

1. PURPOSE

This SOP focuses on isolation of equipment and steps which must be taken to avoid the possibility of injury to employees when working in close proximity to, or on pumps, motors or other electrical appliances. Procedures outlined also extend to plant, vehicles and equipment including hand tools. Isolation of water, sewage, chemicals, fluids and gases should be addressed similarly as required.

2. APPROVAL

Managing Director

3. SAFETY

Before working on or in close proximity to electrical equipment or equipment containing other hazard associated with stored energy (such as fluids under pressure), isolation of that equipment is mandatory. This SOP has been developed specifically for the protection of East Gippsland Water (EGW) employees.

4. PROCEDURE

4.1 Initial conditions

Equipment to be worked on is identified including point of isolation. There are occasions where this is not clear, e.g. switchboard may not isolate all equipment in vicinity, and some plant, actuators etc. may require isolating elsewhere.

Danger, out of service tags and padlocks are to be available and Superintendent/supervisor informed of the work to be performed.

4.2 Danger tags and out of service tags

Red *danger tags* are used to “lock out” plant, equipment and/or machinery by preventing operation or attempts at operating plant, equipment or machinery to which they are affixed. The tags also indicate that someone is working in, on, or around the equipment, and its operation could place a person in danger.

Out of service tags (yellow and black) are fitted to defective plant/equipment/machinery to indicate that no attempt is to be made to operate the plant/equipment/machinery until repairs are completed.

Persons fitting *out of service tags*, or ‘long term’ *danger tags* should report this to their supervisor to allow an overview of plant serviceability.

4.3 Electrical equipment. Isolation of electrical equipment shall be carried out by the following methods.

4.3.1 Working in close proximity to equipment:

- turn off controlling switch/es
- tag switch/es and include information on *danger tags* indicating by whom, date and reason for isolation
- persons who installed *danger tags* to remove them following completion of the work.

4.3.2 Working on equipment (no electrical disconnection):

- turn off controlling switch/es
- if circuit breakers are fitted, open the circuit breakers and wire or tag them open if possible
- if fuses are fitted, remove element or cartridge and reinstall fuse wedges
- tag both control switches and fuses or circuit breakers, and include information on *danger tags* indicating by whom, date and reason for isolation
- it should be noted that some fuses or circuit breakers may be located within control cabinets that can only be opened by appropriate electrically licensed persons
- persons who installed *danger tags* are to remove them at completion of the work.

4.3.3 Electrical disconnection and reconnection of equipment:

- disconnection/connection of electrical equipment shall only be carried out by an appropriately electrically licensed person
- fuse elements or cartridges to be removed or circuit breakers to be locked open
- isolating switches, fuses or circuit breakers, insulated disconnected wiring all to be tagged and information on *danger tags* to include by whom, date and reason for isolation/disconnection
- persons who installed *danger tags* are to remove them at completion of the work.

4.4 Plant and equipment

Staff servicing plant and equipment shall also use *danger tags* to avoid the possibility of it being energised inadvertently.

Defective plant and equipment shall be tagged with an *out of service tag*.

4.5 Hydraulic and gas isolation

Prior to working in or on any facilities, plant or equipment, staff and contractors should complete a Field Work Hazard Identification Checklist (Form 048) or Safe Work Method Statement (Form 042) to determine whether isolation of fluids and gases is required. This should determine/record whether isolation of valves, sewers, water mains, tanks and so on, is required.

Subject to the assessment confirming that isolation is required, such isolation is to occur and *danger tags* (if appropriate) are to be installed.

4.6 Removal of danger tags

Danger tags may only be removed by the person who installed them.

The only exceptions are where an authorised person removes the tag following confirmation that the person who installed has left the area, that no other persons are in the area, and the plant is operational. The authorised person in this instance, can be the Superintendent of Works, Technical Officer, designated Treatment Plant Operator or appropriately electrically licensed person.

In the instance where the *danger tag* is removed by a person other than the person who tagged the equipment, written advice must be detailed on the tag and the tag returned to the responsible Works Superintendent.

4.7 Removal of out of service tags

As per instructions on the *out of service tag*, the tag may only be removed by the person installing the tag, or another person after authorisation from the authorised persons listed in 4.6 above, or by any person who is authorised to repair or make safe the equipment protected by the *out of service tag*.

5. KEY RESPONSIBILITIES

5.1 Managers and supervisors are responsible for the implementation of this SOP within their area of responsibility, including the implementation of any corrective actions arising from workplace inspections, audits or risk assessments.

5.2 Employees are required to cooperate with management with regard to the implementation of this SOP, particularly with regard to informing Superintendents/supervisors of the use of *danger* or *out of service tags*, and ensuring that tags are not removed without appropriate authorisation.

6. REFERENCES

The main legislation and references relevant to this SOP include:

- Occupational Health and Safety Act 2004 and subordinate regulations
- Occupational Health and Safety Regulations 2007, Part 3.5
- WorkSafe Victoria Code of Practice for Plant
- WorkSafe Guidance Note – Lock out and tagging of plant: November 2003
- Australian/New Zealand Standards
- EGW SOP 103 - OHS Hazard Management

7. REFERENCED FORMS

- Field Work Hazard Identification Checklist (Form 048)
- Safe Work Method Statement (Form 086)

8. RISK MANAGEMENT

This SOP forms an integral part of East Gippsland Water's Risk Management Program.