Work Control Procedures

Test Permit October **2025**

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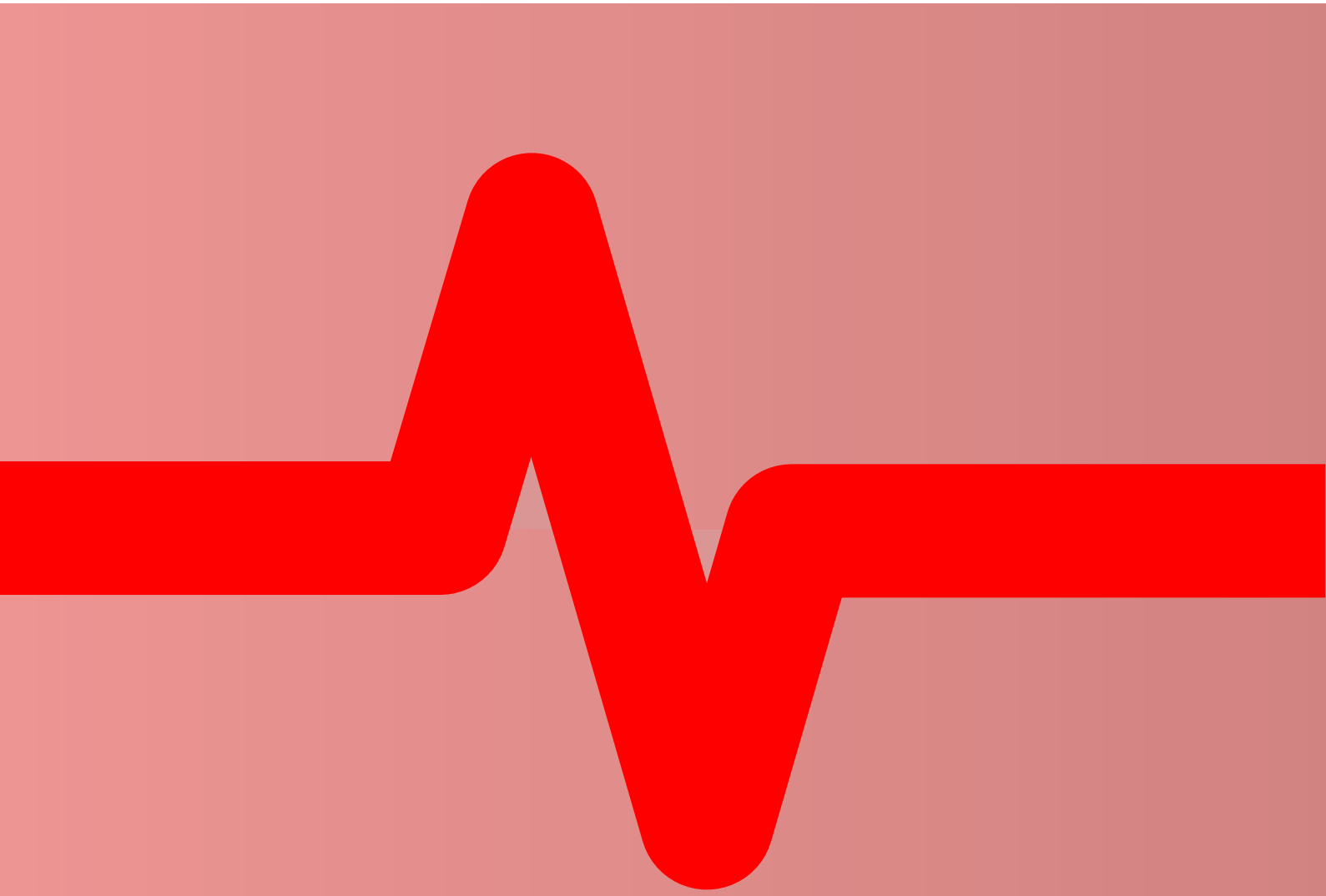

Record of Amendments

Date Issued	Summary of Key Changes
June 2023	**Original Issue**
Oct 2025	**Major review and updates** **Section 1 - Introduction** • Scope & Application - Added defined terms shall, should, may & can **Section 2 Process Selection** • Clarification - Insulation resistance testing >1000V DC requires a TP • Updated example when a TP is not required • Revised WCP Selection Guide in line with legislation, WorkSafe and SMEI guidance **Section 3 – Roles and Responsibilities** • Added Supervisor (Test Permit Position) • Expanded competency responsibilities to cover asset owner and Employers (PCBU's) • Updated competency requirements to reflect the StayLive Training and Competency Guideline • Clarification for Issuer boundary marker responsibilities • Clarification of responsibilities for Supervisor (Test Permit Work Position) • Clarification of Recipient responsibility to physically check IASMs and confirm the corresponding keys are in the lockbox before accepting the TP **Section 4 Safety Measures and Isolation Points** • New statement covering importance of operational locks and safety measures. • Clarification that where possible all IASM's and RASM's shall be locked • Clarification RASM process is used for both the management of safety measures and also for plant status control • Management of Common RASM isolations **Section 5 Test Permit Hardware & Documentation** • Added reference to EEA Permit Areas Guide • Removed detail for Assurances and references StayLive Assurance guidance document • Clear differentiation between IASM's able to be removed to facilitate testing and TP IASM alterations (additions or deletions) which are no longer allowed. A TP will require return and cancellation if alterations are required. **Test Permit Process** • Minor clarifications and improvements **Process Flow Charts** • Removed references to alterations and the associated Flow Chart • Removed duplicated references and items covered in Operating Order/Isolation Instruction and Assurance documents **Test Permit Forms** • Added example test permit forms **Glossary** • Amended/added definitions for Actioner, Allocate, Alteration, Checker, Compiler, Daily Meetings, Delegate, Minimum Approach Distance, Objective, Operational Locks, Plant Status Control, Suspension, Transfer and Test Permit

Contents

Preparation of Work Control Procedures

StayLive Work Control Procedures are prepared by a consensus process involving representatives nominated by major generating companies in NZ. These procedures may be derived from existing industry procedures, from established international procedures and practices or may be developed by the StayLive Work Control Procedures Working Group.

The following companies are represented on the WCP Group:

Contact Energy Ltd

Genesis Energy Ltd

Meridian Energy Ltd

Mercury NZ Limited

Nova Energy Ltd

Pioneer Energy Ltd

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Disclaimer

This document has been prepared by a group of representatives of the electricity industry for the purpose of providing principles on safety and other practices for use by the generation sectors of that industry. It sets out standards considered to be appropriate for the electricity industry; in some instances, further procedures will need to be developed in order to implement those standards. Although this document is recommended by industry representatives, it is not legally binding; as such, the industry representatives involved in its development can accept no liability or responsibility for any injury, loss, damage, or any other claims caused by or resulting from any inaccuracy in or incompleteness of the document.

1. INTRODUCTION

PURPOSE

StayLive adopts the Safety Manual – Electricity Industry (SM–EI) rules as its essential safety requirements for the control of hazards.

This Test Permit (TP) document is one of a suite of generation Work Control Procedures (WCP).

Combined, this suite of documents describes the specifics for the range of WCPs used in the generation industry.

These WCP's set out, where necessary, the specific requirements for applying SM–EI rules to generating plant and facilities to ensure consistent interpretation and practical compliance across the NZ generation sector.

These procedures are designed to enable:

- safe access to plant and equipment for the purposes of undertaking any form of maintenance, inspections and/or testing
- contractors moving between different sites and asset owners experience consistent requirements and methods of equipment isolation
- safe and reliable return to service following completion of any works, and
- ensuring other plant and equipment are not affected during the works

OVERALL PHILOSOPHY

Achieving safe work practices on our worksites is conditional upon three key elements:

1. Personnel shall fully understand their individual roles and responsibilities and also an understanding of the roles and responsibilities of others.
2. Effective planning will drive efficient and safe work execution.
3. Clear, concise, and effective communication is essential to ensure the correct application of these work control procedures and the safe completion of site activities.

SCOPE AND APPLICATION

These Work Control Procedures are mandatory and apply to all work carried out on generating plant and facilities.

These Work Control Procedures take precedence wherever there is an optional requirement or ambiguity with the SM–EI rules and procedures.

In this document, the following terms apply:

- "shall" indicates a requirement (mandatory),
- "should" indicates a recommendation,
- "may" indicates a permission,
- "can" indicates a capability.

STANDARD OPERATING PROCEDURES

If the implementation of these Work Control Procedures results in sub-optimal or impractical outcomes, then Standard Operating Procedures (SOP) may be developed which provide an equivalent or greater standard of control of the work environment.

THE TEST PERMIT

The TP is a Works Management System used to present equipment in an agreed and defined state for testing, using Issuer applied safety measures, where testing includes the introduction of primary energy sources, test voltages or potentially lethal hazards. The process allows for the Recipient to remove agreed IASM's to facilitate the testing.

TPs apply to testing of equipment which is located in its service position and do not apply to equipment removed from this position to another location e.g. workshop or test facility.

Disconnection of equipment does not constitute removal from the service position.

2. PROCESS SELECTION

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THE TEST PERMIT

Test Permits (TP)s are required in the following circumstances;

- any testing on isolated equipment which introduces potentially lethal hazards which could cause harm to employees
- any work involving the use of a **primary energy source** for the work and where hazards shall be controlled
- for work which requires movement or rotation of equipment and introduces potentially lethal hazards

A TP can be issued on equipment:

- directly after safety measures are applied; or
- after an Access Permit (AP) has been returned

A TP shall be used where a Recipient intends to;

- energise isolated equipment for testing
- run, operate and/or energise equipment defined in an AP 'equipment to be worked on' section where that equipment is not ready for return to service
- remove agreed IASMs to facilitate testing

A TP should be issued for tests on in-position equipment, including but not limited to;

- Power Factor testing
- Hi-pot testing
- Core flux testing
- Impedance testing
- VT calibration
- VLF testing
- Rotor pole volt-drop testing
- Insulation resistance testing >1000V DC
- Stroking unguarded turbine wicket gates
- When required to rotate equipment manually which may introduce potentially lethal hazards

Only one TP shall be applied to a single item of equipment at a given time.

An AP is not required as a condition, or pre-requisite, for a TP.

Work that is required to facilitate testing can be completed under that TP e.g., Disconnecting conductors.

Work that is not required to facilitate testing **shall not** be completed under a TP.

A TP shall comprise one work party. Testing may require the work party to be located at multiple work positions.

Where the TP Recipient is unable to supervise work at multiple work positions, a work position supervisor may be appointed.

TPs are not required for testing equipment which has been removed from its in-service position, e.g. a transformer removed to a workshop, however all hazards introduced by the testing shall be controlled e.g. for 5kV insulation resistance testing of the transformer.

