

<b>JSC Safety and Health Handbook</b>	JPR No.	<b>1700.1K</b>
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## Chapter 12.15 Job-Specific Performance Requirements - General Information

### 12.15.1 General job-specific performance requirements

12.15.1.1 You shall follow these requirements for asbestos jobs:

- a. Chapter 12.16 contains individual Job-Specific Performance Requirements (JPRs) for the most common jobs at JSC that potentially involve ACM. Table 12.15-1 below lists the activities by Class of asbestos work as defined in Chapter 12.4 of this Handbook. All JPR numbers reflect the Class of asbestos work being performed. Table 12.15-1 also lists the attachment from Chapter 12.16 that describes the performance requirements. Each description in Chapter 12.16 provides sufficient information to determine which jobs fit within the procedure. The JPR requirement descriptions in this chapter and in Chapter 12.16 are the pre-approved project designs for asbestos Class I and Class II abatement activities involving less than 260 linear feet, 160 square feet, or 35 cubic feet of ACM and for asbestos Class III activities.
- b. Following each job description in Chapter 12.16 is a listing of minimum requirements for completing the described asbestos work. These listings may not be complete, and trained asbestos workers are expected to perform all Classes of asbestos-related work using industry-accepted work practices and controls. Work supervisors and Competent Persons shall exercise discretion on some requirements (e.g., determining the size of containment system or enclosure for Class I asbestos work).
- c. Table 12.15-1 also lists the minimum training requirements needed to perform each JPR. The training abbreviations shown in the table, and their meanings from Chapter 12.5, paragraph 12.5.3, are:
  - (1) **32-hour worker:** training specified in 40 CFR 763, Subpart E, Appendix C, for all Class I work and Class II work, to include the use of critical barriers and negative pressure enclosures.
  - (2) **16-hr O&M:** training specified in 29 CFR 1926.1101(k)(9)(v) and 40 CFR 763(a)(2) for Class III operations and maintenance work, involving Class III glovebag or spot abatement activities.
  - (3) **JSC 8-hr:** training for Restricted Class III Asbestos Operations and Maintenance work as shown in Chapter 12.5, paragraph 12.5.3. This training does not allow workers to perform removal of any amount of ACM.
  - (4) **2-hr:** Class IV awareness training required by 29 CFR 1926.1101(k)(9)(vi) and 40 CFR 763(a)(2) for housekeeping and custodial activities.
  - (5) **RFCI:** Training in the methods specified by the Resilient Floor Covering Institute (RFCI) for the removal of resilient floor coverings and adhesives that contain asbestos. The specific methods used may be found in the RFCI document "*Recommended Work Practices for Removal of Resilient Floor Coverings*" at <http://www.rfci.com/index.php>. See the TDSHS statement concerning RFCI procedures at <http://www.dshs.state.tx.us/asbestos/pdf/ARC022.pdf>.
- d. If you do not find the asbestos-related work in one of the listed procedures in Table 12.15-1 or in Chapter 12.16, define the job by the Class of asbestos work as found in Chapter 12.4 of this

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Handbook or in 29 CFR 1926.1101; then develop an alternative procedure as required by Chapter 12.2 of this Handbook and submit an asbestos project design as required by Chapter 12.6.

- e. You shall submit an asbestos project design as required by Chapter 12.6 if:
  - (1) Your activity will cause the demolition of a building or portion thereof, regardless of whether ACM has been identified or not
  - (2) You perform asbestos Class I or Class II abatement work using an Alternative Procedure under Chapter 12.2, Paragraph 12.2.2
  - (3) You perform asbestos Class I or Class II abatement work involving the removal of ACM or PACM in quantities equal to or greater than 260 linear feet, 160 square feet, or 35 cubic feet
- f. Plan all asbestos-related work following the procedures in Chapters 12.1 and 12.2 of Part 12 of this Handbook.

**12.15.2 Exposure control program**

12.15.2.1 The underlying assumptions behind the development of the exposure controls reflected in the JPRs are:

- a. All tasks involving potential asbestos exposure require some degree of control. Hence, the removal of even one ceiling tile in a building known to contain asbestos SAI is covered by Part 12. The degree of control is tailored to the potential of exposure to workers and to building occupants.
- b. When it is necessary to open an area of suspended ceiling in a building containing SAI, such that a total of 32 square feet or more (i.e., the 4th contiguous ceiling tile) is exposed, you shall erect a small enclosure.
- c. Spot removals of any amount of SAI require the erection of an enclosure, but may not require specific decontamination areas (e.g., shower area, clean room, equipment rooms). Place the enclosure under local negative pressure using a HEPA-filtered vacuum cleaner or negative-pressure systems as described within Part 12. "Pop-Up" style mini-enclosures (Klean Kubes® or equivalent units) are commercially available for this purpose. You shall use additional safeguards such as wetting and catching the material close to the scrape.
- d. Any job that requires the removal of 3 contiguous square feet or greater of asbestos from a surface (other than a pipe surface if glovebag procedures are used), or which has a sufficient number of small-scale spot removals such that the cumulative amount of insulation removed exceeds 35 cubic feet, 160 square feet, or 260 linear feet of pipe is, under this program, a major asbestos removal operation. Major removals require the submission of a project design to the APM, which details how the enclosure, decontamination, monitoring, record-keeping, and clearance requirements are to be satisfied.
- e. The above assumptions represent JSC's best effort in interpreting the OSHA and EPA guidelines, which are based on specific fiber concentrations, and establish a workable program for controlling asbestos exposure. The Space Medicine Operations Division (SMOD) will monitor various jobs to determine whether the degree of control described above provides

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adequate environmental and health protection. Therefore, the performance requirements may be revised. For example, it may be necessary to reduce the small enclosure criteria to below 32 square feet, if controls are inadequate.

