

Kansas Administrative Regulations

Department of Health and Environment

Article 50.—Asbestos Control

28-50-9. Work practices for asbestos-removal projects in occupied spaces.

(a) Each asbestos-removal project that involves the removal of friable asbestos-containing materials from a structural item or equipment that is located in any area that can be expected to subsequently be reoccupied by any person after the project is completed, or in an area that is only directly accessible from an area that is, or subsequently will be, occupied by any person other than persons directly involved in the project, shall be conducted in accordance with the following requirements:

(1) Each proposed work area shall be isolated from other areas of the building and outside areas by erecting temporary partitions that are rigid and airtight around the work area or by installing airtight seals over doorways, windows, and ventilation system openings, except that doorways between the work area and decontamination facilities and waste load-out areas shall be closed off with a control curtain. At least one temporary partition or seal shall contain a clear viewing area that is 18 inches or more in height and width and is installed in a manner that will allow direct visual observation of the work area from a location outside of the work area. Plastic sheeting used for the construction of airtight seals shall be not less than four mils thick. Whenever possible, each heating and ventilation system serving the work area shall be shut down and locked out. If these systems cannot be shut down, special provisions shall be made to assure that airborne contamination from the work area cannot enter the ventilation system and be carried to other areas of the building. Appropriate warning signs shall be prominently posted at all entryways into the work area. Provisions shall be made to prevent any person other than those persons having responsibilities directly related to the project from entering the area before the requirements of paragraphs (9) and (12) of this subsection are met and the project is approved in accordance with all other applicable requirements.

(2) All movable furnishings, equipment, and fixtures in the proposed work area shall be precleaned with a HEPA filter-equipped vacuuming device or wet cleaning methods. After cleaning, the items shall be removed from the work area and stored in an area that is not subject to contamination with asbestos fibers. The items shall not be returned to the work area until final room cleanup has been completed and approved in accordance with requirements applicable to the project.

(3) All structural item surfaces, other than those from which asbestos is to be removed, and all non-movable furnishings, equipment, and fixtures remaining in the proposed work area shall be precleaned with a HEPA filter-equipped vacuuming device or wet cleaning methods and covered with not less than four-mil-thick plastic sheeting, except that floors shall be covered with a minimum of two layers of six-mil-thick plastic sheeting that extends up the walls at least 12 inches. Plastic sheeting on walls shall be affixed to the wall in a manner that assures that it will remain in position throughout the length of the project and shall overlap the floor sheeting at least 12 inches above the intersection of the walls with the floor. Any tears that are noted in the protective plastic sheeting required by this subsection shall be immediately repaired.

(4) HEPA filter-equipped ventilation fans shall be installed in a manner that will continually exhaust air from all locations within the work area. The total capacity of the fans shall be sufficient to remove the entire volume of air contained in the workroom area within 15 minutes or less, unless a longer time period is specifically approved by the department. The removed air shall be discharged through a duct that has been installed through the plastic on the walls in a manner that will provide an airtight seal between the plastic and the outside surface of the duct. The exhausted air shall be discharged outside of the building whenever possible and shall not be discharged inside the building, unless this discharge is specifically approved by the department in writing. Each ventilation fan shall be continuously operated throughout the duration of the project until the action required by paragraph (12) of this subsection is completed. Each fan shall be operated in a manner that establishes, and maintains, a flow of air into the work area from all adjacent areas of the building as demonstrated by use of smoke-producing tubes. At a minimum, these determinations shall be made and the results

recorded before initiation of asbestos-removal operations and at the start of each day's operation.

(5)(A) A decontamination facility shall be provided between the work area and building areas intended to remain uncontaminated with asbestos fibers generated by the asbestos-removal operations. All persons entering or leaving the work area shall pass through and use the decontamination facility. Each decontamination facility shall consist of the following designated areas, which are each to be entered through a doorway that is covered by a control curtain:

(i) A clean room that shall be maintained free of asbestos-containing debris and shall be first entered by any persons entering the work area. The clean room shall be constructed in a manner that provides adequate space for removing or putting on street clothing, putting on and fit-testing respirators, and putting on protective clothing and other protective equipment required to be worn in the work area.

(ii) A shower room that shall be first passed through by any person that moves from the work area into the clean room. These persons shall be required to shower before entering the clean room. Each shower room shall be provided with at least one shower head that is supplied with hot and cold water. Adequate quantities of soap, hair shampoo, and towels shall be provided to accommodate each person who emerges from the work area. Shower enclosures shall be leak proof and constructed of disposable or easily washable material. Shower water may be drained directly into the building's plumbing system or collected for subsequent disposal in accordance with the requirements of K.A.R. 28-50-14.