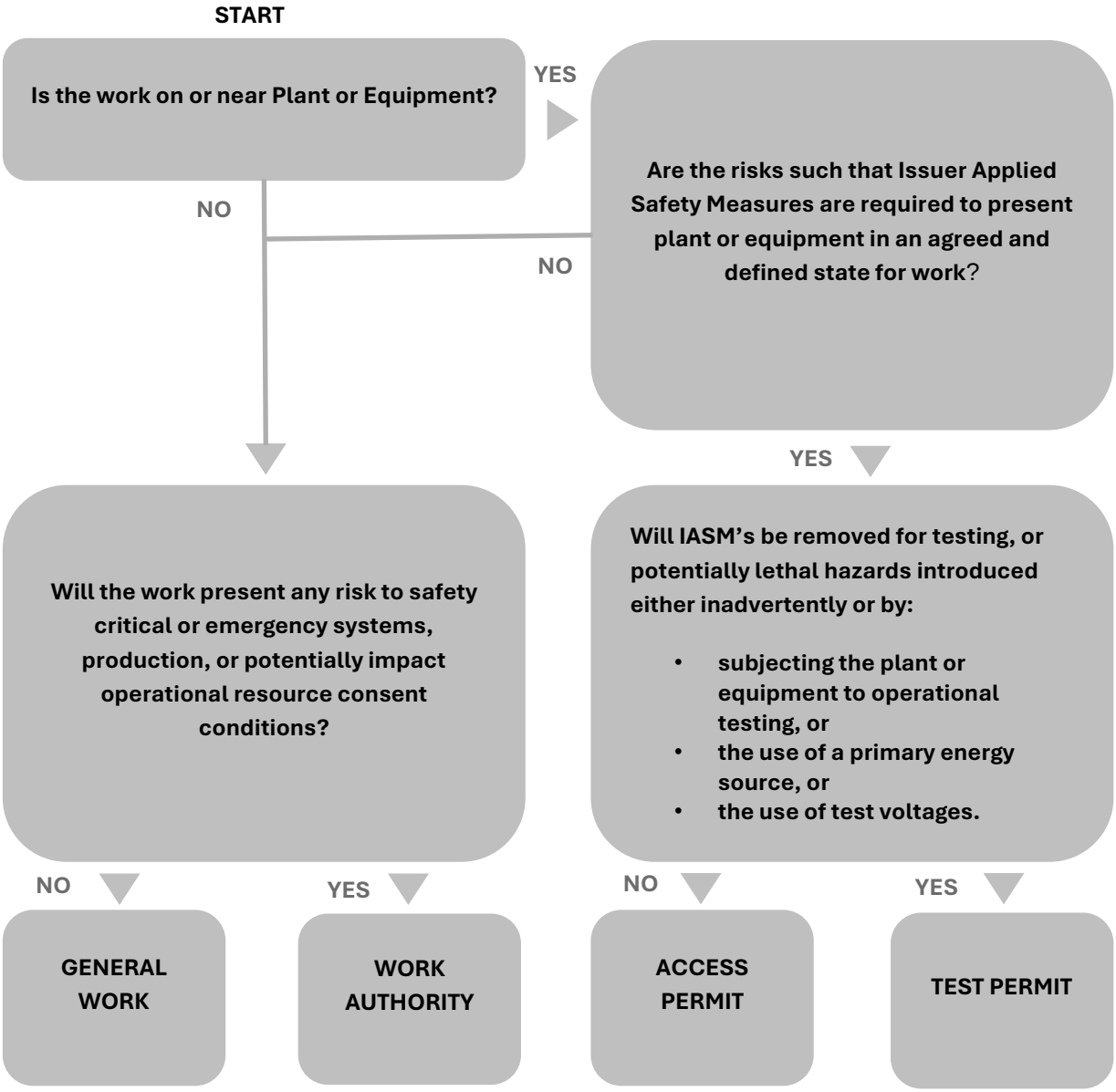
A System-Operator-approved test plan shall be used to control test livening of equipment from the National Grid.

A TP may be used in conjunction with a System Operator approved test plan.

This selection guide is intended to support a robust planning process between relevant parties. Assessing the risk of the work or activity is critical to determine the most suitable process to follow. Examples may include:

- Risks that cannot wholly be controlled by a Recipient or Supervisor
- Hazards from energy sources eg electrical, mechanical, gases, water
- Other considerations that warrant the use of IASM's.

WCP Selection Guide



3. ROLES AND RESPONSIBILITIES

ROLES

Primary roles for a TP are:

- Issuer
- Recipient
- Supervisor (Test Permit Work Position)

For a TP:

- the Issuer and Recipient shall be different people
- the Recipient is the Supervisor (Test Permit)
- the Recipient may appoint additional supervisors (Test Permit Work Position)

RESPONSIBILITIES

It is the responsibility of each person, including members of the work party and those scoping, scheduling, and implementing work to:

- fully understand their respective role and their associated responsibilities to provide safe access to equipment for the purposes of undertaking testing
- have a practical understanding of SM–EI and the StayLive Work Control Procedures (WCP) to ensure they are implemented correctly
- be aware at all times of what other work is occurring that might affect the safety of themselves and others on site
- be conscious of the hazards associated with, or introduced by, their testing and have effective mitigations in place for those hazards
- plan and communicate effectively so that intentions are well understood, and risks can be effectively managed

COMPETENCY

Each defined role shall only be performed by persons meeting the competency criteria for that role or by persons undergoing training, or competency assessment, or where they are under the direct supervision of a competent person.

The asset owner and respective employer(s) have shared responsibilities for the competencies for WCP roles.

Competencies required for a TP Issuer, Recipient and supervisor (test permit work position) are:

- Access Operational Areas (refer: StayLive Training and Competence Guideline)
- WCP specific permit competence
- Safety measure competence (as determined by the asset owner)

ASSET OWNER

The asset owner has a duty to ensure that any hazards that work parties may be exposed to are identified and appropriate controls established. Such information shall be available to persons preparing applications for TP's.

ISSUER

It is the responsibility of the Issuer to ensure:

- they and the Recipient hold appropriate and valid competence
- they communicate fully with the Recipient and other parties that may be affected by the testing regarding the scope and application of the work control
- where the Generation Controller is not the Issuer, the Issuer and Recipient will agree on who will contact the Generation Controller to advise that the testing is being carried out, and to forewarn any possible alarms, indications or change in plant status
- IASMs are adequate and appropriate for the testing requested and are correctly applied in accordance with SM-EI and this document
- boundary markers for permit areas are placed as required
- that all IASMs including those applied under an Assurance are referenced on the TP form
- that all appropriate actions allowing safe access to equipment for testing have been taken
- operating order/isolating instructions are used for the isolation/de-isolation of equipment
- that procedures shall be used for the operation and isolation/de-isolation of complex equipment e.g., hydrogen filled generator
- that all additional WCP specific forms and attachments are provided to the Recipient and are identified on the TP form
- they retain a copy of the TP and keep it secure (digital or hard copy)
- they log the details of all TPs issued

It is the responsibility of the Issuer to ensure that they and the Recipient discuss, understand, and acknowledge:

- the worksite, the equipment and extent of the testing
- the state of the equipment before, during and after the testing
- the location of adjacent energised or in service equipment
- agreed changes of permit boundary markers
- all points of isolation necessary for the TP
- location of all IASM's, and that they are correctly applied
- that any known hazards, including those introduced during testing and/or any special precautions to ensure Recipient/work party safety are identified
- that a hazard identification and risk management process is completed by the Recipient as per the asset owner's requirements
- that proposed RASM's are appropriate and agreed with the Recipient
- the location of all isolations to which RASMs are to be applied
- that all plant risks and mitigations are agreed with the Recipient
- the IASM's to be removed for testing are agreed with the Recipient

The Issuer and Recipient shall be different people.

RECIPIENT

The TP Recipient shall be on site and with the work party at all times.

The TP Recipient is the Supervisor.

The TP Recipient can only hold one TP at any one time.

It is the responsibility of the Recipient to ensure:

- they hold appropriate and valid competence
- they communicate fully with the Issuer regarding the scope and application of the TP
- the work control is adequate for the testing to be carried out, and it remains adequate throughout for the purposes of maintaining safe access to the equipment being tested
- that RASM's as agreed, are identified, applied, removed and recorded as per Section 4 of this document.
- that a hazard identification and risk management process is completed in consultation with the work party prior to the commencement of testing, at least daily and as necessary during the testing
- where practicable, they physically check all IASMs and confirm the corresponding keys are in the lockbox before accepting the TP
- the appropriate level of supervision is provided at all times
- they shall be present at the worksite while the testing is in progress. If not, then the TP should be transferred to a new Recipient
- the safety of the work party, and of others in the vicinity of their workplace
- they display the TP notices for the equipment to be tested and control access to equipment
- they may also display "Testing in Progress" notices during the testing and remove these immediately prior to the TP return

The Recipient shall ensure they understand and acknowledge:

- the state of the equipment to be tested
- the extent of the equipment that is to be tested
- the worksite, and extent of the testing
- the location of adjacent energised, available for, or in service equipment
- the existence of known hazards
- potential hazards at the worksite
- the extent of the tests and the hazards that may be created
- all points of isolation necessary for the TP
- locations of all IASM's, including those which can be removed for testing, and that they are correctly applied
- location of all isolations to which RASM's are to be applied

The Recipient shall discuss the hazards that may be created by the tests with those involved.

While the TP is in force the Recipient shall ensure:

- the safety measures listed on the TP that may be removed for testing remain in place until immediately before the test
- the equipment to be tested shall be connected only to test equipment under the control of the Recipient
- that the equipment being tested is in a suitable condition to be tested and will not result in risk to the work party, or damage or maloperation of the equipment as a result of the testing

- that test equipment used for testing is fit for purpose and has the required safety features to ensure work party safety during the tests
- they monitor the state of the isolations and the integrity of the TP
- they request the cancellation and/or transfer of TPs
- they retain the Recipient's copy of the TP under safe custody so that it cannot be signed on to or off without the Recipient's knowledge
- that all members of the work party sign on and off the TP as required
- that all changes to the TP, isolations and activity being done under the TP are clearly communicated to the work party
- the testing remains within the boundary of the isolations at all times and is only on the equipment for which the TP has been issued
- they are the only person who arranges for the removal of IASM's for testing

A TP shall allow work party members to be at different work positions. If this is necessary, a work position supervisor shall be appointed for every work position that the Recipient of a TP cannot supervise directly. This ensures compliance with TP requirements for supervision.

In this case the Recipient shall ensure:

- they verify the competency of each work position supervisor
- they approve any change of work position supervisor
- they always know the identity of each work position supervisor
- that each work position supervisor enters (Supervisor) after their printed name on the work party form
- they instruct the work position supervisor(s) on the extent of the equipment covered by the TP, and the scope of the testing to be done
- they instruct the work position supervisor(s) and work party on remaining hazards identified by the Issuer
- they monitor the worksite to ensure that the equipment under the TP remains safe, and the requirements for the TP are being met
- they consult the work position supervisor(s) about any intended changes to the TP and immediately advise the work position supervisor(s)when these changes have been made
- clear, timely and effective communication is maintained between the Recipient and the work position supervisor(s) to ensure activity status is understood
- the Recipient shall remain responsible for the integrity of and changes to the TP, e.g. transfer, status change, application/removal of RASMs and return

The Recipient may delegate the application/removal of RASM's to the work position supervisor(s).

