



Procedure: Isolation and danger tagging

Purpose

This procedure describes how simple isolation and tagging are managed at the Australian National University (ANU). This procedure ensures the legal and other obligations of the *Work Health and Safety Act 2011 (Cth)*, *Work Health and Safety Regulations 2011 (Cth)* are defined for managing the health and safety of all workers. This procedure is linked to the Australian National University's Work health and safety policy and is one of the Safe Work Procedures within the WHS Management System.

Definitions

Caution tape refers to yellow and black coloured plastic barrier tape used to create an exclusion zone around an identified hazard, preventing access to an area and indicates that a hazard is present as identified at all entry points by a Notice tag(s).

Commissioning tape refers to green and white coloured plastic tape used to create a demarcated exclusion zone around a hazard in which new plant or equipment is being installed and tested for operational use. The exclusion zone may only be entered with permission from the person in control as identified at all entry points by a Notice tag(s).

Commissioning refers to the process of installing, testing and modifying new equipment or plant in a local area. During the testing phase of commissioning, all equipment must be treated as live and having energy present, even it does not have the usual locks and tags. Special and unique work instructions and permits are required and the numbers of workers present are restricted to only essential workers for the commissioning period.

A **Competent Person** is a worker who has acquired through training, qualification, observation, experience, or a combination of these, the knowledge and skills, to carry out a particular task, including WHS knowledge and skills, qualifying that worker to perform the task required.

Complex Isolations refer to any isolation in which more than one isolation point is required to de-energise a system. For further detail refer to Table 1.

Control in this procedure refers to direct control of an energy source. A worker is in control of the energy source when the energy source has been physically disconnected and the energy source cannot be reconnected without the knowledge or actions of the worker.

A worker in control of the energy source is not required to use a Red Lock to isolate the energy, this is considered a low risk activity. For further detail refer to Table 1.

Danger Tape is coloured red and white and is used to form an exclusion zone around an identified immediate risk to the health and safety of people. An exclusion zone marked with Danger tape may only be entered with permission from the person who is in control as identified on the Notice tag(s) located at all entry points. For further detail refer to [Supporting document: Equipment used for isolations and demarcation <link to be provided>](#).

Energy Sources for this procedure refer to all types of energy (such as mechanical, chemical, electrical, hydraulic, radiation, thermal, gravitational, pneumatic, stored spring and kinetic energy systems) that have been identified as having the potential for uncontrolled or catastrophic release, which can damage property and cause injury or death within the isolation system.

Isolated refers to a disconnection between the worker and an energy source which has been physically locked to prevent the release of energy and the activation of the system. Each worker working on an isolated system is required to be competent in the isolation process and has placed a Red Personal lock at the isolation point for the system.

Isolation refers to the separation of hazardous plant and equipment from people, either by distance or by physical barrier according to the Hierarchy of Control Measures as described in the *Code of Practice Managing Risk in the workplace 2011* (Cth). This procedure focuses on the Isolation of energy sources with a physical barrier such as an isolation device, a Red Personal Lock and a Danger tag ([Supporting document: Equipment used for isolations and demarcation <link to be provided>](#)).

Isolation measures refers to the process of identifying, isolating all energy sources and verifying that no energy is present or can be released from workers for separate plant, equipment, and electrical installations.

For simple isolations, isolation measures are limited to:

- Red Personal locks, Danger tags, electrical lockout cases (buckets); and
- Multi-lock devices with a Yellow Group lock in complex isolations ([Supporting document: Equipment used for isolations and demarcation <link to be provided>](#)).

Maintenance refers to the scheduled activity to bring plant or equipment to a predetermined level of operability. Maintenance of plant includes statutory maintenance (required by outside authorities), preventative maintenance (recommended by manufacturers) and corrective maintenance (repair).

