

# Guidelines for the safe clean-up of structurally compromised structures

## KEY POINTS

- Before any workers enter these structures, employers must ensure structural integrity has been evaluated
- If the structure was constructed prior to 2000, it is presumed that asbestos may be present
- An employer must apply for an acceptance from section 34 of the OHS Code to demolish a fire-affected building without first removing the asbestos

## THE HAZARDS: What are the hazards of a compromised structure?

These are structures that are still standing, but are not safe to occupy because of fire damage. Before any workers enter these structures, employers must ensure the structural integrity of the building has been evaluated and the power and gas is off.

If the structure was constructed prior to 2000, it is presumed that asbestos may be present, unless a hazardous materials survey for the structure is available that confirms it is not present.

If the structure is not likely to contain asbestos, the procedures for completely or partially burned structures should be followed.

The following information assumes asbestos is present.

## THE EFFECTS: What health effects could workers experience?

Asbestos can affect the body if the fibres are inhaled. Once inhaled, the fibres settle in the airways and lung tissues. Three diseases that may be caused by inhaling asbestos fibres are [asbestosis, lung cancer and mesothelioma](#).

Asbestosis is a lung disease caused by exposure to high concentrations of asbestos over a long period of time. The main effects are scarring of the lung tissues and shortness of breath. Workers exposed to asbestos have an increased risk of developing lung cancer, especially if they smoke cigarettes. Mesothelioma is a rare cancer of the chest, or abdominal cavity linings. Exposure to asbestos increases the risk of mesothelioma.

Because heat stress may become a hazard, ensure workers are trained to [recognize the signs of heat stress](#), have plenty of drinking water available and implement a work/rest schedule.

# Guidelines for the safe clean-up of structurally compromised structures

## THE PROCESS: What do employers need to know about demolishing a fire-affected building with asbestos?

An employer must apply for an acceptance from section 34 of the OHS Code to demolish a fire-affected building without first removing the asbestos. Under section 34 of the OHS Act, a Director may issue an acceptance if work processes provide equal or greater protection to affected workers as that provided for in the OHS legislation.

Acceptances are issued to a particular employer; if a contractor is responsible for the demolition of more than one structure, they may apply for an acceptance that will relate to all of the locations in one application.

To apply for an acceptance from section 34 of the OHS Code, you must submit a written request to [lbr.ohsaccept@gov.ab.ca](mailto:lbr.ohsaccept@gov.ab.ca). The request must include the following information:

- The address(es) of the properties that require demolition. An acceptance can only be issued to one employer; however, it may apply to multiple work sites. To speed up the process, employers responsible for demolishing structures on a number of properties should include all of them in one application;
- A description of the property/properties (include a site plan/map and photographs for each);
- The estimated year of construction of the property/properties;
- A description of neighboring occupied residences and their proximity to the properties covered by the acceptance;
- The legal name of the employer/contractor completing the work;
- A copy of any hazardous materials sampling data that has been completed for the structure including; lead, mercury, and asbestos, if available; and
- If no sampling can be done, written confirmation from a structural engineer that the structure(s) are not sound (should be stamped).

For more information on acceptances from section 34 of the OHS Code, go to <http://work.alberta.ca/documents/OHS-bulletin-LI030.pdf>.

## THE CONTROLS: How do employers ensure safe removal of debris?

### Typical work procedures for demolition of a structure under an acceptance to section 34 of the OHS Code

In addition to the submitted procedures the employer, contractor, prime contractor, and workers must comply with all applicable sections of the Alberta OHS legislation.

The work procedures may vary according to the work site. The specifics of the work site must be considered and reflected in the accompanying work procedures.

# Guidelines for the safe clean-up of structurally compromised structures

## Set-up:

- A work perimeter of 30 metres or up to the property boundary, where possible, must be established including visible separation and signage (specify how this will be accomplished).
- The signage must state the following:
  - Danger
  - Asbestos
  - Authorized personnel only
  - Eating, drinking, and smoking are prohibited.
- When no work is occurring the work site must be secured (specify how this will be accomplished in the application).
- The waste receptacles and equipment used for the project must be inside the perimeter.

## Training:

- Workers must be trained in accordance with section 37 of the OHS Code (specify the type of asbestos training for all workers involved in the project in the application).
- Transport drivers must have asbestos training in accordance with section 37 of the OHS Code in addition to emergency spill procedures.

## Work Procedures:

- Workers, including equipment operators, transport drivers, and labourers must be protected with appropriate personal protective equipment (PPE). This includes:
  - disposable coveralls,
  - rubber steel toe boots, and
  - respirators,
  - at minimum, a properly fitted half-mask respirator equipped with combination organic vapour/P100 cartridges (provide description of PPE that will be used in the application).
- Demolition must be done by machine.
- The structure must be pre-wetted and continuously wetted during the demolition process with enough volume to ensure the material is saturated (indicate how this will be accomplished in the application).
- Work must be suspended when wind speeds are above 20 km/hr (measured by an anemometer). The material must be wetted and covered if possible (specify how the waste will be covered in the application).
- All asbestos debris will be placed in properly lined waste bins or trailers, if the bins/trailers are not lined, provisions must be in place to decontaminate them (specify what will be done in the application).
- The bins/trailers must be covered before leaving the work site to prevent dust from escaping during transport.
- Additional procedures must be developed to address a possible collapse of the whole or part of the structure during demolition (specify the procedures in the application).