Before TP return for cancellation, the Recipient shall ensure that return to service checks have been completed, including:

- that all test connections are removed from the equipment.
- all applied TP notices are removed
- that the testing is completed, and tools are clear
- the worksite is tidy
- All RASMs are returned in the agreed state and RASM register updated
- IASMs removed for testing are replaced, unless mutually agreed to remain removed with the Issuer, and the status is clear on the TP
- Plant is ready for return to service if applicable

The Recipient shall also ensure:

- all work position supervisors and work party members are advised the TP is to be returned and have acknowledged by signing off
- that if a work party member is not present, they are informed that the TP has been returned
- they return the TP and all associated documentation once testing is complete
- they advise the Issuer of the current status, and any modifications made to the equipment as a result of the testing e.g., changing a transformer fixed tap position.

SUPERVISOR (Test Permit Work Position) RESPONSIBILITIES

A TP shall allow work party members to be at different work positions, if required. An additional supervisor (Test Permit Work Position) shall be appointed for every working position that the Recipient of a TP cannot supervise directly.

In this case it is the responsibility of any appointed work position supervisor to comply with and ensure:

- The identity of the Supervisor (Test Permit work position) shall be known to all members of the work party
- they liaise with the Recipient regarding the scope and application of the TP
- they are identifiable by entering (Supervisor) after their printed name on the work party form
- they remain at the work position whilst the work is being carried out
- that, in consultation with the Recipient, they will determine the level of supervision required throughout the work for their work position and work party
- the testing remains within the boundary of the isolations at all times and is only on the equipment for which a TP has been issued
- they understand the state of the equipment, risks at the worksite, risks to those in the vicinity of the testing and precautions required to manage these risks
- that a hazard identification and risk management-process is completed in consultation with the work party prior to the commencement of testing, at least daily and as necessary during the testing
- the quality and completeness of information recorded on the hazard identification and risk management documentation
- they provide clear and effective instruction to the work party and keep the work party fully informed of any changes
- energy is dissipated where this is required
- the controls necessary for entry/access to the equipment under the TP
- they understand the equipment which is isolated, and the boundary within which testing may be carried out

For safety measures

- the Recipient may delegate the application and removal of approved RASM's to the work position supervisor
- these RASMs shall be recorded on the RASM's register
- work party earths are applied if they are competent to do so
- an additional RASM lock may be applied to the lockbox as the supervisor deems necessary

Before the TP is returned any appointed work position supervisors shall ensure return to service checks are completed including:

- ensuring that the testing is complete
- that tools are clear
- the worksite is tidy

- All RASMs are returned in the agreed state and RASM register updated
- they advise the Recipient of the current status, and any modifications made to the equipment as a result of the testing e.g., changing a transformer fixed tap position

WORK PARTY

It is the responsibility of the members of the work party to ensure:

- they sign on to the TP prior to commencing work
- they work under the supervision of the TP Recipient or the work position supervisor
- they take part in a hazard identification and risk management process before work and during the testing as required
- that they shall review and sign on to the hazard identification and risk management documentation at the start of each day or shift before starting work
- they work only on equipment as specified in the equipment to be worked on section of the TP
- they obey all signs associated with the TP, instructions from the Recipient and the TP work position supervisor
- they enter or leave the TP area through defined entry points
- they inform the Recipient, or the test permit work position supervisor and other work party members of any additional hazards created by the testing or otherwise identified and ensure these hazards are effectively managed

Where the TP is issued for longer than a day, work party members are not required to sign off the TP at the end of each day or shift, unless otherwise instructed by the asset owner.

Under a TP, the work party shall sign off when:

- the intent or the purpose of the TP has changed and shall be cancelled
- the work party is not readily contactable and will be away from the worksite
- the work party has completed their work, and the TP is being returned for cancellation
- when a TP is returned for transfer to a new Recipient

Before signing off the work party shall ensure they have made their work area safe.

When returning to site, the work party or individual work party member shall follow normal process and contact the Recipient to sign back on to the TP to ensure that they understand the boundaries and isolations of the TP as these may have changed in their absence.

DAILY MEETINGS

Site meetings shall be held at the start of every day or shift and shall include all Recipients and work party supervisors who are expected to be on site that day.

Meetings shall be consistent and appropriate for the scale, scope and complexity of the work planned or in progress. Additional work party work activity meetings are to be held prior to starting work.

The meetings shall cover off, among other things:

- work on site
- contractors on site
- locations and activities of work parties
- nominated Issuers, Recipients, Supervisors
- work controls in place or required
- planned changes to safety measures
- temporary hazards
- management of production risks
- shared equipment to be used
- testing activities
- commissioning activities
- any work activities that may impact others

Key decisions are to be recorded on the daily site meeting form.

4. SAFETY MEASURES AND ISOLATION POINTS

Generation sites utilise operational locks and safety measures. These are integral to people and plant safety and shall NEVER be interfered with. Interfering with safety measures and other operational locks is a serious violation of work control procedure protocols.

Safety measures are those measures taken to ensure work can be safely undertaken under a TP.

Equipment shall be removed from service, isolated, and placed in an agreed and defined state for work. This is achieved through the application of safety measures and isolations to sources of energy such as electricity, compressed air, hydraulic pressure, water, gasses required to meet the agreed and defined state.

Safety measures may be either Issuer applied, or Recipient applied.

Where safety measures are required on equipment under the control of another asset owner, the Assurance process shall be used.

IASM's and RASM's incorporate isolations applied to equipment. These are referred to as isolation points.

For TPs, safety measures are in place prior to any change in test connections, removed for the testing then immediately replaced after the test(s) have been completed.

ISSUER APPLIED SAFETY MEASURES

IASM's are used to ensure equipment and other assets are presented in a defined and predetermined state appropriate for the planned activity.

All IASM's shall be applied or removed using an operating order or isolation instruction. An operating order or isolation instruction is not required for IASMs that may be removed for testing as listed on the TP.

Where practicable all IASM's shall be locked.

When compiling an Operating Order or Isolation instruction the following steps should be completed sequentially to ensure the safest possible application of IASM's and further safety measures.

1. Equipment is removed from service.
2. Equipment is confirmed in a suitable state for IASM's to be applied.
3. IASM's that isolate sources of primary energy are applied and any stored energy dissipated.
4. Where IASM temporary earthing is required, this is applied between the primary energy source boundary IASM's and the out of service equipment.
5. All other IASM's required to make the equipment safe can then be applied between
    a. the primary energy source isolation and the equipment or
    b. IASM earthing and the equipment.

Examples of primary energy source isolations include:

- devices which isolate any live HV source from the equipment being worked on, e.g., disconnectors
- main steam, gas etc isolating valves
- hydro turbine wicket gates, main isolation valve, headgate or stoplogs

Every endeavour shall be made to include all necessary isolations as IASM's, particularly those that are unlikely to change through the course of the works.

Where parts of equipment are removed as part of an isolation then its field location SHALL be locked or tagged to ensure energisation cannot occur.

These isolations could be electrical or mechanical e.g. isolating fuse carrier or blanking flanges. This is to ensure the field location is treated as the IASM, not the equipment part removed. These isolations also ensure that an alternative or equivalent equipment part cannot be used in this location.

Equipment parts removed as above should be secured in the lock box.

This includes small fuses and links. Equipment parts such as spool pieces or large fuses too big for the

lockbox shall be controlled separately in an appropriate facility to ensure correct restoration.

MANAGEMENT OF COMMON ISOLATIONS FOR MULTIPLE PERMITS

Where there are common isolations for multiple permits, then multi-lock principles shall be used. This will ensure the IASMs cannot be altered without consultation and agreement with all affected Recipients while any permit with common isolations remains in force.

Multi-locking means that the IASM locks for each isolation required are added or removed from the common isolation point using a multi-locking device, lockbox or similar facility.

A multi-lock is:

- a device applied at the point of isolation or earthing which has provision for a number of locks to be attached, each of which when in place will inhibit the operation of that isolation point, or
- a lockbox or facility for multiple locks

Where common isolation points are likely, the multi-locking device should be applied at the first opportunity to ensure that this facility is available for subsequent IASM locks.

There are multiple ways of achieving multi-locking provided the objective described above is met.

ELECTRICAL ISOLATION

All electrical equipment used as isolation points for sources of energy or, for preventing movement or operation of equipment, shall be locked, and tagged.

All disconnectors that form isolation points shall be opened, locked, and tagged.

All equipment used as an electrical isolation point shall have the operating mechanism energy source removed or otherwise disabled according to the manufacturer's instructions.

Unless used for earthing, indoor circuit breakers of removeable or rackable design used for isolation, shall be racked and locked out and/or spout shutters locked closed where possible.

Circuit breakers, fuse switches and distribution or ring main units specifically designed for integral 'no visible break' electrical isolation and or earthing, shall be operated according to the manufacturer's instructions, with locks and tags fitted as required.

Any electrical equipment that is designed to be an isolation point and does not have a visible break then the abbreviation 'NVB' no visible break, is to be noted as part of the description of that safety measure in the safety measure section of the TP.

Unforeseen energisation of equipment may occur through livening from other sources. These could include power transformers, instrument transformer secondary windings, capacitors, induced voltages, testing or standby generators.

All possible sources of electrical energisation including back feeds shall be identified and isolated.

Where TPs are to be issued and electrical supplies shall be left energised, or electrical equipment remains operational, details shall be given in the BUT NOTE THAT section of the TP form.

EARTHING

Sufficient IASM earths shall be applied to safeguard employees against any inadvertent source of electrical energy.

These include:

- inadvertent connection to supply
- interconnection with other parts of the power system or any other power system, e.g., via transformer secondary circuits, especially in distribution and local service networks
- stored charge in capacitors, power cables and bushings
- induction from adjacent circuits, atmospheric conditions, or direct lightning strike
- back-feed from secondary circuits, e.g., embedded generation

This earthing should be applied as close as practicable at the isolation point, to establish a safe working zone

that ensures effective earthing of the equipment under the TP.

All Issuer applied earthing shall be recorded as a safety measure on the TP.

A disconnector or circuit breaker used to provide earthing continuity shall be electrically and or mechanically disabled in the closed position, locked, and tagged.

Earth Switches including those on metal clad switchgear shall be electrically and or mechanically disabled in the closed position, locked, and tagged.

Issuer applied earths that are removed under a TP shall only be removed for the duration of the test(s).

Where IASM' temporary earths are removed for testing only the head clamps shall be removed. The tail clamps shall remain in place.

CONTROL & PROTECTION SYSTEMS ISOLATION

If remote operation of equipment under a TP is possible and where provision exists, control circuits shall be switched/ isolated, locked and tagged as appropriate.

Where such provision does not exist and where equipment status can be changed through remote access, operation, or modification of a controlling device or controlling device software, the Issuer shall remove and tag control or communication cables or agree with the Recipient what isolations they will manage.

