

WISHA REGIONAL DIRECTIVE

WISHA Services

Department of Labor and Industries

23.35

DEMOLITION OF BUILDINGS WITH ASBESTOS-CONTAINING MATERIALS

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I. Background

The Department of Labor and Industries (L&I) has previously reviewed the application of demolition requirements in WAC 296-155-775 as they apply to the removal of asbestos-containing materials before beginning demolition activities.

WAC 296-155-775(9) includes specific requirements for asbestos and other hazardous materials present at the work site. These substances must be tested and removed or purged before demolition begins, the objective being to eliminate the hazard prior to demolition. In defining demolition, WAC 296-62-07703 defines "demolition" and refers to WAC 296-155-775(9) to indicate "where feasible, asbestos containing materials shall be removed from all structures prior to commencement of demolition." In situations where intact flooring and roofing materials are the only asbestos-containing materials, it has not always been clear whether asbestos removal prior to demolition or demolition in place will generate greater airborne exposure to asbestos fibers. As a result WISHA Interim Memorandum #99-1-C was developed to address the issue and provide guidance as to when materials can be demolished in place.

II. Scope and Application

This WISHA Regional Directive (WRD) provides guidance to WISHA enforcement and consultation staff whenever they must address demolition activities and the need to identify and remove asbestos-containing materials.

This WRD replaces WISHA Interim Memorandum #99-1-C and all other previous guidance on this subject, both formal and informal.

Note: This policy relates only to demolition of buildings with asbestos-containing materials. All other provisions of WAC 296-155, WAC 296-65, and WAC 296-62-077 are applicable.

III. Interpretive Guidance

What general requirements apply to demolition of buildings with asbestos-containing materials?

The following general requirements apply to any demolition activities involving buildings with asbestos-containing materials:

- WAC 296-155-775 *Preparatory Operations* requires an engineering survey, a written demolition plan or method of operation, and a determination whether asbestos and other hazardous materials are present at the work site.
- WAC 296-155-775(9) and WAC 296-62-07721(2) require the *identification* of asbestos containing materials *prior to demolition*.
- WAC 296-62- 07721(2)(b)(ii) requires a *good faith survey* be conducted by an *accredited inspector prior to demolition*.
- WAC 296-155(9) from Part S of the construction standard requires that apparent or suspected asbestos-containing materials *be removed prior to demolition*. This applies to other hazardous substances as well. Removal of asbestos-containing material must follow the requirements of chapters 296-62 and 296-65 WAC.

In applying this guidance, the department has concluded that in certain circumstances it is appropriate to demolish a building with asbestos-containing materials in place and that any violation of WAC 296-155-775(9) specific to that issue should be considered de minimis and no violation issued. To make such a determination, staff must apply the enforcement and consultation protocols described in Section IV below.

IV. Special Enforcement and Consultation Protocols

A. *What must WISHA staff consider when assessing an employer's demolition project and its relationship to asbestos-containing materials?*

In assessing an employer's demolition project, WISHA staff must verify that the employer performed the engineering survey and the identification of asbestos-containing materials. WISHA staff must also review the employer's demolition plan or method of operation to determine whether asbestos-containing materials were or will be identified and removed prior to the commencement of demolition activities.

B. *What must WISHA staff consider to determine whether demolition with all asbestos-containing materials in place is appropriate?*

In determining whether an employer's determination to demolish the building with all asbestos-containing materials in place is appropriate, WISHA staff must consider the following general conditions:

1. If the *engineering survey* required in WAC 296-155-775(1) indicates that the structural integrity of the building would not allow employees to safely remove asbestos-containing materials prior to demolition, the building may be demolished in-place without such prior removal. The demolition plan would then need to include procedures and methodology to reduce employee exposure to airborne asbestos fibers during demolition activities. Dust suppression using water is such a procedure and is identified in WAC 296-155-775(18).
 2. If a regulatory authority has determined that the building's structural integrity has been compromised by fire, water damage, earthquake, etc., rendering entrance and occupancy a hazard to employees, the building may need to be demolished in-place without prior removal of asbestos-containing materials. Condemnation by the health department would qualify as such documentation of a hazard to employees entering the building.
- C. *If a building containing asbestos is being demolished in place, what must WISHA staff consider to determine whether appropriate alternate procedures have been used?*

When the conditions already described allow for demolition in place of a building containing asbestos, WISHA staff must ensure that the following *alternate procedures* have been used by employers:

1. Demolition must be conducted by a certified asbestos abatement contractor and certified asbestos workers unless the employer can verify that only Class II materials are present.
2. A certified supervisor must be present on the work site.
3. A survey to identify the presence and location of asbestos containing materials must be completed prior to demolition. In the absence of a survey or if one cannot safely be performed, all surfacing materials and thermal system insulation in building constructed no later than 1980 must be presumed to contain asbestos (demolition of surfacing materials and thermal system insulation presumed to be asbestos containing is Class I asbestos work).
4. Heavy equipment operation and demolition must be presumed to render asbestos-containing materials non-intact. When other asbestos-containing materials other than vinyl asbestos floor tile or intact roofing materials are being demolished by such methods, the operator of a backhoe, cat, track hoe, or other mechanized demolition equipment must therefore be a certified asbestos worker or a certified asbestos supervisor.

