

Standard Interpretations

/ Requirements for tapping or tying-in to asbestos containing cement water pipes for construction.

- **Standard Number:** 1926.1101 ; 1926.1101(b) ; 1926.1101(f) ; 1926.1101(g) ; 1926.1101(g)(9) ; 1926.1101(h)(3)(iii) ; 1926.1101(i)(1) ; 1926.1101(k)(9) ; 1926.1101(o)(4)

OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

May 29, [2007]

Robert J. Prejeant, Esquire
240 Barrow Street
P.O. Box 669
Houma, Louisiana 70361-0669

Dear Mr. Prejeant:

Thank you for your letter dated December 19, 2006, to Secretary of Labor Elaine L. Chao. Your letter was forwarded to the Directorate of Enforcement Programs of the Occupational Safety and Health Administration (OSHA) for a response. Your letter asked two questions relating to operations on asbestos cement water pipes and compliance with OSHA's Asbestos Standard for construction, 29 CFR 1926.1101. One of your questions referenced an industry manual for such operations, published by the American Water Works Association (AWWA), which you enclosed.¹ You also enclosed two letters from an engineering consultant providing advice on this matter. We provided an interim reply to you, January 23, 2007. This letter constitutes OSHA's interpretation only of the requirements discussed, and it may not be applicable to any question not detailed in your original correspondence. Your paraphrased questions and our replies are below.

Question 1: Is the work involved in tapping or tying-in to asbestos-containing cement water pipes considered a Class II or Class III asbestos work activity, as defined in 1926.1101(b)?

Reply 1: A competent person must evaluate the work and classify the asbestos operation(s) in accordance with 1926.1101. It has been reported² that asbestos-containing cement pipes consist of 15-20 percent asbestos, thus meeting the definition of an asbestos-containing material (ACM), which means any material containing more than one percent asbestos (reference 1926.1101(b)). Removal of asbestos cement (AC) pipe is normally Class II asbestos work, as this activity involves

the removal of ACM that is not thermal system insulation or surfacing material. If, however, the work to be performed is repair or maintenance and involves removing no more ACM than can be contained in one glove bag or waste bag, this operation could be Class III asbestos work (see 29 CFR 1926.1101(b)). Please keep in mind that, if it is not clear in which class the asbestos work belongs, the employer should assume the higher class applies because employees will be protected better using the more restrictive work practices and controls. For example, in this employer's case, the work practices and controls required for a Class II removal of AC pipe are more protective than those for a Class III repair. OSHA's Asbestos Standard defines several relevant terms applicable to this utility's described work with AC pipe, including, but not limited to, Class II, Class III, Competent Person, Disturbance, Negative Initial Exposure Assessment, Removal, and Repair (see 29 CFR 1926.1101(b)).

Question 2: A public water utility requires this tapping and tying-in work on AC pipes in its system to adhere to the following procedures: workers wear personal protective equipment such as Tyvek® suits, respirators, and gloves; all workers receive adequate asbestos training; and debris is wrapped in plastic covering, hauled to a dumpster dedicated for AC pipe and later disposed in a hazardous waste landfill. However, these procedures are being questioned by developers as unreasonable and costly.

In response, the utility drafted a new policy for contractors performing tapping or tying-in to asbestos cement pipe, wherein the contractors are to follow the published AWWA procedures for such work. The utility's policy also proposes to employ a Competent Person to determine the airborne concentration of asbestos during each tapping or tying-in project and if OSHA's permissible exposure limit (PEL) or excursion limit are exceeded, the Competent Person will direct the contractor to cease work, and a specialty contractor shall then be directed to complete the remaining work where exposures are expected to exceed the PEL. This policy is proposed to reduce costs for the public utility and for developers that may need to connect to the utility's water system. Does this new policy for tapping and tying-in to AC pipe comply with the requirements of 1926.1101?

Reply 2: Other than the regulatory provisions in its standards, OSHA does not approve, endorse, or provide any specific policies or procedures for employers' operations. However, we can provide general comments on the information you provided. The AWWA's published work practices for AC pipe are generally compliant with OSHA's Asbestos Standard for construction, 1926.1101, and, if followed, AWWA's work practices should reduce employee exposures so that the OSHA PEL and excursion limit for asbestos are not exceeded. However, OSHA's Asbestos Standard includes provisions that must be complied with regardless of whether employee exposures exceed the PEL or excursion limit.