# Guidelines for the safe clean-up of structurally compromised structures

- Should the work take more than one day to complete, the debris and waste must be wetted and covered overnight (specify how this will be accomplished in the application).
- All materials must be **handled** as “asbestos waste”, as defined in the OHS Code. Note that **disposal** as asbestos waste **may not** be required (contact local disposal site for confirmation).
- Any materials, such as the foundation, that are to be recycled must be cleaned and encapsulated (if this is the case, specify the materials and how they will be cleaned/sealed in the application).
- Any visible contamination on the ground from the demolition must be cleaned.

## Decontamination:

- Workers, including equipment operators, must decontaminate prior to leaving the work perimeter (specify how this will be done, note that showers are not mandated, but at minimum workers must have an area where they can clean their face and hands, take off equipment, dispose of used PPE and clean boots/respirators).
- All PPE, equipment and tools must be decontaminated prior to leaving the work perimeter (specify how this will be done).

## Waste Handling and Disposal:

- All asbestos-contaminated materials, including used protective clothing and respirator cartridges, must be packaged for disposal as asbestos waste (as defined in the OHS Code).
- The truck transporting the waste must do so in accordance with Transportation of Dangerous Goods (TDG) requirements.
- Truck drivers must be in the trucks during loading with the windows up and air off.
- All necessary information regarding the asbestos content of the waste, if it is available, must be forwarded to the landfill and transport company.
- Documentation stating that the landfill has agreed to accept the asbestos containing waste must be submitted as part of the application package.
- Waste must be covered overnight if it will be stored on site for more than one day.

## Air Monitoring:

- At least one occupational air sample must be collected each day of work.
- Air monitoring must be conducted in appropriate locations at the work perimeter including downwind (specify how many samples).
- If any results are at 50 per cent or greater than the OEL of 0.1 f/cc within the work perimeter or at 10 percent of the OEL at the work perimeter, work must be suspended and procedures re-evaluated.
- Air sample results must be available prior to the start of work the following day.

# Guidelines for the safe clean-up of structurally compromised structures

## Contact Us

### OHS Contact Centre

Edmonton & Surrounding area

- 780-415-8690

Throughout Alberta

- 1-866-415-8690

Deaf or hearing impaired:

- 780-427-9999 (Edmonton)
- 1-800-232-7215 (Alberta)

### Website

[work.alberta.ca/ohs](http://work.alberta.ca/ohs)

## Get Copies of OHS Act, Regulation and Code

### Alberta Queen's Printer

[www.qp.gov.ab.ca](http://www.qp.gov.ab.ca)

### Occupational Health and Safety

[work.alberta.ca/ohs-legislation](http://work.alberta.ca/ohs-legislation)

## FOR MORE INFORMATION:

- Wildfire Recovery: Information for Workers and Employers  
<https://work.alberta.ca/documents/wildfire-recovery-info-sheet.pdf>
- Asbestos at the Work Site  
[http://work.alberta.ca/documents/WHS-PUB\\_ch019.pdf](http://work.alberta.ca/documents/WHS-PUB_ch019.pdf)
- Asbestos Containing Materials in Building to be Demolished  
[http://work.alberta.ca/documents/WHS-PUB\\_ASB003.pdf](http://work.alberta.ca/documents/WHS-PUB_ASB003.pdf)
- Alberta Asbestos Abatement Manual  
<http://work.alberta.ca/documents/Asbestos-Abatement-Manual.pdf>
- Occupational Health and Safety Acceptances  
<http://work.alberta.ca/documents/OHS-bulletin-LI030.pdf>
- Best Practice – Working Safely in the Heat and Cold  
[http://work.alberta.ca/documents/WHS-PUB\\_GS006.pdf](http://work.alberta.ca/documents/WHS-PUB_GS006.pdf)
- Hazard Assessment and Control: A Handbook for Alberta Employers and Workers  
<http://work.alberta.ca/documents/ohs-best-practices-BP018.pdf>

© 2016 Government of Alberta, Labour

This material may be used, reproduced, stored or transmitted for non-commercial purposes. The source of this material must be acknowledged when publishing or issuing it to others. This material is not to be used, reproduced, stored or transmitted for commercial purposes without written permission from the Government of Alberta, Labour. This material is to be used for information purposes only. No warranty express or implied is given as to the accuracy or the timeliness of the material presented. In case of any inconsistency between this document and the Occupational Health and Safety Legislation, the legislation will always prevail.