Multi-lock device refers to a device that allows multiple locks to be attached to the isolation device in complex or group isolations where more than one worker is working on an isolated system. The device cannot open if any personal locks are still locked to the device or if the Yellow Group lock remains locked. Multi-lock devices can be grouped together so that as many workers as required can work on a system. Every worker working on the system must attach and lock a Red Personal lock prior to work. For further detail refer to [Supporting document: Equipment used for isolations and demarcation <link to be provided>](#).

Non-routine refers to a maintenance operation other than considered normal operations for the item of plant being worked on. If tools are required to conduct the work or access the system or process, then the work is also considered non-routine.

For example, an electric toaster would normally be used to make toast. If the toast/bread becomes jammed in the toaster then a non-routine task would be performed to remove the toast and thus requiring the energy source to be isolated.

Notice Tag refers to a tag, made of cardboard or plastic, that is attached to an item of plant or equipment or to barrier tape (at the entrance to an exclusion zone) to indicate a WHS issue is present. The tag must clearly state the description of the notice, date, and name and signature of the author. Any worker may place a Notice tag at any time if there is a WHS concern. Discussion with a supervisor should immediately take place to alert management to the issue raised and cause a maintenance request to be issued. For further detail refer to [Supporting document: Equipment used for isolations and demarcation <link to be provided>](#).

Out of Service Tag (Maintenance) refers to a cardboard or plastic tag and is usually associated with a Yellow Group lock (complex isolations) that is utilised to indicate that the equipment, plant, or machinery presents a hazard and is being worked on by maintenance. The Out of Service tag is similar to a notice tag, however it is only attached by competent maintenance workers. It is a yellow and black tag with the words 'Caution Out of Service'. Only maintenance personnel, technicians or a supervisor may remove/attach the tag once the equipment is deemed safe following repair and testing.

Personalised 'Danger' tags are attached to an appropriate type of isolation device and should be accompanied by a Red Personal lock.

The Personal Danger tag has the same purpose and value as a Red Personal lock at the ANU. It is currently only used as a lock on an isolation device by persons who have not yet been trained and deemed competent in the use of a Red Personal lock. It may only be

removed by the worker who placed and signed the Personal Danger tag. All rules that apply to a Red Personal lock also apply to a Personal Danger tag.

Plant and Equipment is defined as any machinery, equipment or tool, or any component thereof ([Work Health and Safety Regulations 2011 \(Cth\)](#)). The University [Plant and equipment safety management procedure](#) provides more specific details.

Red Personal locks are personal danger locks issued to an individual following completion and competence in isolation training at the ANU. Red Personal locks should be individually marked with a unique identification number and only have two keys per lock.

Safe Work Procedures are written step by step instructions that are given to a worker so that they can carry out a task safely. They are required to be consulted, monitored and reviewed. All Safe Work Procedures are written after a hazard assessment has been completed for a routine task (done frequently) with involvement of the workers according to the University's [WHS hazard management procedure](#). For all work that is considered non-routine (done infrequently) a personal hazard assessment must be completed.

Simple Isolation refers to any isolation of a single point/energy source by a worker when the worker does not have complete control of the single energy source. For further detail refer to Table 1.

Yellow Locks or Group Locks are locks used by a maintenance group for isolations that are considered complex (more than one isolation point) and follow a very detailed and documented isolation plan. Each Yellow Group lock must have a completed Out of Service Tag attached. For further detail refer to [Supporting document: Equipment used for isolations and demarcation <link to be provided>](#).

Worker refers to anyone who carries out work for the University. A worker includes staff, volunteers, contractor, students and visitors at the University.

Procedure

Scope

1. The purpose of the University's Isolation and tagging procedure is to ensure that simple isolations occur and are correctly applied across the University. Correct isolation prevents inadvertent energisation of the system being worked on and injury to the worker or damage to plant and equipment.

