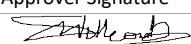




Isolation and Tagging Manual

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1 Purpose and Scope

The purpose of this Manual is to set out the requirements for conducting isolation, lockout and tagging processes to provide a safe system of work to protect people, equipment and the environment from potential hazards associated with uncontrolled damaging energy sources (including electrical, mechanical, hydraulic, pneumatic, thermal, gravitational, radiation and stored).

This Isolation and Tagging Manual provides the mandatory requirements to support implementation and conformance with Roy Hill Operations HSES Performance Standard 06 – Isolation of Equipment; and Performance Standard 10 – Working with Stored Energy.

This Manual applies to all persons entering Roy Hill operations, other workplaces or any area for which Roy Hill has accountability, unless approved by the Head of HSE or delegate.

1.1 Fundamental Principles

The Isolation and Tagging Manual is based on the following key concepts:

-) All potentially damaging energy sources shall be isolated and locked out before commencing work;
-) Only competent and authorised personnel shall perform isolations and de isolations;
-) No person shall commence work on isolated plant or equipment until they have applied their Personal Locks and Tags; and
-) Personal Locks and Tags shall only be removed by their owner.
-) Daisy chaining of hasps are not permitted under any circumstances.

1.2 Isolation Locks and Keys

Only locks described in this Roy Hill Isolation and Tagging Manual shall be used on any Roy Hill operations, other workplaces or any area for which Roy Hill has accountability, unless approved by the Head of HSE or delegate.


Locks and Tags shall be securely attached to Isolation Points by way of an Isolation Tool.

An Out of Service Tag or Commissioning and Testing Tag can be attached directly without the use of an Isolation Tool.

All care shall be taken to protect locks, tags and lockout mechanisms from damage.

Where a Lock or Tag is being removed from an Isolation Point, and a different Lock or Tag is being placed on the same Isolation Point, the method used shall be; place new before removing the old.

Table 1: Lock Use

Lock	Use
	<p>1.2.1 Personal Lock</p> <p>Personal Locks are for the protection of individuals working on plant and equipment where the inadvertent change in the state of the equipment may cause harm.</p> <p>Personal Locks shall be Red in colour and a maximum of six will be issued in a set.</p> <p>There shall only be one key that can operate a Personal Lock. If a Personal Lock is part of a set of keyed alike locks, then there shall only be one key for the set.</p> <p>Personal Locks shall be indelibly marked (e.g. engraved or stamped) with a unique identification that maybe traced back to the owner.</p>

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Lock	Use
	<p>1.2.2 Visitors Lock</p> <p>Visitor's locks are for the protection of individuals working on plant and equipment where the inadvertent change in the state of the equipment may cause harm.</p> <p>Visitor's locks shall be Red in colour and issued as a maximum of six locks in a set.</p> <p>Visitors locks shall be indelibly marked (e.g. engraved or stamped) with Visitor and a unique identification that may be traced back to the owner through the Visitors Lock Register.</p> <p>There shall only be one key that can operate a Visitors Lock. If a Visitor's Lock is part of a set of keyed alike locks, then there shall only be one key for that set.</p>
	<p>1.2.3 Personal Isolation Lock</p> <p>Lock placed by a Personal Isolation Officer to indicate that the Isolation Point has been secured in the appropriate state to isolate the equipment.</p> <p>Isolation locks shall be Orange in colour.</p> <p>All isolation locks shall be keyed alike.</p> <p>Keys only issued to Authorised Persons.</p>
	<p>1.2.4 Group Isolation Lock</p> <p>Lock placed by a Group Isolation Officer to indicate that the Isolation Point has been secured in the appropriate state to isolate the equipment. This lock is used during the group process to provide protection to a working party.</p> <p>Group Isolation Locks shall be Blue in colour.</p> <p>Group Isolation Locks shall be indelibly marked (e.g. engraved or stamped) with the Lockout Station Identification Number.</p> <p>The Manager or delegate shall nominate persons in the Department who will be responsible for all Group Isolation Locks, Keys, Lockout Stations and Lock Station Locks.</p> <p>There shall only be one key that can operate a set of Group Isolation Locks.</p> <p>No spare Group Isolation Lock Keys shall be kept for Group Isolation Lock sets that are in service.</p> <p>Keys only issued to Authorised Persons.</p>
	<p>1.2.5 Linking Locks</p> <p>Lock placed by a Permit Officer to the relevant Lock-out Station (LOS) to allow a Mobile Permit Board (MPB) to be linked to that LOS taken in to the field.</p> <p>The Group Isolation Linking Lock shall be White in Colour.</p> <p>To be used with a Group Isolation Tag</p> <p>Each lock shall be individually keyed and be indelibly marked (e.g. engraved or stamped) with a unique identification that can be traced back to the Permit Officer.</p>

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Lock	Use
	<p>1.2.6 High Voltage Lock</p> <p>Lock placed by an Authorised HV Operator to indicate that the Isolation Point has been secured in the appropriate state to isolate the High Voltage (HV) energy source.</p> <p>All HV Isolation Locks shall be Purple In colour.</p> <p>All HV Isolation Locks shall be keyed alike.</p> <p>HV Isolation Locks Shall be used for High Voltage Isolations only.</p> <p>Keys only issued to Authorised Persons.</p>
	<p>1.2.7 Lockout Station Lock</p> <p>Lock placed on the Group Isolation LOS and/or MPB by Authorised Persons to secure the Group Isolation Key and Locks during a Group Isolation.</p> <p>Lockout Station Locks shall be Green in colour and shall be indelibly marked (e.g. engraved or marked) with "LOS".</p> <p>All Isolation locks shall be keyed alike.</p>

1.3 Tags in Use

Only tags described in this Roy Hill Isolation and Tagging Manual shall be used on any Roy Hill operations, other workplaces or any area for which Roy Hill has accountability, unless approved by the Head of HSE or delegate.

Tags shall be securely attached to Isolation Points using the appropriate locks as per Table 1, except for an Out of Service Tag and Commissioning Tags which can be attached directly to the isolation point.

Table 2: Tags in Use




Tag	Use
	<p>1.3.1 Personal Tag (Disposable)</p> <p>This tag is placed by an Authorised Person to identify the individual who is working under an Isolation.</p> <p>This tag shall only be placed on a Personal Lock when authorised to work on the plant or equipment.</p> <p>Only the person named on the tag may remove it.</p> <p>Once removed the tag shall be destroyed (tag torn in half).</p> <p>All information on the tag shall be completed and legible.</p> <p>The Isolation Officer section of the tag is not required to be completed when used on a Group Isolation.</p>

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Tag	Use
	<p>1.3.2 Personal Tag (Permanent)</p> <p>This tag is placed by an Authorised Person to identify the individual who is working under an Isolation.</p> <p>This tag shall only be placed on a Personal Lock when authorised to work on the plant or equipment.</p> <p>Only the person named on the tag may remove it.</p> <p>A Permanent Personal Tag may be placed directly onto the Personal Lock via an approved chain when used on a Personal Isolation (HME only).</p> <p>A Permanent Personal Tag may be used when placing a Personal Lock onto a Group Isolation.</p> <p>Contractors are to use a Disposable Personal Tag unless approved by the Head of HSE or delegate.</p>
	<p>1.3.3 Isolation Officer Tag</p> <p>This tag is placed by an Authorised Isolation Officer to indicate that the Isolation Point has been secured in the appropriate state to isolate the equipment.</p> <p>This tag shall only be placed by an Authorised Isolation Officer in conjunction with an Isolation Lock.</p> <p>Only Authorised Isolation Officers may remove it.</p> <p>Once removed the tag shall be destroyed (tag torn in half).</p> <p>All information on the tag shall be completed and legible.</p>
	<p>1.3.4 Group Isolation Tag</p> <p>This tag is placed by an Authorised Group Isolation Officer to indicate that the Isolation Point has been secured in the appropriate state to isolate the equipment.</p> <p>This tag shall only be placed by an Authorised Group Isolation Officer in conjunction with a Group Isolation Lock.</p> <p>Only Authorised Group Isolation Officers may remove it.</p> <p>All used tags shall be stored with the relevant cancelled permit for auditing purposes.</p> <p>All information on the tag shall be completed and legible.</p>

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Tag	Use
	<p>1.3.5 Out of Service Tag</p> <p>Out of Service Tags can be placed on fixed plant or equipment that is faulty and dangerous which is to be kept out of service for operational reasons, and plant which has incomplete job(s).</p> <p>An Out of Service Tag shall NOT be used as a substitute for a Personal Isolation or a Group Isolation.</p> <p>All information on the tag shall be completed and legible.</p> <p>An Out of Service Tag may be placed on an Isolation Point or Control Point.</p> <p>Once removed the tag shall be destroyed (tag torn in half).</p>
	<p>1.3.6 Perforated Out of Service Tag</p> <p>Perforated Out of Service Tags can be placed on fixed plant or equipment that is faulty and dangerous which is to be kept out of service for operational reasons, and plant which has incomplete job(s).</p> <p>An Out of Service Tag shall NOT be used as a substitute for a Personal Isolation or a Group Isolation.</p> <p>A perforated Out of Service Tag may be placed on an isolation or control point.</p> <p>All information on the tag shall be completed and legible, including the perforated section which shall be detached and provided to the supervisor.</p> <p>Once removed the tag shall be destroyed (tag torn in half).</p>
	<p>1.3.7 Commissioning or Testing Tag</p> <p>This tag is placed by an Authorised Person to indicate that the equipment which it is attached to must not be altered by any person other than those involved in the commissioning or testing process.</p> <p>Commissioning or Testing Tags shall be placed on the Control Points by the personnel carrying out the Commissioning or Testing work.</p> <p>Only the Authorised Person named on the tag may remove it.</p> <p>Once removed the tag shall be destroyed (tag torn in half).</p>

1.4 Approved Isolation Plans

All designated systems, plant and equipment in a work area shall have approved Isolation Plans. Approved Isolation Plan template design shall be approved by the Head or General Manager of the work area. The Approved Isolation Plans must be version controlled and be stored in a secure data base to maintain integrity. The plans include;

-) Area Isolation Plans (AIPs)
-) Shut Specific Isolation Plans (SSIPs)
-) Task Specific Isolation Plans (TSIPs)

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Where new plant and equipment has been introduced to the workplace, appropriate change management procedures shall be followed to identify Isolation Points. The development of isolation plans shall require a documented field verification to validate the isolation points prior to the creation of Approved Isolation Plans.

The Isolation Plans shall define how the system, plant or equipment is made safe for maintenance activities. Where required, compliance to Original Equipment Manufacturer (OEM) maintenance procedures shall be incorporated into the isolation plans to ensure all plant and equipment damaging energies are controlled to the manufacturers' and Roy Hill requirements.

The Isolation Plans shall include, but not limited to, detail about decontamination, venting of stored energy, securing of rotors or fan blades, chocking of vehicles and disconnecting, blocking or bleeding of equipment, cables, pipes and vessels and any connections to distributed control systems.

Approved Isolation Plans shall only be developed by personnel who have been deemed competent and have intimate knowledge of the area and equipment to be isolated. These personnel shall be authorised by the Work Area Manager or delegate and recorded in their personnel files.

Approved Isolation Plans shall be made available to all authorised personnel required to perform isolations within a work area.

In situations where it is not practical to isolate and/or discharge all damaging energy sources, a Job Hazard Analysis (JHA) shall be conducted. The JHA shall be approved by the Work Area Superintendent or delegate.

2 Methods of Isolation

In line with the fundamental principles detailed in this Manual (1.1 Fundamental Principles), the following process shall be used.

2.1 Rules for HV Isolation

The High Voltage (HV) Isolation is based on the following concepts:

1. All potentially damaging energy sources shall be isolated before commencing work.
2. All High Voltage Switching shall be performed by an Appointed High Voltage Operator.
3. Only competent and authorised personnel shall perform isolations.
4. No person shall commence work on isolated High Voltage equipment until;
 - 4.1. They have applied their Personal Locks and Tags;
 - 4.2. They have read, understood and signed onto the JHA and are authorised to work with HV;
 - 4.3. They have read and understood the High Voltage Permit; and
 - 4.4. They have been witnessed by the High Voltage Permit Officer signing onto the High Voltage Permit.
5. Personal Locks and Tags shall only be removed by their owner.
6. Only competent and appointed personnel shall perform de-isolations.

Note: High Voltage is defined as Voltages \geq 1000VAC and 1500VDC.

Note: Refer to High Voltage Procedure OP-PRO-00129 for further requirements.

2.2 Rules for Personal Isolations

1. Personal isolations shall only be used where:

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- 1.1. There are six or less Isolation Points and there are six or less personnel working under the Personal Isolation; or
- 1.2. There are six or less Isolation Points and there are twelve or less persons working under the Personal Isolation on Heavy Mining Equipment (HME) or Rail Rolling Stock.
2. A Personal Isolation and a Group Isolation can be used in conjunction with each other for the same job, when managed under a JHA or Work Instruction (WIN).
3. Isolation Points for the nominated equipment shall be referenced from the approved WIN, Area or Task Specific Isolation Plans, which shall also support the steps to be taken to make and keep the work area safe.
4. Isolations and de-isolations for Personal Isolations shall only be carried out by Personal Isolation Officers/Group Isolation Officers authorised for that type of isolation and that equipment or area.
5. All personnel shall place a Personal Tag with a Personal Lock.
6. All personnel shall remove their Personal Locks and Tags when:
 - 6.1. Their work is complete;
 - 6.2. At the completion of their involvement with the task; or
 - 6.3. At the end of their shift.