### **12.15.3 Waivers to job performance requirements**

12.15.3.1 Except for JPR III-13 (see Chapter 12.16, paragraph 12.16.3.8), there will be no waivers issued for the JPR procedures in Chapter 12.16. The following requirements apply.

- a. In buildings with SAI, raised computer floors and sub-floors may contain SAI debris from activities performed in the building before asbestos work was regulated at JSC. The entry into any computer floor or sub-floor, in a building containing SAI, is normally considered Class III asbestos work governed by JPR III-13. The JSC Occupational Health Officer, or his designee, may issue a waiver releasing workers from these Class III requirements under the following conditions:
  - (1) The area can be easily delineated above and below the raised flooring into “clean” and “dirty” sections. Normally, the delineation shall be done by rooms defined by hard walls above the floor. The Occupational Health Officer, or his designee, may establish other delineation in special cases.
  - (2) Clean the area below the raised floor (as well as any equipment or cabling below the floor), the flooring support structure, and the flooring tiles using wet-wiping and -mopping methods and HEPA vacuuming. Clean any items removed from the sub-floor area by wet-wiping or HEPA vacuuming as they are removed from the floor. Clean following the procedures shown in JPR III-13. Workers performing these activities shall wear protective clothing and respiratory protection.
  - (3) The JSC Occupational Health Officer, or his designee, will visually inspect the sub-floor area after cleaning. The basic standard of cleanliness for the sub-floor area is no visible dust or debris.
  - (4) When the JSC Occupational Health Officer, or his designee, is satisfied about the cleanliness of the sub-floor area, he or she will issue a JPR III-13 Waiver for the specific area cleaned. The SMOD will post the waivers on the JSC Health home page at <https://sashare.jsc.nasa.gov/sd/SD3/SitePages/Occupational%20Health/Asbestos.aspx>The waivers, once issued, do not expire.
  - (5) Personnel entering an area with a JPR III-13 Waiver are encouraged to use a HEPA vacuum for periodic housekeeping under the sub-floor.
- b. Even though a waiver to JPR III-13 procedures may be issued, there may be other installed suspect ACM beneath the sub-floor. These materials may include, but are not limited to, cementitious pipe chase materials, transite board, sub-floor stanchion mastic, firewalls, floor tiles and mastic, etc. If any sub-floor activities are planned, which may disturb these materials, you shall determine the asbestos content, or presumed asbestos content, and follow other appropriate JPR requirements.

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**Table 12.15-1  
Job Performance Requirements Listing**

<b>Asbestos Work Class</b>	<b>Task Title</b>	<b>JPR No.</b>	<b>Reference Paragraph in Chapter 12.16</b>	<b>Min. Req'd Training</b>
Class I	Removal of Surfacing Insulation ( $\geq 10$ sq ft cumulative and $< 160$ sq ft cumulative). Decontamination area (equipment room, shower area, clean room) required.	I-1	12.16.1	32 hr worker
	Removal of Thermal System Insulation (piping: $\geq 25$ Lf cumulative and $< 260$ Lf) (vessel: $\geq 10$ sq ft cumulative and $< 160$ sq ft or $< 35$ cu ft) or glove bag not feasible. Decontamination area (equipment room, shower area, clean room) required.	I-2	12.16.1	32 hr worker
	Removal of Surfacing Insulation ( $\geq 3$ sq ft contiguous (or one waste bag) and $< 10$ sq ft cumulative). Decontamination area not required but may be used.	I-3	12.16.1	32 hr worker
	Removal of Thermal System Insulation using glove bags (piping: $\geq 3$ Lf contiguous, more than one spot abatement, more than one waste bag and $< 25$ Lf cumulative) (vessel: $\geq 3$ sq ft contiguous, more than one spot abatement, more than one waste bag and $< 10$ sq ft cumulative) . Decontamination area not required but may be used.	I-4	12.16.1	32 hr worker