2. This procedure establishes the minimum requirements to prevent exposure to hazards while performing maintenance and servicing activities on any plant and equipment. The intent is to prevent unexpected energising or start-up of plant or equipment or released of stored energy while any individual is undertaking installation, repair, adjustment, or maintenance of plant and equipment or their associated systems for all University locations.

3. This procedure has been developed by the University to ensure safe and consistent isolation and tagging procedures and practices are used within the University. It is a requirement that all workers follow this procedure. Local area management shall ensure that the hazard assessment process is completed and when appropriate, the isolation control measures are implemented.

4. Where numerous energy sources are present and more than one lock is required to isolate the system, then a complex isolation must be performed.

General responsibilities

College Dean, Research School or Service Division Director

5. It is the responsibility of the College Dean, Research School or Service Division Director to ensure that local procedures and work instructions are in place and understood for effective isolations when work is to be done involving a single energy source.

Workers

6. It is the responsibility of workers to isolate all energy sources prior to conducting any work on, or making any repairs to any plant or equipment at the University that they are personally working on.

7. It is the responsibility of all workers to conduct a hazard assessment prior to performing non-routine work on an item of plant and equipment.

8. All non-routine operations or maintenance or servicing of plant, equipment or systems with hazardous moving parts or any energy source(s), shall be made safe by workers prior to any work on the system where a worker may come into contact with the system or process. This can be done by either:

- being in control of the energy source (Low risk); or
- isolating the energy source with a Red Personal lock and Danger tag (Medium and High Risk)

9. It is the responsibility of all workers that when a hazard assessment determines that there is a moderate or greater severity rating to a worker's health then the isolation requirements of this procedure must be followed and includes a Red Personal lock and completed Danger tag. For those of a lesser severity then it will be necessary to have a safe work procedure or hazard assessment that includes full control of de-energised plant, equipment or system.

Isolation of energy sources (Lock, Tag, Try)

10. The lock-out process is the most effective isolation procedure. The process is as follows:

- shut down the machinery and equipment (involves all movement stopping);
- identify all energy sources and other hazards;
- identify all isolation points;
- isolate all energy sources;
- control or de-energise all stored energy;
- lock out all isolation points;
- tag machinery controls, energy sources and other hazards; and
- test by 'trying' or "verifying" 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. This may require further measures to safely release these energies, for example hydraulic or pneumatic pressure, suspended weight or compressed springs.

11. Note: Many isolations have failed due to improper verification where the isolating workers have isolated the wrong equipment or only one of the electrical sources i.e. Distributive Control Systems (DCS), can send a signal to start a motor and also need to be isolated. This is particularly dangerous in isolating parallel equipment and highlights the importance of the Isolation Plan and also of the Verification Step as required by legislation in the *WHS Regulations 2011 (Cth) and the Code of Practice Managing Risk of Plant in the Workplace, 2016 (Cth)*.

Isolation methods

Table 1: Methods of isolation

| Methods of isolation | |
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| <p>Complex Isolation refer to any isolation in which more than one isolation point is required to de-energise a system.</p> | <p>This requires an isolation plan be followed for each isolation point and a Yellow Group lock with a completed Out of Service tag will be located at each isolation point in the system by a trained and competent maintenance worker. A final Yellow Group Lock will be located on a multi-lock device, which is attached to a “Lock Box” containing all of the yellow lock keys used in the isolation. Every worker working on the system (including the worker group who have isolated the system with Yellow Group Locks) shall attach a Red Personal lock and completed Danger tag to the Multi-lock device locked to the lock box. When work on the system has been concluded at the end of shift, each worker removes their Red Personal lock before leaving the University. The Yellow Group Lock does not get removed from the multi-lock device and lockbox until the isolation is no longer required as work on the system has been completed.</p> |
| <p>Simple Isolation refers to any isolation of <u>a single point/energy source</u> by a worker when the worker does not have complete control of the single energy source.</p> | <p>Rules of Simple Isolation (Lock, Tag Try) include:</p> <p>A Red Personal lock (Lock Step) with a completed Danger tag (Tag Step), must be locked on to a <u>single point</u> to isolate an item of plant from an energy source while the worker works on the isolated system. These steps are required by law.</p> <p>An attempt to energize the system following isolation must be attempted (Try Step or Verification Step) and the energy verified as isolated prior to work commencing. This step is required by law.</p> <p>If more than one isolation point is required, then a complex</p> |

