Health and Safety - Lock-Out and Tag-Out Procedure

Section 1 - Purpose / Objectives

(1) The Lock-out and Tag-out system objective is to use appropriate controls to ensure the safety of persons working on or near plant and equipment that is the process of being commissioned, cleaned, serviced, repaired or altered. As a system of risk control, isolation procedures are necessary measures taken to de-energise the plant, or a section of the plant to prevent persons coming into contact with dangerous elements or moving parts. Lock-out involves the use of devices to isolate and prevent machinery becoming operational. Tags are used to identify equipment that cannot be used because it is undergoing commissioning, cleaning, servicing, repairing or because it is faulty.

Section 2 - Scope / Application

(2) This procedure applies across the Victoria University.

(3) Exemption: Works undertaken by contractors who are engaged by Cushman & Wakefield who provide VU with Facilities Management Services. These contractors are required to comply with the requirements of Cushman & Wakefield's Lock out Tag out procedure.

Section 3 - Definitions

(4) Authorised Person - A person with appropriate competency, technical skill and authority to issue permits to work that for the purposes of this procedure include the need to isolate and lock out energy sources. Must be appointed by the Associate Director Facilities Management. Refer to Permit to Work Procedure for more information.

(5) Competent Person - A person having acquired through training, qualification, experience, or a combination of these, the knowledge and skills to carry out a particular task.

(6) 'Danger - Do not operate' Tag - A signed and dated label that is attached to energy isolation points of equipment , plant, pipes or lines by the person responsible for undertaking commissioning, repairs, maintenance, service alteration or cleaning, to indicate isolation is in place and that plant or equipment, etc., must not be operated. It must only be removed by the person whose name is on the tag.

(7) Energy - A source of power including electrical, mechanical, pneumatic, hydraulic, chemical, thermal, gas, stored kinetic energy, gravity, radiation, fuels, battery or capacitor banks that has the potential to cause injury or damage property.

(8) Energy-isolating device - A lock out, quarantine device by which plant and equipment is removed from its source of energy and is prevented from being inadvertently operated, and may include any of the following:

a. manually operated circuit breaker;
b. disconnect switch;

c. manually operated isolating switch by which the conductors of a circuit can be disconnected;
d. line valve;
e. block;
f. or any similar device used to block or isolate energy.

(9) Isolation - Removing or disconnecting an energy source to prevent the inadvertent restoration of energy, through activation/start-up of installations, plant or equipment, or release of stored energy. Also prevents the introduction of contaminants found in pipes, drains etc especially important for potential engulfment within a confined space.

(10) JSA - Job Safety Analysis or SWMS - Safe Work Method Statement - a document that lists the steps of a task, the OHS hazards for each step and the control in place to ensure the safety of Workers and other persons whilst the task is carried out.

(11) Lock-out device - A device that prevents the inadvertent energising of an energy source on installations, plant or equipment.

(12) Out-of-service tag - A label that is attached to equipment to communicate the installation, plant or equipment is faulty and is currently inoperable or requiring maintenance or repair. This tag should only be removed by the person competent to ensure it is safely repaired or the person who initially put the tag on the equipment.

(13) Plant, Machinery and Equipment - for the purpose of this procedure plant, machinery and equipment is any piece of equipment that has a hazard that could be potential to cause harm to workers and will need to be controlled in some manner. Plant is defined in the Regulations to cover items such as lifts, cranes, pressure equipment, machinery, hoists, powered mobile plant, amusement structures, lasers, turbines, explosive-powered tools, scaffolds and temporary access equipment. In this procedure machinery and equipment covers other things found across VU not covered in the definition of plant.

Section 4 - Policy Statement

(14) Nil

Section 5 - Procedures

Part A - Roles/Responsibilities

Roles	Responsibility
Associate Director Facilities Management or Other Authorised Persons	- Responsible for the management of the work permit that includes isolation, lockout and tag-out. - Is an authorised person and will authorise other competent persons to isolate, lock-out and tag-out installations, plant and equipment. - Ensure all nominated authorised persons have been trained in this procedure. - Ensure that the person(s) doing the work are appropriately qualified or competent to do the work.