Regarding this utility's draft policy for AC pipe tapping and tying-in, we will comment on four issues that affect the cost of this work: training, exposure assessment, engineering and work practice controls, and personal protective equipment. First, concerning training, OSHA's training requirements in 1926.1101 for the workers and the competent persons are based on the classification of the asbestos work. For Class II and Class III work, training is as follows:

1926.1101(k)(9)(iv)(C) For Class II operations not involving the categories of material specified in paragraph (k)(9)(iv)(A) of this section, training shall be provided which shall include at a minimum all the elements included in paragraph (k)(9)(viii) of this section and in addition, the specific work practices and engineering controls set forth in paragraph (g) of this section which specifically relate to the category of material being removed, and shall include "hands-on" training in the work practices applicable to each category of material that the employee removes and each removal method that the employee uses.

1926.1101(k)(9)(v) Training for Class III employees shall be consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a)(2). Such a course shall also include "hands-on" training and shall take at least 16 hours. Exception: For Class III operations for which the competent person determines that the EPA curriculum does not adequately cover the training needed to perform that activity, training shall include as a minimum all the elements included in paragraph (k)(9)(viii) of this section and in addition, the specific work practices and engineering controls set forth in paragraph (g) of this section which specifically relate to that activity, and shall include "hands-on" training in the work practices applicable to each category of material that the employee disturbs.

1926.1101(o)(4)(i) For Class I and II asbestos work the competent person shall be trained in all aspects of asbestos removal and handling, including: abatement, installation, removal and handling; the contents of this standard; the identification of asbestos; removal procedures, where appropriate; and other practices for reducing the hazard. Such training shall be obtained in a comprehensive course for supervisors that meets the criteria of EPA's Model Accredited Plan (40 CFR part 763, subpart E, Appendix C), such as a course conducted by an EPA-approved or state-approved training provider, certified by EPA or a state, or a course equivalent in stringency, content, and length.

1926.1101(o)(4)(ii) For Class III and IV asbestos work, the competent person shall be trained in aspects of asbestos handling appropriate for the nature of the work, to include procedures for setting up glove bags and mini-enclosures, practices for reducing asbestos exposures, use of wet methods, the contents of this standard, and the identification of asbestos. Such training shall include successful completion of a course that is consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92(a)(2), or its equivalent in stringency, content, and length. Competent persons for Class III and IV work, may also be trained pursuant to the requirements of paragraph (o)(4)(i) of this section.

Although employers may be concerned about the costs of this training for workers and competent persons, OSHA doesn't require employers to purchase training materials or use on-site or off-site training vendors; employers may instead perform training using in-house resources as long as the training is equivalent in curriculum, training method, and length to that of the EPA plan (see the *Federal Register*, 59 FR 41020, August 10, 1994). Be advised, however, that some states require state licensing of any type of asbestos workers and supervisors, not just those performing AHERA work in schools.

Additionally, this utility may want to consider whether the exception provided in 1926.1101(k)(9)(v),

above, is applicable for its training of Class III workers. A previous OSHA interpretation has stated that employers applying this exception must still provide initial and annual refresher training, but the standard does not specify the duration of this training; though the initial training covering the elements in 1926.1101(k)(9)(viii) is likely to require at least 4 hours. See OSHA Letter of Interpretation, April 21, 1998 (attached). Again, however, state regulations may be more restrictive.

Concerning exposure assessment, we direct you to paragraph (f) of the standard, *Exposure Assessments and Monitoring*. The provisions in this paragraph and its subparagraphs contain important requirements for air monitoring of employee exposures, initial exposure assessment, negative exposure assessment, objective data, periodic monitoring, termination of monitoring, and employee notification and observation of monitoring, which are applicable to your work on AC pipe.

Concerning the construction Asbestos Standard's provisions for engineering and work practice controls, we direct you to paragraph (g) of the standard. The utility's draft policy you enclosed seemed to indicate that the utility would use a "specialty contractor" whenever the Competent Person determines that the PEL is reached or exceeded by a utility contractor performing the tapping or tying-in operation on AC pipe. This also seems to imply that there may be a different level of training and/or performance capability between the "specialty contractor" and the utility contractor. If these are the intended implications, then we would remind all employers involved of how the exposure assessment and monitoring provisions of the Asbestos Standard are related to employee training and the required methods of engineering and work practice control.