2.3 Rules for Group Isolations

1. Group Isolations shall be used where:
 - 1.1. There are more than six Isolation Points;
 - 1.2. There are more than six personnel working under the isolation; or
 - 1.3. There are more than twelve personnel working under the Isolation on Heavy Mining Equipment (HME) or Rail Rolling Stock.
2. Group Isolations shall remain under the control of a Permit Officer and Permit Acceptor/Holder at all times. Group Isolation permits can be transferred by the Permit Acceptor/Holder. Only a Permit Officer can suspend or cancel a Group Isolation Permit, once field verification checks have occurred.
3. All personnel working under a Group Isolation shall apply their Personal Locks and Tags onto the Lockout Station or Mobile Permit Board (MPB) in the presence of the Permit Officer and Permit Acceptor/Holder prior to commencing work.
4. Isolation Points for the nominated equipment shall be referenced from the approved Area Isolation Plan. These Isolation Points shall also be marked up on the Group Isolation Permit.
5. When a MPB is required, a white linking lock shall be used to link the permit users to the required Lock Out station/s via a MPB. The MPB becomes the isolation point for all personnel who report to the Permit Acceptor/Holder in control of that MPB.
Note: All MPB Permit Acceptors/Holder must be trained and authorised by the Area Owner or delegate to accept/hold mobile permit boards.
6. Isolations and de-isolations for a Group Isolation shall only be carried out by Group Isolation Officers authorised for that type of isolation and that equipment or area.
7. A Group Isolation may have Isolation Points added or removed from the Group Isolation Permit after the Permit Officer has validated the Group Isolation. The comments and special conditions section on the reverse of the Group Isolation Permit shall be used to record all Isolation Points added or removed after the

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Group Isolation has been validated. All such entries shall be completed by the Permit Officer and have a date and time marked next to them and shall be approved by the Work Area Superintendent or delegate.

8. A Personal Isolation and a Group Isolation may be used in conjunction with each other for the same job, when managed under a JHA or WIN.
9. Multiple Group Isolation Permits may be used to create one single safe work area, providing they are cross-referenced on the reverse of the Group Isolation Permit in the comments and special conditions related to the Group Isolation. All such entries shall be completed by the Permit Officer and have a date and time marked next to them and this shall be approved by the Work Area Superintendent or delegate.
10. The reverse of the Group Isolation Permit shall be used to record all comments and special conditions related to the Group Isolation. All such entries shall have a name, date and time marked next to them and this shall be approved by the Work Area Superintendent or delegate.

2.4 Rules for Commissioning or Testing

1. The Commissioning or Testing Tag shall only be used in conjunction with a WIN or Risk Assessment.
2. A Commissioning or Testing Tag shall only be used when commissioning or testing work is to be carried out on equipment which requires an energy source to be energised.
3. Commissioning or Testing Tags shall be placed on the Control Points by all personnel carrying out the Commissioning or Testing work. When carrying out commissioning or testing, barricading shall be used as determined by a risk assessment to prevent entry of unauthorised personnel.
4. No person shall use a Commissioning or Testing Tag to carry out work other than commissioning or testing. The tag shall not be used as a substitute for a Personal Isolation or a Group Isolation.
5. No person shall remove another person's Commissioning or Testing Tag (except as allowed under the Missing Person Procedure - Section 3.2).
6. The person in charge of the Commissioning or Testing shall place their Commissioning or Testing Tag on all equipment control points as determined by the WIN or Risk Assessment.
7. No person shall operate or touch the controls for a piece of equipment, which has a Commissioning or Testing Tag attached to the Control Points, unless specifically directed to do so by the person conducting the test or by a person authorised by the WIN, Suspended Group Isolation Form or Risk Assessment.
8. Commissioning or Testing Tags shall not be placed on a piece of equipment for more than one task.
9. An Out of Service Tag shall be removed from the Isolation Points for the duration of the testing and commissioning.
10. At the completion of any commissioning or testing, the Commissioning or Testing Tag shall be removed and if the equipment is not available for service, a new Out of Service Tag is to be applied, advising the current status of the equipment. (Refer to Out of Service Tag Section 2.5).
11. No person shall leave site without first removing their Commissioning or Testing Tag.

2.4.1 Placing a Commissioning or Testing Tag

The Commissioning or Testing Tag is intended to prevent inadvertent operation or change in state of equipment undergoing commissioning or testing. A change in state may present a hazard to the person carrying out the commissioning or testing work.

If there is a need to place a Commissioning or Testing Tag, the employee shall first obtain permission from the Supervisors responsible for the equipment's operation prior to works.

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1. When an operator is to use the equipment controls, the operator shall receive a full explanation of the work as per the WIN or Risk Assessment and the method of communicating directions shall be agreed and tested.
2. Commissioning or Testing Tags shall be placed on the Control Points by the personnel carrying out the Commissioning or Testing work.
3. If the Commissioning or Testing is to continue over more than one shift, then the Commissioning and Testing Tag shall be removed and an Out of Service Tag placed prior to the end of that shift.

2.4.2 Removing a Commissioning or Testing Tag

1. When the commissioning or testing work is complete, the Commissioning or Testing Tag shall be removed and:
 - 1.1. Supervisors shall be notified the equipment is ready for service; or
 - 1.2. An Out of Service Tag shall be placed stating the status of the job; or
 - 1.3. A Personal Isolation or a Group Isolation Permit shall be raised and work continued.
2. Commissioning or Testing Tags shall only be removed by the person who has placed the tags.
3. Used Commissioning or Testing Tags shall be torn in half.

2.5 Rules for Out of Service Tags

Any Roy Hill inducted person may place an Out of Service Tag.

1. Out of Service Tags shall be placed on:
 - 1.1. Faulty and dangerous equipment;
 - 1.2. Equipment which is to be kept out of service for operational reasons; and/or
 - 1.3. Incomplete jobs.
2. An Out of Service Tag shall NOT be used as a substitute for a Personal Isolation or a Group Isolation.
3. Plant or Equipment, as stated on the Out of Service Tag, shall not be started or operated by any person other than an authorised person.
4. Prior to work being carried out, the appropriate Personal or Group Isolation process shall be followed.

2.5.1 Placing an Out of Service Tag

1. The Out of Service Tag shall be completed, indicating:
 - 1.1. Plant or Equipment to be taken out of service;
 - 1.2. Name of person who placed the tag;
 - 1.3. Department;
 - 1.4. Date when the tag was placed; and
 - 1.5. Reason for taking the equipment out of service.
2. All information on the Out of Service Tag shall be completed and legible. After placing the tag, notification shall be given to the relevant supervisor.
3. The supervisor responsible for the equipment shall request an Isolation Officer conduct a further review and if required conduct an isolation to prevent the equipment from being used.

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4. When an isolation is not required or is not practical, the Out of Service Tag shall be placed on the Control Point. On Mobile equipment, the Isolation point may be used as a control point for the purpose of placing the Out of Service tag directly on the Isolator.
5. The supervisor responsible for the plant or equipment shall arrange for repair or removal to be occur.

2.5.2 Removing an Out of Service Tag

1. The equipment shall be inspected and be deemed safe and serviceable before the Out of Service Tag is removed.
2. Out of Service Tags shall be removed by a person who has been given specific authorisation by their supervisor.
3. Used Out of Service Tags shall be destroyed by tearing the tag in half. The supervisor responsible for the plant or equipment shall be advised of the tag removal.

2.6 Heavy Mining Equipment (HME) Isolation Process

The following process shall be used by maintenance and operations staff within the HME operations and maintenance environment (see Appendix 2 – HME - Isolation Overview).

2.6.1 Personal Isolations

Each individual working on isolated equipment shall apply a Personal Lock and Tag to each Isolation Point. Only one Isolation Tool per Isolation Point is permitted.

1. A Personal Isolation shall only be raised by a Personal Isolation Officer with the relevant authority.
2. Isolation Points for the nominated equipment shall be identified in a written Area or Task Specific Isolation Plan.
3. To raise a Personal Isolation, the Personal Isolation Officer shall in order:
 - 3.1. Obtain approval from the supervisor responsible and/or ROC if applicable, for its operation to taken out of service;
 - 3.2. Isolate each Isolation Point in accordance with the Area or Task Specific Isolation Plans, using a Personal Isolation Lock;
 - 3.3. Verify the isolation at each Isolation Point by testing the circuit or by visual confirmation that the energy source is disconnected;

Note: Where verification by testing the circuit or by visual confirmation is not possible, then a risk assessment will be utilised to identify the risks and determine the controls for ensuring isolation of the energy sources.

- 3.4. Attach an Isolation Tool to each Isolation Point, allowing up to 12 personnel to work on the equipment and the correct Personal Lock and Tag; and
 - 3.5. Once all Isolation Points have been locked out with a Personal Isolation Lock and Isolation Officer Tag, perform a clear and trial step by clearing the area of personnel and try to operate the equipment to ensure that the equipment has been successfully isolated.
4. An Isolation Tool and Lock shall not be placed on an Isolation Point when the lockout mechanism is missing, damaged or not fully functional (refer to Section 3 Isolation Breaches).

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5. A Personal Isolation Officer who wishes to make use of an Isolation Point which already has an Isolation Lock and Tag applied shall be satisfied that the intended job will not adversely affect work already in progress, and shall contact the person responsible for the work in progress prior to proceeding.

2.6.2 Working Under a Personal Isolation

1. All persons who wish to work under the protection of a Personal Isolation shall place a Personal Lock and Tag on the Isolation tool provided at each Isolation Point prior to commencing work.
2. A Personal Isolation Officer may use an approved chain when placing their Permanent Personal Tag to their Personal Lock.
3. If the Personal Isolation Officer who raised the Personal Isolation is required to work under that isolation, then they shall also place a Personal Lock and Tag on each Isolation Point.
4. Where a task involves only the Personal Isolation Officer and is to be completed within the current shift, the Personal Isolation Officer may attach an Isolation tool and their Personal Lock and Permanent or Disposable Tag on the Isolation Point.
5. If the task then extends beyond the shift, or requires more than one person, then a Personal Isolation Officer shall place a Personal Isolation Lock and Isolation Officer Tag on the Isolation Tool.

2.6.3 Cancelling a Personal Isolation

1. A Personal Isolation shall only be cancelled by a Personal Isolation Officer with the relevant authority.
2. If the equipment is not safe or ready for de-isolation, the Personal Isolation Lock and Isolation Officer Tag shall be left in place and an Out of Service Tag shall be placed on the Isolation Tool at the Isolation Point (Refer to Out of Service Tag Section 2.5).
3. Upon completion of work, all persons who were working under the Personal Isolation shall remove their Personal Locks and Tags.
4. Provided all Personal Locks and Tags have been removed and the equipment is required to be de-isolated, an approved Personal Isolation Officer shall remove the Personal Isolation Locks and Isolation Officer Tags and perform the de-isolation.
5. If an appropriately authorised Personal Isolation Officer is unavailable for de-isolation, the Personal Lock Holder shall notify their supervisor that the equipment is ready for de-isolation.
6. The supervisor responsible for the equipment shall be advised either that the equipment is ready for de-isolation, de-isolated and ready for use, or that the equipment is not ready for use and an Out of Service Tag has been placed.

2.7 Processing and Port Operations Isolation Process

The following process shall be used by maintenance and operations staff within the Processing / Fixed Plant / Port operations and maintenance environment.

2.7.1 Personal Isolations

2.7.1.1 Raising Personal Isolations

1. Isolation Points for the nominated equipment shall be referenced from the approved Area or Task Specific Isolation Plans, which shall also support the steps to be taken to make and keep the work area safe.
2. Personal Isolations shall involve six or less personnel and or six or less Isolation Points.
3. To raise a Personal Isolation, the Personal Isolation Officer/Group Isolation Officer shall in order:

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- 3.1. Obtain approval from the supervisor responsible and/or ROC if applicable, for its operation to taken out of service;
- 3.2. Isolate each Isolation Point as referenced within the Area or Task Specific Isolation Plans, using a Personal Isolation Lock;
- 3.3. Verify the isolation at each Isolation Point by testing the circuit or by visual confirmation that the energy source is disconnected;

Note: Where verification by testing the circuit or by visual confirmation is not possible then a risk assessment will be utilised to identify the risks and determine the controls for ensuring isolation of the energy sources.

- 3.4. Attach an Isolation Tool to the Isolation Point and then place a Personal Isolation Lock and Isolation Officer Tag; and

Once all Isolation Points have been locked out with an Isolation Lock, perform a clear and trial step by clearing the area of personnel and try to operate the equipment to ensure that the equipment has been successfully isolated. The final clear and trial step must occur at the principal piece of equipment which will be worked upon. The plant/equipment must be placed into 'maintenance mode' at the local stop/start station (if applicable) which removes all interlocks. The Control Room Operator (CRO) must be called to advise of the final isolation check and a local start attempted to prove the plant/equipment is isolated.

4. The Personal Isolation Lock shall be the first lock applied and the last lock to be removed. Locks shall not be placed on an Isolation Point when the lockout mechanism is missing, damaged or not fully functional (refer to Section 3 Isolation Breaches).
5. A Personal Isolation Officer/Group Isolation Officer who wishes to make use of an Isolation Point which already has a Group Isolation Lock or an Isolation Lock applied shall be satisfied that the intended job will not adversely affect work already in progress, and shall contact the person responsible for the work in progress prior to proceeding.

2.7.1.2 Working Under a Personal Isolation

1. All persons who wish to work under the protection of a Personal Isolation shall place a Personal Lock and Tag on the Isolation tool provided at each Isolation Point prior to commencing work.
2. If the Personal Isolation Officer who raised the Personal Isolation is required to work under that isolation, then they shall also place a Personal Lock and Tag on each Isolation Point.
3. If the Personal Isolation Officer/Group Isolation Officer who performed the Personal Isolation is required to work under that isolation, then they shall also place a Personal Lock and Permanent or Disposable Tag on each Isolation Point.