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| | <p>isolation shall be completed.</p> <p>If the simple isolation cannot be completed in that shift, then a complex isolation should be considered.</p> <p>In a complex isolation, a Red Personal lock and Danger tag would be attached to a <u>single isolation point</u> (Lock box) on a multi-lock device, to allow the worker to protect themselves. All of the Yellow Group Lock keys used in the complex isolation are locked inside the lock box (Supporting document: Equipment used for isolations and demarcation <link to be provided>), which is then locked by the multi-lock device and allows as many workers as necessary to lock onto the system.</p> <p>This allows the worker to work on the complex isolation and remove their Red Personal lock and Danger tag when their work has been completed.</p> |
| <p>In Control (No Red Personal Lock Required)</p> | <p>In most cases, the worker would unplug the energy source from the wall outlet. Thus isolating the energy, complete the work and then reenergise the energy source. The worker would be in control of the electrical plug at all times and stop any attempt by another worker to energise the plant or equipment. This is considered a low risk activity.</p> <p>A worker is in control of an energy source if the worker is able to:</p> <p>physically see the point where the energy source has been disconnected at all times; and</p> <p>physically prevent another worker from connecting the</p> |

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| | <p>energy (energising); or</p> <p>apply a Danger tag and isolate device to the sole connection to the energy source preventing re-energisation.</p> |
| <p>Not in Control (Red Personal lock required)</p> | <p>A maintenance worker needs to change the fluorescent tubes in an office and is competent to do so. The electrical switch room to isolate the electrical circuit for that office is in the same building, but the worker cannot see the isolation point and would not be able to stop another worker from flipping the electrical breaker back on, energising the system. Thus the worker is not in control and must isolate the energy source with a Red Personal lock, Danger tag and a circuit breaker isolation device in the switch room (Supporting document: Equipment used for isolations and demarcation <link to be provided>) before work could begin. An Electrical Maintenance Worker would have the only access to the Electrical Switch Room as these are locked at the University according to the Electrical safety management procedure and thus only competent electrical maintenance workers are able to complete this task.</p> |

Hazard assessment

12. The person in control of the activity shall ensure that prior to working on all plant, equipment or systems that a hazard assessment has been undertaken as described in the [WHS hazard management procedure](#).

13. If the hazard assessment determines that there is potential to harm the worker undertaking work on that plant, equipment or system, harming a worker utilising that plant, equipment, or system, or a bystander that can be potentially harmed by that plant, equipment or system or the energy contained within the system, then the requirements of this procedure apply.

14. Energy sources that need to be considered in a hazard assessment include, but are not limited to:

- electricity (mains, static, numerous source inputs like DCS);
- battery or capacitor banks;
- solar panels;
- fuels;
- heat or cold;
- steam;
- fluids or gases under pressure (water, air, steam or hydraulic oil);
- stored energy (compressed springs, clutches);
- gravity (objects falling from above, energy rising from below (steam));
- radiation;
- chemical (poisons, explosives); and
- biological.

15. For those low risk tasks where there is control of the energy source at all times, including work on tools, appliances, photocopiers, computers, shredders etc. the isolation involves ensuring that it is appropriately separated from the energy source (such as unplugged). If control is broken then other controls will be necessary. For example:

- A worker is working with a paper shredding machine which has become jammed. The worker is unable to reverse the shredder and the machine remains jammed unable to move the paper forward or backwards. Before the worker begins to manually remove the paper jam, a hazard assessment indicates a low risk. The worker must unplug the paper shredder from the outlet, thus isolating the item of plant from the power source.
- The worker should “Try” to switch the paper shredding machine on to verify that the energy source has been isolated before placing their hands in the shredder as there could be a backup battery supply that they are unaware of, or perhaps they have unplugged the wrong machine.