Roles	Responsibility
Manager /Supervisor of the area where activity is being conducted	- Identify all plant and equipment within the workplace for which Lock-out and Tag-out is applicable. - Arrange for repairs and/or maintenance of items of equipment or plant that are out of service. - Maintain records of lock-out/tag-out for all defective equipment from when it is isolated, locked out or tagged out to when it is returned to service by ensuring the Lock-out/Tag-out register is completed. - Obtain a copy of the JSA/SWMS or equivalent, to ensure it has been completed based on the work to be done, as it applies to VU - inspect the work area prior to commencement of task. - Ensure the area and equipment is made safe before re-commencing work. - Ensure a work permit is provided to the person undertaking the work (the authorised person retains this when the work has been completed). - Periodically check that the work being completed is in accordance with the work permit and JSA/SWMS.
Person(s) completing the activity requiring isolating of equipment	- Complete a JSA/SWMS for the intended task (identifying hazards and determining appropriate controls). - Be licensed (where applicable), skilled, qualified and competent to perform the work, including the use of any PPE or rescue equipment. - Isolate the plant and equipment by affixing the necessary locks, completing the tags and ensuring signs are prominently displayed so that personnel are aware that the equipment is isolated/not in operation. - Complete the Lock-out/Tag-out register. - Adhere to the JSA/SWMS and permit to work requirements. - Ensure work area is safe prior to commencement of task and seek advice if in doubt or if circumstances change. - Communicate completion of work to VU contact or Authorised Person for sign off - Ensure equipment and area safe on completion of the task.
OHS Team	- Provide health and safety advice as required. - Audit compliance to procedure as part of audit plan.

Part B - Procedure

No.	Procedure step	Detail
1	Standard Operating Procedures(SOP's) and risk assessments are developed for isolation of plant and equipment undergoing maintenance, repair, installation, service and cleaning	An isolation procedure is a set of predetermined steps that should be followed where workers are required to perform tasks such as maintenance, repair, installation, service and cleaning of plant. Isolation procedures involve the isolation of all forms of potentially hazardous energy so that the plant does not move or start up accidently. The first step is to assess the risk and decide on the method for ensuring safety of the person working on the plant / machine. Low Risk - this is where there is minimal chance of the equipment being started remotely or there is limited risk from the re-energisation. Example a photocopier has limited moving parts and the service technician can see all parts of the equipment easily. Unplugging and Do not Use tag may be sufficient protection based on the risk. Medium to high risk - where there is a chance another person can turn on the plant equipment whilst still being worked on, work can take a couple of hours to complete and there are identified hazards that could result in harm. Steps 2-6 must be followed. Part of work permit or confined space permit - where isolation is required as part of a body of work deemed to be high risk, may have more than one trade working at the same time and work can take a period of time in that conditions may change. Steps 2-6 must be followed.

