

Lock Out Tag Out of Plant Procedure

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Purpose

This procedure aims to reduce the risk of injury when people are working on plant by preventing the item and its components from being set in motion and preventing the accidental release of stored energy.

Scope

This procedure applies to people (staff, contractor, sub-contractor, self-employed person, student, etc.) working on plant on University premises. Where several people are working on plant, this procedure applies to every person.

Legislative Context

- Occupational Health and Safety Act 2004 (Vic)
- Occupational Health and Safety Regulations 2017 (Vic)

Definitions

A complete list of definitions relevant to this procedure is contained within the Health and Safety Policy.

A further list of definitions **specifically** relevant to this procedure is included below:

Term	Definition
Plant	<p>All machinery, fixed appliances and services. This includes cranes, hoists, lifts and forklifts, presses, workshop machinery, farming machinery, processing machinery, conveyors, pumps, engines and motors, industrial vehicles, fixed pipe work, electrical installations and cabling, etc.</p> <p>It also includes fixed or portable specialised workshop/laboratory tools and equipment that have external or integrated energy sources (e.g. explosive-powered tools, equipment with sources of ionising or non-ionising electromagnetic radiation, compressed gases, capacitors, high-capacity batteries, etc.).</p> <p>It does not include road-registered vehicles, household consumer goods (e.g. kitchen refrigerators or microwave ovens), common hand-held tools (drills, sanders, angle grinders, etc.), portable items (mobile phones, hand-held instruments, etc.), and general office furniture and equipment (e.g. desktop computers, printers), except where these items contain or generate a chemical or where they are used for a purpose that is different from their intended usage (e.g. research projects).</p>
Working in isolation	<p>Means working alone in conditions where no other person is able to:</p> <ul style="list-style-type: none"> • detect effectively and promptly (e.g. by visual, electronic or other means) that the worker needs assistance; and • proceed to the scene of the incident and provide direct and prompt assistance.

Actions

1. Safely working on plant

	ACTIVITY	RESPONSIBILITY	STEPS
A.	Safely shutting down the item(s) of plant	Any person planning to work on plant	<ol style="list-style-type: none"> 1. Shut down the item of plant. Simple items can usually be shut down by a single control, such as a switch or valve. More complex items may have to be shut down in a set sequence or by shutting down several energy sources (e.g. electricity, pneumatics, hydraulics, fuel, etc.). 2. Place a completed Out of Service Tag on the controls of every energy source.
B.	Completing a Safe Work Method Statement form	Any person planning to work on plant	<ol style="list-style-type: none"> 1. Identify all sources of energy associated with the item of plant and their isolation points,

			<p>including ones that may be remote or hidden. Include electricity, compressed gases, fluids under pressure, stored energy, fuels, heat, steam, gravity, radiation, etc.</p> <ol style="list-style-type: none"> 2. Identify all other hazards, including mechanical, chemical, falls, burns, asphyxiation, and impact. 3. If the work and the item of plant meet all the conditions listed below, proceed with the work: <ol style="list-style-type: none"> a. the item involves only one source of energy, and that energy source will be under the direct control of the worker throughout the work; b. the work involves only one worker; c. the worker is not working in isolation; d. the work and item are well within the technical competencies of the worker; and e. other safety requirements do not apply (e.g. permit-to-work). 4. If the work or item of plant do not meet any one of the requirements in Item 3 above, record the findings on a Safe Work Method Statement (SWMS) form and contact the Property and Infrastructure office of the premises/campus where the work is being carried out. 5. If there is uncertainty about any aspect of completing a SWMS form or if further information is required (e.g. plans or diagrams), contact Property and Infrastructure. 6. Property and Infrastructure will review the SWMS, issue the necessary Locks and Tags, make the entries in the Lock
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			and Tag Register, and determine the level of supervision and additional measures required.
C.	Isolating all energy sources: Lock-out/Tag-out	Any person working on plant	<p>1. Once Property and Infrastructure have approved the SWMS and have issued the necessary Locks and Tags, isolate every energy source by means of one Lock and one Danger Tag for every worker on every isolation point. Where several workers are involved, use Safety Hasps (see Figure 1 below). Contact Property and Infrastructure to obtain these Hasps.</p> <p>2. Except for simple electrical equipment connected via a plug and socket, an electrician* must isolate and disconnect all electrical supply to an item of plant/equipment.</p> <p>*Note: "electrician" in this procedure means a worker who holds either of the following electrical licences:</p> <ul style="list-style-type: none"> - Restricted Electrical Worker's licence (REL, previously known as 'D licence') - Electrician's Licence (A Class/A/E Licence)