2.7.1.3 Cancelling a Personal Isolation

1. A Personal Isolation shall only be cancelled by a Personal Isolation Officer/Group Isolation Officer with the relevant authority.
2. If the equipment is not safe or ready for de-isolation, the Personal Isolation Lock and Isolation Officer Tag shall be left in place and an Out of Service Tag shall be placed on the Isolation Point (Refer to Out of Service Tag Section 2.5)
3. Upon completion of work, the persons working under the Personal Isolation shall remove their Personal Locks and Tags.

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4. Provided all Personal Locks and Tags have been removed and the equipment is required to be de-isolated, an approved Personal Isolation Officer/Group Isolation Officer shall remove the Personal Isolation Locks and Isolation Officer Tags, and perform the de-isolation.
5. If an appropriately authorised Personal Isolation Officer/Group Isolation Officer is unavailable to de-Isolate for a Personal Lock Holder, the Personal Lock Holder shall notify their supervisor that the equipment is ready for de-isolation.
6. The supervisor responsible for the operation of the equipment shall be advised either that the equipment is ready for de-isolation, de-isolated and ready for use, or that the equipment is not ready for use and an Out of Service Tag has been placed.

2.7.2 Group Isolations

2.7.2.1 Raising Group Isolations

1. A Group Isolation shall only be raised by a Permit Officer in conjunction with a Group Isolation Officer.
2. Permit Officer shall not raise a Group Isolation unless they fully understand the work to be carried out under the Group Isolation and have full knowledge of the equipment being worked on.
3. When raising a Group isolation, the Permit Officer shall, in order:
 - 3.1. Ensure that the Group Isolation Permit is filled out indicating the reason for placing the isolation and the equipment to be isolated;
 - 3.2. Obtain approval from the supervisor responsible and/or ROC, if applicable, for its operation to take the equipment out of service;
 - 3.3. Select a Lockout Station with sufficient Group Isolation Locks, and note the Lockout Station identification number and department in the spaces provided on the Group Isolation Permit;
 - 3.4. Remove from the Lockout Station the quantity of Group Isolation Locks required for the permit, along with the Group Isolation Key, and lock the Lockout Station with a Lockout Station Lock; and
 - 3.5. Confirm with the Area Supervisor or their delegate that the Group Isolation Permit is ready to be taken into the field to start the group Isolation process.

2.7.2.2 Group Isolation Process

The Permit Officer and Group Isolation Officer **will NOT** verify the Isolation points together.

The Group Isolation Officer shall:

1. Attend each of the Isolation Points that they are authorised to isolate;
2. Verify that the plant or equipment on the Group Isolation Permit to be isolated is correct for the proposed job;
3. Isolate each Isolation Point as per the Group Isolation Permit, verify the isolation at each Isolation Point by testing the circuit or by visual confirmation that the energy source is disconnected;

Note: Where verification by testing the circuit or by visual confirmation is not possible, then a risk assessment will be utilised to identify the risks and determine the controls for ensuring isolation of the energy sources.

4. Print their name on the Group Isolation Tag;

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5. Attach an Isolation Tool to the Isolation Point and place the Group Isolation Lock and Tag;
6. Once all Isolation Points have been locked out with a Group Isolation Lock and Tag, perform a clear and trial step by clearing the area of personnel and try to operate the equipment to ensure that the work area has been successfully isolated; and
7. Repeat (steps 1 to 6) until all Isolation Points that they are authorised to isolate have been isolated

The Permit Officer shall:

1. Accompany the Group Isolation Officer to the isolation points and allow them to progress along the isolation plan;
2. Follow the Group Isolation Officers pathway and complete the Group Isolation Tag required for the Group Isolation with the Permit Officer's name and the date legibly written in the spaces provided;
3. Verify by visual inspection that the Group Isolation Officer has placed the Group Isolation Lock and Tag on an Isolation Tool at each Isolation Point as outlined in the Group Isolation Permit;
4. Verify by visual and verbal confirmation that the clear and trial step of the isolation was performed by the Group Isolation Officer for each point isolated and recorded on the Group Isolation Permit; and
5. Repeat steps 1 – 4 until all Isolation points have been isolated.

Once the Group Isolation Permit is completed, the Group Isolation Officer and Permit Officer must attend the principal piece of equipment and conduct the final clear and trial step. The plant/equipment must be placed into 'maintenance mode' at the local stop/start station (if applicable) which removes all interlocks. in 'maintenance mode.

If the Permit Officer and the Group Isolation Officer are unable to isolate all the equipment as listed in the 'Equipment To be Isolated' section of a Group Isolation Permit, the Permit Officer is to:

1. Initial each individual equipment isolated in the 'Equipment to be isolated' section of a Group Isolation Permit;
2. Document the Equipment Number of the equipment that has been isolated in the Comments and Special Instructions on the back of the Group Isolation Permit;
3. Complete the name, date, time section in the Comments and Special Instructions section on the back of the Group Isolation Permit; and
4. Handover the incomplete Group Isolation Permit to the oncoming Permit Officer to complete the isolation of the remainder of the equipment as listed in the 'Equipment to be Isolated' section, complete and validate the Group Isolation Permit.

The Group Isolation Officer shall accompany the Permit Officer to the Lockout Station where they shall:

1. Ensure the Permit Officer has crossed out any blank Isolation Points on the Group Isolation Permit;
2. Ensure the energy source as nominated on the Group Isolation Permit has been isolated;
3. The correct number of Group Isolation Locks and Tags for the Group Isolation Permit have been attached;
4. The Group Isolation Lock Key has been returned to the Lockout Station and the Lockout Station locked with the Lockout Station Lock; and
5. Print their name and sign onto the Group Isolation Permit relevant for their area of authority.
6. A Permit Officer and a Group Isolation Officer who want to place a Group Isolation Lock and Tag on an Isolation Point which has already been locked-out shall be satisfied that the intended job will not adversely

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affect the work already in progress, and shall contact the relevant Personal Isolation Officer or Permit Officer, Permit Acceptor/Holder prior to placing the new Group Isolation Lock and Tag.

7. Group Isolation Locks and Tags shall not be placed on an Isolation Point when the lockout mechanism is missing, damaged or not fully functional.

2.7.2.3 Working under a Group Isolation

1. All persons who wish to work under the protection of a Group Isolation Permit shall in order:
 - 1.1. Obtain the permission of the Permit Officer, Permit Acceptor/Holder to sign onto the Group Isolation Permit;
 - 1.2. Use a MPB when it is linked to a lockout station, the MPB is now the isolation point for all personnel who report to the Permit Acceptor/Holder in control of that MPB.
 - 1.3. Demonstrate to the Permit Officer, Permit Acceptor/Holder, a satisfactory understanding of the safe area of work covered by the Group Isolation Permit.
 - 1.4. Report to the Permit Officer, Permit Acceptor/Holder and must ensure they are signing onto the correct Group Isolation Permit or MPB. The Lockout Station number or MPB number on the top of the Group Isolation Permit must correspond with the actual Lockout Station number/MPB Number;
 - 1.5. Place their Personal Lock and Permanent or Disposable Personal Tag onto the Lockout Station and/or MPB and print their Personal Lock number, name, date and sign onto the Group Isolation Permit in the presence of Permit Officer, Permit Acceptor/Holder in control of the Permit;
 - 1.6. To assist in identifying separate workgroups that are locking onto a lockbox, supervised workgroups may apply an Isolation Tool to the Lockout Station allowing up to 12 personnel to work on the equipment. The workgroup Supervisor shall be the first to lock on and the last to unlock off the hasp;
 - 1.7. If more than one Group Isolation is in place for a job, personnel shall apply their Personal Locks and Tags to all relevant Lockout Stations and sign onto all relevant Group Isolation Permits; and
 - 1.8. All personnel shall sign off the Group Isolation Permits and remove their Personal Locks and Tags from the Lockout Station and MPB when their work is complete, at the completion of their involvement with the task or at the end of their shift.

2.7.2.4 Temporarily Suspending a Group Isolation for testing or inching

1. A Group Isolation Permit may only be suspended by an approved Permit Officer for a period of no more than 24 hours, in situations where the plant or equipment may need to be tested or inched, during maintenance work.
2. The Permit Officer, Permit Acceptor/Holder shall verify all Personal Locks and Tags have been removed from the Lockout Station and confirm all signatures in the sign-on column have a corresponding signature in the sign-off column.
3. If a Permit Acceptor/Holder has control of the Group Isolation Permit, they shall transfer the Group Isolation Permit to the Permit Officer in the presence of the Permit Officer by writing:
 - 3.1. The date and signing their name in the 'Transfer of Permit' section of the Group Isolation Permit.
4. The Permit Officer shall:
 - 4.1. Write their name and sign in the 'Transfer of Permit' section of the Group Isolation Permit to take control of the Group Isolation Permit; and

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- 4.2. Write the date, their name, sign and the reason for suspending the Group Isolation Permit on the 'Testing/Inching-Temporarily Suspended' section of the Group Isolation Permit to suspend the Group Isolation Permit.
5. The Permit Officer shall remove the Lockout Station lock and then remove the Group Isolation Key from the Lockout Station.
6. The Lockout Station shall be locked again with the Lockout Station Lock and the Group Isolation Permit shall remain with the Permit Officer.
7. The Permit Officer shall obtain a Suspended Group Isolation Form.
8. The Permit Officer shall enter the Permit number and the Lockout Station number onto the Suspended Group Isolation Form.

Note: The Group Isolation Permit and the Suspended Group Isolation Form shall be with the Permit Officer at all times.

9. Permit Officer shall accompany the Group Isolation Officer and the supervisor nominated for the work area to the Isolation Point that are required to be de-isolated and complete the section 1 of the Suspended Group Isolation Form filling in:
 - 9.1. Their name;
 - 9.2. Signature;
 - 9.3. Date; and
 - 9.4. Reason for suspension of the Group Isolation Permit.
10. The Permit Officer shall witness the Group Isolation Officer remove the Group Isolation Locks, Tags and Isolation Tools from all required Isolation Points.
11. The Permit Officer shall then write in section 2 of the Suspended Group Isolation Form:
 - 11.1. The equipment number;
 - 11.2. The status of the equipment before de-isolating; and
 - 11.3. Confirmation that the Group Isolation Locks, Tags and Isolation Tools have been removed.
12. The Group Isolation Officer shall ensure the correct Group Isolation Locks, Tags and Isolation Tools have been removed.
13. The supervisor nominated for the work area shall confirm the equipment is safe and ready to de-isolate by:
 - 13.1. Signing the Suspended Group Isolation Form confirming the equipment can now be de-isolated.
14. The Group Isolation Officer shall de-isolate the equipment as stated in section 2 of the Suspended Group Isolation Form and write the following:
 - 14.1. The date and time; and
 - 14.2. Group Isolation Officer initials.
15. The Permit Officer shall initial section 2 of the Suspended Group Isolation Form to acknowledge he has witnessed the de-isolations.
16. The supervisor nominated for the work area shall attach the Commissioning or Testing Tags to each of the energised Isolation Points stated on the Suspended Group Isolation Form.
17. The supervisor nominated for the work area shall write the following information in section 3 of the Suspended Group Isolation Form:

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- 17.1. The equipment number;
 - 17.2. The status of the equipment;
 - 17.3. Commissioning or Testing Tags placed; and
 - 17.4. Sign their name.
18. The Permit Officer and Group Isolation Officer shall return to the Lockout Station and:
- 18.1. Place the de-isolated Group Isolation Locks, Tags and Group Isolation Key inside the Lockout Station;
 - 18.2. Write their names and sign in section 4 of the Suspended Group Isolation Form to state that the Group Isolation Locks, Tags and Group Isolation Key have been returned to the Lockout Station.
19. The Permit Officer shall place the Group Isolation Permit and the Suspended Group Isolation Form in the Lockout Station. The Lockout Station shall then be locked with a Lockout Station Lock.
20. The Permit Officer shall place a "Commissioning or Testing in Progress" sign on the front of the Lockout Station.

2.7.2.5 Reinstating a Temporarily Suspended Group Isolation for testing or inching

1. A Group Isolation Permit may only be reinstated by a Permit Officer when the testing or inching has been completed.
2. The nominated Work Area Supervisor shall inform the Permit Officer that the Group Isolation Permit is ready to be re-instated.
3. To reinstate a Group Isolation Permit, the Permit Officer shall unlock the Lockout Station lock and remove the Group Isolation Permit, Suspended Group Isolation Form the Group Isolation Key, Locks and Tags as stated on the Suspended Group Isolation Form.
4. The Permit Officer shall accompany the Group Isolation Officer and nominated supervisor to each of the Isolation Points stated on the Suspended Group Isolation Form.
5. The Permit Officer shall witness the nominated supervisor remove the Commissioning or Testing Tags and shall complete section 5 of the Suspended Group Isolation Form and write the following:
 - 5.1. Equipment number; and
 - 5.2. Commissioning or Testing Tags removed.
6. The Permit Officer shall witness the Group Isolation Officer perform the isolations and record the status of the plant or equipment once isolated in section 5 of the Suspended Group Isolation Form.
7. The Group Isolation Officer shall place a Group Isolation Lock, Tag and Isolation Tool on the Isolation Points.
8. The Permit Officer shall complete section 5 of the Suspended Group Isolation Form and write the following;
 - 8.1. Group Isolation Lock, Tag and Isolation Tool placed.
9. The Permit Officer shall witness the Group Isolation Officer perform a clear and trial step.
10. The Permit Officer and the Group Isolation Officer shall initial section 5 of the Suspended Group Isolation Form to ensure that the clear and trial has been performed.
11. Repeat steps 5 to 9 until all Commissioning or Testing Tags have been removed and all Isolation Points have been isolated.
12. The Permit Officer, Group Isolation Officer and the nominated supervisor shall sign section 6 of the Suspended Group Isolation Form to confirm all equipment has now been reinstated to the correct isolated position.