(iii) An equipment room that shall be passed through before the shower room can be entered from the work area. The equipment room shall be used for temporary storage of contaminated tools, equipment, and protective clothing used in the work area. The floor and walls of the room shall be lined with not less than six-mil-thick plastic sheeting. Tools, equipment, and protective clothing shall be free of gross contamination before removal from the work area into the equipment room.

(B) All decontamination facility areas shall be fully enclosed and shall be contiguous to each other and the work area unless connected to one another by enclosed passageways that are effectively isolated from areas intended to remain free of

asbestos contamination. Decontamination facilities shall remain in place and in functional condition until removal of airtight seals and partitions is authorized in accordance with the requirements of K.A.R. 28-50-9(a)(12).

(6) A waste load-out area may be constructed between the work area and the exit through which asbestos-containing waste materials are intended to be removed from the work area. If a waste loadout area is provided, it shall be totally enclosed, and the doorway between the work area and the waste load-out area shall consist of a combination of control curtain and rigid door. The floor of the load-out area shall be covered with not less than six-mil-thick plastic sheeting, which shall be kept clean and free of visible asbestos-containing debris. Floor covering shall be removed upon completion of the project and disposed of in compliance with the requirements of K.A.R. 28-50-14. Asbestos-containing waste shall not be transferred from the waste load-out area unless it has been placed in containers that comply with the requirements of K.A.R. 28-50-14(a). Waste containers shall be removed from the waste load-out area only by persons who enter the load-out area from an area that is intended to be maintained free of asbestos-containing debris generated by the removal operations. The doorway between the work area and load-out area shall be kept secured except when waste materials are being transferred from the work area. The load-out area doorway shall not be used as an entrance or exit by persons who leave or enter the work area.

(7) All exposed surfaces of friable asbestos-containing materials shall be maintained in a wet condition while the material is being removed or cleaned up from structural or equipment items. Any friable asbestos-containing material shall be wetted with a water solution containing an effective wetting agent. The wetting solution shall be applied with a low pressure spraying system. The effectiveness of the solution in penetrating the asbestos-containing materials shall be determined by applying it to a small representative sample of the material before the gross removal operation is initiated. The removed friable asbestos-containing materials shall be maintained in a wet condition until placed in sealed containers for disposal in accordance with the requirements of K.A.R. 28-50-14. All accumulations of loose debris shall be removed

from floors and other surfaces and placed in sealed bags or containers as quickly as practicable and at least daily.

(8) After the asbestos-containing materials have been removed from the structural or equipment items, all plastic sheeting, equipment, and surfaces in the work area shall be cleaned with a HEPA filter-equipped vacuuming device or by wet cleaning methods and shall be free of all visible debris, but if more than one layer of plastic sheeting has been used on walls and floors, this additional layer of sheeting may be removed and disposed of instead of being cleaned. Sheetting that is removed shall be disposed of in compliance with the requirements of K.A.R. 28-50-14. Any liquid or material that has leaked through these additional layers of sheeting shall be removed by wet cleaning methods.

(9) The surfaces from which the friable asbestos-containing materials have been removed shall be cleaned free of all visible residues and then covered with an effective sealing material before the final layer of plastic sheeting covering the floors, walls, and non-movable items is removed.

(10) After the sealant has dried, the plastic wall and floor coverings shall be removed and disposed of in compliance with the requirements of K.A.R. 28-50-14. After removal of the plastic wall and floor coverings, all surfaces in the work area shall be cleaned with a HEPA filter-equipped vacuuming device or by wet cleaning methods and shall be free of all visible debris.

(11) After completing the requirements in paragraph (10) of this subsection, clearance monitoring, as described in 40 C.F.R. 763.90(i), as in effect on July 1, 1998 and hereby adopted by reference, may be conducted. In the absence of clearance monitoring, an air stream from a high speed leaf blower or equivalent device shall be swept across all surfaces within the work area for a period of not less than five minutes for each 1,000 square feet of surface area.

(12) Each temporary partition and airtight seal provided for doors, windows, and duct openings in accordance with paragraph (1) of this subsection shall remain in place until the sampling results from the clearance monitoring, referenced in K.A.R. 28-50-9(a)(11), indicate compliance or in the absence of clearance monitoring, the temporary partitions and airtight seals shall remain in place for no fewer than 24 hours after completion of

the actions required by paragraph (11) of this subsection and until the cleanup is approved in accordance with any other special requirements applicable to the project.

