

REPAIR AND REMOVAL OF ASBESTOS CEMENT PIPES

1 PURPOSE

The purpose of this SOP is to ensure the health and safety of East Gippsland Water (EGW) employees and contractors who may come into contact with asbestos products and debris and to ensure that EGW complies with legislative requirements of Part 4.4 of the Occupational Health and Safety Regulations 2017 and the B Class (Specific) non-friable asbestos removal licence issued pursuant to those Regulations, and EPA requirements for transport and disposal of waste asbestos which classifies such waste as prescribed industrial and a category C waste.

2 APPROVAL

Managing Director

3 SCOPE

This SOP shall apply to any employee, consultant or contractor engaged by East Gippsland Water to repair, remove, connect to, inspect or assess asbestos cement pipelines. For in-situ building based asbestos management refer to SOP090.

4 DEFINITIONS

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| PPCE | Personal Protective Clothing and Equipment |
| AC | Asbestos Cement |
| ACM | Asbestos Containing Material |
| ACD | Asbestos Contaminated Dust – debris from ACM |
| ACS | Asbestos Contaminated Soil |
| EPA | Environment Protection Authority |
| GIS | Geographic Information System |
| HS | Health and Safety |
| SWMS | Safe work method statement (EGW's F048) for construction works |

IN AN EMERGENCY REFER TO SECTION 11 OF THIS SOP.

5 RELATED ISSUES

5.1 Guiding Principles

- 5.1.1 In accordance with Part 4.4 of the Occupational Health and Safety (OHS) Regulations 2017, EGW will examine all its assets to locate and identify any asbestos containing materials. The location of AC pipes will be identified on the GIS; other in-situ (above ground) asbestos is listed in a register (DOC/14/15451*) maintained by the HS Team. In order to monitor asbestos pipe removal and associated nominated asbestos supervisor activity, a relevant removals register is available as DOC/10/9754*).
- 5.1.2 These documented listings form the basis of EGW's "Asbestos Register". Part A is the electronic register maintained by the HS Team; Part B is the GIS. Relevant staff have access to both registers.
- 5.1.3 The Asbestos Register will be updated as asbestos materials are removed or identified.
- 5.1.4 The risk associated with any identified material will be assessed and appropriate control

measures implemented to ensure the workplace is safe.

The remainder of this SOP deals exclusively with the removal or repair of AC pipes or debris found in soil whether suspected or actual asbestos. For the management of other in-situ (facility) asbestos, refer to SOP 090.

- 5.1.5** Prior to commencement of works, signage must be erected to alert other employees, contractors or members of the public that asbestos removal work is being undertaken.
- 5.1.6** Also prior to commencement of works, temporary fencing (e.g. para-webbing) should be erected around the site to prevent access to the public or non-authorized employees or contractors.
- 5.1.7** Where practicable the whole section of AC pipe should be removed without cutting or breaking at joints.
- 5.1.8** Under the conditions of EGW's licence, no employee is permitted to remove or repair AC pipes unless they have completed the appropriate training and been duly authorised to conduct this work. Contractors are not to conduct asbestos removal work unless appropriately licensed. Consultants are not to inspect or assess removal work unless appropriately licensed.
- 5.1.9** Work practices must be used that will minimise dust generation and/or dispersal. Any asbestos products to be cut must be thoroughly wetted down and cut with a low speed hand tool (e.g. hand saw), or power demolition saw with water jet incorporated in the operating system. **(EGW WI 025 refers to the use of the approved power saws. Abrasive disc or other power saws must not be used. Hand tools (like crow bars or hammers) that could potentially break the asbestos into smaller pieces, must not be used).** Upon completion, the entire work area of the task must be cleaned of all asbestos type waste. Collect as many broken pieces as practicable. Waste pieces are to be double bagged in heavy-duty plastic bags, which are to be labelled "ASBESTOS - FOR DISPOSAL". All disposable clothing, respirators, respirator cartridges must also be included in these bags. Do not launder clothes that are directly exposed to asbestos – dispose of immediately. If skin contact is made with asbestos, wash skin immediately with water.