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13. The Permit Officer and Group Isolation Officer shall return to the Lockout Station and:
 - 13.1. Remove the “Commissioning or Testing in Progress” sign from the front of the Lockout Station;
 - 13.2. Replace the Group Isolation Key inside the relevant Lockout Station and ensure it is locked using the Lockout Station Lock;
 - 13.3. Ensure all Locks in the Lockout Station correspond to the Group Isolation Permit; and
 - 13.4. Ensure the Group Isolation Key is placed inside the Lockout Station.
14. The Permit Officer shall sign and date the ‘Testing/Inching Temporary Suspend’ section of the Group Isolation Permit to revalidate the Group Isolation Permit and attach the Suspended Group Isolation Form to the Group Isolation Permit.
15. The Group Isolation Permit can be placed onto the Lockout Station ready for personnel to place their Personal Locks and Tags.

2.7.2.6 Transferring a Group Isolation Permit

Group Isolation Permits shall only be transferred and accepted by a Permit Officer, Permit Acceptor/Holder. No Permit Officer, Permit Acceptor/Holder shall accept a Group Isolation Permit unless they fully understand the work to be carried out under the Group Isolation Permit and have full knowledge of the equipment being worked on.

All current or outstanding information shall be transferred to each subsequent permit.

1. New Permit Officer, Permit Acceptor/Holder Present:
 - 1.1. The current Permit Officer, Permit Acceptor/Holder shall verbally advise the new Permit Officer, Permit Acceptor/Holder about all the special conditions that apply to the Group Isolation Permit;
 - 1.2. The current Permit Officer, Permit Acceptor/Holder shall sign the Group Isolation Permit in the transfer section, to relinquish control of the Group Isolation Permit; and
 - 1.3. The new Permit Officer, Permit Acceptor/Holder shall print their name and shall sign the Group Isolation Permit to accept responsibility.

Note: Personnel are NOT required to sign off or remove their Personal Lock and Tag during this process.

2. New Permit Officer Not Present:
 - 2.1. The current Permit Officer shall ensure that all personnel sign off the Group Isolation Permit and remove their Personal Locks and Tags; and
 - 2.2. The current Permit Officer shall comment on the back of the Group Isolation permit about any special conditions to the Group Isolation Permit at that time.

Note: The Work Area Superintendent or delegate must approve any additional comments or Comments and Special Instructions to be added to the Group Isolation Permit.

3. The current Permit Officer shall date and sign the transfer section of the Group Isolation Permit to relinquish responsibility for the Permit.
4. The current Permit Officer shall place the Group Isolation Permit inside the Lockout Station and shall re-lock the Lockout Station using the Lockout Station Lock.
5. Upon re-commencement of the job, a new Permit Officer shall remove the Group Isolation Permit from the Lockout Station and shall ensure that the following:
 - 5.1. The number on the Group Isolation Permit corresponds to the Lockout Station number;

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- 5.2. The Group Isolation Key and correct number of locks are in the Lockout Station; and
- 5.3. The Lockout Station shall then be locked using the Lockout Station Lock.

Note: The Group Isolation Permit can now be reinstated by the Permit Officer.

6. The new Permit Officer, Permit Acceptor/Holder shall read all special conditions on the back of the Group Isolation Permit and print their name and sign in the transfer section of the Group Isolation Permit.
7. The Group Isolation Permit shall then be placed on the front of the Lockout Station ready for personnel to place their Personal Locks and Personal Tags and sign on.

2.7.2.7 Cancelling a Group Isolation

1. The Permit Officer shall ensure all Personal Locks and Tags have been removed from the Lockout Station and inspect the Group Isolation Permit to confirm all signatures in the sign-on column have a corresponding signature in the sign-off column.
2. The Permit Officer shall establish that all nominated plant or equipment on the Group Isolation Permit is ready for de-isolation.
3. The Permit Officer shall remove the Group Isolation Key and the Group Isolation Permit from the Lockout Station. The Lockout Station shall be locked with the Lockout Station Lock.
4. The Group Isolation Officer can now use the Group Isolation Key to de-isolate the isolation points associated with the Permit and Area or Task Specific Isolation Plan.

Note: A Permit Officer is not required to witness the Group Isolation Officer perform the de-isolation of each isolation point.

5. When the plant or equipment is not ready for de-isolation, the Group Isolation Officer shall ensure that an Out of Service Tag is placed at each Isolation Point prior to removal of the Group Isolation Lock and Group Isolation Tag.

Note: An Out of Service Tag is not required when the work is to continue on the equipment using another Group Isolation Permit provided the other Group Isolation Lock is already in place.

6. The Group Isolation Officer shall remove the Group Isolation Lock and Tag.
7. The Group Isolation Officer shall confirm the correct Group Isolation Lock and Group Tag have been removed and provided no locks or tags remain, the Group Isolation Officer shall de-Isolate the nominated equipment.
8. Steps 4 - 7 shall be repeated until all Isolation Points on the Group Isolation Permit are de-isolated or tagged out of service.
9. The Group Isolation Officer shall tick the Group Isolation Permit to acknowledge the placement of Out of Service Tags if attached.
10. The Group Isolation Officer shall return to the Lockout Station and shall replace all the Group Isolation Locks and Key inside the Lockout Station. The Lockout Station shall then be locked with a Lockout Station Lock.
11. The Permit Officer shall tick the Group Isolation Permit to acknowledge all Group Isolation Locks have been placed back into the Lockout Station with the Group Isolation Key.
12. The Group Isolation Officer shall sign the Group Isolation Permit to acknowledge that all nominated equipment has been de-isolated, or remains isolated for other work, or Out of Service Tags have been placed, and that all the Group Isolation Locks and the Group Isolation Key have been returned to the Lockout Station.

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13. The Permit Officer shall cancel the Group Isolation Permit by signing the cancellation box on the Group Isolation Permit.

14. The Group Isolation Permit and shall be retained for a minimum of 5 years.

2.7.2.8 Managing Group Isolation Permits

1. Group Isolation Permits shall be controlled by a Permit Officer, Permit Acceptor/Holder.
2. A Permit Officer controlling a Group Isolation Permit may use a Permit Acceptor/Holder to:

- 2.1. Ensure personnel sign on to the correct Group Isolation Permit; and/or
- 2.2. Check the sign off from personnel prior to cancelling a Group Isolation Permit.

3. The Permit Officer, Permit Acceptor/Holder in control of the Group Isolation Permit shall:

- 3.1. Explain the safe area of work to persons wishing to sign onto the Group Isolation Permit and check their understanding of the work;
- 3.2. Check that the work to be performed by persons signing onto the Group Isolation Permit is covered by the isolations; and
- 3.3. Witness when a person attaches their Personal Lock and Personal Tag to the Lockout Station and signs onto the Group Isolation Permit.

2.7.2.9 Sign On/Off Section Becomes Full

1. The Permit Officer, Permit Acceptor/Holder shall prepare an Additional Group Isolation Sign On and Transfer Permit listing the Group Isolation Permit Number and the Lockout Station number and department.
2. The Permit Officer, Permit Acceptor/Holder shall place a comment on the back of the Group Isolation Permit. The comment shall read: "Sign On section of Group Isolation Permit is full. Additional Group Isolation Sign On and Transfer Permit attached".
3. The Permit Officer, Permit Acceptor/Holder shall securely attach the Additional Group Isolation Sign On and Transfer Permit to the Group Isolation Permit.
4. The Additional Group Isolation Sign On and Transfer Permit shall be attached to the Lockout Station with the original Group Isolation Permit ready for personnel to place their Personal Isolation Locks, Personal Isolation Tags and sign on.
5. All additional personnel who wish to work on the job shall place their Personal Lock and Personal Tag on the Lockout Station and sign onto the Additional Group Isolation and Sign On Transfer Permit.
6. Both the Group Isolation Permit and the Additional Group Isolation Sign On and Transfer Permit shall be treated as a single permit.

2.7.2.10 Transfer Section Becomes Full

1. The Permit Officer, Permit Acceptor/Holder shall prepare an Additional Group Isolation Sign On and Transfer Permit listing the Group Isolation Permit number and the Lockout Station number and department.
2. The Permit Officer, Permit Acceptor/Holder shall place a comment on the back of the Group Isolation Permit. The comment shall read: "Transfer section of Permit is full. Additional Group Isolation Sign On and Transfer Permit attached".
3. The Permit Officer, Permit Acceptor/Holder shall securely attach the Additional Group Isolation Sign On and Transfer Permit to the Group Isolation Permit.
4. Both the Group Isolation Permit and the Additional Group Isolation Sign On and Transfer Permit shall be attached to the Lockout Station.

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5. All additional personnel who are to work on the job shall place their Personal Lock and Tag on the Lockout Station and sign onto the new Group Isolation Permit.
6. Both the Group Isolation Permit and the Additional Group Isolation Sign On and Transfer Permit shall be treated as a single Permit.

2.7.2.11 Non-Continuous Jobs

1. When a job is not to be continued in the next shift, but will be continued later, the Permit Officer shall either:
 - 1.1. Cancel the Group Isolation Permit; or
 - 1.2. Leave the Group Isolation Permit in place and follow Section 2.7.2.5 in the Isolation and Tagging Manual.

2.7.3 Mobile Permit Boards

1. When operational and/or maintenance requirements dictate the requirement for a MPB, the Permit Officer will be responsible for arranging the MPB which will be used remotely.
2. The Permit Officer shall create the Group Isolation Permit to be applied to the MPB.

“ATTENTION”

A MECHANICAL ISOLATION OFFICER AND A PERMIT OFFICER/CO-ORDINATOR MAY BE THE SAME PERSON ***ONLY*** WHEN A MPB IS REQUIRED AND USED REMOTELY. THE MPB SHALL BE TREATED AS A MECHANICAL ISOLATION AND THE ASSOCIATED GROUP ISOLATION PERMITS SHALL BE SIGNED OFF IN THE MECHANICAL ISOLATION SECTION TO CONFIRM ALL ISOLATIONS ARE IN PLACE AND IT IS SAFE TO START WORK.

3. The Permit Officer shall attach a White Linking Lock and Group Isolation Tag to the relevant Lock Out Station.
4. The Permit Officer shall place the White Linking Lock Key into the receptacle on the corresponding MPB.
5. The Permit Officer shall secure the MPB with a Green Lock out station lock.
6. The Permit Officer will ***now complete MPB Group Isolation Permit as the Mechanical Isolation Officer*** (top right corner of the Group Isolation Permit) to confirm all isolations are in place before the MPB is transferred for field use. ***ONLY for the MPBs, may the Mechanical Isolation Officer and Permit Officer be the same person.***
7. The authorised Permit Officer must then sign the permit for the MPB and transfer it to the Permit Acceptor/Holder to take control of the MPB.
8. The Permit Acceptor/Holder must have an approved JHA as part of their work pack and demonstrate an understanding of the scope of work and risk controls.
9. The Permit Acceptor/Holder signs and attaches their Personal Lock and Personal Danger Tag onto the MPB in the presence of the Coordinator Permit/Permit Officer.
10. The Permit Acceptor/Holder takes the MPB into the field.
11. The Permit Acceptor/Holder is now responsible for overseeing the Work Group applying their Personal Lock and Personal Danger Tags to the MPB and signing on/off the permit, whilst still maintaining the integrity of the Permit to Work and Isolation systems.

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12. At the end of the shift, the Permit Acceptor/Holder will ensure the Work Group remove their Personal Lock and Personal Danger Tag and signs off the permit. If the work is completed, the Permit Acceptor/Holder returns the MPB to the Permit Hut and engages with the Permit Officer, who will arrange for the removal of the White Linking Lock/s from the Lock Out Station/s and then cancels the Permit.
13. If work is to continue across shifts (day shift/night shift), the MPB Permit Acceptor/Holder transfers the Permit to the incoming Permit Acceptor/Holder, by signing off and completing the 'Transfer of Permit' section. The incoming Permit Acceptor/Holder signs on the Group Isolation Permit transfer section then applies their Personal Lock and Personal Danger Tag.
14. When the task is completed, all workgroup team members locked on to the MPB shall remove their Personal Locks and Personal Danger Tags and sign off the permit, then the Permit Acceptor/Holder shall return the MPB to the Coordinator Permit/Permit Officer in Permit Hut.
15. The Permit Acceptor/Holder engages with the Permit Officer, who will remove the Green Lock Out Station Lock from the MPB and remove the White Linking Lock Key from the receptacle and gives it to the Mechanical Isolation Officer/Permit Officer. **ONLY for the MPBs, may the Mechanical Isolation Officer and Permit Officer be the same person.**
16. The Permit Officer, acting as the Mechanical Isolation Officer, can now use the key to remove the White Linking Lock and Group Isolation Tag from the relevant Lock Out Station and signs off the Permit on the MPB.
17. The Permit Officer may now cancel the Permit and return the linking lock/s and MPB/s to their storage locations.

2.7.4 Mobile Permit Board – Change of scope

1. If there are any changes to the scope of work, the workgroup **must stop the task** and remove their Personal Locks and Personal Danger Tags and sign off the permit associated with the MPBs.
2. The Permit Acceptor/Holder shall return to the Permit Office to seek instructions from the Permit Officer as defined in section 3.
3. If the revised scope of work is covered under the existing permit, the Permit Officer shall complete the 'Comments and Special Conditions' and allow the Permit Acceptor/Holder to return to work with their workgroup. The JHA Change Management section must be reviewed by the work group and approved before the task continues.
4. If the Permits current isolations **do not** cover the revised Scope of Work, the Permit cannot be modified and the permit shall be cancelled and a new Permit issued. A new JHA must be completed based upon the scope of work changes and approved by the work group.

