type of situation is referred to as a fiber release episode. Upon notification, the Environmental Office and Occupational Health coordinate response actions with the facilities maintenance FSS contractor. The situation will be evaluated and appropriate actions will be taken. These actions may include cleanup, repair, or removal of ACM as dictated by the particular circumstances.
- c. Call the site EOC, x33333 or (281) 483-3333, to report suspected asbestos debris at JSC, Sonny Carter Training Facility, and Ellington Field. The EOC will contact the JSC Environmental Spill Team for cleanup and containment and the Occupational Health for hazard assessment and air monitoring.

11.3.9. Delimit ACM from non-ACM

11.3.9.1 When a response action results in removal of asbestos containing TSI or SAI, the new non-ACM material shall be demarcated to distinguish it from the existing ACM material as follows:

- a. Label new non-ACM Thermal System Insulation (TSI) using "Asbestos Free Insulation" pipe markers with the arrow pointed towards the non-ACM insulation.
- b. Use blue banding on metal covered insulation to further demarcate non-ACM Insulation.
- c. Dye or paint new non-ACM Spray Applied Insulation (SAI) blue, to include spray applied and troweled on fireproofing.

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11.3.10. Prohibited activities

11.3.10.1 To minimize the potential for exposure to asbestos, all *uncontrolled* activities that may damage ACM or PACM or cause the release of airborne asbestos fibers are prohibited, Employees shall NEVER:

- a. Cut or drill holes in any ACM or PACM.
- b. Install hangers or fasteners in any ACM or PACM.
- c. Sand, grind, drill, remove, or damage any ACM or PACM, including floor tiles, carpet tiles, or adhesives used on these tiles.
- d. Damage ACM or PACM while moving equipment or furniture.
- e. Install curtains, drapes, or dividers in such a manner that they will damage ACM or PACM.
- f. Use an ordinary vacuum or compressed air or dry sweeping to clean up ACM or PACM debris.
- g. Remove ceiling tiles below ACM or PACM without following the procedures set forth in Part 11.
- h. Hang any item from the suspended ceiling grid below a ceiling plenum with SAI.
- i. Damage any pipe or mechanical system insulation that contains or could contain ACM or PACM. Insulating materials such as Styrofoam, foam rubber, foam glass, or fiberglass do not contain asbestos; however, ACM may exist at the joints and fittings. Contact Occupational Health before conducting activities that may cause disturbance or damage to these materials or follow the applicable procedure in Chapter 11.16.