- The worker can then remove the paper manually. If at any point the worker must leave the jammed paper shredding machine, to attend another task, control has been lost and the machine shall be isolated according to this procedure.
- A worker is working on a table saw and must change the saw blade. The hazard assessment indicates with the electrical plug disconnected, a low risk remains. But line of sight to the electrical plug cannot be maintained at all times by the worker. Thus the worker is not in full control of the electrical plug at all times, a simple isolation must be completed and the electrical plug must be secured by the worker using an electrical plug isolating device (Supporting document: Equipment used for isolations and demarcation <link to be provided>) with a Red Personal lock and completed Danger tag.

Safe work procedures

16. The person in control of an activity shall ensure that prior to all work on plant, equipment or systems that a safe work procedure has been developed for all medium and high hazards as indicated in the [WHS hazard management procedure](#), approved and communicated to those undertaking work requiring isolations.

17. Safe work procedures that include isolation of equipment must include:

- the situation under which the simple isolation procedure is to be implemented;
- the identification of the isolation point;
- the means by which the isolation will be achieved;
- the means by which the isolation of the energy source is verified and by whom;
- the checks that are to be performed prior to the commencement of work;
- the competency requirements required to perform the work;
- any other special requirements for the isolation of the energy source(s) or re-energisation; and
- the required step(s) to de-isolate, generally this is done in the opposite order to isolation with the last de-isolated being the first isolated.

18. The supervisor in control of the activity is responsible for ensuring that isolations are carried out as per this procedure. Where an isolation is required, workers are responsible for completing the isolation and having the isolation(s) confirmed and verified (by a

supervisor or other) before commencing the activity. The confirmation and verification is to be completed by competent persons.

19. It is essential that an effective isolating control device is selected, that is suitable for the type of isolation identified in the hazard analysis (e.g. locking of operational switches, blanking off pipes utilising a blank flange or end cap, locking pins, locking access hatchways and electrical isolation switches).

20. Isolation devices and tags shall never be interfered with. Interfering or removing an isolation lock, danger tag or isolation device is a serious safety violation and is considered “serious misconduct” under the [Enterprise Agreement](#) and could result in termination of employment.

21. For isolations involving electricity, where it is not possible to isolate the electricity supply, it will be necessary to follow the [Electrical safety management procedure](#) for troubleshooting and live work.

22. When the activity is complete, each worker is to remove their Red Personal lock and Danger tag and re-energise the system if safe to do so.

Isolation Equipment

Refer to [Supporting document: Equipment used for isolations and demarcation <link to be provided>](#).

Red Personal locks

23. Attaching a personal lock is carried out by the owner of the Red Personal lock. The lock and their keys shall be issued to the worker only after they are considered competent at performing minor isolations following completion of the Simple Isolation (Red Lock) training for Personal Isolations. There are a number of conditions to comply with including:

- a worker shall only use their own Red Personal lock and never use another worker's lock or key;
- a Red Personal lock will only be issued to a worker following completion of simple Isolation training for personal Isolations;
- worker's shall not remove, damage or interfere with another worker's lock;
- the lock shall only be used for its intended purpose;
- only 2 keys are to be issued per lockset;
- when using a red lock, it shall have a completed Danger tag attached;

- the Red Personal lock shall not be left on an ongoing isolation. If the worker is not working on the system then the lock must be removed;
- a record of personal lock holders shall be maintained by the worker in control of the local area and available;
- contractors will follow their contracting company's isolation rules and procedures and the ANU simple and complex isolation procedures; and
- Red Personal locks may only be replaced following proof of loss or damage.).