Where modification of equipment controlling device software is part of any work programme under a TP, the Issuer and Recipient shall agree on the safety measures required.

Any work that could cause inadvertent operation of a protection system shall require the protection system and/or the equipment to be isolated to ensure that the equipment does not operate.

The isolation of other controls and power supplies to equipment under a TP is managed by the RASM process to ensure the application and removal is recorded.

MECHANICAL ISOLATION

All mechanical mechanisms used as isolation points for sources of energy or, for preventing movement or operation of equipment, shall be locked, and tagged.

This could include gates, valves, blanking plates, or other mechanical devices which inhibit operation of equipment.

This also applies to gates, valves and other facilities used as an IASM controlling the diversion, dispersion or release of solids, liquids, and gasses.

All necessary gates, valves, doors, etc. on mechanical, hydraulic and gas filled equipment shall be opened or closed (as required), locked and tagged. The equipment is, then where necessary, de-watered, disconnected, drained, purged, vented, or otherwise made safe for work.

The workplace safety in an area protected by a gas release system, shall be determined by the asset owner and measures implemented to manage the associated risks. (e.g., early warning systems, segregation, PPE).

Where this cannot be done and work is required in any area in which gas may be automatically released, the gas release mechanism shall be isolated locked and tagged.

Where equipment which retains stored energy such as air receivers, gas filled vessels, mechanical or hydraulic mechanisms or turning gear on horizontal generators remains operational, awareness of these risks shall be communicated to all affected parties and details shall be recorded in the BUT NOTE THAT section of the TP form.

TESTING ON POINTS OF ISOLATION

Testing on equipment that is a point of isolation for a safety measure shall not be undertaken unless the **integrity of the isolation remains unaffected** by the testing activity itself, or inadvertently during the testing.

Risk controls shall be in place to ensure that the testing is being undertaken on the non-energised side of the isolation only and that the isolation is firmly

locked in position to prevent the inadvertent release of energy.

Testing on disconnectors used as a point of isolation is not permissible.

MANAGEMENT OF ISOLATIONS IN TRANSPOWER SWITCHYARDS

Isolations applied in Transpower switchyards shall be managed in accordance with Transpower's isolation procedures.

This process applies only where the Issuer has operational control of the Transpower equipment, otherwise an Assurance applies.

The key elements of the Transpower lockout procedure are as follows:

- Once all safety measures have been locked, all switchgear keys and fuses that form issuer-applied safety measures shall be secured in a switchyard lockout box
- A Transpower Issuer lock (identified with a yellow bead) shall be used to lock the lockout box and the key to the Issuer lock shall be returned to the key safe
- The Issuer shall then apply the Transpower Recipient lock (identified with a blue bead) to the lockout box
- The Transpower Recipient lock key shall be placed in the generation plant permit lockout box

Transpower lockout box showing yellow Issuer lock and blue Recipient locks.

Picture 1:Example of lock box

RECIPIENT APPLIED SAFETY MEASURES

The RASM process is used for both the management of safety measures and also for plant status control. These are applied by or on behalf of the Recipient.

RASM's are safety measures additional to IASM's applied to isolation points to make equipment or systems safe to work on.

RASM's may also be used for tracking when the work requires a change of plant status e.g., manual/auto select switch, using valves to prevent loss of hydraulic oil, disconnecting a section of pipework or installing/removing blanking flanges.

Unless plant status controls are managed by a specific procedure or process, they shall be controlled under the RASM process to ensure that the plant is returned in the correct state.

Where practicable all RASM's shall be locked.

RASM's shall not be applied to major boundary isolations.

RASM's shall be recorded on a RASM register.

The purpose of the RASM register is to ensure that:

- the work party is aware of what isolations are in place
- the work party is aware of the current status of equipment, and
- the equipment isolations are correctly restored at the conclusion of the works

The RASM register shall be kept with the work control document at all times.

If a new permit or transfer is necessary, all RASMs required to remain in place are transferred to the new permit RASM register.

The Issuer and Recipient shall discuss and agree on any RASM's to be applied.

RASM's include;

- additional earths
- bonding connections

- Isolation of low-risk supplies needed to enable specific work to take place, e.g., instrument air, low pressure water, LV power supplies etc
- removal of equipment communications connections
- disconnection of control cables or wires

Where RASM's will be applied and removed multiple times during the course of the intended works the RASM register is to be updated:

- as required to effectively ensure the safety of the work party
- at the end of the working day
- prior to daily return if applicable

When the work control document is being returned for cancelation and no other work control is required then the Recipient shall check and sign off that all RASM's have been removed.

MANAGEMENT OF COMMON RASM ISOLATIONS

Where there are common isolations for multiple work parties, then multi-lock principles shall be used.

This will ensure the RASM's cannot be altered without consultation and agreement with all affected parties while any work control with common isolations remains in force.

A multi-lock is a device applied at the point of isolation or earthing which has provision for a number of locks to be attached, each of which when in place will inhibit the operation of that isolation point.

Where common isolation points are likely, the multi-locking device should be applied at the first opportunity to ensure that this facility is available for subsequent RASM locks

5. TEST PERMIT HARDWARE & DOCUMENTATION

LOCKS AND TAGS

Issuer-applied safety measure (IASM) and Recipient-applied safety measure (RASM) locks and tags shall:

- be applied and removed only by authorised and competent persons
- not be used for any purpose other than to lock and tag out isolation points, earthing, lockboxes, and plant status control
- be able to be tracked back through to the work control document to which they relate

No spare keys shall be held for any IASM or RASM lock.

FORCED REMOVAL OF LOCKS

Forced removal of locks is permissible in the following circumstances only:

- if the key to that lock is missing
- if the key fails to open the lock due to damage
- if it can be confirmed that the key holder has left site and it is not practical to expect them to return, e.g., time factors, distance, production, plant integrity, personal safety
- in the case of a missing key, every endeavour should be made to locate the missing key

If a lock needs to be removed or replaced complete the following steps:

1. All work shall stop, and the safety of plant and people is confirmed.
2. Issuer and Recipient shall correctly identify the lock that is to be forcibly removed.
3. At the conclusion of the above steps, if the lock is safe to remove, the following steps shall be taken:
    a. Asset owner approval obtained.
    b. The lock can now be forcibly removed.
    c. If required, apply the correct replacement lock, and update any work control procedure lock reference detail.
    d. Return the destroyed lock and update records as required.

IASM LOCKS AND TAGS

IASMs will be used for any isolations and earthing that are required to be applied by the Issuer, or on behalf of the Issuer, under a TP.

IASMs include all main boundary and major isolations and Issuer-applied earths.

IASMs may include other isolations as identified at the time of preparing the TP.

IASMs shall be locked with an IASM lock.

Where it is not practicable to use an IASM lock, a tag shall be used and shall be uniquely identifiable to the permit.

Where tags cannot be applied, e.g., fuse holders, then yellow DO NOT OPERATE or DO NOT REMOVE tape shall be used.

The IASM locks shall be yellow with a unique identifier to track the safety measure to the permit(s) to which it relates.

The IASM locks should be labelled with DO NOT OPERATE or DO NOT REMOVE in black text.

If the lock is labelled DO NOT OPERATE or DO NOT REMOVE, then no accompanying tag is required.

All IASM locks shall be uniquely keyed and identifiable to the correct key.

Where utilised, the IASM tags shall be a yellow tag with DO NOT OPERATE or DO NOT REMOVE in black text.

Issuer-applied earths should be locked where practicable, if not practicable, the earths shall have an IASM tag applied AT THE TAIL.

Where it is not practicable to physically lock a main boundary or major isolation then an agreed and approved control shall be documented and implemented to ensure equivalent or better protection.

Any systems that are required to remain operational in order to provide a safety measure shall be managed and controlled.

Picture 2: IASM lock, tag, and tape

RASM LOCKS AND TAGS

RASM's shall comprise a lock and or tag. Where it is not practical to use a lock, a tag or tape shall be used and shall be uniquely identifiable.

RASM locks, keys and tags are issued to the Recipient by the Issuer.

In general, all RASM locks shall be uniquely keyed and identifiable to the correct key. However, a small number of RASM locks may be commonly keyed provided they are issued to only a single Recipient and only one key exists for these locks.

- no spare keys shall be held for any RASM lock
- all RASM locks shall be red
- if the lock is labelled DO NOT REMOVE and is uniquely identifiable, then no accompanying tag is required unless specified by the asset owner.
- RASM tags shall be red and white with DO NOT REMOVE in black text
- where tags cannot be applied then red and black RASM tape shall be used

RASM locks and tags shall:

- be applied and removed only by authorised and competent persons
- not be used for any purpose other than to lock and tag out isolation points, earthing or Plant Status Control
- be able to be tracked back through to the work control to which they pertain

No work shall be conducted on an isolation point, where that work may compromise the integrity of any isolation.

Picture 3: RASM lock, tag, and tape

THE LOCKBOX

The keys to all issuer-applied safety measures shall be secured in a lockbox or lockboxes.

The Issuer and Recipient shall apply their respective IASM and RASM locks to each lockbox. This ensures access to the IASM keys is only possible by agreement with both the Issuer and Recipient.

If agreed with the Recipient, the work position supervisors and members of the work party may apply a RASM to the TP lockbox.

The lockbox shall be secured at a location agreed by the Issuer and Recipient.

The Issuer's IASM lockbox key shall be kept secure by the Issuer.

The Recipient's RASM lockbox key shall be kept secure by the Recipient.

GUIDANCE FOR DEFINING TEST PERMIT AREAS

Refer also to EEA Permit Areas Guide

SWITCHYARDS

All TP areas within a switchyard shall have boundary marking.

Only continuous permit area, non-conductive yellow and green boundary marker, shall be used e.g. rope, tape or plastic chain.

Switchyard permit area boundary marker shall be formed to provide defined points of entry.

More than one point of entry may be provided when necessary.

Members of a work party shall enter and leave only through points of entry. The Recipient shall strictly enforce the correct use of the point of entry.

A TP identification notice shall be displayed at each entrance to indicate the Recipient's name, TP number, and the work being done.

Where a TP is in force, additional warning signs shall also be displayed within the permit area.

The permit area boundary marker should be positioned to allow sufficient working space around equipment covered under the TP.

The boundary marker shall be sufficiently taut and supported by posts or fixed support members so it cannot be blown into live equipment.

The boundary marker shall not be fastened to switch handles and/ or equipment covered by the TP.

Where equipment is enclosed by or partially enclosed by a fence, that fence may replace the use of the continuous permit area boundary marker.