First, employers must understand that employees performing asbestos work, whether their exposures are above or below the PEL, will still require the appropriate level of training described above, as per 1926.1101(k)(9). Additionally, for this utility's work on AC pipe, the standard specifies required engineering and work practice controls in the applicable subparagraphs in paragraph 1926.1101(g), some of which apply even when exposures do not exceed the PEL. These controls include wet methods; HEPA vacuums; prompt clean-up and disposal; and prohibitions against use of high-speed abrasive disc saws or compressed air without HEPA-filtered exhaust, dry clean-up of dust and debris, and employee rotation. In addition to these controls, whenever employee exposures exceed the PEL or excursion limit in Class III work, for example, the following controls are specified (we've underlined the parts that may apply to the utility's operations with AC pipe where a competent person determines that it is Class III work):

1926.1101(g)(9)(iv) Where the employer does not produce a "negative exposure assessment" for a job, or where monitoring results show the PEL has been exceeded, the employer shall contain the area using impermeable drop cloths and plastic barriers or their equivalent, or shall isolate the operation using a control system listed in and in compliance with paragraph (g)(5) of this section.

1926.1101(g)(9)(v) Employees performing Class III jobs, which involve the disturbance of thermal system insulation or surfacing material, or where the employer does not produce a "negative exposure assessment" or where monitoring results show a PEL has been exceeded, shall wear respirators which are selected, used and fitted pursuant to provisions of paragraph (h) of this section.

Regarding the work practice controls for utility operations on AC pipe, one of the two letters you enclosed from the utility's engineering consultant contained a statement that was inaccurate.

The work practices described in the AWWA manual are based on data for "peak dust concentrations" representing short time periods of maximum exposure and will limit exposure level to airborne asbestos during a typical work day. Using these [AWWA] work practices, the exposure time is well below the PEL and the [tapping and tying-in] activity [on AC pipe] is exempt from the [OSHA] regulations.

This consultant was in error when he stated that when an activity is below the PEL it is exempt from OSHA's Asbestos Standard. As we explained in the preceding paragraphs, besides the training requirements and exposure determination requirements, the standard also specifies several engineering and work practice controls for all asbestos work, regardless of whether the exposures exceed the PEL or excursion limit, per paragraphs 1926.1101(g)(1)-(3) for all asbestos work, and additionally for Class III work specifically, per paragraphs (g)(9)(i)-(ii).

Finally, we will comment on the provisions of the construction Asbestos Standard for personal protective equipment, with respect to the utility's operations on AC pipe. We mentioned above the standard's provision at paragraph 1926.1101(g)(9)(v) for the use of respirators when the employer does not have a negative exposure assessment or when monitoring results show the PEL has been exceeded. In addition, paragraphs (h)(3)(iii) and (h)(3)(iii)(A) require employers to provide employees working in these conditions with half-mask air purifying respirators equipped with HEPA filters. Similarly, the standard's provision for protective clothing at (i)(1) requires employers to provide or require the use of protective clothing, such as coveralls or similar whole-body clothing, head coverings, gloves, and foot coverings for any employee exposed in excess of the PEL or excursion limit, or where a negative exposure assessment has not been made.

In conclusion, the utility's policy for asbestos operations involved in tapping and tying-in to AC pipe should not be based on the assumption that as long as the AWWA procedures are followed, then there will be assured compliance with OSHA's construction Asbestos Standard, 29 CFR 1926.1101. What is correctly represented in the AWWA handbook is that by adhering to its work practices employers will limit asbestos exposures so that the OSHA PEL or excursion limit are not likely to be exceeded.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please feel free to contact the OSHA Office of Health Enforcement at (202) 693-2190.

Sincerely,

Richard E. Fairfax, Director
Directorate of Enforcement Programs

¹ *Work Practices for Asbestos-Cement Pipe*, American Water Works Association, Denver, CO, 1995 (ISBN 0-89867-795-5).[back to text]

² *Guidance for Controlling Asbestos-Containing Materials in Buildings* (Purple Book), Appendix A, Page A-1, 1985 (EPA 560/5-85-024).[back to text]

[Corrected on 01/05/2012]

UNITED STATES DEPARTMENT OF LABOR

Occupational Safety & Health Administration
200 Constitution Ave NW
Washington, DC 20210
☎ 800-321-6742 (OSHA)
TTY
www.OSHA.gov

FEDERAL GOVERNMENT

White House
Severe Storm and Flood Recovery
Assistance
Disaster Recovery Assistance
DisasterAssistance.gov
USA.gov
No Fear Act Data
U.S. Office of Special Counsel

OCCUPATIONAL SAFETY & HEALTH

Frequently Asked
Questions
A - Z Index