De-isolating and removing Red Personal locks

24. The lock may only be removed under the following conditions:

- The worker who owns the Red Personal lock, has completed the required work;
- The worker who owns the Red Personal lock has completed work for the shift and is leaving the University grounds. This applies to personal locks on group isolations where the only lock remaining on the lockbox is the yellow group lock as all of the Red Personal locks have been removed at the end of the shift. The workers are no longer working on the system;
- 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 between working groups in accordance with the above points.

Cutting off Red Personal locks

25. If a Red Personal lock is left on an isolation, but the worker identified on the lock and Danger tag is no longer working on the isolation a very serious issue has been created. The first priority is to physically search the working area to confirm the worker has not been injured or trapped and to then confirm they have potentially left the workplace forgetting to remove their lock.

26. The worker must be contacted and return to the workplace to remove the lock if safe to do so. Potentially, disciplinary action could result.

27. If the Red Personal lock is left locked on to an ongoing isolation and the owner cannot be located or contacted, then the local area supervision will make a decision based on risk on leaving the isolation as is, or potentially cutting the lock off.

28. On a single point isolation with only one worker attaching a Red Personal lock and Tag, the supervisor may allow the lock to remain until the next day when the worker returns.

29. On a group isolation when a Red Personal lock is discovered to be left locked on to the Multi-lock device and work has ceased for the shift, no work is allowed to commence on the isolation system (possibly the entire work area) and no new workers are allowed to add their Red Personal locks until either the worker has been located or the worker is confirmed to be returning to remove their Red Personal lock.

30. A Red Personal lock will only be removed without the key (cut) following approval from the local area Dean/Director or General Manager and the Associate Director WEG. The following conditions must be met:

- confirmation that the owner of the Red lock is not injured or trapped anywhere in the workplace; and
- confirmation in person or over the phone with the owner of the Red lock that: they are not at work; they have forgotten to remove their Red Personal lock; they are unable to return to work to remove their Red Personal lock and that they have not left any hazards or energy sources to injure another worker;
- a hazard assessment must be completed prior to cutting a Red Personal lock ensuring that there is no risk to the worker who has left the lock on the system and to no other workers working in that area;
- the owner of the Red Personal lock has confirmed that they have lost the key to a lock, or the locking mechanism is not working with the key and it is safe to cut the lock off; and
- only if no other options are available agree to cut a Red Personal lock.

Danger tags

31. Danger tags shall be used with Red Personal locks unless it is not practicable to do so because of extreme environmental conditions. The tags are used when a worker is working on isolated plant, equipment or a system (complex isolations). As such each worker has to comply with the following:

- All workers working on the plant, equipment or system attach their own Personal Red lock and Danger tag when working on an isolated system;
- As each worker completes their task/s they are to remove only their Red Personal lock and Danger tag; and
- A competent worker has to confirm and verify that the plant, equipment or system is safe so that re-energisation can occur. The plant, equipment or system needs to be tested, confirmed and verified safe after re-energisation by a competent worker otherwise it is tagged and locked again until the faults are identified and corrected.

Notice tags

32. A Notice tag can be attached onto any plant, equipment or system by anyone who considers the machinery, plant or equipment to be unsafe or unserviceable. A Notice tag shall be fully completed and include:

- The worker attaching the tag and their contact details (supported by their signature and attachment date);
- A clear indication of the concern or why the machinery or equipment has been taken out of service or disconnected from an energy sources (e.g. by key or any other starting device removed or installed to effect inoperability); and
- The tag for electrical energised machinery or equipment should be placed onto the electrical cord adjacent to the electrical plug as a minimum and additional tags placed onto any other areas of the equipment if deemed required

33. Immediately following this action the worker completing the tag has the responsibility to notify the worker responsible for the plant, equipment or system and arrange for appropriate maintenance or repair and appropriate locking devices to prevent use.