Where the fenced section includes a personnel gate, it may be used to gain entry to work on the equipment provided that:

- The personnel gate is kept secure against unauthorised access at all times and kept locked immediately work ceases under a TP
- A TP identification notice is placed at the personnel gate
- Where possible, other gates are made available for access to the switchyard

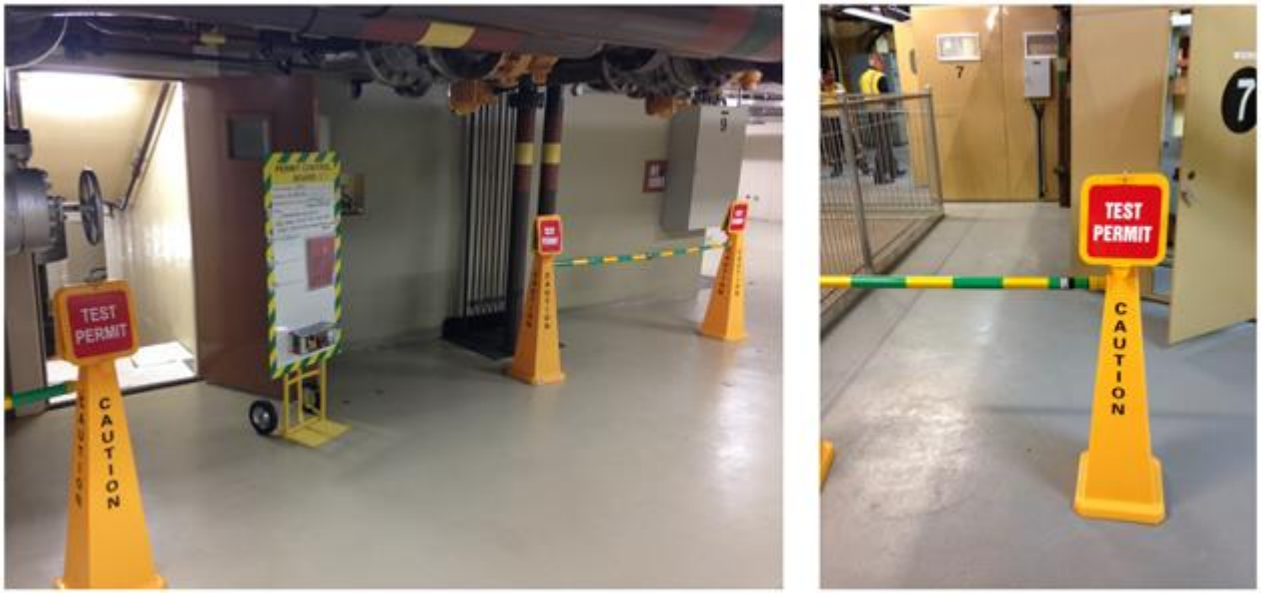
The TP area shall be easily identifiable from any direction that the area could normally be approached from.

GENERATION FACILITIES

Where practical the switchyard practices as above should be followed.

At generation facilities where this is not practicable, the TP area will be identified by the appropriate TP signage complemented with additional signage, cones and yellow and green barriers.

Yellow and green striped identification shall be used on metal-clad switchgear and panels under permit.



Picture 4:Examples of barrier equipment in place

TEST PERMIT FORMS

A TP shall be documented on a standard form using a process approved by the asset owner.

- a TP form (either paper or digital) shall be used for issuing a TP
- all fields on the form should be filled in. If an entry is not required, then that section should be crossed out, or in the case of digital formats the word 'N/A' shall be added to identify fields which are not applicable
- it shall be possible at any time to determine the status of a TP
- TP forms shall be retained as part of the operating log

IASM'S WHICH MAY BE REMOVED FOR TESTING

IASM's specifically agreed between the Issuer and all affected Recipients, listed in the *Safety measures which may be removed for testing* field, may be removed and reapplied as required by the Recipient to facilitate the testing.

IASMs removed for testing shall be replaced, unless otherwise mutually agreed between the Issuer and the Recipient, and the status is recorded on the TP.

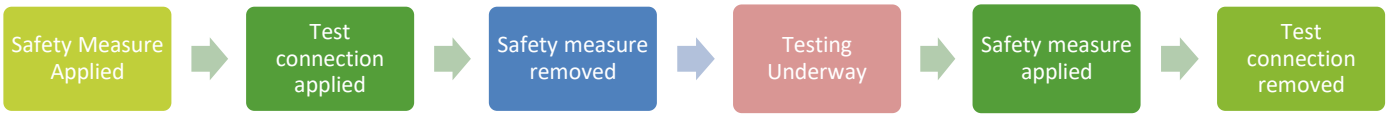
ALTERATIONS TO ISSUER APPLIED SAFETY MEASURES

Due to the elevated risks associated with work conducted under TPs, any alterations (additions and deletions) will require the TP to be returned and cancelled and the process for planning and issuing a new TP shall be followed.

Note: There is an important difference between "IASM's able to be removed to facilitate testing", and IASM "alterations" (additions or deletions) which are no longer allowed under a TP. Refer glossary which explains the differences.

TEST CONNECTIONS

Under a TP, test connections should be made and removed only while safety measures are in place.

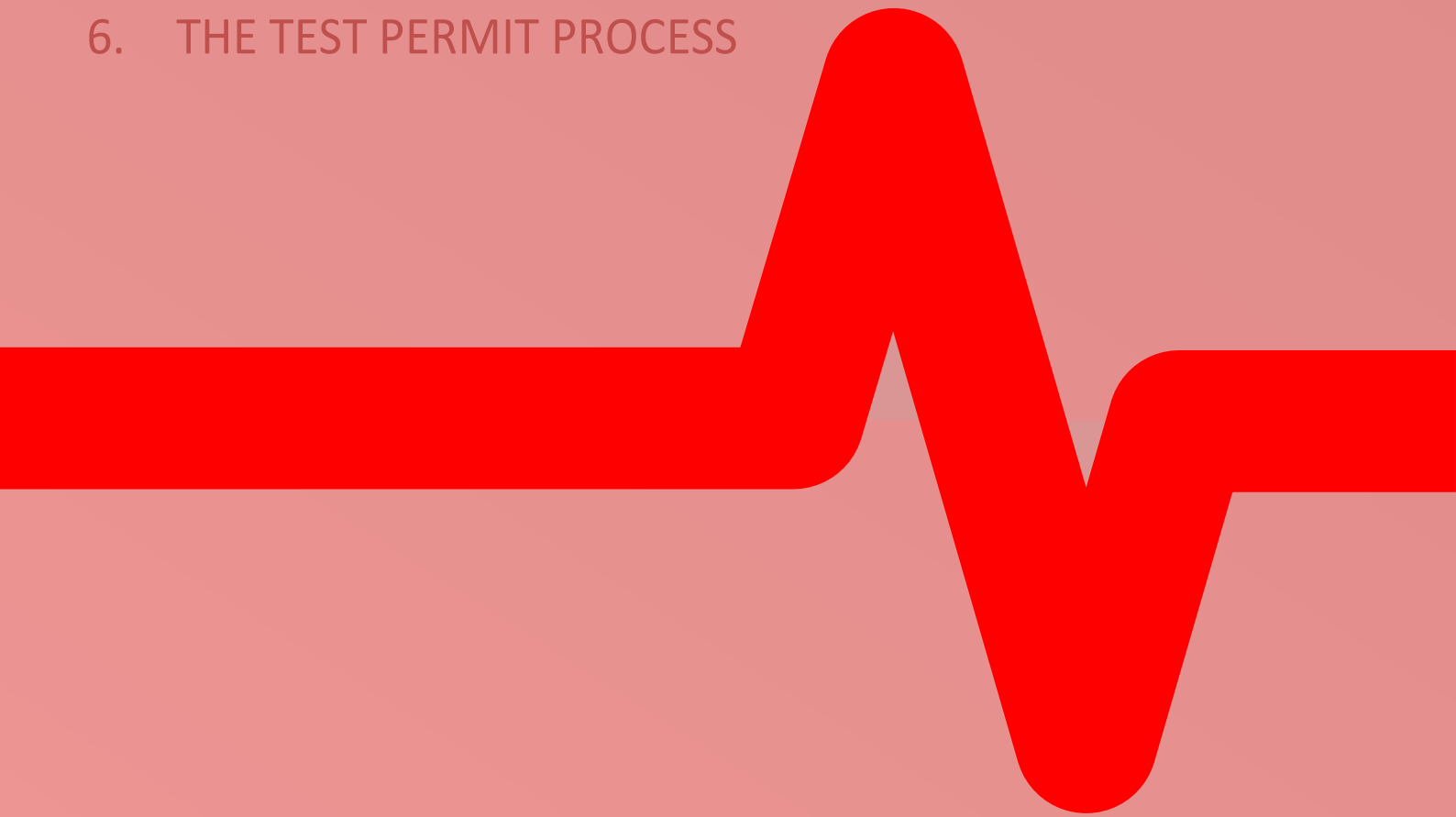


This ensures the equipment is maintained in the safest state possible throughout the test process.

ASSURANCES

Refer Staylive Assurance WCP for guidance.

6. THE TEST PERMIT PROCESS



PLANNING FOR A TEST PERMIT

Pre-work planning shall be completed for any intended work.

Pre work planning is essential to ensure that all aspects of the work and any related work are considered and identified.

This ensures adequate consideration is taken for the isolation of plant, and the safety of people working on equipment.

Where the scope and nature of the work requires, planning for management and compliance with regulatory and other safe work requirements shall be completed. For example;

- notifiable work
- civil works/Excavations
- mobile crane usage
- confined space

Pre-work planning shall be held ahead of the intended work with sufficient lead time to ensure all planning, communication and logistical aspects required for the safe and efficient implementation of the tasks is completed.

This shall be a scalable process relative to the complexity and risk of the intended work.

Typically, breakdown pre-work planning will be completed within a compressed timeframe.

Documentation required will be specified by the asset owner but at minimum the following information shall be captured

- intended work scope and expected timeframe
- work control selection
- isolations/safety measures required
- identify Issuers, Recipients, supervisors
- the nature and objective of the tests
- requirement for a Transpower approved test plan
- identification of any other permits in force at the time. If any are affected, then the Recipient of these permits should attend this meeting, and these permits shall be returned
- identification of whether any Assurances are required from third parties
- identification of what, if any, other work will be affected and confirmation that the supervisors of these works attend this meeting
- identification of what hazards are introduced by the testing and how these hazards will be controlled
- agreement between Issuer and TP Recipient about which issuer-applied safety measures can be removed for testing and who will be responsible for making the changes to the issuer-applied safety measures
- identifying and confirming work that is required to facilitate testing can be managed under that TP e.g., disconnecting conductors prior to testing and replacing these when testing is completed
- ensuring that work that is not required to facilitate testing shall not be completed under a TP

The pre-work planning meeting is to be attended by the;

- Issuer
- Recipient
- any TP work position supervisor(s)
- Recipients of other affected permits

Additional attendees as required depending on the scope may include;

- asset owner
- technicians
- engineers
- project managers

- trades staff
- planning function
- other SME as needed (Safety/Environmental)

The record of the pre-work meeting or equivalent including key decisions should be kept and made available.

GUIDANCE FOR THE MANAGEMENT OF MULTIPLE PERMITS WHEN TESTING

Where a TP is required for testing equipment, no other permit shall be issued on the equipment under test.