5.1.10 BROOM SWEEPING, USE OF BRUSH OR WATER JET APPLICATION TO ASBESTOS PRODUCTS, IS FORBIDDEN.

5.1.11 EPA regulations recognise spoil, which contains less than 1% asbestos by weight/volume as an inert material. Where the asbestos content of predominantly earth spoil is less than 1%, then the total spoil is not regarded as asbestos. For example, following the excavation of a disused AC pipeline all spoil, including the very small fragments of broken pipe which were unable to be collected, does not require special treatment except that:

- The soil and very small pipe fragments or dust and saw shavings need not be segregated
- Clean spoil may go to disposal or remain as fill material at the worksite
- Spoil used as fill at the worksite must be laded by machine
- Spoil to be disposed of at an EPA approved landfill should be immediately covered with uncontaminated spoil. If the spoil is 'clean' and the material goes to a landfill, there are concerns about possible asbestos fibres, especially if the soil

dries out. Covering of the spoil immediately is a good precaution. However immediate cover would only be available at a site with suitable plant, contact with Council or landfill operator to ensure equipment was available at time of delivery will be required.

- Clearance certificate for removal of asbestos from soil is sought by the project manager where land is to be sold or where greater than 10 square metres of asbestos is removed or where otherwise advised by the HS team.

5.1.12 Requirements of EGW's licence issued by WorkSafe Victoria include the completion of documentation (including a control plan and record of removal) and the nomination of a supervisor who is able to be available within approximately 20 minutes for the removal work.

Control Plan and Record of Removal

A Form No 032 Asbestos Control Plan and Record of Removal of Non-Friable Asbestos Cement Pipes is to be raised for all asbestos removals. The control plan abbreviates the safety controls listed in this SOP, while the record of removal section provides a record that is to be retained at the depot for 12 months during which time it will be audited by the HS team.

This document is to be completed for all AC pipe removals and is to be retained along with the accompanying Form 048 - Field Work hazard Identification and Control Checklist. These processes may be completed within the FieldGo application in which case they will be automatically recorded upon the submit function and can be accessed by anyone thereafter.

Regulation 273 of the OHS Regulations 2017 requires that the control plan must be readily accessible for the duration of the removal job.

Asbestos Supervisors

Supervisors have been nominated and trained to oversee AC removal work and provide additional guidance as required. The nominated supervisor for a particular removal job is to be accessible by phone, and able to attend the removal site within a reasonable time period if required.

5.1.13 Where contaminated soil or asbestos debris is suspected, the area must be made safe and EGW's Hazard Report Form (Form 049) should be completed. The HS Team or relevant manager will raise identified actions within Action Manager. If there is uncertainty, based on reasonable grounds, as to whether asbestos is present, asbestos will be assumed. Contact the HS Team in order to sample and analyse.

5.2 PPC&E

Personnel involved with the cutting and disposal of AC pipes must wear:

- A correctly fitted disposable Class P2 respirator, half face mask and cartridge, or other suitable respiratory protective device
- Disposable overalls
- Gloves
- Gumboots with protective over boots
- Glasses or goggles
- Hard hats

Note: in order to achieve an acceptable fit test, staff must be clean shaven as per the Compliance Code.

5.3 Notification to WorkSafe

The conditions of EGW's licence provide the following conditions for notification to WorkSafe of individual removal works:

- a. Emergency works – notification not required as per licence
- b. Tappings – notification not required as per licence
- c. Planned removals less than 10m² (ie; cut ins or less than 4 lengths of pipe) – minimum 24 hours notice
- d. Planned removals greater than or equal to 10m² (4 lengths of pipe) – minimum 5 days notice

Notifications are to be made using EGW Form 034 (Fax/Email) or online via the WorkSafe portal, and a copy provided to the HSE Team.

Apart from the notification requirement, the safe removal procedure in this SOP is consistent and unchanged regardless of the amount of AC pipe or debris to be removed.

5.4 Information to persons in Immediate and Adjacent Occupying Areas Including Signs

Regulation 277 and 301 (1 and 2) of the OHS Regulations 2017 and EGW's licence (DOC/15/55) requires that signage to indicate that removal work is underway be used. Also, employers in the immediate and adjacent areas (adjoining or directly facing) need to be notified of the proposed removal work prior to that work commencing. This can be achieved by providing a work card to employers and occupants immediately adjacent to any proposed asbestos pipe removal worksite.

5.5 Copy of Training Records to be Available on Site

Regulation 270 requires that a copy of staff training records be available on asbestos removal sites. This is to be achieved by staff to ensuring that copies of their asbestos removal training card are kept on their person, or within their PPE kit bags at all times. Qualified and approved contractors must also carry an asbestos removal training card when assisting EGW staff.

