

Safe Working Practices for Handling Asbestos Cement (AC) Pipe

Adopted date: Feb 14, 2024	Amended date:	Next Review: 2029
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OBJECTIVE

Van Anda Improvement District (VAID) cares about the safety and well-being of employees and recognizes the risks inherent handling asbestos cement (AC) pipe. This policy is in place to protect employees from asbestos-related illness and describes the responsibilities and actions to be taken to protect employees when they work with asbestos.

During regular maintenance and construction activities, VAID Water Operators perform work on asbestos cement (AC) pipe. Disturbance of AC pipe through cutting, drilling, coring, tapping, penetrating and other activities may result in elevated levels of airborne asbestos fibers, if proper safety procedures are not applied. The intention of these safety procedures is to provide a guideline for performing the work in a manner which will protect workers from airborne asbestos fibers. These procedures have been prepared in accordance with WorkSafeBC regulations and guidelines outlined in the Occupational Health and Safety Regulations (OHSR) and Safe Work Practices for Handling Asbestos.

POLICY

VAID shall take all reasonably practicable steps to reduce, eliminate, or control identified and potential risks to workers who handle AC pipe.

RESPONSIBILITIES

VAID:

- Identify asbestos handling hazards in the workplace and take the necessary steps to protect workers.
- Develop and implement safe work procedures to eliminate or reduce the identified risks to workers handling asbestos.
- Ensure that workers comply with the safe work procedures.
- Review and revise the procedures not less than every three years or sooner if circumstances at a workplace change in a way that poses a risk to the safety or health of a worker handling asbestos.

Supervisors:

- Ensure employees follow the safe work procedures set out by the employer.

Employees:

- Familiarize themselves with WorkSafeBC Safe Work Practices for Handling Asbestos.
- Perform an initial safety assessment before starting work.
- Must wear appropriate PPE.

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- Take reasonable care/precautions to look after their own health and safety.
- Safeguard the health and safety of other people affected by their work.
- Cooperate and comply with the health and safety procedures set out by the employer.
- Evaluate risk and apply appropriate actions.
- Report any accidents, injuries, near misses, and other dangerous occurrences.

SCOPE

This policy applies to all VAID employees and contractors doing work for VAID handling AC pipe.

PROCEDURE

1. **RISK ASSESSMENT** - All work is to be performed as outlined in the WorkSafeBC publication, Safe Work Practices for Handling Asbestos.

1.1 Low-risk work activities

Activities that involve working with or in proximity to asbestos-containing material if the material is not being:

- Cut, sanded, drilled, broken, ground down, or otherwise fragmented, or
- Disturbed, such that asbestos fibres may be released.

It would not be necessary to use PPE or engineering controls to prevent worker exposure to airborne asbestos fibres.

Activities that carry a low risk of exposure to airborne asbestos fibres include:

- Removing caps from asbestos pipe risers that are in good condition.
- Moving asbestos-containing waste material that is contained within a cleaned labelled bag and double wrapped in 6 mil polyethylene.

1.2 Moderate-risk work activities

Activities other than high-risk work activities that involve working with or in proximity to asbestos-containing material that is being cut, sanded, drilled, broken, ground down, fragmented, or otherwise disturbed. It is necessary to use PPE or engineering controls to prevent worker exposure to airborne asbestos fibres.

Moderate-risk work activities require specific procedures to ensure the safety of workers and others who may be affected by the activities.

Activities that carry a moderate risk of exposure to airborne asbestos fibres include:

- Using hand tools to cut, shape, drill, grind, or remove non-friable manufactured products containing asbestos, such as asbestos cement pipe.
- Replacing damaged AC pipes (ex. main pipe burst) with hand tools.
- Replacing AC pipe fittings
- Wet tapping into AC pipe for new connection installation

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1.3 High-risk work activities

Activities that involve working with or in proximity of asbestos-containing material if a high level of control is necessary to prevent worker exposure to airborne asbestos fibres.

High-risk work activities require specific procedures and containment to ensure the safety to workers and others who may be affected by the activities.