The TP may share common isolation points with other permits.

For the issue of a TP all Recipients with permits that share any common isolation points that need to be removed for the test shall be advised and their permits returned and suspended.

An assessment shall be made of the risks created by the testing and the effect this could have on any other permits. Any permits that may be affected by the testing will also require return and suspension.

PRELIMINARY REQUIREMENTS FOR A TEST PERMIT

The following steps shall be completed before issuing a TP;

- plan/schedule plant outages, including any notifications required
- complete the pre-work planning process, and discuss the requirements with all key stakeholders
- compile and check operating orders/isolation instructions are adequate for the planned work
- confirm that it is appropriate to issue a TP for the intended work. Refer to the work control selection guide
- confirm that the intended work will not adversely affect any other work occurring on site over the period
- identify what actions are required to manage any risks

COMPILING THE TEST PERMIT

The Issuer shall ensure the TP is compiled in full, ready for issue.

- the TP section 'Equipment to be tested,' shall clearly identify the equipment to be tested
- the TP section 'Testing to be done,' shall clearly identify the testing activity
- the TP section 'But Note That, shall clearly identify any equipment that may remain energised
- The IASMs are appropriate for the work
- The IASM's which may be removed for testing shall be clearly identified
- RASMs are as agreed between Issuer and Recipient
- Equipment identification is easily understood and legible

TEST PERMIT ISSUE

Before issuing the TP, the Issuer shall ensure the Recipient holds Recipient competency and that they both understand their respective responsibilities.

For a TP, the Issuer shall provide the keys for any IASM's which may be removed for testing to the Recipient.

Before accepting the TP, the Recipient shall ensure that:

- the equipment to be worked on and the work to be done stated on the TP is as requested
- they are satisfied with the IASM's stated on the TP
- they are satisfied with the IASM's that may be removed for testing

- The IASM's as stated are correctly applied and confirm the corresponding keys are in the lockbox
- they are satisfied with the agreed RASM's to be applied

Once the Recipient has confirmed the details are correct for the work, they sign the acceptance section of the TP form or digital equivalent.

TEST PERMITS NOT ISSUED IN PERSON

When a TP cannot be issued in person, several methods can be used to ensure relevant and correct information is included, acknowledged, and confirmed. For example:

- an Issuer completed copy can be sent to the Recipient remotely. The Recipient would then confirm the details with the Issuer and sign the acceptance section using a direct verbal communication process
- a blank TP form can be used to populate each field by Issuer and Recipient using a direct verbal communication process

GUIDANCE FOR TEST PERMIT RETURN

A TP can be returned for the following two reasons.

1. For Transfer to new Recipient

The existing Recipient is unable to meet their responsibilities.

2. For Cancellation of the TP

This means the testing is completed or stopped and the TP is returned for cancellation, and no further testing is required.

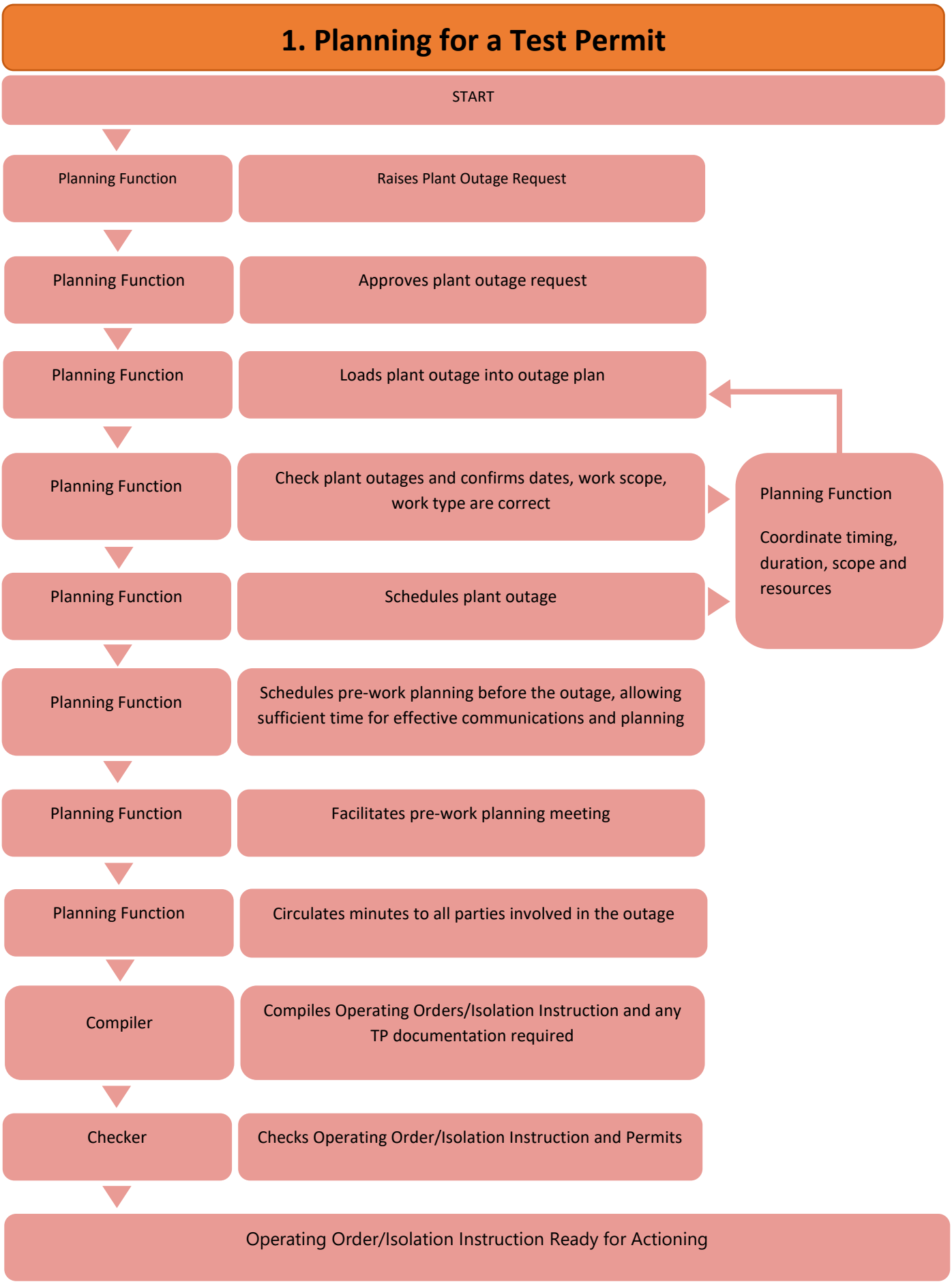
Testing could be stopped because of unforeseen problems, a change in IASM's is required, or work under an AP is required.

At the completion of testing required under the TP, the Recipient shall:

- Ensure return to service activities and checks have been completed
- Ensure all supervisors and work party members have been advised the TP is to be returned and have acknowledged by signing off the TP.
- Return the TP and associated documentation to the Issuer for cancellation and advise the Issuer of any modifications and whether the equipment is ready to return to service or not.

The Issuer accepts and cancels the TP.

7. PROCESS FLOW CHARTS



2. Change from Access Permit (AP) to Test Permit (TP) 1 of 2

Works in progress	
Issuer, AP & TP Recipient(s)	Undertake pre-test meeting ensuring all affected AP's and safety measures to be removed for testing are identified
AP Recipient(s)	Requests work party sign off the AP and requests Supervisors remove RASM locks from lock box if applicable
Issuer, AP & TP Recipient(s)	Agree on which RASMs remain in place for the duration of the TP. When RASMs remain in place, the RASM register shall form part of the TP
AP Recipient(s)	Returns the AP for suspension. Removes the RASM lock on the AP lockbox
Issuer & TP Recipient(s)	Issuer requires any other AP that could be affected to be returned. TP Recipient explains intent of TP to other AP Recipients. [Preferably with Issuer] physically checks that all IASMs are correctly applied and identifies equipment to be worked on
Issuer	Opens AP lockbox and removes necessary keys/fuses for any IASMs that may be removed for the purpose of testing as stated on TP and hands over to TP Recipient
Issuer	Applies IASM lock to the (previous AP) lockbox and issues the TP. The lockbox is now the TP lockbox. Updates log and retains an available copy (paper or digital) of the TP
TP Recipient	Places RASM lock on the lockbox and accepts the TP. Retains an available copy (paper or digital) of the TP
TP Recipient	Checks the TP area is established correctly and ensures TP notice in place. Updates the Work in Progress (WIP) board (or equivalent)
Next Page	

2. Change from Access Permit (AP) to Test Permit (TP) 2 of 2

Continue

TP Recipient	Ensures work party sign on to the TP. Ensures work party complete and sign on to the hazard identification and risk management documentation
TP Recipient	Ensures work party set up worksite and apply test equipment if applicable
TP Recipient	Removes isolations and/or earthing for the purpose of testing or work in accordance with the TP
TP Recipient	Informs work party of changes to IASM's (as required)

TESTING PROCEEDS

3. Issue a Test Permit. 1 of 2

Continue from Planning for a TP (Chart 1)

Actioner	Ensures equipment is available in the state agreed in the outage plan. If an Assurance is required, then ensures that it has been received
Issuer	Requests return of any AP that could be affected. Actions Operating Order/Isolation Instruction. Applies and records Issuer Applied Safety Measures (IASM)
Issuer	Places Permit Board (if used) at worksite and defines the permit area using permit boundary marker, signage or barriers as required in agreement with the recipient (see recipient responsibilities)
Issuer	Places IASM keys, any fuses, and any assurance etc in the lock box and locks the lock box with an IASM lock
Issuer & Recipient	Meet to discuss detail of the TP. Confirm IASM's that may be removed for testing. Confirm RASM's required and issuer issues RASM locks and keys.
Recipient	[Preferably with Issuer] physically checks that all IASMs are correctly applied and identifies equipment to be worked on
Issuer	Issues the TP. Updates log and retains an available copy (paper or digital) of the TP
Recipient	Places RASM lock on the lock box and accepts the TP.