34. The worker addressing the maintenance issue is able to remove a Notice tag that was written by another worker. The Maintenance worker can attach a completed Out of Service Tag with details of the issue and the Work Order number created to make the repair.

35. It is considered best practice for the maintenance worker to let the worker who issued the Notice tag, that the issue has been corrected and that the maintenance work order has been completed.

Out of Service tags (maintenance)

36. An Out of Service tag can be attached onto any plant, equipment or system by a competent maintenance worker who considers the machinery, plant or equipment to be unsafe or unserviceable. A Notice tag shall be fully completed and include:

- the maintenance worker attaching the tag and their contact details (supported by their signature and attachment date);
- a clear indication of the concern or why the machinery or equipment has been taken out of service or disconnected from an energy sources (e.g. by key or any other starting device removed or installed to effect inoperability).
- Ideally the work order number if known, that is being used to link the job.

37. Following completion of maintenance, maintenance workers will inspect and verify the safety of the plant, equipment or system. Maintenance workers will advise the worker/s who issued the Notice tag or raised the concern that the issue has been corrected and that the maintenance work order has been completed and that the item of plant, equipment or system is now safe to return to service. This will also be recorded with the work order number.

38. Out of Service tags will also be attached to each Yellow Group Lock at all isolation points of a complex isolation and on the final Yellow Group lock attached to a multi-lock device on a lock box containing the keys of each yellow lock used to isolate the system.

39. The key to the final Yellow Group lock on the lock box will be held by the maintenance planner who oversees and has responsibility for the Group lock process and has issued Isolation permits to the maintenance group according to the [Permit to work procedure](#).

40. Examples of appropriate use of Out of Service tags include:

- A valve on a hot water heating system that is normally in the open position has been closed to prevent leaking hot water and would be placed by the maintenance worker. It would have an Out of Service tag attached with the details of the issue and state that the valve is normally in the on position, but has been closed and the Maintenance Work Order that has been created to make repairs ([Supporting document: Equipment used for isolations and demarcation](#)).
- All of the isolation points in a system have been isolated according to the isolation plan. Each point will have a Yellow Group lock and a completed Out of Service tag and is part of a Group Isolation involving many isolation points (Complex isolation).

Caution barrier tape (yellow and black)

41. Yellow and black cautionary tape (Supporting document: Equipment used for isolations and demarcation <link to be provided>) is used at the University to:

- demarcate plant, equipment, systems or areas that have been risk assessed as low or medium. An area that has been circled in yellow and black caution tape tells the worker from a distance that there is a WHS hazard inside the caution tape;
- demarcate plant, equipment or systems that requires workers to be warned of identified hazards prior to entry of the demarcated zone. Demarcation tape must be marked with the word "CAUTION";
- a completed notice tag shall be attached to the tape at all the entry points of the demarcated exclusion zone to indicate the nature of the hazard and who is in control;
- workers requiring access must make sure they familiarise themselves with the hazards, assess the situation and providing it is safe to do so proceed into the demarcated zone;
- only those workers requiring to enter the demarcated zone created by the barrier tape should be present as the numbers of workers inside the demarcated zone should be kept to the minimum necessary; and
- contact with the Supervisor in control of the plant, equipment or system demarcated zone should be made as soon as possible following entry.

42. Yellow and black caution tape at the University could involve indicating hazards of:

- a broken pathway;
- bees swarming in the area;
- overhead tree branches falling down;
- magpie swooping;
- flooding danger; and/or
- high noise from demolition work.