No.	Procedure step	Detail
2	Include safe lock-out process as part of Isolation procedures	The lock-out process is the most effective isolation procedure. The process is: - shut down machinery and equipment when any form of 'maintenance' work is being performed on it; - identify all energy sources and other hazards eg confined space entry, working at heights; - identify any potential contaminants that could result in engulfment within the workspace and ensure safe; - identify all isolation points; - isolate all energy sources; - de-energise all stored energy (including fluids/gases under pressure); - check that controls will take moving parts to a safe state or fix so that they are supported against gravity; - lock out all isolation points; - tag machinery controls, energy sources and other hazards, and - test by 'trying' to reactivate the plant without exposing the tester or others to risk (failure to reactivate the plant means that the isolation procedure is effective and that all stored energies have dissipated). - Where applicable, apply exclusion zones and/or restricted access. - Following an interruption in cleaning, servicing, repairing or alteration, the worker must confirm the energy source is still isolated and de-energised. - Complete Lock-out/tag-out register (pending) .
3	Suitable lock-out devices for each staff member involved in maintenance, cleaning and repair process.	In order to isolate plant use a device that effectively locks out the isolation points. These devices include switches with built in locks and lockout circuit breakers, fuses and valves. Other devices include chains, safety lock out jaws (also known as hasps) and safety padlocks. When isolating an energy source a lock that allows one or more padlocks to be fitted shall be used. If more than one person is working on the plant at the same time the local manager should ensure that each worker is able to attach a padlock to the device (see Figure 1 - Example of tag and lockout with the padlocks of two persons). This will prevent access to the energy sources while the work is being carried out. Each worker involved in the commissioning, maintenance, cleaning or repair of the plant shall have a personal lock, tag and key for each isolation point. Personal lock out tags shall be used as a means of providing information to others at the workplace. Contractors may provide their own equipment. Personal locks and tags shall only be removed by the owner of the lock and tag.
4a	De-isolate and removal of tag and lock-out device.	Locks and tags are only to be removed under the following conditions: a) The worker who put on the tag and lock has determined it is safe to de-isolate and return to service. b) There has been an appropriate handover from the worker to another worker and all personal lockout devices and danger tags have been replaced to identify the new worker.
4b	Where the worker cannot remove the lock-out device or cannot hand-over to another worker	All reasonable effort should be made to contact the worker who put the isolation padlock and tag on the plant/equipment. A verbal authorisation to remove the isolation lock and tag can be obtained from the worker if received by 2 people. If the worker is unable to be contacted then another suitably qualified and competent person must assess the status of the plant /equipment and ensure it is in a safe state to re-energise . This must be documented as a variation to the standard operating procedure and/ or work permit.
5	Complete lock-out, tagging register	A lock-out, tagging register of isolations exceeding 12 hours duration is established by the authorised person or VU contact, and closed out when the plant, equipment or installation is re-energised and returned to service.

No.	Procedure step	Detail
6	Testing or returning plant and equipment to service	The following must be observed: - Notify all personnel involved with the plant or equipment - Ensure all danger tags have been removed - Remove all padlocks - Any guards which have been removed should be replaced - Tools are removed from the area being worked on - Hazardous Waste materials are removed in accordance with prescribed waste legislation

Section 6 - Guidelines

(15) Nil

Section 7 - Template

(16) Lock-out /Tag-out Register (pending)

Section 8 - References

(17) This procedure is required to support the following:

a. Occupational Health and Safety Act 2004
b. Occupational Health and Safety Regulations 2017
c. Occupational Health and Safety Amendment Regulations 2014
d. Energy Safe Victoria, Code of Practice for safe electrical work: Low voltage electrical instructions
e. Health and Safety Policy

Section 9 - Supporting Documents

(18) The following documents have been referenced in this procedure:

a. Health and Safety - Permit to Work Procedure
b. Health and Safety - Electrical Safety Procedure
c. Health and Safety - Plant Management Procedure
d. Health and Safety - Contractor Classification Procedure
e. Health and Safety - Contractor Management Procedure - Facilities Department (Capital Planning)
f. Health and Safety - Contractor Management Procedure - Outsourcing Major Services
g. Health and Safety - Contractor Management Procedure - General Contractors

Status and Details

Status	Historic
Effective Date	24th August 2016
Review Date	24th April 2019
Approval Authority	Vice-Chancellor
Approval Date	17th August 2016
Expiry Date	5th August 2019
Accountable Officer	Lisa Line Deputy Vice-Chancellor Enterprise and Digital Lisa.Line@vu.edu.au
Responsible Officer	Stuart Hildyard Chief Digital Officer and Executive Director Campus Services +61 3 9919 5576
Enquiries Contact	Muhammad Nofal Senior Health and Safety Advisor +61 3 9919 5593 Workplace Relations and Safety