- With the current controls taken into consideration, no “High Risk” work activities have been identified.

2. WORK PROCEDURE – MODERATE RISK WORK ACTIVITIES

NOTE: NO POWER TOOLS (i.e. cut-off saw, K-5 saw, Stihl saw, etc) ARE PERMITTED WHEN CUTTING AC PIPE WITHOUT USING WATER FLOW TO CARRY AWAY ASBESTOS FIBRES. The dry use of such abrasive disc saws will release excessive levels of asbestos fibres into the atmosphere and cause over-exposure to employees, contractors, and the public.

2.1 **Equipment:** The following tools and equipment are required when working with asbestos cement (e.g., pipe cutting, drilling, etc):

- traffic control equipment
- high visibility vests
- two wash buckets
- duct tape (for sealing PPE and disposal bags)
- pylons/sawhorses/traffic cones
- asbestos warning tape
- labelled asbestos waste bags (must be double bagged, sealed with duct tape and clearly marked “Asbestos”)
- disposable hand towels
- roll of 6 mil polyethylene sheeting
- airless spray canister capable of misting if no local source of water present
- hose connected to a water source for washing down tools, etc.

2.2 **Personal Protection Equipment (PPE):**

- disposable Tyvek (or similar) coveralls with hoods and elastics at wrists and ankles
- disposable gloves
- NIOSH-approved half-face (minimum) or full-face respirator. Respirators will have cartridges for particulate (P100)
- safety glasses (if using half-face respirator)
- waterproof non-laced boots

2.3 **AC Pipe Handling Procedures**

NOTE: Prior to commencing removal of AC pipe underground, asbestos pipe caps are often removed first. Handling of such task can be performed without tools to prevent any damage to

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the material. If the material is intact and in good condition, the work may be considered as “low risk work activity”.

This procedure applies to:

- Cutting AC non-pressurized pipes
- Removal and replacement of damaged AC pressure pipe
- Replacing pipe fittings

- 2.3.1 Excavate around the AC pipe a sufficient distance to ensure adequate tool clearance in the area to be cut. Care must be taken to avoid any pipe abrasions.
- 2.3.2 Set up asbestos working area boundaries with asbestos warning tape, and/or cones and barriers with asbestos warning signage, whichever practicable.
- 2.3.3 Don Personal Protective Equipment before entering asbestos working area.
- 2.3.4 For dust control, apply water to the area being cut and continue until the cutting has been completed.
- 2.3.5 Upon completion of the final cut, thoroughly wash all equipment with clean water to remove AC debris.
- 2.3.6 Compressed air shall not be used to clean up and remove dust from any surface.
- 2.3.7 Install replacement pipe and fittings as required, taking care to avoid any abrasion to the AC pipe.
NOTE: In the event damaged AC pipe is removed and the remaining AC pipe in the trench will become abandoned due to alternate services, wrap the ends of the abandoned AC pipe with 6mil poly and labelling it with asbestos hazard tape.
- 2.3.8 Once the work in the excavation area has been completed, move any tools and materials from the work zone to the decontamination area.

2.4 Clean-up and Decontamination

Tools and materials used to perform cutting of AC pipe will be thoroughly rinsed in a bucket of water and any remaining pieces of debris shall be wiped off the tools using a damp cloth. Tools and materials must be thoroughly washed and inspected (to ensure there is no asbestos contamination) before being removed from the authorized work zone. Materials contaminated with asbestos will be rinsed with clean water and placed in a labelled asbestos waste disposal bag (see below). Properly sealing disposal bags of asbestos waste will follow these directions:

- 2.4.1 The workers shall clean-up the area and place all asbestos contaminated waste (including PPE, rags, and sponges used in work area) into a labeled ‘Asbestos Waste’ disposal bag. Gently squeeze the bag to expel the air.
- 2.4.2 Twist tightly the unused top portion of the bag into a tail and seal with duct tape at the base of the tail.
- 2.4.3 Take the leftover twisted tail section of the bag and bend it around to make a loop and attach it to the base of the tail using the duct tape (this seals the bag and makes a handle).
- 2.4.4 Clean the surface of the bag using water and wipes. Place the first bag into the second bag and repeat the sealing procedure in steps 2.4.2 and 2.4.3 above.