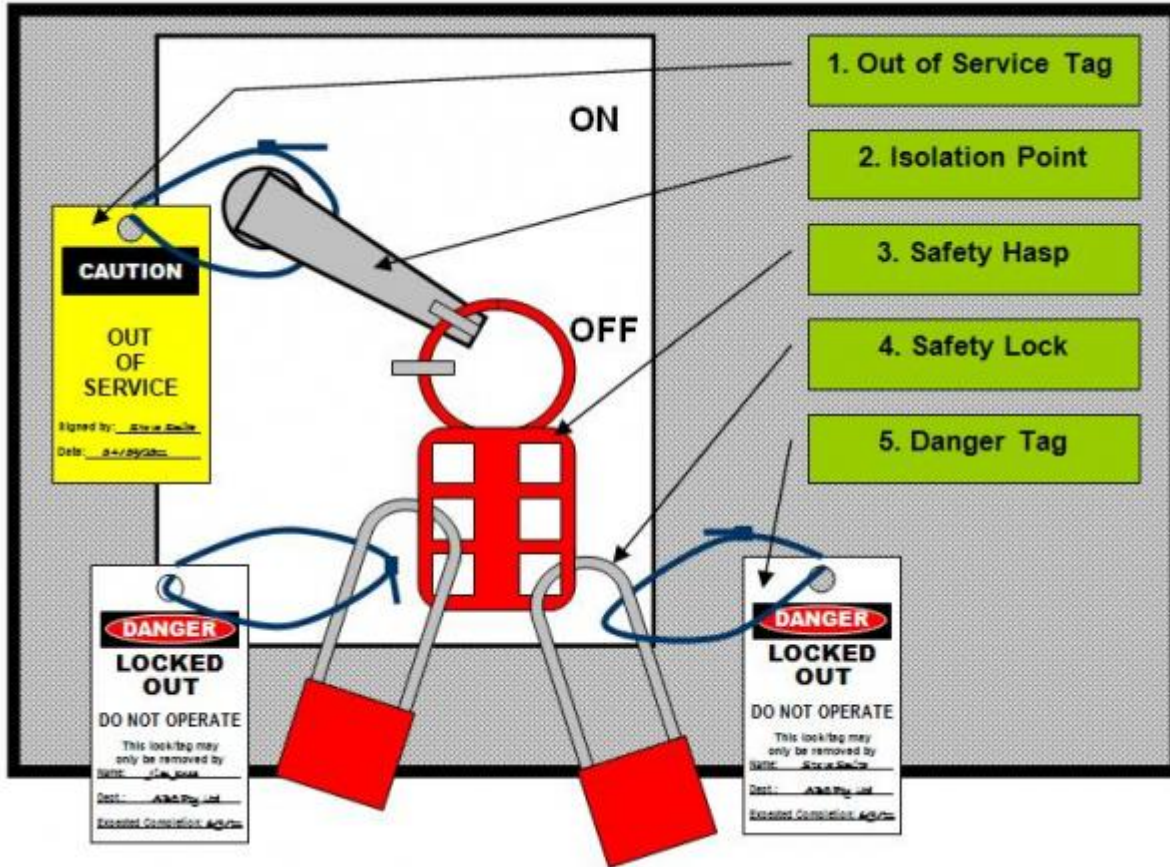


Fig. 1: A typical lock-out/tag-out set up

	ACTIVITY	RESPONSIBILITY	STEPS
D.	De-energizing all stored or trapped energies	Any person working on plant	<ol style="list-style-type: none"> 1. Take any of the following steps necessary to guard against energy left in the item of plant after its energy sources have been isolated: <ol style="list-style-type: none"> a. Inspect the plant to make sure all parts have stopped moving. b. Install ground wires. c. Block or brace parts which could fall due to gravity. d. Release the tension on springs, or block the movement of spring-driven parts. e. Block parts in hydraulic and pneumatic systems