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<b>Asbestos Work Class</b>	<b>Task Title</b>	<b>JPR No.</b>	<b>Reference Paragraph in Chapter 12.16</b>	<b>Min. Req'd Training</b>
Class II	Removal of or modification to wallboard, plaster, transite, ceiling tiles, flooring, roofing, or siding containing asbestos. Airborne concentrations likely to $\geq 0.01$ f/cc or a negative exposure assessment not available. Equipment room required for large enclosures.	II-1	12.16.2	32-hr worker
	Removal of or modification to wallboard, plaster, transite, ceiling tiles, flooring, roofing, or siding containing asbestos. Airborne concentrations likely to $<0.01$ f/cc or a negative exposure assessment is available.	II-2	12.16.2	32-hr worker
	Removal of less than ( $<$ ) 160 sq ft of resilient sheet flooring using procedures and methods specified by the Resilient Floor Covering Institute (RFCI) to include: (i) ACM sheeting or (ii) sheeting with ACM backing or mastic; and where the waste exceeds the capacity of one standard waste bag.	II-3	12.16.2	32-hr worker plus RFCI
	Removal of less than ( $<$ ) 160 sq ft of flooring using procedures and methods specified by the Resilient Floor Covering Institute (RFCI) to include: (i) any ACM vinyl or asphalt tile or (ii) any vinyl or carpet tile with ACM mastic; and where the waste will exceed the capacity of one standard waste bag.	II-4	12.16.2	32-hr worker plus RFCI

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**Table 12.15-1 (continued)**

<b>Asbestos Work Class</b>	<b>Task Title</b>	<b>JPR No.</b>	<b>Reference Paragraph in Chapter 12.16</b>	<b>Min. Req'd Training</b>
<b>Class III</b>				
Class III Glovebag	Repair of steam, chilled water, hot waterlines, and valves with TSI when less than (<) 3 linear feet of ACM or PACM is disturbed. Waste limited to one standard waste bag or one glovebag.	III-1	12.16.3.1	16-hr O&M
Class III Barrier & Floor Covering	Activities which meet one or more of the following: a. Any entry into a ceiling plenum below surfacing or spray-applied insulation/fireproofing (SAI) ACM or PACM where the ceiling opening is less than (<) 32 square feet; b. Any activity that disturbs (e.g., moves) ACM or PACM ceiling tiles below a plenum that does not contain surfacing or SAI ACM or PACM where the ceiling opening is < 32 square feet. c. Only in a mechanical room, any activity in close proximity (i.e., within 36 inches) of surfacing ACM or PACM. d. Other than in mechanical rooms, any activity in close proximity (i.e., within 24 inches) of surfacing ACM or PACM- e.g. changing lights where acoustic ceiling is present.	III-2	12.16.3.2	JSC 8-hr O&M Restrict.
	Removal of ACM or PACM, where the waste generated does not exceed the capacity of a standard asbestos waste bag, and which involve the: a. Spot removal of ACM or PACM wallboard, joint tape, or joint compound. b. Removal, replacement and disposal of ACM or PACM ceiling tiles below a plenum which does not contain surfacing or SAI ACM or PACM and where the ceiling opening is < 32 square feet.	III-3	12.16.3.2	16-hr O&M
Class III Enclosure	Spot removal of surfacing ACM and PACM less than (<) 3 sq ft contiguous at a single spot. Limit one standard waste bag.	III-4	12.16.3.3	16-hr O&M
	Activities which meet one or more of the following: a. Any entry into a ceiling plenum below surfacing or spray-applied insulation/fireproofing (SAI) ACM or PACM where the ceiling opening is greater than or equal to ( $\geq$ ) 32 square feet; b. Any activity that disturbs (e.g., moves) ACM or PACM ceiling tiles below a plenum that does not contain surfacing or SAI ACM or PACM where the ceiling opening is $\geq$ 32 square feet.	III-5	12.16.3.3	JSC 8-hr O&M Restrict.

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	Removal of non-ACM ceilings (plaster or sheetrock) below ceiling plenum in buildings with spray-applied asbestos insulation or fireproofing (SAI)	III-6	12.16.3.4	16-hr O&M
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<b>Asbestos Work Class</b>	<b>Task Title</b>	<b>JPR No.</b>	<b>Reference Paragraph in Chapter 12.16</b>	<b>Min. Req'd Training</b>
Class III Other	Repair or maintenance of equipment that has ACM insulation or ACM gaskets.	III-7	12.16.3.5	16-hr O&M
	Repair or maintenance of equipment used in asbestos work. Does not apply to changing filters on HEPA vacuum(s) with a self-sealing or self-contained filter pack.	III-8	12.16.3.6	16-hr O&M
	Removal of (i) ACM vinyl or asphalt floor tile; (ii) non-ACM floor tile with ACM mastic; or (iii) carpet tiles with ACM mastic, using procedures and methods specified by the Resilient Floor Covering Institute (RFCI). Waste limited to one standard waste bag.	III-9	12.16.3.7	16-hr O&M plus RFCI
	Any activity below raised computer floor and sub-floor in buildings with spray-applied fireproofing or ACM acoustical ceilings	III-13	12.16.3.8	JSC 8-hr O&M Restrict.
Class IV	Changing air filters in HVAC system air handling units	IV-1	12.16.4	2-hr
	Emergency response action to an asbestos fiber release	IV-4	12.16.4	32-hr worker
Custodial	Custodial work in areas with exposed, friable ACM	C-1	12.16.5	Awareness
	Custodial work involving ACM flooring	C-2	12.16.5	Awareness