(b) Any individual requirement of subsection (a) of this regulation may be waived by the department for asbestos-removal projects if the notification submitted in accordance with K.A.R. 28-50-8 identifies the requirements for which waiver is requested, the reason for requesting the waiver, and any alternate procedure that is proposed. A waiver shall not be granted unless the health and safety of the workers and building occupants are adequately protected. The following minimum requirements shall also be met:

(1) The work area in which the asbestos is to be removed shall be completely isolated from any other areas of the building by the construction or installation of airtight barriers that shall continually remain in place for the duration of the asbestos removal project until final cleanup is completed and approved in accordance with requirements applicable to the project.

(2) Appropriate warning signs shall be prominently posted at all entryways into the work area, and access to the work area shall be restricted to only those persons that are required to enter it because of responsibilities directly related to the project until the requirements of paragraphs (3) and (4) of this subsection are met and the project is approved in accordance with all other applicable requirements.

(3) The surfaces from which the asbestos-containing materials have been removed shall be cleaned free of all visible residue and covered with an effective sealant before the warning signs required by paragraph (2) of this subsection are removed and access to the work area of persons other than those directly involved in the project is permitted.

(4) All visible asbestos-containing debris shall be removed from the work area before the warning signs required by paragraph (2) of this subsection are removed or access to the work area of persons other than those directly involved in the project is permitted.

(5) Asbestos contamination shall be removed from all persons that have been in the work area before they leave the premises or enter any area intended to remain free from asbestos contamination. All equipment used on the project shall be cleaned free of visible debris before it is removed from the work area.

(6) The waiver and all proposed alternative procedures shall be approved by the department in writing before the project is initiated, except that verbal approval may be provided if the 10-day notification period has been waived in accordance with the provisions of K.A.R. 28-50-8(a).

(c) The requirements of subsections (a) and (b) of this regulation may be waived by the department for the removal of friable asbestos-containing materials from the surface of pipes, structural items, or other similar conduits if the following minimum requirements are met:

(1) All friable asbestos-containing materials proposed to be removed in the work area shall be removed using six-mil-thick or thicker leak-proof glove bags in accordance with the manufacturer's instructions. Glove bags shall not be used to remove asbestos-containing materials from surfaces having a temperature of 150°F or more unless written authorization to do so is provided by the department before the removal.

(2) Appropriate warning signs shall be prominently posted at all entryways into the work area. Provisions shall also be made to prevent any person other than those persons that have responsibilities directly related to the project from entering the work area until the actions required by paragraphs (6), (7), and (8) of this subsection are completed and the project is approved in accordance with all other applicable requirements.

(3) Each person using the glove bag shall avoid damaging or otherwise causing the release of asbestos fibers from any other friable asbestos-containing materials that are located within the work area, including any debris that may have accumulated in the area before the start of the project. Each section of the pipe, structural item, or conduit from which damaged or loose hanging friable asbestos-containing material is to be removed that is not immediately enclosed within a glove bag shall be tightly enclosed in six-mil-thick plastic sheeting until a glove bag is placed over it and the asbestos-containing material is removed.

(4) Glove bags shall be sealed to the pipe, structural item, or conduit in a manner that provides an airtight seal around the area from which the asbestos is to be removed until the glove bag is removed, unless the manufacturer's instructions require air pressure within the bag to be maintained below the pressure outside of the bag. Glove

bags shall not be moved and used for removal at more than one location except under written authorization provided by the department and in compliance with any special requirement imposed as a condition for granting the authorization.

(5) All exposed surfaces of friable asbestos-containing materials shall be wetted with a water solution containing an effective wetting agent while the material is removed, and the removed material shall be maintained in a wet condition while it remains in the glove bag until the bag is sealed for final disposal in accordance with the requirements of K.A.R. 28-50-14.

(6) Surfaces from which asbestos-containing materials have been removed shall be cleaned free of all visible residues before the glove bag is removed.

(7) A sealing material shall be applied to all surfaces from which the asbestos-containing material is removed, and to all friable asbestos-containing material surfaces that become exposed as a result of this removal before the warning signs required by paragraph (2) of this subsection are removed or access to the work area of persons other than those directly involved in the project is permitted.

(8) The work area shall be free of all visible asbestos-containing debris, including accumulations that existed before the start of the project and before the warning signs required by paragraph (2) of this subsection are removed or access to the work area of persons other than those directly involved in the project is permitted.

(9) Each project activity in the work area shall be immediately discontinued if any asbestos contamination of the general work area results from damage or improper use of the glove bags or if there is damage to any other friable asbestos-containing materials located within the area. Project activities shall not be resumed until all surfaces in the area that are likely to have become contaminated with asbestos fibers have been thoroughly cleaned with a HEPA filter-equipped vacuuming device or by wet cleaning methods. Each person who is likely to be contaminated with asbestos fibers resulting from these sources, including the cleanup operation, shall remove, or use a HEPA filter-equipped vacuuming device or wet cleaning methods to clean all contaminated outer work clothing before leaving the work area.