Next Page

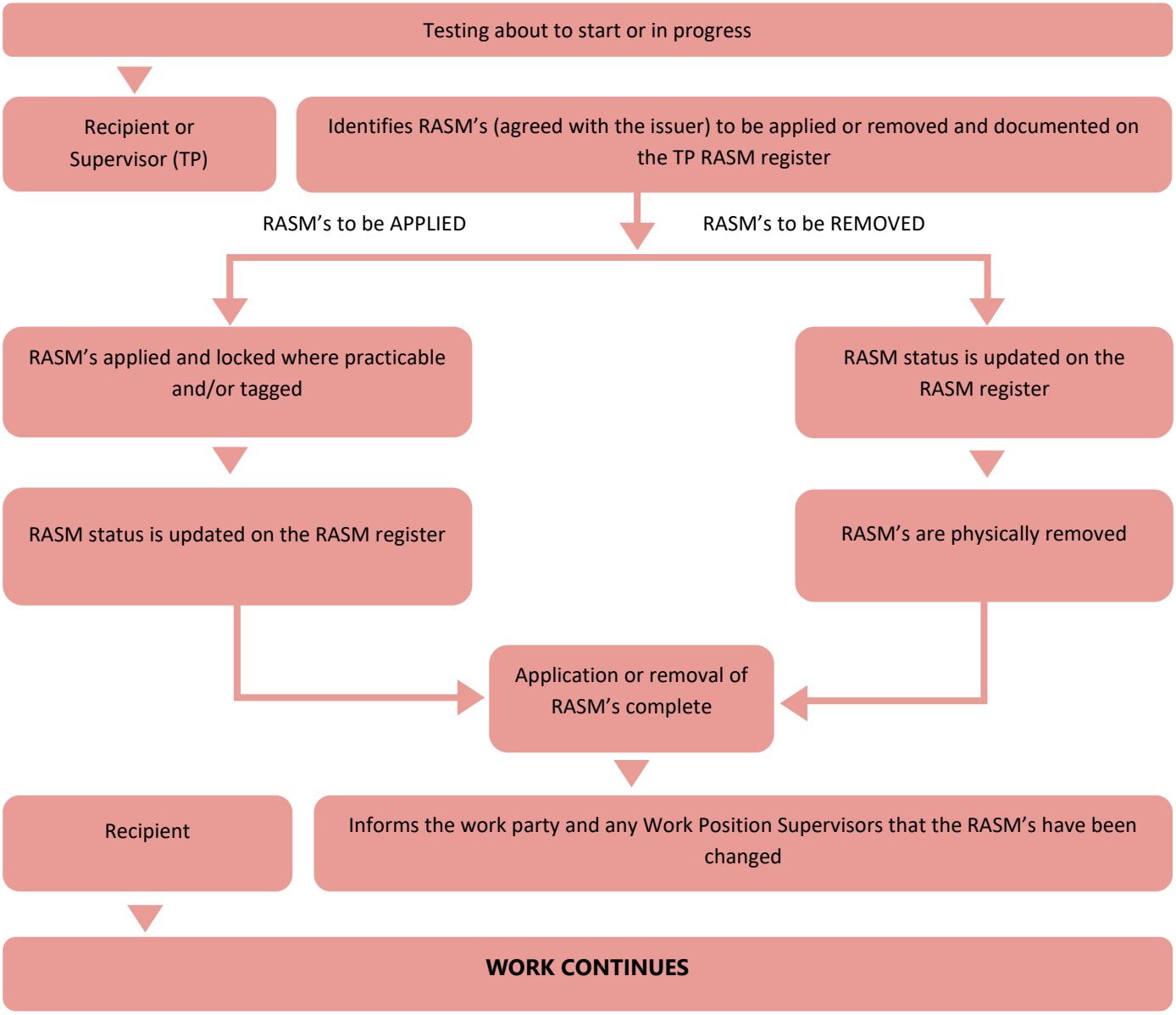
3. Issue a Test Permit. 2 of 2

Continue

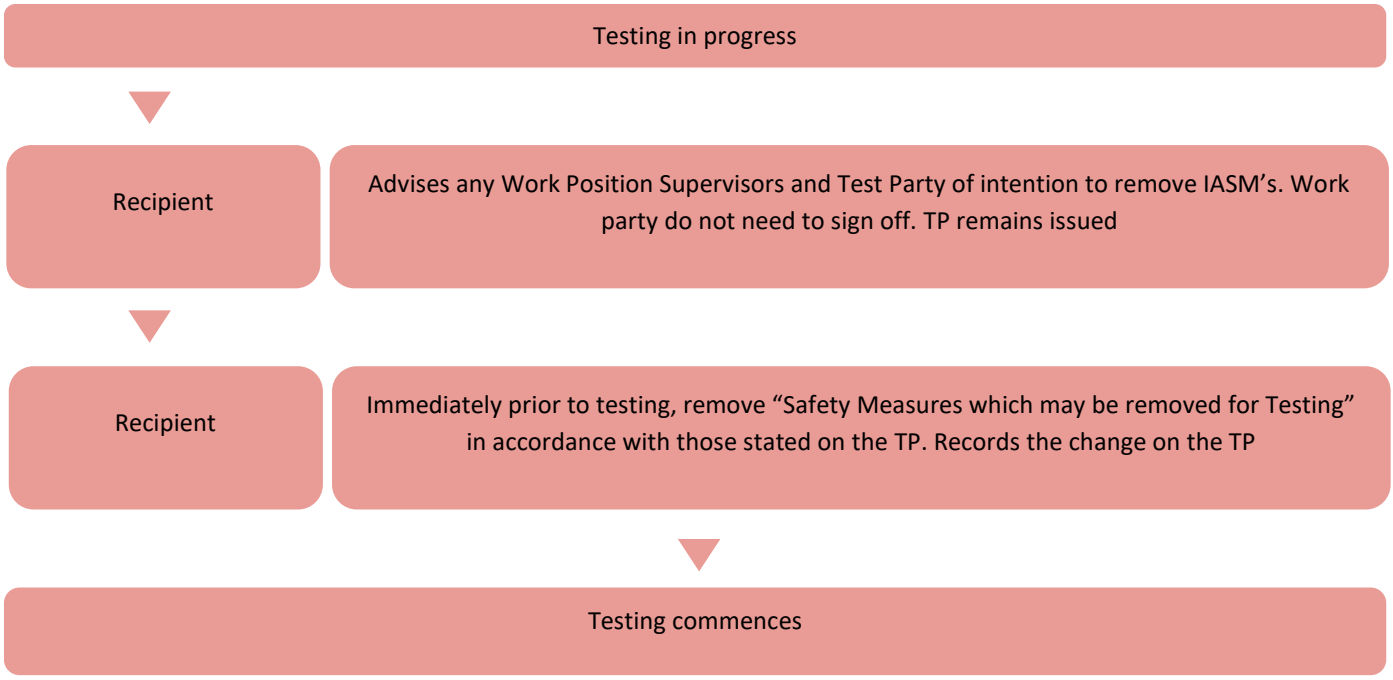
Issuer	Hands over any keys/fuses to Recipient for IASMs that may be removed for the purpose of testing as stated on the TP
Issuer/Recipient	Updates the Work in Progress (WIP) board (or equivalent). Ensures TP and Testing in Progress notice is displayed at the worksite
Recipient	Meets with all members of the work party and steps through the complete detail of the TP. Ensures work party signs onto the TP.
Recipient	Ensure work parties complete their respective hazard identification and risk management

TESTING PROCEEDS

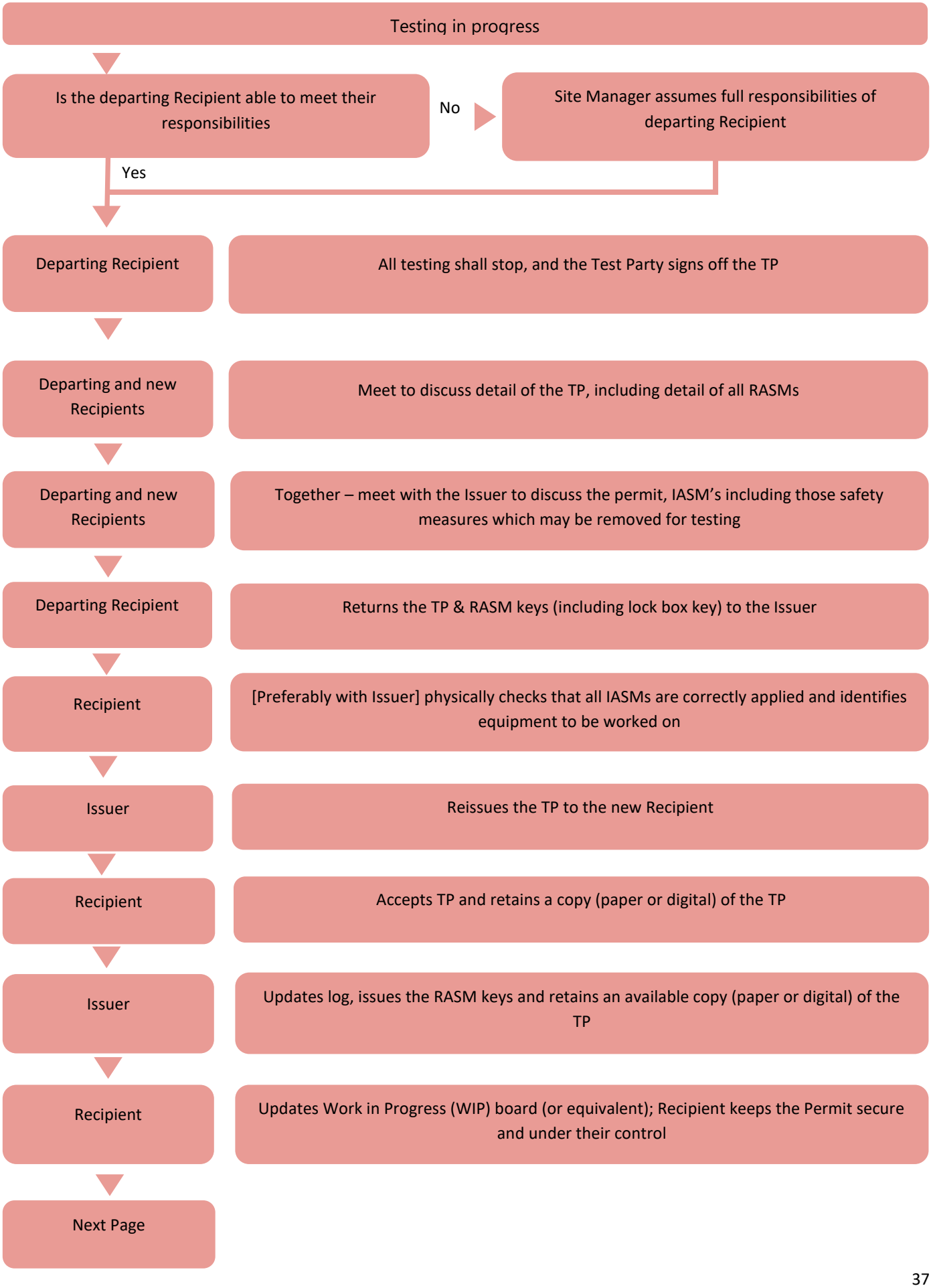
4. Management of Recipient Applied Safety Measures (TP)