If only intact vinyl asbestos floor tile or intact roofing materials are present before demolition begins, employee exposure to non-intact material is minimal and the demolition equipment operator may have Class II eight-hour training specified in WAC 296-62-07722(3)(b).

5. WISHA staff must determine whether a written engineering survey performed by a competent person to assess the integrity of the building and the possibility of unplanned collapse of any portion of the structure has been performed, and whether a copy of the survey and demolition plan and/or methodology is present on work site.
6. WISHA staff must determine whether the employer conducted employee exposure assessments as required by WAC 296-62-07709. If removal conditions change, employers must conduct additional exposure assessments.
7. WISHA staff must determine whether the employer conducted initial exposure assessments as per WAC 296-62-07709(3), and whether he or she complied with the monitoring requirements in WAC 296-62-07709.
8. The demolition site must be controlled as a regulated area by barriers and asbestos warning signs.
9. The written demolition plans or methods of operation required in WAC 296-155-775(2) would be expected to include procedures to reduce employee exposure to airborne asbestos fibers during demolition activities. Dust suppression with water is such a procedure and is identified in WAC 296-155-775(18).
10. Demolition debris must be placed in construction dumpster that is watertight. All demolition debris is considered asbestos-containing and must therefore be labeled.
11. Contaminated water run off must be controlled and filtered.
12. Heavy equipment must be decontaminated prior to leaving the regulated area.
13. A change area must be provided for employees working in the regulated area.
14. WISHA staff must ensure that employers have conducted an appropriate exposure assessment and provided respiratory protection according to WAC 296-62-07715. Work involving surfacing materials or thermal system insulation and any other work in the absence of a negative exposure assessment require respiratory protection with half-mask air purifying respirator or greater, depending on the exposure assessment. Respiratory protection must be provided for the operators and all other employees within the regulated area.
15. WISHA staff must ensure that the notification requirements of WAC 296-65-020 have been met (if intact vinyl asbestos floor-tile or intact roofing materials are the only asbestos containing materials present in the building, notification is not required).

D. How should WISHA staff determine whether asbestos-containing materials were handled appropriately during demolition?

WISHA staff must determine whether asbestos-containing materials were separated from non-asbestos-containing materials during demolition. If such activities were performed by someone other than certified asbestos workers and a certified asbestos contractor, WISHA staff must cite the violation unless one of the following circumstances applies:

- When intact asbestos-containing roofing materials can be completely separated from non-asbestos-containing materials, segregation of the roofing materials may be permitted during demolition.
 - When only vinyl asbestos floor-tile on the ground level floor of the building is present, demolition of the building not including asbestos-containing materials can proceed to the ground level. Once the non-asbestos containing building demolition debris is removed, the vinyl asbestos floor-tile can be abated separately according to the provisions of WAC 296-62-077.
- E. *When can manual tear-off of roofing materials be replaced or supplemented with mechanical means?*

A track hoe with a clam device may be used to tear off and separate intact roofing materials instead of manual tear-off of intact roofing materials. Other procedures for the use of heavy equipment similar to this procedure may be followed as outlined in WAC 296-62-07712(10)(f). When WISHA staff review such activities, they must determine whether the following conditions have been met.

1. All employees, including the operator, must have the eight-hour training specified in WAC 296-62-077(3)(b). However, the contractor need not be a certified asbestos contractor.
2. A certified asbestos supervisor must be on site.
3. An *engineering survey* must be conducted as required by WAC 296-155-775(1) to assess the structural integrity of the building and the possibility of unplanned collapse of any portion of the structure. The written survey report must be available on site as required by WAC 296-155-775(2).
4. Employee exposure assessments as required by WAC 296-62-07709 must be conducted. If removal conditions change, employers are expected to conduct additional exposure assessments.
5. Initial exposure assessments as required by WAC 296-62-07709(3) must be conducted, and employers must comply with the monitoring requirements found in WAC 296-62-07709.
6. The demolition site must be controlled as a regulated area by barriers and asbestos warning signs.
7. The written demolition plans or methods of operation required in WAC 296-155-775(2) are expected to include procedures to reduce employee exposure to airborne asbestos fibers during demolition activities. Dust suppression with water is such a procedure and is identified in WAC 296-155-775(18).
8. Demolition debris must be placed in construction dumpster that is watertight. All roofing material and debris are considered asbestos containing and must be labeled.
9. Contaminated water run off must be controlled and filtered.

10. Heavy equipment must be decontaminated prior to leaving the regulated area.
11. A change area must be provided for employees working in the regulated area.
12. Respiratory protection must be provided in compliance with WAC 296-62-07715. In the absence of a negative exposure assessment for the specific demolition project, minimum respiratory protection must be half-mask air purifying respirator for the operators and all employees.
13. Notification to Labor and Industries is not required.

Approved: _____

Michael Wood

Senior Program Manager, WISHA Policy & Technical Services

For further information about this or other WISHA Regional Directives, you may contact WISHA Policy & Technical Services at P.O. Box 44648 or by telephone at (360)902-5503. You also may review policy information on the DOSH Website (<http://www.lni.wa.gov/Safety-health/>).