2.8 Rail Rolling Stock Isolation Process

The following process shall be used by maintenance and operations staff within the Rail operations and maintenance environment. Personnel shall ensure that protection is implemented not only to secure the item of rolling stock on which work is being performed, but also to prevent any other rolling stock from encroaching on the work area and posing a danger. Rolling stock undergoing maintenance shall be immobilised from rollaway by applying the park brake and/or by using chocks as required (note that Roy Hill's rail cars feature spring applied automatic park brakes). In the event that the park brake or associated brake equipment is

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undergoing maintenance which renders it ineffective, chocks shall be applied as required to prevent movement of the rolling stock.

2.8.1 Isolation within the Rolling Stock Maintenance Facility

Areas where maintenance work is being undertaken within the rolling stock maintenance facility are protected through permanently installed manual derailleurs. Personnel undertaking maintenance activities within these areas shall ensure that the derailleurs are locked in the derail position and raise a personal isolation. Each individual involved in the work shall apply a Personal Lock and Personal Tag to each Isolation Point keeping the area safe. Only one Isolation Tool per Isolation Point is permitted.

1. The Road Isolation shall only be raised by a Personal Isolation Officer with the relevant authority.
2. Isolation Points for the nominated equipment shall be identified in a written Task Specific Isolation Plans, which shall outline the steps to be taken to make and keep the work area safe.
3. To raise a Road Isolation, the Personal Isolation Officer shall in order:
 - 3.1. Obtain approval from the supervisors responsible to take the rolling stock and road out of service;
 - 3.2. Isolate each item of rolling stock inside the derailleurs on the road to be isolated following the processes outlined in the Rolling Stock Isolation Procedure [OP-PRO-00322];
 - 3.3. Attach an Isolation Tool to each Isolation Point, allowing up to 12 personnel to work on the equipment;
 - 3.4. Isolate the derailer at either end of the road in accordance with the Task Specific Isolation Plan;
 - 3.5. Once all Isolation Points have been locked out with an Isolation Lock and Tag, perform a clear and trial step by clearing the area of personnel and try to operate the equipment to ensure that the equipment has been fully isolated; and
 - 3.6. Once the derailer at each end of the work area has been applied, a visual inspection must be undertaken to ensure it has positive contact with the rail head and will be effective.
4. Isolation Tools and Locks shall not be placed on an Isolation Point when the lockout mechanism is missing, damaged or not fully functional (refer to Section 3 Isolation Breaches).
5. A Personal Isolation Officer who wishes to make use of an Isolation Point which already has an Isolation Lock applied shall be satisfied that the intended job will not adversely affect work already in progress, and shall contact the person responsible for the work in progress prior to proceeding.
6. An Isolation Point which is found to be already isolated for the purpose of a task isolation, but not locked out must refer to Section 3 Isolation Breaches and be reported to the area supervisor or responsible persons.
7. In cases where multiple units of rolling stock are being maintained on one road, the Task Specific Isolation Plans for each track machine shall be in place and all personnel involved shall be required to lock onto all Isolation Points for the equipment on the road.

For any rolling stock to enter or leave the protected area, this will necessitate the removal of all Personal Locks and Personal Tags from the rolling stock located on the road requiring all personnel working on any rolling stock on the road in which the shunt movement is taking place, to clear the area until the movement is complete. After the movement is complete, all rolling stock within the protected area is isolated and protection of the road is restored, personnel must re-apply their Personal Locks and Personal Tags to continue working in that area.

Note: Personnel performing any work in the rolling stock maintenance facility within 3 metres of the centreline of a road must also ensure that the road is locked out and the Isolation and Tagging Manual is followed.

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2.8.2 Working Under a Road Isolation

1. All personnel who wish to work under the protection of a Road Isolation shall place a Personal Lock and Personal Tag on the Isolation Tools prior to commencing work.
2. If the Personal Isolation Officer who raised the Road Isolation is required to work under that isolation, then they shall also place a Personal Lock and Personal Tag onto the Isolation Tools prior to commencing work.
3. For all locomotive provisioning tasks undertaken on Road 12, the derailleurs are required to be applied, but personal isolation locks are not required as this is a provisioning task outside the profile of the rolling stock. Should maintenance activities be required within the profile, full isolation and lockout tasks are required.

2.8.3 Cancelling a Road Isolation

1. A Road Isolation shall only be cancelled by a Personal Isolation Officer with the relevant authority.
2. If any item of rolling stock within the isolation is not safe or ready for de-isolation, the Isolation Lock and Isolation Tag shall be left in place.
3. Upon completion of work, all persons who were working under the Road Isolation shall remove their Personal Locks and Tags.
4. Provided all Personal Locks and Personal Tags have been removed and the rolling stock is required to be de-isolated, an approved Personal Isolation Officer shall remove the Isolation Locks and Tags, and perform the de-isolation of the rolling stock and derailleurs as required.
5. If an appropriately authorised Personal Isolation Officer is unavailable for de-isolation, the Personal Lock Holder shall notify their Supervisor that the road is ready for de-isolation.
6. The supervisors responsible for the road shall be advised either that the rolling stock is ready for de-isolation, de-isolated and ready for use, or that the rolling stock is not ready for use and is still isolated.

2.8.4 Isolation on Other Areas of the Railway

Where personnel are required to work on rolling stock on other areas of the railway, the required protection against rolling stock movement as required by Roy Hill Rail Operations shall be employed. In this situation, personnel need to ensure not only that they are protected from other rolling stock impacting on their work area, but also against the train being subject to unauthorised movement. For further details, refer to Rail Rolling Stock Isolation Procedure [OP-PRO-00322].

3 Isolation Breaches

The following requirements have been developed to enable isolations to be safely cancelled in specific circumstances where the requirements detailed in Sections 2.7.1.2 Working under a Personal Isolations or Section 2.7.2.2 Working under a Group Isolation cannot be followed.

3.1 Isolation Breach Procedures

1. Suspected and actual breaches of the Isolation and Tagging Manual shall be reported to the area supervisor or responsible persons.
2. The person involved in or observing the suspected breach shall exercise their Duty of Care to ensure that the job is stopped and that safety issues are immediately attended to.
3. Reports of isolation breaches shall be made and monitored via the standard Incident Reporting System.

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4. Incidents reported via the Incident Reporting System shall be investigated in accordance with the Incident Investigation Specification [OP-SPC-00156].

3.2 Missing Person Procedure

1. This Procedures shall be used when a person cannot be found or has left the work site and has not:
 - 1.1. Removed their Personal Lock and Personal Tag from an Isolation Point; or
 - 1.2. Removed their Personal Lock and Personal Tag from the Lockout Station; or
 - 1.3. Signed off a Group Isolation Permit and any additional permits; or
 - 1.4. Removed their Commissioning or Testing Tag.
2. An attempt shall be made to locate the missing person first by checking the isolated equipment and general work area and then the missing person's home or quarters.
3. If found, the missing person shall return to the work site, if fit for work, and sign off the Group Isolation Permit, remove their Personal Locks and Personal Tags or Commissioning or Testing Tag.
4. When the person cannot be located, or is unable to return to work, an isolation breach advice shall be left at their home or quarters advising them that:
 - 4.1. An isolation breach has occurred;
 - 4.2. The isolation will be cancelled prior to them resuming work; and
 - 4.3. They are to report to their supervisor before commencing any work on their next shift.
5. The person requiring the isolation to be removed shall then contact the Registered Manager or General Manager/Head Of (or delegate) for the work area.
6. The Registered Manager or General Manager/Head Of (or delegate) for the work area, and the person requiring the isolation to be removed shall again thoroughly inspect the work area if the missing person has not been located.
7. When satisfied that the missing person is not in the area, the Registered Manager, General Manager/Head Of or delegate for the work area shall supervise the removal of the missing person's Personal Locks and Personal Tags.
8. The Group Isolation Permit shall then be cancelled in the normal manner when a Group Isolation Permit is involved. A notation shall be placed on the Group Isolation Permit to indicate that the Missing Person Procedure has been carried out.
9. The missing person shall be notified of the isolation cancellation immediately on return to work.
10. An Incident Report shall be completed.

3.3 Missing Permit Officer, Permit Acceptor/Holder

1. The Permit Officer, Permit Acceptor/Holder's Supervisor shall be notified.
2. An attempt shall be made to locate the Permit Officer, Permit Acceptor/Holder by visiting their home or quarters.
3. If found, the Permit Officer, Permit Acceptor/Holder shall return to site, if fit for work, and cancel or transfer the Group Isolation Permit.
4. When the Permit Officer, Permit Acceptor/Holder cannot be located, or is unable to return to work:

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- 4.1. The Permit Officer, Permit Acceptor/Holder's Supervisor shall obtain the services of a new Group Isolation Permit Officer;
- 4.2. The new Permit Officer and a Group Isolation Officer shall conduct a thorough inspection of the work area and equipment nominated on the Group Isolation Permit;
- 4.3. The Permit Officer shall make a notation in the transfer section of the Group Isolation Permit indicating that the inspection has been completed; and
- 4.4. The Permit Officer shall sign the Group Isolation Permit form to transfer the Group Isolation Permit.
5. The new Permit Officer shall sign to accept the Group Isolation Permit.
6. The new Permit Officer shall cancel the Group Isolation Permit or use the Group Isolation Permit to continue the job.
7. The missing Permit Officer, Permit Acceptor/Holder shall be informed of the transfer or cancellation immediately on returning to work.
8. An Incident Report shall be completed.

3.4 Lost Group Isolation Permit

1. The Permit Officer, Permit Acceptor/Holder shall immediately:
 - 1.1. Advise all personnel protected by the Group Isolation Permit that the Group Isolation Permit is lost and ensure all work associated with the lost Group Isolation Permit ceases;
 - 1.2. Ensure no new person shall commence work associated with the lost Group Isolation Permit;
 - 1.3. Conduct a thorough search of the Lockout Station and work areas associated with the Group Isolation Permit;
 - 1.4. Identify all Group Isolation Locks and Tags associated with the lost Group Isolation Permit; and
 - 1.5. Notify the relevant Supervisor.
2. The Permit Officer shall raise a new Group Isolation Permit utilising the same Group Isolation Points.
3. All Isolation Points shall be inspected using the Area or Task Specific Isolation Plan for the equipment and verified.
4. All Group Isolation Tags shall be removed from the Isolation Points and new Group Isolation Tags applied to the applicable locks without de-Isolating the Isolation Point.
5. The Permit Officer shall place a comment on the back of the new Group Isolation Permit. The comment shall read: "Group Isolation Permit lost. New Group Isolation Permit raised."
6. All personnel who want to continue work on the job shall sign onto the new permit and place their Personal Lock and Tag on the new Lockout Station.
7. An Incident Report shall be completed.

3.5 Completed Tag Found Not Attached to an Isolation Point

1. Any completed tag found not attached to an Isolation Point, but in the vicinity of isolated equipment or equipment is a breach of the Isolation and Tagging Manual.
2. The person named on the tag, their supervisor, the Personal Isolation Officer, the current Permit Officer, Permit Acceptor/Holder shall be contacted immediately.

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3. The status of the equipment named on the tag shall be established and if appropriate, the old tag re-attached, or a new tag placed.
4. An Incident Report shall be completed.

3.6 Missing Tag on a Locked Isolation Point

1. The person who placed the lock or the current Personal Isolation Officer, Permit Officer, Permit Acceptor/Holder shall be identified and advised that a tag is missing from their lock.
2. A new tag shall be attached to the lock by unlocking the lock without removing it from the isolation tool, attaching the tag and then relocking the lock.
3. An Incident Report shall be completed.

3.7 Inability to Lock a Designated Isolation Point

1. When the lockout mechanism on an Isolation Point is found to be broken or missing, where possible, the lockout mechanism shall be tagged Out of Service and repaired or replaced immediately. Isolation Locks and tags shall not be placed until the repair is completed.
2. When the lockout mechanism cannot be repaired immediately, the Superintendent or delegate responsible for the equipment's maintenance shall determine a date for completion of the remedial work.

Note: No lock shall be placed on the defective Isolation Point. Instead, determine an alternative Isolation Point to isolate and lock on.

3.8 Key Misplaced

A thorough search for the missing key shall be made. When the search is unsuccessful, the following shall occur.

3.8.1 Missing Personal Lock Key

1. The Superintendent or delegate shall be informed and give permission for the Personal Lock and Personal Tag to be removed.
2. The Personal Lock Holder shall be accompanied by their supervisor to each personal Isolation Point.
3. The supervisor shall identify the lock owner's Personal Lock and witness the removal of the Personal Lock.
4. The supervisor shall arrange for replacement of the Personal Locks and Keys. When a new Personal Lock set is to be issued, any remaining Personal Locks from the old set shall be returned to the nominated person responsible for managing the isolation locks.
5. An incident report shall be completed.

Note: Visitors Locks and Keys can be issued for use until the replacements are available.

3.8.2 Missing Group Isolation Lock Key

1. When a Group Isolation Key is missing and Locks are in use on Isolation Points, the Group Isolation Permit shall be cancelled immediately.
2. The supervisor shall accompany the Permit Officer and Group Isolation Officer to each Isolation Point.
3. The Permit Officer shall identify the Group Isolation Lock. The Supervisor shall verify the identification and approve removal of the Group Isolation Locks and Group Isolation Tags off the Isolation Points.
4. All undamaged Group Isolation Locks shall be removed from the Lockout Station and returned to the nominated person responsible for the Lockout Stations.