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- 2.4.5 Visually inspect the barricaded work area thoroughly to ensure all asbestos-containing material and dust/debris has been fully removed.
- 2.4.6 PPE and tools that are to be reused are to be cleaned and immersed in a bucket of water, followed by a second immersion in a second, clean bucket of water. Inspect thoroughly for asbestos contamination and repeat, if necessary, until all asbestos containing materials have been removed. Place the object outside the authorized work area.
- 2.4.7 If the object is too large to be washed in the buckets of water, such as a shovel or wrecking bar, use a wet cloth to wipe it down until visually "clean". Inspect thoroughly for asbestos contamination and repeat, if necessary, until all material has been removed from the item.

2.5 Disposal of Asbestos Contaminated Waste

Follow the remaining steps to dispose of asbestos contaminated waste:

- 2.5.1 Asbestos-containing materials will be contained, once removed, in 6 mil polyethylene bags marked with Asbestos warning markings. The Asbestos Waste bag is then sealed in a goose neck fashion with duct tape and placed in a second Asbestos Waste bag which is again sealed in a goose neck fashion.
Where use of Asbestos Waste Bags is not applicable (i.e. length of AC Pipe to be removed is longer than 4 feet or too large for the bag to contain) 6-mil Polyethylene drop sheets will be utilized. Two layers of 6-mil Polyethylene drop sheets will be placed beneath the section of AC Pipe to be removed. Once removed, the AC Pipe will be placed directly onto the 6-mil Polyethylene drop sheets. The first layer of the 6-mil Polyethylene drop sheet will be used to contain the AC Pipe by wrapping around the pipe and tying the ends in a goose neck fashion and sealing with duct tape. The second layer of 6-mil Polyethylene sheeting will be utilized to further contain the AC Pipe by double-wrapping the pipe and tying the ends in a goose neck fashion and sealing with duct tape. The double wrapped AC Pipe will then be labelled with an Asbestos Warning Sticker or marked appropriately with other means.
- 2.5.2 Augusta Recyclers in Powell River accepts AC pipe when properly wrapped and labelled.
- 2.5.3 To decontaminate the buckets that contained the contaminated water, empty the first bucket of water into the excavation. Use the second bucket of water to rinse the first bucket and then rinse with clean water and wipe down with a clean wet rag. Rinse and wipe down the second bucket of water with clean water and always ensure that the water is poured into the excavation.
- 2.5.4 Before completing the backfilling, the used barrier tape should be taken down and loosely coiled and placed into the excavation approximately 150-300 mm below the finished ground surface (this will warn others involved in future excavation work of the hazard).

2.6 Personal Decontamination

This process is to be followed by every worker each time they leave the asbestos clean-up area.

- 2.6.1 The worker is to damp wipe his/her disposable coveralls, boots, and respirator to remove visible debris.

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- 2.6.2 Still within the work area, the worker will remove coveralls and place in a 6-mil asbestos waste-labelled polyethylene bag and dispose of as asbestos waste. DO NOT REMOVE RESPIRATOR AT THIS TIME.
- 2.6.3 Still wearing the respirator, the worker will proceed to a “personal decontamination” area.
- 2.6.4 In the personal decontamination area, thoroughly clean the outside of the respirator with water.
- 2.6.5 Remove the respirator.
- 2.6.6 Thoroughly wash hands and face.
- 2.6.7 Wash and rinse the inside of the respirator.
- 2.6.8 Respirator filters will be taped over while respirator is not in use to prevent possible release of entrapped asbestos fibres and place the respirator and filters into a sealable bag for storage.
- 2.6.9 If this is the last use of the filter cartridges, they must be disposed of as asbestos waste.

RELATED DOCUMENTS

- Policy P-21 Occupational Health and Safety
- Worksafe BC Safe Work Practices for Handling Asbestos
- OHS Regulation Part 6: Substance Specific Requirements

FORMS

- Policy Agreement Form