

Document Owner: Head of Network Operations and Engineering

Drinking Water Network Repairs and Disinfection

This Standard Operating Procedure (SOP) covers work undertaken on repairs within the drinking water network. This work needs to be undertaken with the utmost care, following best practice as the network is exposed and must be safeguarded against contamination, both bacteriological and chemical. Disinfection is key to preventing contamination of the water supply during maintenance and should be an integral part of the standard repair procedures.

Health & Safety and Operational Information

Hazard Indicators



Personal Protection



Health and Safety Information

- Health and Safety documentation.
- Sodium Hypochlorite Solution Material Safety Data Sheet

Operation's & Maintenance Documentation

Customer Information (Confidential)

Priority Customer Categories

Emergency Procedure / Escalation

Emergency

- Make "Site Safe" and isolate risks to people or property with resources at hand
- All forms of chlorine have hazardous substance storage and handling requirements. All people using these chemicals should be aware of the requirements identified in the material safety data sheets
- Key phone numbers

Escalate if extra resources required or problems occur!

- Escalate to Team Leader and inform of the issues faced and/or expected resources required if necessary.

Additional Documentation

- FH SOP shutdown procedure
- SOP Reactive Shutdown
- SOP Asbestos Pipe Repair
- Living Safely Manual
- Wellington Water, Disinfection of Water Systems – Work Instruction (Under Development)



Asbestos Pipes

Required Skills, Competencies (Qualifications and/or Certifications)

Competent persons only.

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Standard Operating Procedure

Required Equipment

Equipment and Information	Details
Spray bottle containing Sodium Hypochlorite solution and swabbing material	Ensure full spray bottle and sufficient clean swabbing material is in the vehicle before leaving the depot.

Prepare to do the work

Action	Action Details
Before leaving Depot	<p>Ensure there is a full spray bottle of super-chlorinated solution and sufficient clean swabbing material in the vehicle. The bottle is to be stored in such a way that it cannot tip or spill. If the bottle is not full use the following mixing ratios to have a full spray bottle of chlorine solution at correct strength:</p> <ul style="list-style-type: none"> - decant 20ml (1 cap full) of Sodium Hypochlorite 15-17% Solution into a 1 litre spray bottle, fill the spray bottle with water - 50ml (10 teaspoons) of 2-4% Janola into a 1 litre spray bottle, fill the spray bottle with water. - Ensure you are wearing appropriate PPE including gloves and eye protection, take care not to breathe in the fumes and not to spill any undiluted chemical on yourself or others.

Perform the work

Repairs to pipelines that are in service shall be cleaned and disinfected in the following way:

Action	Trade	Action Details
Maintenance	Serviceperson	All fittings and pipes shall be sprayed and swabbed with a super-chlorinated solution and protected from contamination.
Maintenance	Serviceperson	<p>The internal lining of the open ends of pipelines shall be sprayed and swabbed with a super chlorinated solution. Care shall be taken to ensure water from the trench does not enter the pipeline, this may be achieved by:</p> <ul style="list-style-type: none"> - Shutting down the network during the repair - Excavating deep enough that water in the bottom of the trench is below the pipe - Dewatering the trench to remove water
Maintenance	Serviceperson	After the repair is made, and where practicable, the repaired pipe shall be flushed so that potable water is drawn through the repair location until the water is clear and has a chlorine residual.
Maintenance	Serviceperson	<p>Separate tools should be used on drinking water and wastewater networks. Where this is not possible, or tools become contaminated by wastewater they shall be thoroughly cleaned and disinfected with the super-chlorinated solution before using them again.</p> <p>Equipment and plant that has been used on wastewater networks or in a manner that may contaminate the drinking water network should be cleaned and disinfected before use.</p>

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Approved to Issue for Testing: Planner Name	Tested by: Serviceperson Name	SOP Finalised Team Leader Name
Signed	Signed	Signed
Date	Date	Date