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5. The Area Manager or delegate shall decide whether the remaining Group Isolation Locks are to be destroyed or whether the Key and damaged Group Isolation Locks are to be replaced and the Group Isolation Lock set put back into service.
6. An Incident Report shall be completed.

3.9 Key Found

1. Any person finding a Personal Lock Key, Isolation Lock Key, Group Isolation Lock Key, or Lockout Station Key shall immediately hand the key to a supervisor.

3.10 Lock Misplaced

3.10.1 Missing Personal Lock

1. The loss of a Personal Lock shall be reported as soon as practical to the area supervisor. The supervisor shall decide on a course of action.
2. An Incident Report shall be completed.

3.10.2 Missing Group Isolation Lock

1. When a Group Isolation Lock is lost, a thorough search shall be carried out. If unsuccessful, the following procedure shall be followed:
 - 1.1. Any Group Isolation Permit which is in place shall be cancelled immediately;
 - 1.2. All remaining locks and the Group Isolation Permit Key shall be removed from the Lockout Station and returned to the nominated person in the Department who is responsible for the Lockout Station;
 - 1.3. The nominated person shall arrange for the Group Isolation Lock to be replaced. The Group Isolation Locks and Key shall then be returned to the Lockout Station; and
 - 1.4. An Incident Report shall be completed.

3.10.3 Missing Lockout Station Lock

1. When a Lockout Station Lock is lost, a thorough search shall be carried out. If unsuccessful, the following procedure shall be followed:
 - 1.1. The nominated person responsible for Lockout Station shall be advised and the lock replaced immediately; and
 - 1.2. An Incident Report shall be completed.

3.11 Lock Found

1. Any person who finds a Personal Lock, a Group Isolation Lock or a Lockout Station Lock shall ensure the lock is returned immediately, or promptly hand the lock to their supervisor who shall ensure the lock is returned.

4 Special Isolations

4.1 Belt Movement

The purpose of the Belt Movement Isolation is to limit the range of work functions that can be carried out on the conveyor when there is a danger of the belt moving unexpectedly.

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There will be a need for two Group Isolation Permits. The two Group Isolation Permits will be linked together so the belt movement may be done safely.

A stamp is placed on both linked Group Isolation Permits indicating “Warning Sign on Additional Permits Below”.

1. A Group Isolation Permit may only be locked away by an approved Permit Officer in situations where the plant or equipment may require a belt movement during maintenance work.
2. The Permit Officer, Permit Acceptor/Holder shall verify all Personal Locks and Tags have been removed from the Lockout Station and confirm all signatures in the sign-on column have a corresponding identical signature in the sign-off column.
3. If a Permit Acceptor/Holder has control of the Group Isolation Permits they shall transfer the Group Isolation Permits to the Permit Officer by writing the date and signing their name in the Transfer of Permit section of the Group Isolation Permits.
4. The Permit Officer shall write their name and sign in the Transfer of Permit section of the Group Isolation Permit(s) to take control of the Group Isolation Permits.
5. The Permit Officer shall remove the Lockout Station lock.
6. The Permit Officer shall lock the Group Isolation Permits away in the Lockout Station.

Note: The Group Isolation Permit is locked away to indicate the permit is not in service and a controlled belt movement is in Progress.

7. The Permit Officer shall place a “Belt Movement in Progress” sign on the front of the Lockout Station which holds the Master Group Isolation Permit.
8. The Permit Officer and Group Isolation Officer shall check the work area for good housekeeping and establish that all plant or equipment on the Group Isolation Permit shall be safe and the area barricaded and ready for a belt movement.
9. The nominated for the Work Area Supervisor shall confirm the equipment is safe and ready for a controlled belt movement under the associated linked Group Isolation Permit which is indicated on the permits.

Note: Area shall be barricaded and ‘Belt Movement’ signs shall be placed around the controlled movement.

Note: All other work in the controlled work area shall cease until the belt movement is completed.

10. The Permit Officer shall inform the supervisor nominated for the work who is in control of the Belt Movement that the linked Group Isolation Permit is ready for personnel to place their Personal Locks and Personal Tags and sign on.

10.1. The linked permit will have equipment that has been isolated for the plant or equipment which will be part of the belt movement.

11. Group Isolation Permit may be placed onto the Lockout Station ready for personnel to place their Personal Locks and Personal Tags.

Note: The rules with signing onto the Group Isolation Permit reference back to Working under a Group Isolation.

12. When the controlled Belt Movement has been completed, the Group Isolation Permit shall be closed by a Permit Officer.
13. The Permit Officer may now remove the sign “Belt Movement in Progress’ sign from the Master Group Isolation Permit Lockout Station and reinstate the Group Isolation Permit.
14. A Permit Officer shall now follow the steps in reference to section 2.7.2.2 Working under a Group Isolation.

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4.2 Critical Equipment

Documented Isolation Plans shall be in place for all critical equipment, such as critical alarms, emergency shutdown devices, fire and gas detection devices (and other equipment deemed critical energy and substance). Each site shall maintain a Critical Equipment Register.

1. The Plan shall include:
 - 1.1. Approval from the most senior personnel responsible for the equipment/area covered by the critical equipment;
 - 1.2. Communication processes to ensure all affected areas are aware of the isolation;
 - 1.3. Back up plans to ensure the integrity of the affected equipment/areas are not at risk, and
 - 1.4. In the case of fire detection/suppression equipment, alternative controls that can be immediately implemented in the event of an emergency.

4.3 Radiation

1. Radiation sources shall only be de-energised by an authorised Radiation Isolation Officer.
2. Radiation Isolation Officers shall have been deemed competent to de-energise and isolate sources of radiation by the appointed Radiation Safety Officer in compliance with the Radiation Management Plan [OP-PLN-00125].
3. Any Radiation Isolations shall be done in accordance with the approved Isolation Plan for the radiation source/equipment.

5 Training

All persons who are required to work using the Isolation processes described in this document shall be trained and assessed competent in the Isolation and Tagging Manual (see Appendix 1) and shall be reassessed at periodic intervals (not exceeding two years).

6 Roles and Accountabilities

Table 3: Roles and Accountabilities

Role	Responsibility
Personal Lock Holder	<ol style="list-style-type: none"> 1. Personnel who are trained and achieve competency in the general principles of the Roy Hill Isolation and Tagging Manual can be authorised as a Personal Lock Holder and can be issued their own Personal Locks. Personnel shall be reassessed at periodic intervals (not exceeding two years). 2. Personal Lock Holder shall use their Personal Locks and Personal Tags to work under a Personal Isolation or Group Isolation. 3. Personal Lock Holders are not authorised to isolate or de-isolate equipment. 4. A Personal Lock Holder shall only attach a Personal Lock and Tag on equipment isolated for them by a Personal Isolation Officer/ Group Isolation Officer. 5. Before attaching their Personal Lock and Tag, a Personal Lock Holder shall demonstrate satisfactory understanding of the safe area of work to the Personal Isolation Officer, Group Isolation Officer, or Permit Officer / Permit Holder. 6. If a Personal Lock Holder cannot demonstrate understanding of the safe area of work, the Personal Lock Holder shall not place a Personal Lock and commence work, and their supervisor shall be notified to decide on a course of action. 7. The Personal Lock Holder shall check the operation of their Personal Lock prior to placement at the Isolation Point.
Visitors Lock User	<p>A person who does not possess an approved Personal Lock and who wishes to work under a Personal Isolation or sign onto a Group Isolation may be issued with a Visitor's Lock and Key.</p> <ol style="list-style-type: none"> 1. The following information shall be recorded when Visitors Locks are issued: <ul style="list-style-type: none">) Name of the person to whom the Visitors Locks are issued;) Name of the company or department for which they work;) Lock number issued;) Signature of person accepting the lock and key; and) Name of the person responsible for supervision. 2. A person who has been issued with a Visitor's Lock shall either: <p>Be always in the company of a Personal Lock Holder, Acceptor/Holder, Personal Isolation Officer, Group Isolation Officer, Permit Officer / Permit Acceptor/Holder who is authorised for the area of work; or</p> <p>As a minimum, be trained in the Roy Hill Isolation and Tagging Manual, pass the approved Personal Lock Acceptor/Holder Examination and receive the Area Orientation for the area of work.</p> 3. When working under a Personal Isolation, a Visitor's Lock User shall always use a Personal Tag in conjunction with their Visitor's Lock. 4. Visitor's Lock Users shall not leave site without removing their Visitor's Lock and Tag and signing off the Group Isolation Permit. 5. Visitor's Lock Users shall hand back their Visitor's Locks and Keys each shift unless otherwise approved by the person responsible for their supervision.

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Role	Responsibility
Group Isolation Officers	<p>Group Isolation Officers are authorised to perform isolations and de-isolations of plant and equipment for working parties under a Group Isolation, according to their individual authority level and area of authorisation.</p> <ol style="list-style-type: none"> 1. Each Group Isolation Officer shall be authorised for a particular area, department, and/or generic equipment group. 2. There shall be a process in place to record each Personal Isolation Officers particular level and area of authority. Group Isolation Officer's shall only perform isolations within this authority. 3. Group Isolation Officers shall be trained in accordance with the Roy Hill Isolation and Tagging Manual and pass the area specific isolation written and practical tests 4. New Group Isolation Officers shall pass a practical assessment in the workplace to demonstrate competency. 5. Group Isolation Officers shall have full knowledge of the Area Isolation Plan for their level of authority. <p>Refresher training shall be conducted in accordance with the Roy Hill Training and Assessing Standard.</p> <p>Group Isolation Officers shall be reassessed at periodic intervals (not exceeding two years).</p>
High Voltage Permit Officers	Refer to High Voltage Procedure OP-PRO-00129
High Voltage Isolation Officers	Refer to High Voltage Procedure OP-PRO-00129
Mechanical Isolation Officers	<p>Authorised to perform isolations and de-isolations of plant and equipment, per their individual authority level and area of authorisation. The role ensures that the plant/equipment is disconnected or hazard energy sources are isolated from personnel.</p>
Permit Acceptor/Holder	<p>Permit Acceptor/Holder are NOT authorised to raise or cancel Group Isolation Permits. They shall only accept, administer the operation of, and transfer Group Isolation Permits under their area of responsibility.</p> <ol style="list-style-type: none"> 1. Permit Acceptor/Holder must be trained and competent in Group Isolation Theory and pass the relevant approved written test. 2. Permit Acceptor/Holder shall be the designated person in charge of the permit and workgroup signed onto that permit. 3. New Permit Acceptor/Holder shall also be required to pass the area specific orientation. 4. Before signing to accept a Group Isolation Permit, the Permit Acceptor/Holder shall demonstrate a clear understanding of the safe area of work covered by the Group Isolation to the Permit Officer. <p>Refresher training shall be conducted in accordance with the Roy Hill Training and Assessing Standard.</p> <p>Permit Acceptors/Holder shall be reassessed at periodic intervals (not exceeding two years).</p>

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Role	Responsibility
Personal Isolation Officers	<p>Personal Isolation Officers are authorised to perform isolations and de-isolations of plant and equipment, per their individual authority level and area of authorisation.</p> <ol style="list-style-type: none"> 1. Types of authority may include: <ol style="list-style-type: none"> 1.1. Mechanical; 1.2. Electrical; 1.3. Radiation; 1.4. Mobile Equipment; 1.5. High Voltage; and 1.6. Any combination of these categories. 2. Each Personal Isolation Officer shall be authorised for an area, Department, and/or generic equipment group. 3. There shall be a process in place to record each Personal Isolation Officers particular level and area of authority. Personal Isolation Officers shall only perform isolations within this authority. 4. Personal Isolation Officers shall be trained in accordance with the Roy Hill Isolation and Tagging Manual and pass the area specific isolation written and practical tests. 5. Personal Isolation Officers shall have full knowledge of the Area Isolation Plan for their level of authority. 6. New Personal Isolation Officers shall pass a practical assessment in the work place to demonstrate competency. 7. Refresher training shall be conducted in accordance with the Roy Hill Training and Assessing Standard. 8. Personal Isolation Officers shall be reassessed at periodic intervals (not exceeding two years).
Permit Officer	<p>Permit Officers may raise, administer, transfer and cancel Group Isolation Permits within their area of authority.</p> <ol style="list-style-type: none"> 5. Permit Officers shall be trained and competent in Group Isolations and pass the relevant approved written test. <p>The new Permit Officer shall then record the participation in a set number of supervised Group Isolations in a period of not less than one month after formal classroom training. The one month period allows for roster patterns and plant/equipment formalisation to occur across the work area. Once the Work Area Manager or their delegate can verify isolation proficiency, then the new Permit Officer shall pass a practical assessment in the work place to demonstrate competency.</p> <ol style="list-style-type: none"> 5.1. The number of accompanied isolations shall be determined by the Work Area Manager. 6. Permit Officers shall have full knowledge of the Area Isolation Plans for their area of authority. <p>Refresher training shall be conducted in accordance with the Roy Hill Training and Assessing Standard.</p> <p>Permit Officers shall be reassessed at periodic intervals (not exceeding two years).</p>