(d) The requirements of subsections (a) and (b) of this regulation may be waived by the department for an asbestos-removal project that involves the removal of friable

asbestos-containing materials from structural items or equipment that is installed in, and accessible from, outdoor areas, if the following minimum requirements are met:

(1) Each door, window, or other opening into enclosed areas that is adjacent to the work area shall be securely covered with not less than four-mil-thick plastic sheeting if the opening is located 100 or fewer feet from the work area.

(2) A person other than the persons that have responsibilities directly related to the project shall not be allowed to occupy or pass through any unenclosed area that is located 50 or fewer feet from the work area. This area shall be identified and defined by fences or other effective means. Appropriate warning signs shall be prominently posted at all entryways into the area until the requirements of paragraphs (4) and (5) of this subsection are met and the project is approved in accordance with all other applicable requirements.

(3) All exposed surfaces of friable asbestos-containing material shall be wetted with a water solution that contains an effective wetting agent while the material is being removed. All removed material, including debris on surfaces below the location from which the material is removed, shall be maintained in a wet condition until placed in sealed containers for disposal in accordance with the requirements of K.A.R. 28-50-14.

(4) All friable asbestos-containing debris, including accumulations that existed before the start of the project, shall be removed from the work area before the warning signs required by paragraph (2) of this subsection are removed or access to the area of persons other than those having responsibilities directly related to the project is permitted.

(5) All surfaces from which asbestos-containing materials are removed shall be cleaned free of visible residues and covered with an effective sealant before the warning signs required by paragraph (2) of this subsection are removed or access to the area of persons other than those having responsibilities directly related to the project is permitted.

(6) Each person who removes asbestos-containing materials or otherwise occupies the restricted area identified in paragraph (2) of this subsection shall remove outerwear that is worn in the area before entering any enclosed area that is occupied by any person other than those persons engaged in the project.

(e) The requirements of subsections (a) and (b) of this regulation may be waived by the department for an asbestos project that involves the removal of friable asbestos-containing materials from structural items that are installed in, and accessible from, any structure or portion of a structure that is demolished after the material is removed, if the following minimum requirements are met:

(1) Appropriate warning signs shall be prominently posted at all areas into the work area, and persons other than the persons that have responsibilities directly related to the asbestos-removal project shall not be allowed to occupy or pass through the work area until the requirement of paragraph (4) of this subsection is met and the project is approved in accordance with any other applicable requirements.

(2) Each window, door, and other direct opening between any area where asbestos is to be removed and any other area of the structure that is not intended to be demolished shall be sealed airtight, with securely fastened plastic sheeting, until the project is completed. The plastic sheeting seals shall be not less than four mils thick.

(3) All exposed surfaces of friable asbestos-containing material shall be maintained in a wet condition while the material is being removed. The material shall be wetted with a water solution containing an effective wetting agent. All removed friable asbestos-containing material, including debris that falls on surfaces below the location from which the material is removed, shall be maintained in a wet condition until placed in sealed containers in accordance with the requirements of K.A.R. 28-50-14.

(4) All friable asbestos-containing debris, including accumulations that existed before the start of the project, shall be removed from the work area before the warning signs required by paragraph (1) of this subsection are removed or access to the work area of persons other than those having responsibilities directly related to the project is permitted.

(5) Each person who removes asbestos-containing materials or otherwise occupies the work area before the project is completed shall remove outerwear that is worn in the area before entering any enclosed area that is occupied by any person other than those persons engaged in the project.

(6) Structural items from which friable asbestos-containing material is removed shall not be sold or reused for any purpose unless the surfaces from which the material has

been removed are free from visible residue and have been covered with an effective sealing material, unless the sealing requirement is waived by the department in writing.

(f) Each person engaged in an asbestos-removal project or entering an asbestos-removal project work area shall be provided with, and shall wear, an appropriate respirator and protective clothing.

(g) Airborne asbestos exposures of each person engaged in an asbestos-removal project shall be determined in accordance with applicable OSHA or EPA exposure-monitoring requirements. Copies of the results of the analyses of samples collected at a project subject to the requirements of this regulation shall be submitted to the department as soon as practicable, after receipt of a written request for the results of the analyses from the department.

(Authorized by and implementing K.S.A. 1998 Supp. 65-5303; effective, T-86-1, Jan. 6, 1986; effective May 1, 1987; amended, T-88-54, Dec. 16, 1987; amended, T-89-8, March 18, 1988; amended, T-89-15, April 26, 1988; amended Sept. 19, 1988; amended Feb. 4, 1991; amended Oct. 1, 1999.)

***** Authenticated Kansas Administrative Regulation *****