6 PROCEDURE

Pipe cutting shall be performed using hand tools, compression cutters or the approved power saw with water jet incorporated into the operating system. For hand saws, use a Tungsten Hard Tipped Saw. Abrasive disc or other power saws must not be used. Hand tools that may break asbestos pipes like crow bars or hammers also must **not** be used.

6.1 Pre-work actions

- 6.1.1 Complete notification to WorkSafe for planned removals (see 5.3). No notification is required for tappings or emergency response works as per EGW's licence.
- 6.1.2 Raise Forms 032 – Asbestos Control Plan and Record of Removal, and 048 - Field Work Hazard Identification and Control Checklist (EGW's SWMS)
- 6.1.3 If using the approved power saw with water jet incorporated into the operating system, ensure conformance with EGW Work Instruction 025.
- 6.1.4 Notify persons in the immediate and adjacent areas of the proposed removal work.

6.1.5 Ensure adequate barricades and signage to protect the public from hazards associated with excavation work and asbestos removal.

6.1.6 Ensure that there is an adequate battery power and water supply is on hand for entire operation to use to run over area to be cut and for decontamination of non-disposable clothing and equipment. For the approved power saw with water jet incorporated into the operating system, ensure that the 100 litre water tank is filled.

Consider a knapsack water supply as an additional wetting resource.

6.1.7 Ensure that there are adequate asbestos waste bags and/or plastic for the disposal of contaminated PPE and asbestos waste.

6.1.8 Prepare and communicate an appropriate emergency plan to manage human exposures or contamination of surrounding properties.

6.2 Excavation

6.2.1 Determine depth of pipe from drawings and/or manual excavation.

6.2.2 Carefully uncover pipe to remove or repair section. This is best done by combination of backhoe or excavator and manual excavation. Refer to SOP 086 for Working Near Overhead and Underground Services.

6.3 Cutting & Disposal

6.3.1 Put on PPE before commencing any works that may release asbestos fibres or create AC dust or AC pipe fragments. **No employee shall commence any such work unless they have achieved a satisfactory fit test with the respirator positioned on the face.**

6.3.2 Prepare asbestos waste bags and/or plastic for the disposal of contaminated PPC&E and asbestos waste.

6.3.3 From the water supply as mentioned in 6.1.6, run water **continuously** over area of pipe to be cut.

6.3.4 Remove section of pipe to side of trench.

6.3.5 Cut piece of heavy-duty plastic wrapping to a slightly longer length than the piece of pipe. Alternatively a purpose made asbestos waste plastic bag can also be used.

6.3.6 Wrap the pipe, fold the overlapping plastic back over the pipe at both ends and secure with tape.

6.3.7 Place wrapped pipe in Asbestos labelled plastic bags, tie or tape end. Note all waste must be effectively “double wrapped”.