			<p>that could move from the loss of pressure.</p> <ul style="list-style-type: none"> f. Relieve trapped or stored pressure. Bleed the lines and leave vent valves open. g. Drain process piping systems and close valves to prevent the flow of hazardous material. h. If a pipe must be blocked where there is no valve, use a blank flange. i. Purge tanks and process lines. j. Dissipate extreme cold or heat, or provide protective clothing. <p>2. If stored energy can re-accumulate, monitor it to make sure it stays below hazardous levels.</p>
E.	Testing for effective isolation	Any person working on plant	<p>1. After the item of plant has been shut down, locked out and tagged out, but before any person attempts to start work on the item, test all isolated power sources. Test first with appropriate instruments and then by trying to activate the item. Ensure the complexity of the plant (or parts of the plant, including control stations and computers remote from the plant) is understood. If unsure, contact Property and Infrastructure.</p> <p>2. Only begin work on the item of plant when tests have confirmed it is safe to do so.</p>
F.	Completing the work	Any person working on plant	<p>1. While performing the work, monitor the condition of the item of plant/equipment throughout the work to ensure unforeseen hazards or changing conditions do not cause injury.</p> <p>2. On completion of the work:</p>

			<ol style="list-style-type: none"> a. Return the item of plant to a safe and serviceable condition. b. Ensure each worker removes his/her own Safety Lock(s) and Danger Tag(s). Note: Only the worker who was issued with a given Lock and Danger tag can remove them. Contact the Property and Infrastructure Manager (or a more senior staff member) if for any reason it is impossible to comply with this rule (e.g. lost key). c. Ensure the person who fitted the Out of Service Tag(s) removes it(them). d. Test the equipment for correct operation. e. Report to Property and Infrastructure. Return all the items on loan, including used tags.
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Supporting Documents

- [Corporate Governance Policy](#)
- [Health and Safety Management Procedure](#)
- [Hazard Identification, Risk Assessment and Control Procedure](#)

Forms.

- [Lock and Tag Register](#) (PDF 129.4kb)
- [Safe Work Method Statement for Contractors](#) (DOCX 180.4kb)
- [Safe Work Method Statement for Staff and Students](#) (DOCX 180.2kb)

Responsibility

- The Chief Operating Officer, is responsible for monitoring the implementation, outcomes and scheduled review of this procedure.
- The Head - Health, Safety and Wellbeing is responsible for maintaining the content of this procedure.
- The Property and Infrastructure Managers are responsible for including this procedure in contractor inductions and for ensuring that contractors/sub-contractors and Property and Infrastructure staff comply with this procedure.
- Deans/Directors are responsible for ensuring their staff and students comply with this procedure.

- Specific responsibilities are included under Actions.

Promulgation

The [Lock Out Tag Out of Plant Procedure](#) will be communicated throughout the University community in the form of:

- an Announcement Notice via FedNews website and on the 'Recently Approved Documents' page on the 'Policies, Procedures and Forms @ the University' website; and
- an email to the Director and Managers of Property and Infrastructure.

Implementation

The [Lock Out Tag Out of Plant Procedure](#) will be implemented throughout the University via an Announcement Notice via:

- an Announcement Notice via FedNews website and on the 'Recently Approved Documents' page on the 'Policies, Procedures and Forms @ the University' website; and
- an email to the Director and Managers of Property and Infrastructure.

Records Management

Document Title	Location	Responsible Officer	Minimum Retention Period
Safe Work Method Statement (SWMS)	School/Directorate/ College/Centre of staff or students who performed the work on plant Property and Infrastructure for contractors	Dean/Director	Destroy seven (7) years after work was completed
Lock and Tag Register	Property and Infrastructure	Director	Destroy two (2) years after work has been completed