

1 PURPOSE

To ensure that there are adequate controls to eliminate risks associated with inadvertent release of energy during cleaning, servicing, repairing or alteration work on installations, plant, or equipment.

2 SCOPE

This procedure applies to all staff, students, contractors, and other personnel at workplaces under the management or control of the University of Melbourne.

3 DEFINITIONS

Authorised person

A person, authorised by the local supervisor, who is sufficiently competent to lock out, tag and isolate installations, plant, or equipment for the purposes of cleaning, servicing, repairing or alteration.

Competent

Having acquired through training, qualification, experience, or a combination of these, the knowledge and skills to carry out a task.

Danger tag

A label/sign that identifies that cleaning, servicing, repairing, or alteration is being undertaken on isolated installations, plant or equipment.

Energy-isolating device

A device that physically prevents the transmission or release of energy, including the following:

- manually operated electrical circuit breaker.
- disconnect switch.
- manually operated switch by which the conductors of a circuit can be disconnected.
- line valve.
- block; or
- any similar device used to block or isolate energy.

Energy source

A source of power including: electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gas and other.

Note: energy sources may include stored energy that may be released as kinetic energy, such as an object suspended above the work area.

Isolation

Removing or disconnecting an energy source to prevent the inadvertent restoration of energy, either through activation/start-up of installations, plant or equipment, or release of stored energy.

Lock-out device

A device that prevents the inadvertent energising of an energy source on installations, plant, or equipment.

Out-of-service tag

A label attached to equipment that indicates the installation, plant or equipment is faulty and is currently out of service.

4 PROCEDURE

4.1 Plant or equipment that can be fully isolated by local physical separation from the energy source

The supervisor must ensure that local area procedures are available for plant or equipment that can be fully isolated by local physical separation from energy sources. These procedures must include a requirement to identify and isolate energy sources prior to cleaning, servicing, repairing or alteration.

4.2 Safe work procedure

The Head of School/Division must ensure that, for all cleaning, servicing, repairing, or alteration carried out on installations, plant or equipment under their control, safe work procedures (such as standard operating procedures) are developed and maintained.

Safe work procedures shall take into account:

- shut down.
- identifying all energy sources, including uninterruptible power supplies (UPS) and generators.
- identifying all other hazards (for example, confined space entry, working at heights).
- identifying all isolation points.
- isolating energy sources (including stored energy).
- de-energising all energy sources.
- confirm all energy sources are de-energised (including chocking, if required);
- locking out all isolation points.
- identifying (tagging) shutdown and isolation.
- where applicable, apply exclusion zones and/or restricted access.
- documentation and records; and
- returning to service.

The supervisor shall ensure that prior to working on the installations, plant, services or equipment, all authorised persons are:

- fully briefed on the safe work procedures; and
- competent to carry out the work.

Note: Following an interruption in cleaning, servicing, repairing or alteration, the authorised person must confirm the energy source is still isolated and de-energised.

4.3 Lock-out

The Head of School/Division must ensure that for all cleaning, servicing, repairing, or alteration carried out on installations, plant or equipment under their control, lock-out devices are available for authorised persons where lock-out and isolation is required.

All lock-out devices must meet minimum safety requirements and possess the following characteristics:

- instant visual identification as a safety device, for example, marked "Danger: Lock-out".
- prevent accidental energisation at the point of attachment.
- single issue of each lock-out device (ie its locking mechanism is unique and has only one key).
- where a padlock is used, the key can only be removed when the padlock is in the locked position.
- where a padlock is used, the key profile is exclusive to safety lock-out applications; and
- tamper-proof.

Examples of suitable lock-out devices at Safety Topics [Plant and electrical equipment](#)

4.4 Tagging

The authorised person must ensure that a danger tag is:

- used in conjunction with a lock-out device; and
- attached to the installation, plant, or equipment as a visual warning that the energy source has been isolated.

The authorised person must ensure that the tag describes the:

- installation, plant or equipment that is isolated.
- reason the installation, plant or equipment is isolated.
- name of the authorised person undertaking the work; and
- date of the isolation.

Example of a danger tag at Safety Topics [Plant and electrical equipment](#)

Note: An out-of-service tag must not be used during lock-out and isolation. Therefore, if an out-of-service tag was attached due to breakdown or faulty equipment, it should be removed and replaced with a danger tag while the installation, plant or equipment is isolated for the purpose of repair.

4.5 De-isolating and removing the lock-out device

The lock-out device may only be removed under the following conditions:

- the authorised person has determined that it is safe to de-isolate by:
 - ensuring the installation, plant or equipment is safe to re-energise.
 - notifying all relevant persons that the installation, plant, or equipment is about to be re-energised; and
 - completing a visual inspection to determine that all tools, surplus materials, and wastes have been removed; or
- there has been appropriate hand-over from the authorised person to another authorised person in accordance with the above bullet points.

Where there is hand-over to another authorised person, all personal lock-out devices and danger tags must be replaced to identify the new authorised person.

Where the authorised person cannot remove the lock-out device or cannot hand over to another authorised person, the supervisor may remove the lock-out device only after:

- confirming that the authorised person is not available.
- ensuring that no one is working on the installation, plant, or equipment.
- ensuring that de-isolation is safe; and
- confirming this with a suitably competent person.

4.6 Lock-out, tagging and isolation register

The Head of School/Division must ensure that a lock-out, tagging and isolation register of isolations exceeding 12 hours duration is established and maintained, and includes the following information:

- the installation, plant or equipment that is isolated.
- the reason the installation, plant or equipment is isolated.
- the name of the authorised person who conducted the isolation; and
- the date of the isolation.

The lock-out, tagging and isolation register may comprise a noticeboard, a hard copy table, electronic record system or other suitable method.

The supervisor of the authorised person performing an isolation exceeding 12 hours duration must ensure that the authorised person completes the register.

When isolations recorded in the lock-out, tagging and isolation register are re-energised, the authorised person must remove or close out the entry in the lock-out, tagging and isolation register.

4.7 Training

The supervisor must ensure that authorised persons are competent to carry out lock-out, tagging and isolation procedures. Training will include:

- identifying energy sources.
- controlling energy sources.
- complying with this procedure; and
- complying with the relevant local procedures.

5 RESPONSIBILITIES

Head of School/Division

Supervisor

Authorised person

6 REFERENCES

Occupational Health & Safety Act 2004 (Vic)

Occupational Health & Safety Regulations 2017 (Vic)

AS 4024: (series) Safety of machinery

AS/NZS 4836: Safe working on low voltage electrical installations

7 DOCUMENT CONTROL

7.1 Processes

Nil

7.2 Forms

Nil

7.3 Guidance

[Examples of suitable lock-out devices](#)

[Sample illustration of the danger tags](#)