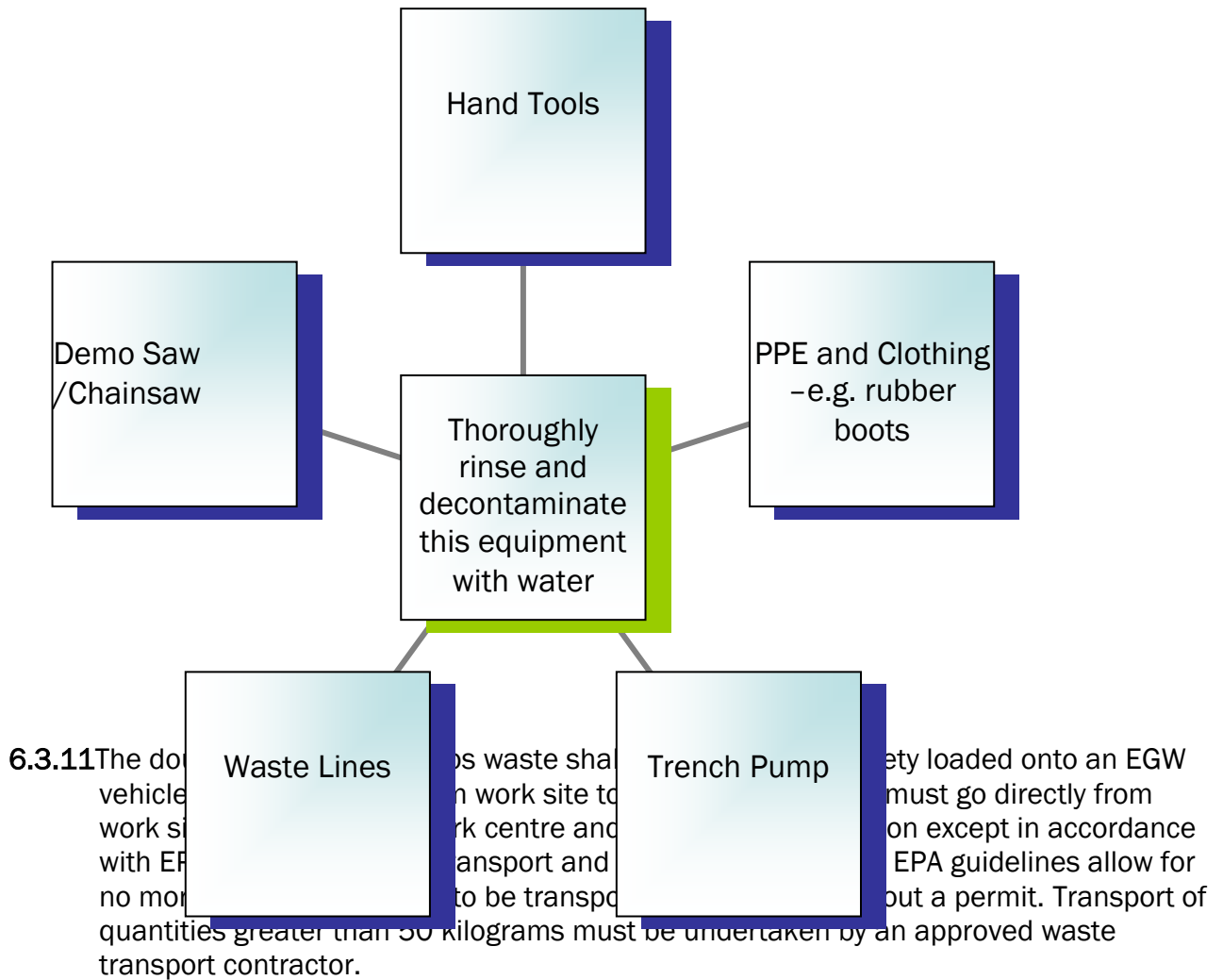
6.3.8 Non-disposable protective clothing (e.g. gumboots) should be rinsed clean with water preferably with the person still in the trench to prevent runoff.

6.3.9 All disposable clothing, respirators, cartridges, gloves etc must be rinsed and removed while in trench if possible and the disposable clothing placed in the labelled asbestos

waste bags. The used disposable clothing shall be regarded as asbestos waste. Cartridges shall be used once and disposed of after use.

6.3.10 All equipment (e.g. hand tools, powered demolition saw, bilge pump and waste lines) used during the cutting process is to be deemed as potentially contaminated with asbestos dust and residue until it can be decontaminated thoroughly. Decontamination procedure must be undertaken whilst wearing full PPEC and shall involve water to wash the tool and plant in the trench. Tools and plant with hard to access areas shall be stripped and wiped down with wet wipes or similar. This is best done at the site but as part of preventive maintenance, cleaning whilst wearing full PPEC can be done in a place where traffic is excluded. Refer Figure 1.1 as a reminder for what to decontaminate.

Figure 1.1 Equipment that must be rinsed and decontaminated immediately after use



6.3.12 The waste shall be stored at the depot in a secure skip bin for disposal, unless it is transported directly to an approved disposal facility by a waste transport contractor.

6.3.13 Each depot shall contain a weatherproof, dedicated, secure and locked skip bin or container that shall hold the appropriately wrapped bundles of waste. Each skip or container shall be boldly labelled or stencilled “Asbestos Waste”, no other material is to be deposited in the container. **Upon the completion of the task staff are to immediately wash to maintain an appropriate state of personal hygiene relative to the activity undertaken. It is also recommended staff use nailbrushes paying particular attention to fingernails.**

6.3.14 Stored material is disposed of by transferring to an EPA approved Waste Disposal Site by an approved and permitted waste disposal contractor. The waste will be removed from the storage containers at each depot on an as needs basis but not less than once every six months.