Danger tape (red and white)

43. Red and white danger tape (Supporting document: Equipment used for isolations and demarcation <link to be provided>) is used at the University to create a demarcated exclusion zone and shall be used on plant, equipment or systems where there is an immediate medium or high risk threat to people, equipment and/or the environment to ensure no unauthorized workers enter the exclusion zone.
44. A completed notice tag shall be attached to the tape at all entry points to indicate the nature of the hazard, the requirements to enter and the Supervisor in control of the demarcated exclusion zone who will permit entry.
45. Permission to enter the demarcated exclusion zone is required and can only be granted by the Supervisor in control of the area.
46. Un-authorized People shall not enter or work within an area that is demarcated with Danger Tape for any reason. Even a work place inspector is not allowed to enter a demarcated exclusion zone with Danger tape without permission.
47. Breaching the barrier tape and the exclusion zone created can have serious WHS risks including injury and death.
48. Breaching a demarcated exclusion zone is equivalent to removing a workers Red Personal Lock and Tag and is strictly forbidden.
49. Red and white danger tape at the University could involve indicating hazards of:
- overhead work;
 - demolition;
 - construction;
 - horizontal boring; and
 - an exclusion zone created to preserve an incident until the scene is released by the workplace inspector.

Commissioning tape (green and white diagonal)

50. Green and white Commissioning tape (Supporting document: Equipment used for isolations and demarcation <link to be provided>) is used at the University when a local area is installing new plant and equipment and an exclusion zone is required to prevent any unauthorised workers from entering.

51. Green and white Commissioning tape is similar to Red and White Danger tape, but the commissioning indicates that new plant and equipment is being installed and is possibly live with exposed energy sources and other hazards present to allow for testing.
52. A completed Notice tag shall be attached at all entry points to indicate commissioning.
53. Only those people authorised by the worker in control of the plant, equipment or system may enter the commissioning zone.
54. Breaching the commissioning barrier tape and the exclusion zone created can have serious WHS risks including injury and death.
55. Green and white tape at the University could indicate hazards of:
- commissioning new lasers, processes or facilities;
 - non destructive testing involving radiation sources;
 - commissioning new equipment for research experiments; and
 - commissioning new process piping or electrical installations;

Security tape (blue and white diagonal)

56. Security tape is a type of isolation tape that is used by University security to isolate any site or area in response to a situation they have been called to attend.
57. The same rules apply to Security tape as to a red and white demarcated Danger exclusion zone in that no one may enter the area without the permission of University security.

Police exclusion zone tape (blue and white checkers)

58. Australian Federal Police (AFP) tape is a type of isolation tape that could be seen at the University, however it is controlled by the AFP in response to a situation or incident that they have been called to.
59. The same rules apply to Police tape as to a red and white demarcated Danger exclusion zone in that no one may enter without the permission of the AFP.
60. The University Security Staff will be present during an incident in which the AFP or Fire Services have responded and may assist establishing the demarcated exclusion zone according to the [Emergency response procedure](#).

Records

61. The local area is responsible to maintain a register of isolations required for the area. This register is to include only those isolations that are likely to require longer than one shift in length to complete. As a minimum, details should include plant or equipment identification number, time and date placed in isolation, time and date that the item is de-isolated, and the worker/s responsible for the isolation.

62. The worker responsible for the local area is to ensure that there is a register of competent people trained in isolations as per this procedure maintained within the Human Resources Management System (HRMS).

63. The local area is responsible for issuing Red Personal locks following the completion and competence of Isolation Training and maintaining records of the persons trained and a record of the locks issued.

Training and competency requirements

64. Personal Isolation training at the University is required for any worker performing a simple isolation as defined by this procedure.

65. Following completion and competence in Red Personal lock training each individual will be issued with a unique Red Personal lock and keys and a record of this will be kept by the local area.

Sources

| Legal and other requirements |
|---|
| <u>Work Health And Safety Act 2011 (Cth)</u> |
| <u>Work Health And Safety Regulations 2011 (Cth)</u> |
| <u>Safe Work Australia - Managing Risk of Plant in the Workplace – Code of Practice</u> |
| <u>National Self Insurer WHS Audit Tool (NAT CTH)</u> |
| AS/NZS 4836:2011 <u>Safe working on low voltage electrical installations</u> |

Document information

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|---------------------|--|
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