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7 Definitions

Table 4: Definitions

Term	Definition
Approved Isolation Plan	All designated systems, plant and equipment in a work area shall have approved Isolation Plans. The Approved Isolation Plans must be version controlled and be stored in a secure data base to maintain integrity. Approved Isolation Plan template design shall be approved by the Head Of or General Manager of the work area. Approved Isolation Plans shall only be developed by personnel who have been deemed competent and have intimate knowledge of the area and equipment to be isolated. These personnel shall be authorised by the Work Area Manager or delegate
Authorised	Written permission from the Work Area Manager or delegate to carry out specific tasks relative to the Roy Hill Isolation and Tagging Manual.
Authority	Written permission given by the Work Area Manager or delegate on matters relating to the Roy Hill Isolation and Tagging Manual.
Belt Movement	Belt Movement is a controlled movement of a belt under a Group Isolation Permit.
Clear and Trial Step	The process of clearing the area of personnel after isolating a piece of plant or equipment and trialling the isolation to ensure it has been isolated. Within the operational plant work environment at processing and port operations, the final clear and trial step must occur at the principal piece of equipment which will be worked upon. The plant/equipment must be placed into 'maintenance mode' at the local stop/start station (where applicable) which removes all interlocks and an attempt to start the equipment must be completed.
Commissioning or Testing Tag	A tag used to identify equipment and people involved in live commissioning, diagnostics or testing, only where isolations are not able to be used for the task.
Competent	A person who has been assessed by an approved trainer using authorised tools and has demonstrated skill & knowledge.
Controlled Belt Movement	A situation where the controlled movement of a conveyor belt is required while isolation is in place.
Control Point	The location of the operating controls for a piece of equipment. (Control points may occur at multiple locations.)
Damaging Energy Source	Anything with the potential to cause injury to people, or damage to equipment or the environment. This may include but is not limited to electricity, compressed gas, hydraulic systems, charged springs, heated substances, radiation, sewerage systems, and stored gravitational or kinetic energy. Note: Extra Low Voltage electrical systems are treated as non-hazardous, unless a risk assessment for a specific situation determines otherwise.
De-isolate	Reconnect or reenergise previously isolated equipment.
Department	A team or work area within a Manager's accountability.
Extra-Low Voltage (ELV)	Electrical voltage not exceeding 50Va.c or 120Vd.c. ripple free.
Group Isolation	There are more than six personnel working under the isolation; or There are more than twelve personnel working under the Isolation on Heavy Mining Equipment (HME) or Rail Rolling Stock. Where the isolation activity or task to be performed, has been determined as high risk using the Roy Hill risk management process.
Group Isolation Locks & Key	A uniquely keyed set of locks, Blue in colour and used in conjunction with a Group Isolation.
Group Isolation Officer	A person authorised in writing by the Work Area Manager or delegate and is competent to Isolate and De-Isolate equipment for Personal Isolations and/or Group Isolations.

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Term	Definition
Group Isolation Permit	A printed Permit generated under the Roy Hill Isolation and Tagging Manual, which is used to record personnel and processes involved with a Group Isolation.
Group Isolations Tag	A printed tag that is attached to each Isolation Point used with a Group Isolation and identifies the Isolation Permit by number.
Isolation Tool	An implement such as a Scissor Clip, Pin, Clamp, Hasp, or similar device for performing or facilitating the securing of an Isolation Point, used to allow locks to be attached to an Isolation Point.
High Voltage (HV)	Voltage that is greater than or equal to 1000Va.c. or 1500Vd.c.
High Voltage (HV) Isolation Lock	A purple isolation lock distinguished with the HV engraving and keyed alike.
HV control MCBs	HV control "Main Control Boards".
Isolate	Disconnect or inhibit all damaging energy sources to a piece of equipment.
Isolation Breach	Non-compliance with any requirement specified within the Isolation Manual or Area Isolation Plans.
Isolation Lock	A lock, Orange in colour and placed by a Personal Isolation Officer on a disconnected or inhibited isolation point.
Isolation Point	A point where an energy source can be disconnected or inhibited and locked out.
Isolation and Tagging Manual	A system of rules and principles, within Roy Hill, that controls the isolation and lockout of potentially hazardous sources of energy prior to commencing work.
Isolation Tag	A tag that is attached to an Isolation Lock when a Personal Isolation Officer places such a lock.
Job Hazard Analysis (JHA)	A process for systematically identifying all the hazards associated with each step of a task and to implement appropriate control measures in order to prevent harm to people, property or environment.
Linking Lock	A white lock enabling the linking of Group Permits under an isolation to a Mobile Permit Board. The white lock is applied to the main Group Permit board and demonstrates that a Mobile Permit board is be used in the field by a Work Group.
Personal Lock Acceptor/Holder	A person only authorised to place a Personal Isolation Lock onto an Isolation Point or lock out station while being supervised by a Personal Isolation Officer or Permit Officer/Acceptor. Note: Personal Lock Acceptor/holders are not authorised to perform Isolations.
Locked Out	An Isolation Point that has been decoupled, and/or de-energised and locked to prevent reenergising.
Lockout Station	A purpose built, lockable box containing the Group Isolation Locks & Key, used to facilitate the Group Isolation process.
Lockout Station Lock	Green in colour and used by Permit Officers for locking Lockout Station's and MPBs.
Low Voltage (LV)	Electrical voltage exceeding Extra-Low Voltage (ELV), and less than 1000Va.c. or 1500Vd.c.
Mobile Equipment	Self-propelled mobile equipment which is not connected to any other system or fixed energy source. This includes but is not limited to light vehicles, haul trucks, marine vessels and locomotives.
Mobile Permit Board (MPB)	Enables Workgroups to remotely lock onto a Group Isolation involving a White Linking Lock in conjunction with a Group Isolation Tag and corresponding Lock Out Station.
Out of Service Tag	Tag used by personnel to indicate that the plant and or equipment is out of service and shall not be operated.

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Term	Definition
Permit Acceptor/Holder	A person authorised in writing by the Work Area Manager or delegate, to accept and transfer Group Isolation Permits. Note: Permit Acceptors/Holder are not authorised to raise or cancel Group Isolation Permits.
Permit Officer	A person authorised in writing by the Work Area Manager or delegate, to raise, accept, administer, transfer and close Group Isolation Permits.
Personal Tag	A tag used to identify the people involved with a personal isolation.
Personal Isolation	Isolation used to provide protection for an individual person placing a Personal Isolation Lock.
Personal Lock	A uniquely identifiable lock, Red in colour and assigned to an individual to secure an Isolation Point or Lockout Station for the purpose of isolation.
Personal Isolation Officer	A person authorised in writing by the Work Area Manager or delegate and has been deemed competent to Isolate and De-Isolate equipment for Personal Isolations.
Radiation Isolation Officer	A person authorised in writing by the Radiation Safety Officer and has been deemed competent to Isolate and De-Isolate sources of radiation.
Radiation Safety Officer	A person appointed by the Registered Manager or delegate and is authorised by the Radiological Council of WA to manage radiation safety for the mine site.
Shall	Shall is to be interpreted as a mandatory instruction.
Verification of Isolation	Visual assessment or conformation that the energy has been disconnected.
Visitor	Any person that does not hold or is not authorised to hold a personal lock and who may be required to use Visitor locks & key for a Personal Isolation or Group Isolation.
Visitor Locks & Key	Personal Isolation Locks and Keys, Red in colour and issued to a visitor on a temporary basis.
Work Instruction (WIN)	A Procedure written at the task level, clearly describing the sequential steps that result in the best known way to complete a task with the goal of preventing harm to our people, environment, equipment and processes.

8 References

Table 5: References

Document number	Title
Bow Tie PH-04	Electricity Interactions
Bow Tie PH-09	Crushed by Moving Equipment
Bow Tie PH-10	Entanglement
Bow Tie PH-11	High Pressure Fluids
Bow Tie PH-16	Confined Space and Asphyxiation
OP-FRM-00064	Group Isolation Permit
OP-FRM-00230	Authorisation for Personal Lock Form
OP-PLN-00125	Roy Hill Radiation Management Plan
OP-PRO-00001	Authority to Work Procedure
OP-PRO-00021	Principal Hazards Management Procedure
OP-PRO-00129	High Voltage Procedure
OP-PRO-00322	Rolling Stock Isolation Plan
OP-SPC-00156	Incident Investigation Specification

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Document number	Title
OP-STD-00195	Health, Safety, Emergency and Security Performance Standards. Performance Standard 06 – Isolation of Equipment. Performance Standard 10 – Working with Stored Energy.
OP-WIN-02730	Isolation Lock Register WIN

9 Review

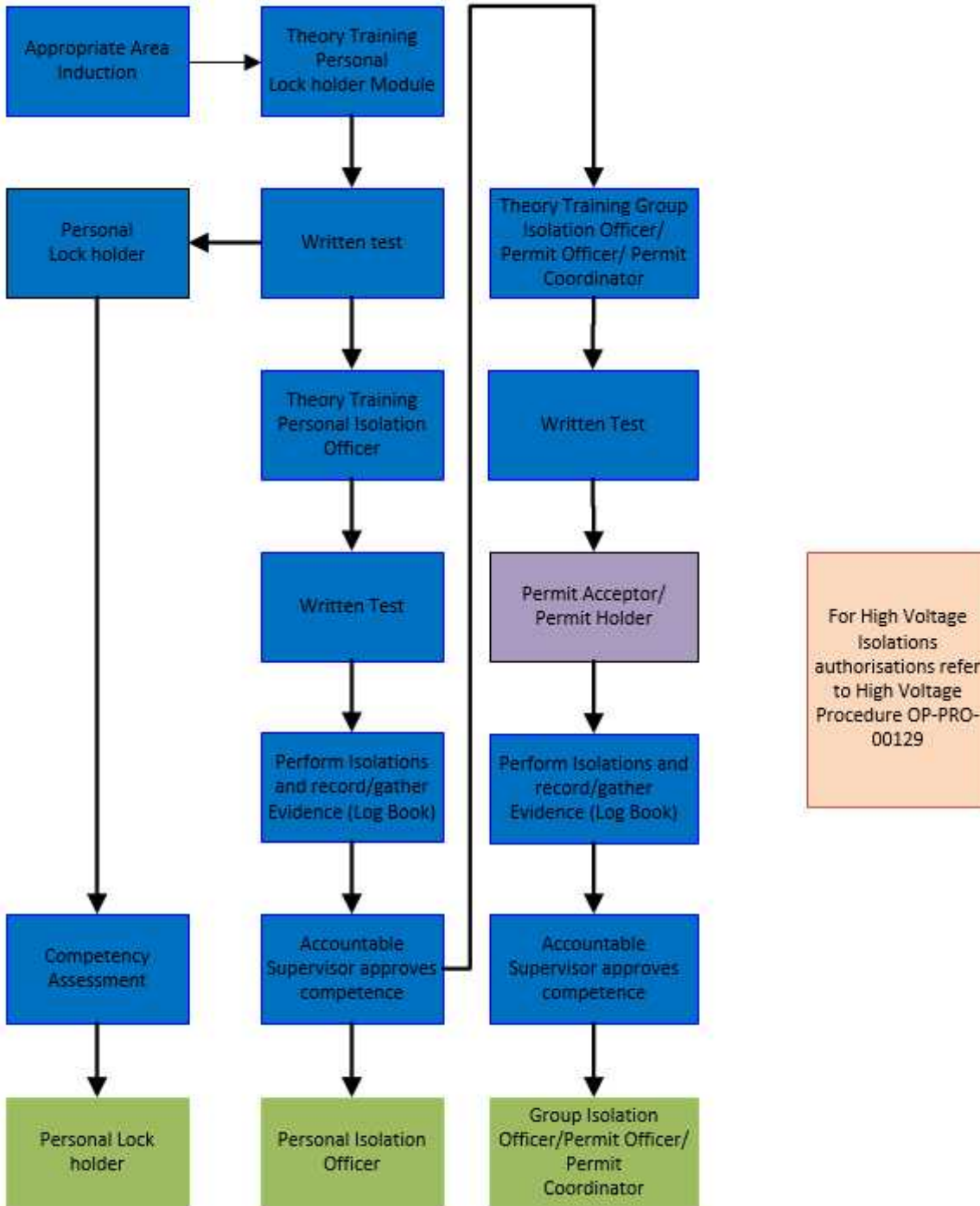
Reviews are to examine the appropriateness of the Manual, taking into consideration corporate, system and compliance requirements and legislative changes since the last review was undertaken.