- 6.3.15** Outer depots are permitted to transport up to 50 kilograms per trip of double-bagged asbestos to the Bairnsdale or Lakes Entrance depots to reduce the frequency of visits by waste transport contractors to their depots.
- 6.3.16** Ensure that a waste transport certificate is completed upon receipt of the asbestos by the waste transport contractor as per DOC/09/5337*.
- 6.3.17** Complete Form 032 – Asbestos Control Plan and Record of Removal - attach to the relevant Form 048 and retain in depot for period of at least 12 months. After 12 months, the completed forms may be forwarded to records for archiving and permanent retention.
- 6.3.18** Where lengths of pipe of two lineal metres or more are replaced with another material, forward copy of page one of Form 032 to the GIS Coordinator to enable GIS to be updated to reflect removal of section of AC pipe.

7 TRAINING

All Depot field staff will undergo formal asbestos training as soon as possible after commencement of employment. Depot Superintendents are to ensure that only employees who have completed this training and possess a certificate of competency are to undertake asbestos removal work. Only staff that have been trained and are competent in the use of the power saw may operate the power saw unit.

8 SAFETY

Operator safety must be given the highest priority. All operators must be familiar with this SOP and deemed competent against EGW Work Instruction 025 – Use of Petrol Demolition Saw or ICS Chainsaw for AC Pipe Removal.

In addition to required staff medical assessments referred to in section 10, the HS Team will coordinate periodic air monitoring of planned asbestos removal works. This will be performed by a 3rd party in order to monitor compliance with Regulation 275. Air monitoring has previously occurred in 2015 and 2018.

9 VALIDATION OF WORKS AGAINST THIS SOP

Asbestos supervisors are to conduct site inspections of 10% of asbestos cement pipe removal works to validate that the work is being carried out in accordance with this SOP. Control plans and Records of Removal for those works are to be annotated accordingly. Depot superintendents are to facilitate this action and allocate inspections evenly to ensure that asbestos supervisors maintain their skills.

10 MEDICAL EXAMINATIONS

As required by Part 4.4 of the OHS Regulations 2017, all staff who undertake work included in this SOP will be subject to regular medical examinations, details of which may be found in SOP 097, Health Monitoring.

11 EMERGENCY RESPONSE

- 11.1 In an emergency make the area safe and apply first aid (if qualified) and get help if required.
- 11.2 Contact the nominated Supervisor listed on the *Control Plan and Record of Removal*.
- 11.3 Identify the type of emergency. (e.g. vehicle/plant accident, medical, asbestos dust, other)
- 11.4 If pollution has occurred or is likely to occur, refer Environmental Incident Reporting SOP 003.
- 11.5 Complete an accident / incident investigation form as soon as possible (refer to SOP 104 – OHS Incident Reporting and Investigation).

CONTACT PHONE NUMBERS:

24-hour emergency number: 000

Supervisor: As listed on the *Control Plan and Record of Removal*.

Contact the Service Delivery Manager or Executive Manager Operations on 03 5150 4400 (during business hours).

Or mobile: Manager Network Services – 0418 514 288
Executive Manager Operations – 0437 135 971

12 REFERENCES

- Victorian Occupational Health and Safety Act 2004
- Environment Protection Act 1970
- Occupational Health and Safety Regulations 2017, Part 4.4 WorkSafe
- Compliance Code - Removing Asbestos in Workplaces October 2018
- Environment Protection (Prescribed Waste) Regulations 1998
- EGW Work Instruction 025 (Demolition Quick Cut and ICS chainsaw)
- EPA Information Bulletin, “Asbestos Transport and Disposal (IWRG611.2 June 2017)
- EPA Industrial Waste Resource Guidelines (Waste Transport Certificates) of the Environment Protection (Industrial Waste Resource) Regulations 2009
- EGW SOPs 097 and 104
- Environment Protection (Scheduled Premises) Regulation 2017

13 REFERENCED FORMS

- Form 032 - Asbestos Control Plan and Record of Removal of Non-Friable Asbestos Cement Pipes
- Form 034 - Notification of Asbestos Removal
- Form 049 – Hazard Report Form
- KERN / Form 048 - Field Work Hazard Identification and Control Checklist

14 REVIEW

This SOP will be reviewed every 3 years.