10 Appendices

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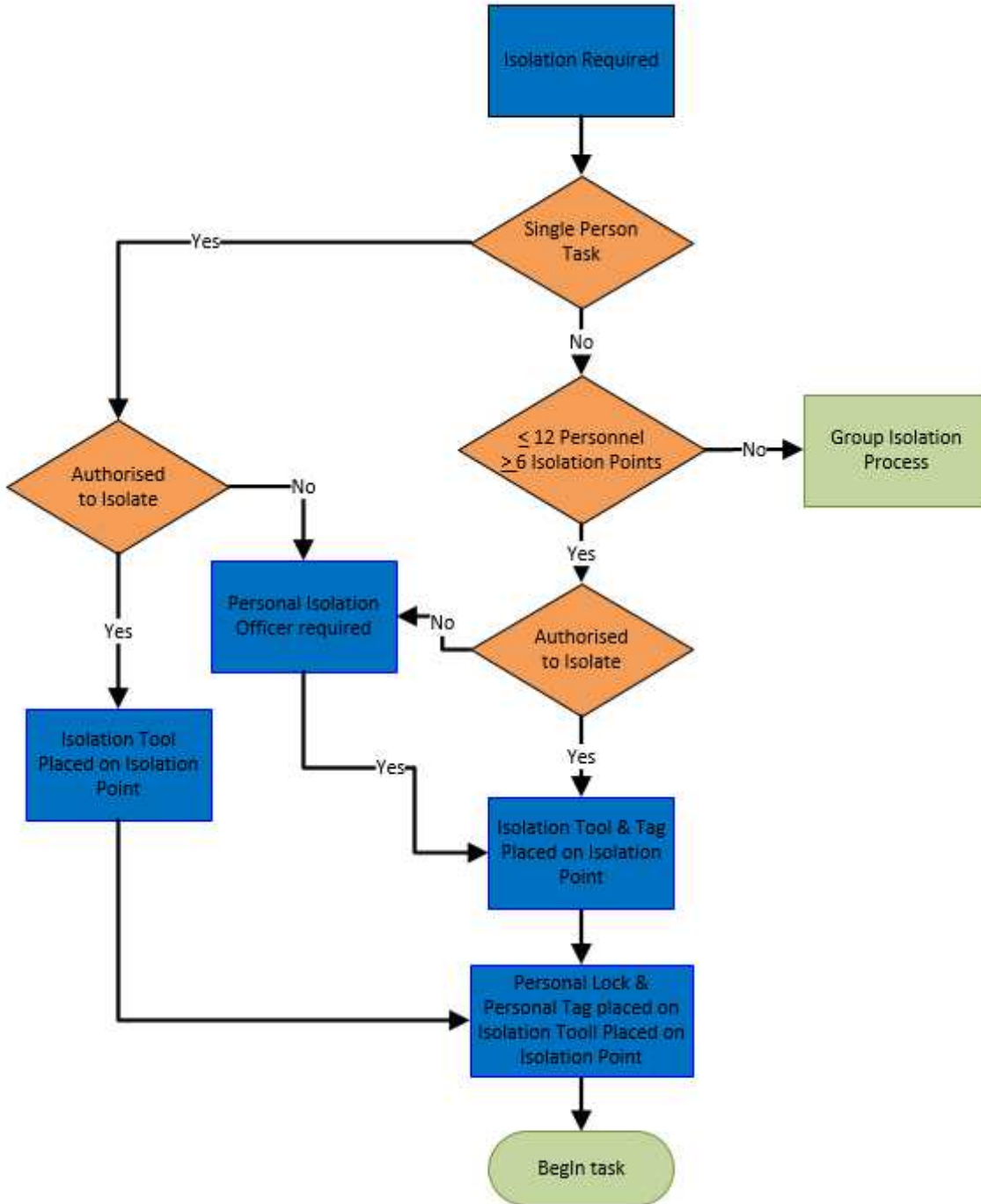
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Appendix 1 - Isolation Manual Training and Authorisation Map



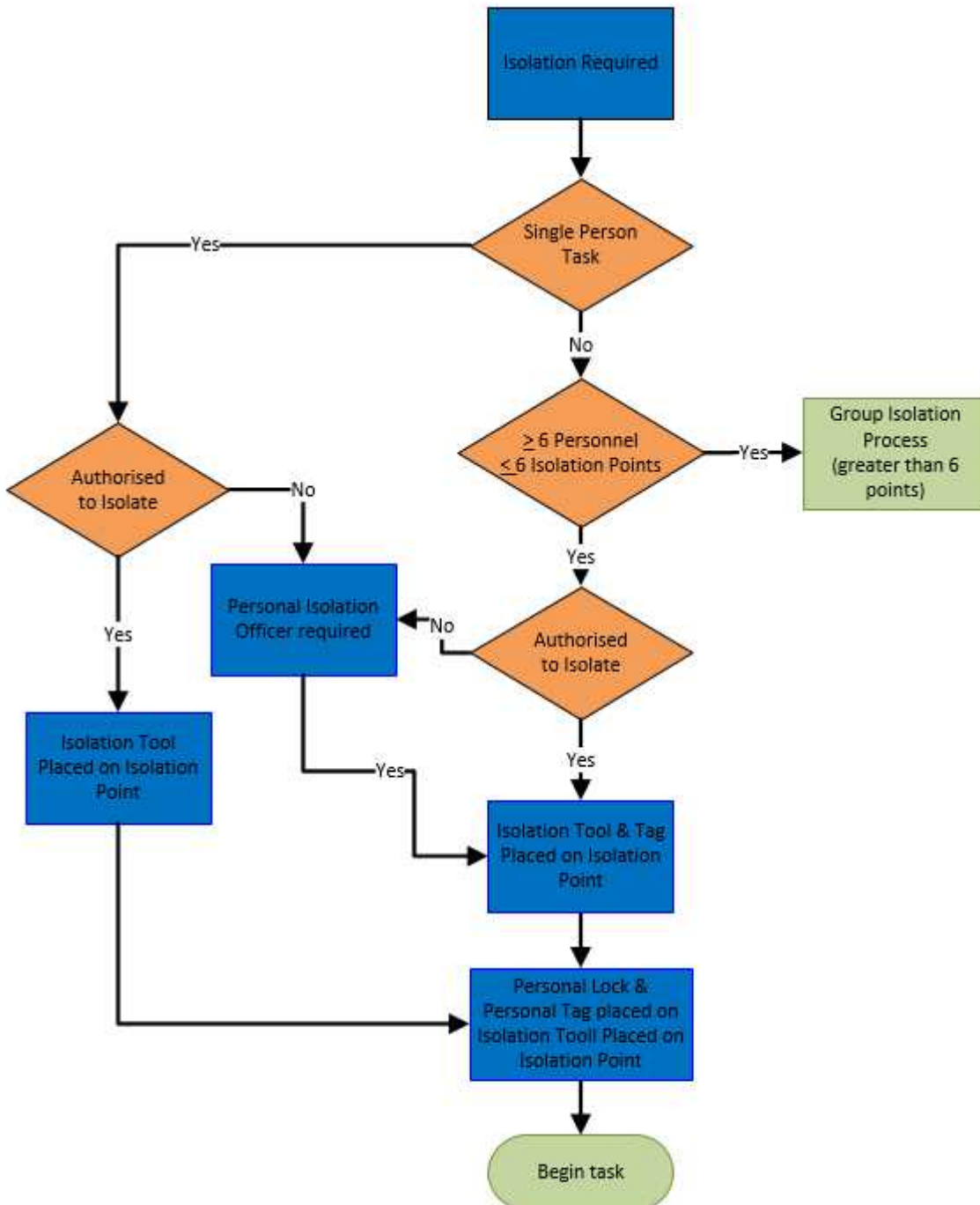
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Appendix 2 - (HME) Isolation Overview



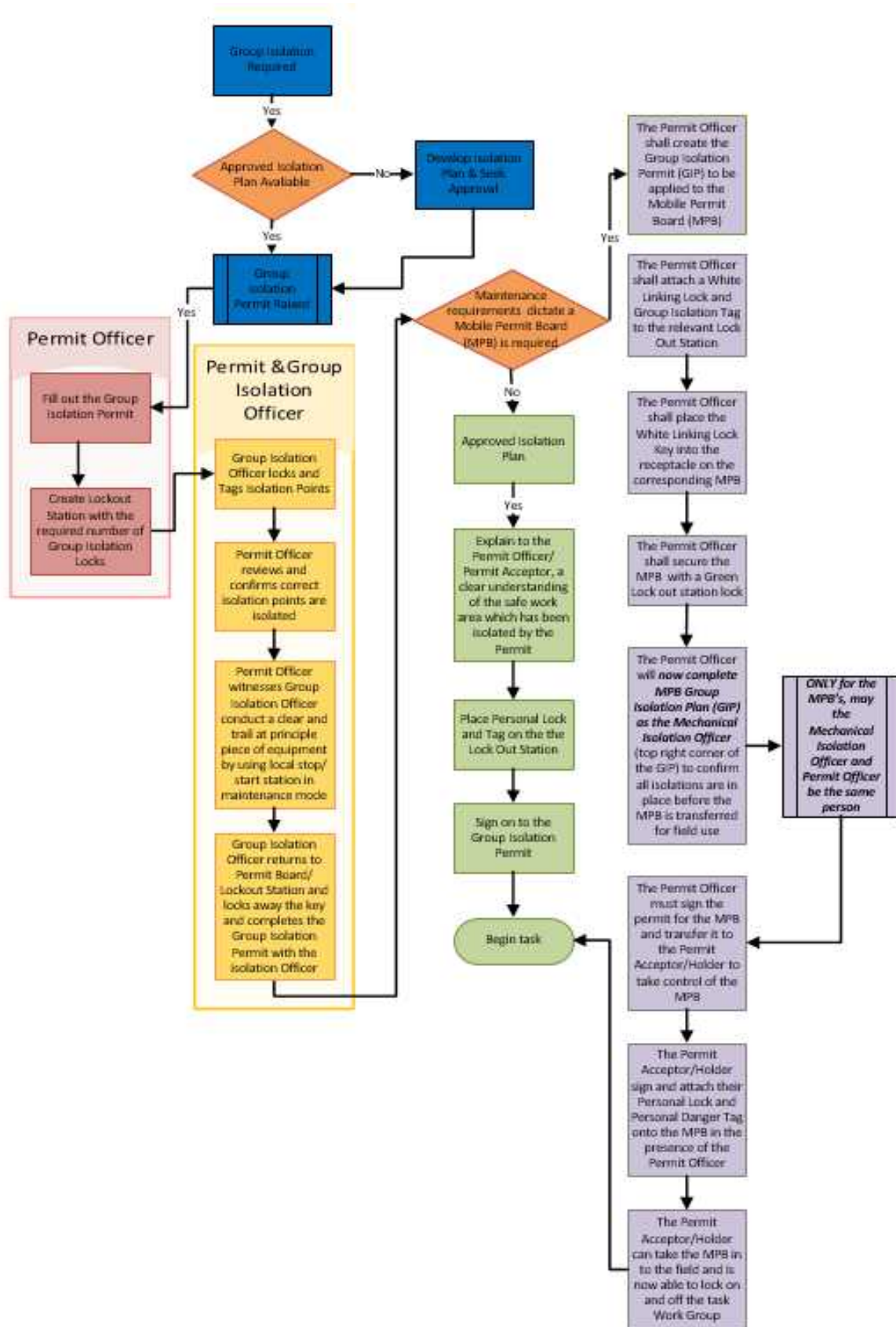
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Appendix 3 - All Others Isolation Process



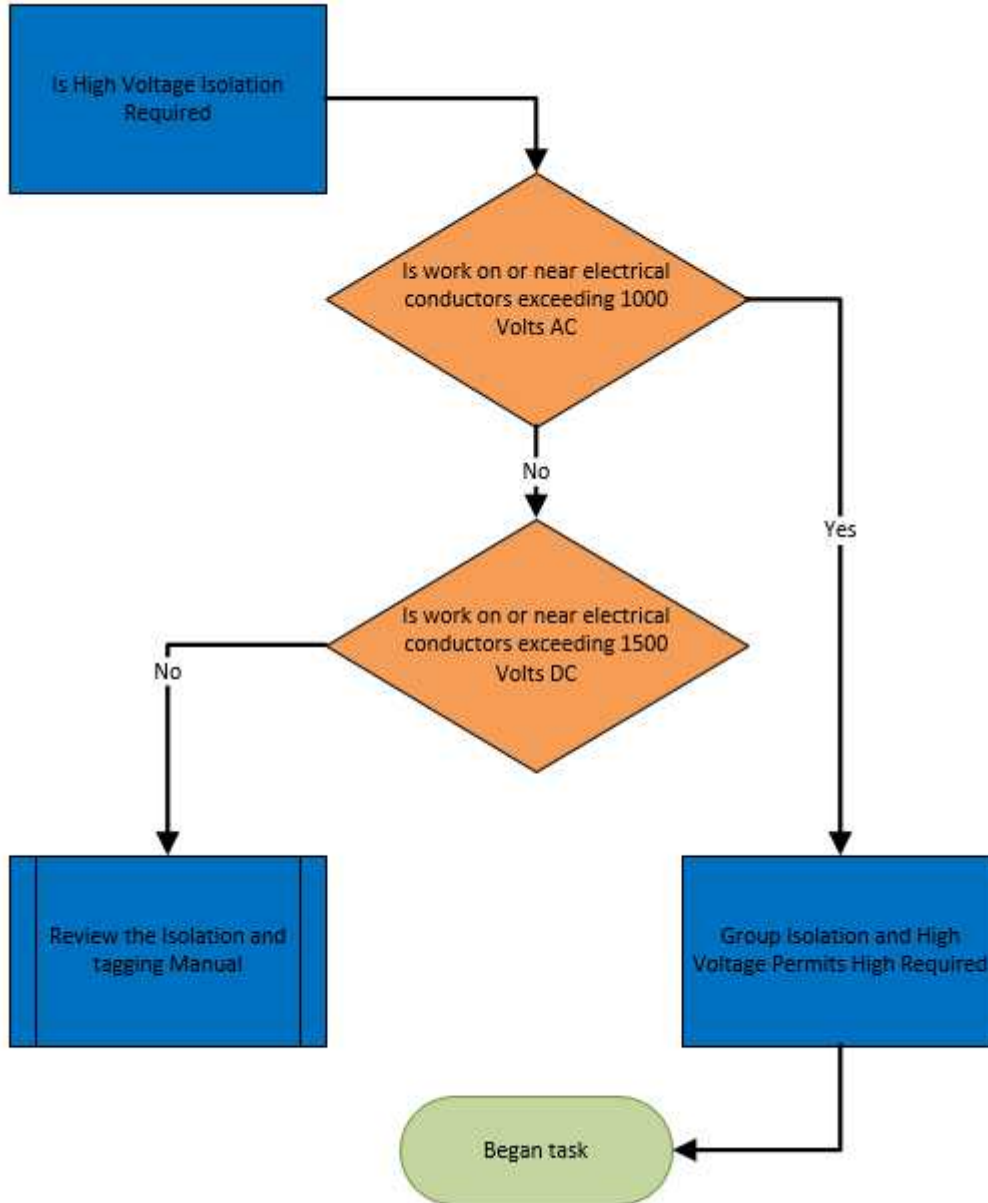
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Appendix 4 - Group Isolation Process



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Appendix 5 - High Voltage Isolation Process



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