5. Test Permit IASM's that may be removed for testing



6. Transfer a Test Permit to a New Recipient. 1 of 2



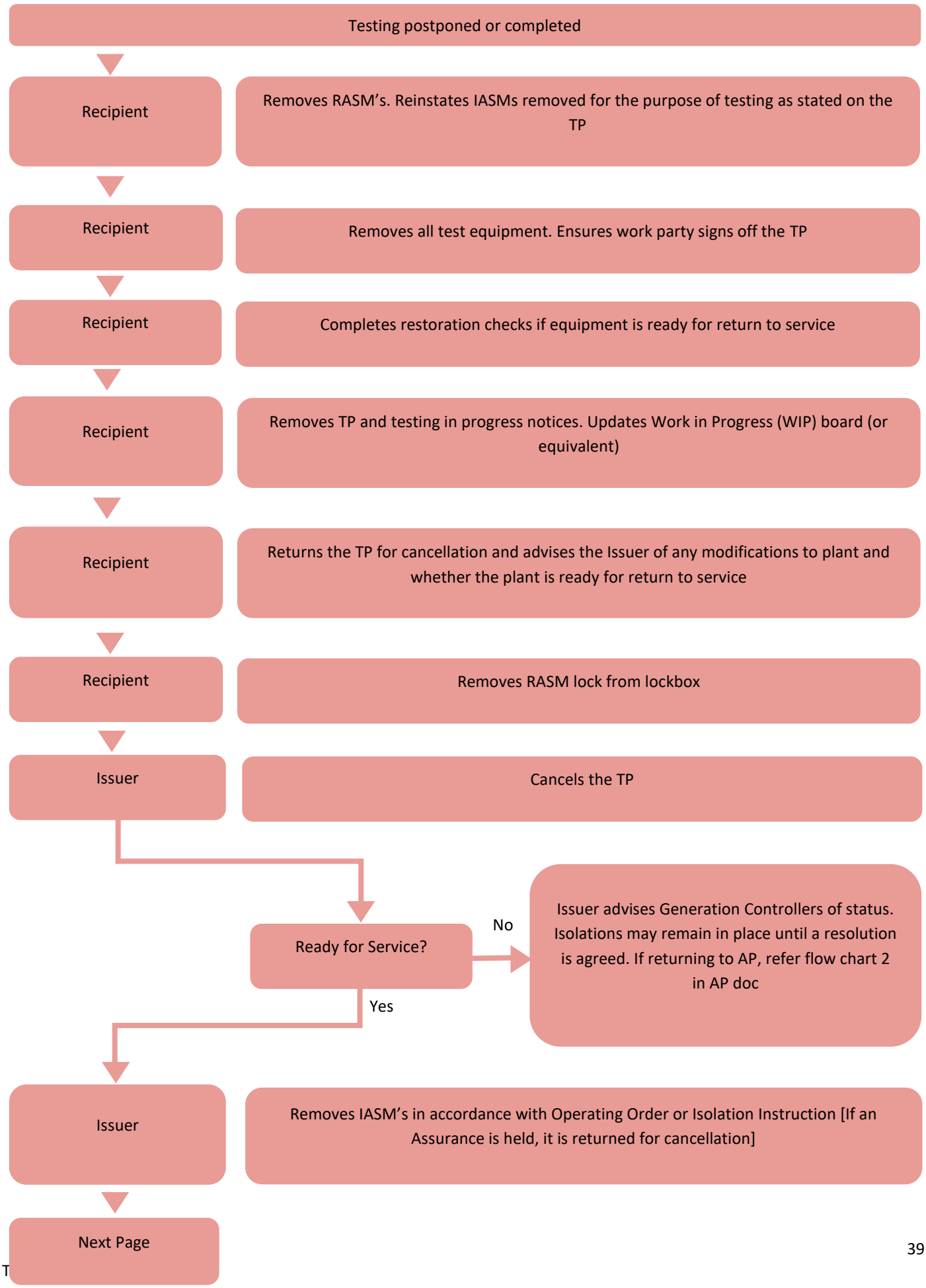
6. Transfer a Test Permit to a New Recipient. 2 of 2

Continue

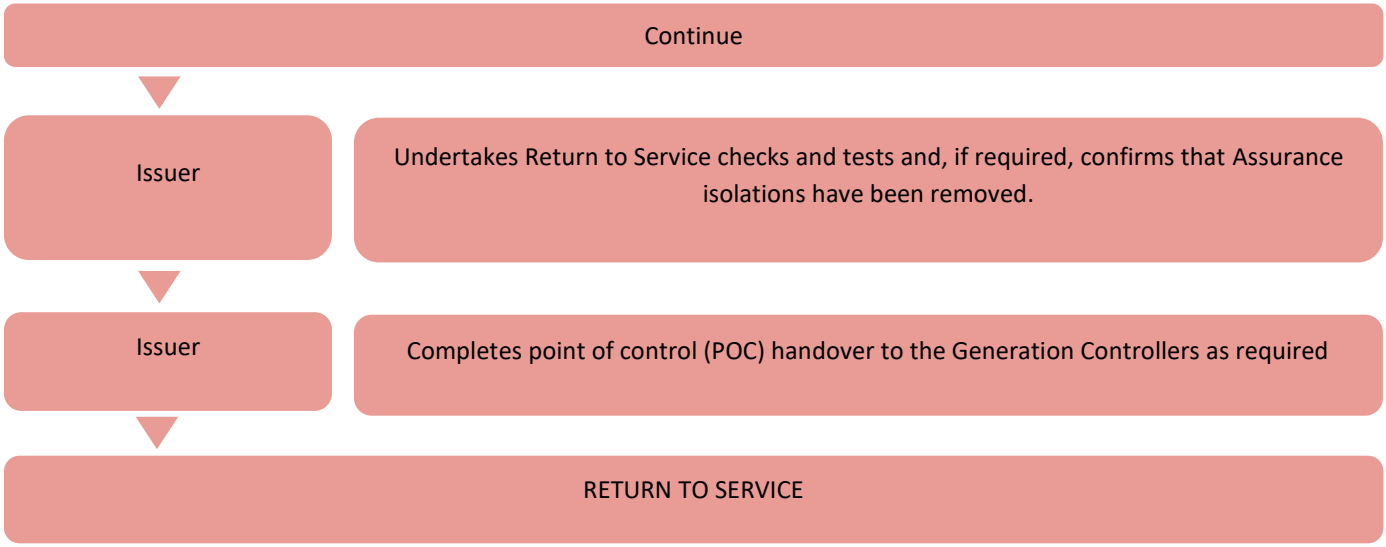
Recipient	Informs any Work Position Supervisors and Test Party that transfer complete. If required, work party signs back on to the TP
Recipient	Discusses Test requirements with any TP Work Position Supervisors

WORK CONTINUES

7. Returning a Test Permit for cancellation. 1 of 2



7. Returning a Test Permit for Cancellation. 2 of 2



8. Returning a TP for Reissue of a Suspended AP. 1 of 2

Testing completed, postponed or cancelled to allow work under an AP

Recipient	Removes RASM's. Reinstates IASMs removed for the purpose of testing as stated on the TP
Recipient	Removes all test equipment. Ensures work party signs off the TP
Recipient	Removes TP and testing in progress notices. Updates Work in Progress (WIP) board (or equivalent)
Recipient	Returns the TP for cancellation and advises the Issuer of any modifications to plant
Recipient	Removes RASM lock from lockbox and returns this and other RASM locks to the issuer
Issuer	Cancels the TP
Issuer	Ensures equipment is in the state agreed with the AP Recipient.
Issuer	Places IASM keys, any fuses, and any Assurance etc. in the lock box and locks the lock box with an IASM lock
Issuer & Recipient	Meet to discuss detail of the AP, confirm RASMs required and Issuer issues RASM locks and keys
Recipient	[Preferably with Issuer] physically checks and acknowledges that all IASMs are correctly applied and identifies equipment to be worked on

Next Page

8. Returning a TP for Reissue of a Suspended AP. 2 of 2

Continue from Chart 8/1

Issuer	Issues the AP to the Recipient. Updates the log and retains an available copy (paper or digital) of the AP
Recipient	Applies RASM lock on the lock box, if not already applied, and accepts the AP
Issuer/Recipient	Updates the Work in Progress (WIP) board (or equivalent). Ensures permit notice is displayed at the worksite
Recipient	Meets with all members of the work party(s) and steps through the complete detail of the AP. Ensures work party signs on to the AP
Supervisor (AP)	Ensure work parties complete their respective hazard identification and risk management.

WORK PROCEEDS

8. TEST PERMIT FORMS

STAY LIVE Electrical Industry Health & Safety Group

Test Permit

Work Control Number	
Lockout Box(s)	
Recipient Lock Number(s)	

Recipient Name		Contact Number		Competency Expiry	
Company		Station			
Equipment to be Worked On					
Work to be Done					
But Note That					

Safety Measures which may be removed for Testing

	Equipment Code	Isolation Point	Isolation Method	Lock No	Removed (Initial)	Applied (Initial)
1						
2						
3						
4						
5						

Issue The equipment specified has been removed from service and the Issuer Applied Safety Measures listed are in place. The agreed safety measures which may be removed for testing have been listed.

Issuer Name		Compentency Expiry				Issue Communicated Via	Hand / Verbal / Digital
Issuer Signature		Date		Time			

Acceptance
I am satisfied that the safety measures listed are in place and understand the isolation(s) that may be removed for testing.
I understand the equipment covered by this Test permit. I am satisfied that the equipment is in a safe condition to be tested.

Recipient Signature		Date		Time	

Return by Recipient This permit is returned. My work party has been informed in accordance with the StayLive Work Control Procedures.

Recipient Signature		Date		Time	

Cancellation This permit is cancelled.

Issuer Name		Issuer Signature			Date	Time	

Return to Service (if "No", list reason why not and any restrictions or modifications) **Yes / No** (Circle)

Figure 1 - Example TP Issue and Acceptance form

STAY LIVE Electrical Industry Health & Safety Group

Test Permit - Safety Measures

Work Control Number	

	Issuer to list all isolation, earthing, locking, safety measures, etc applied for issue of this permit:			Isolation/Locks	
	Equipment Code	Isolation Point	Isolation Method	Lock Number	Recipient Check (Initial)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Figure 2 - Example TP Safety Measures Form

STAY LIVE Electrical Industry Health & Safety Group

Recipient Applied Safety Measures

Work Control Number	

Record all the Issuer Agreed, Recipient Applied Safety Measures and Plant Status Control Measures, in accordance with the StayLive Work Control Procedures.

	Isolation Point	Isolation Method	Issuer Agreed (Initial)	Lock No.	Applied (Initial)	Removed (Initial)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

Recipient: I have checked and I am satisfied that all safety measures applied by my work party have been removed.	Recipient Name					
	Recipient Signature		Date		Time	

Figure 3 - Example Supplementary RASM Register

STAY LIVE Electrical Industry Health & Safety Group

Work Party

Work Control Number	

I understand the equipment as detailed is available to work on.	Date (dd/mm)	Name (Print)	Sign On	I understand the equipment is no longer available to work on.	Sign Off
		a			a
		b			b
		c			c
		d			d
		e			e
		f			f
		g			g
		h			h
		i			i
		j			j
		k			k
		l			l
		m			m
		n			n
		o			o
		p			p
		q			q
		r			r
		s			s
		t			t
		u			u
		v			v
		w			w
		x			x
		y			y
		z			z

Figure 4 - Example TP Work Party Sign On/Off Form

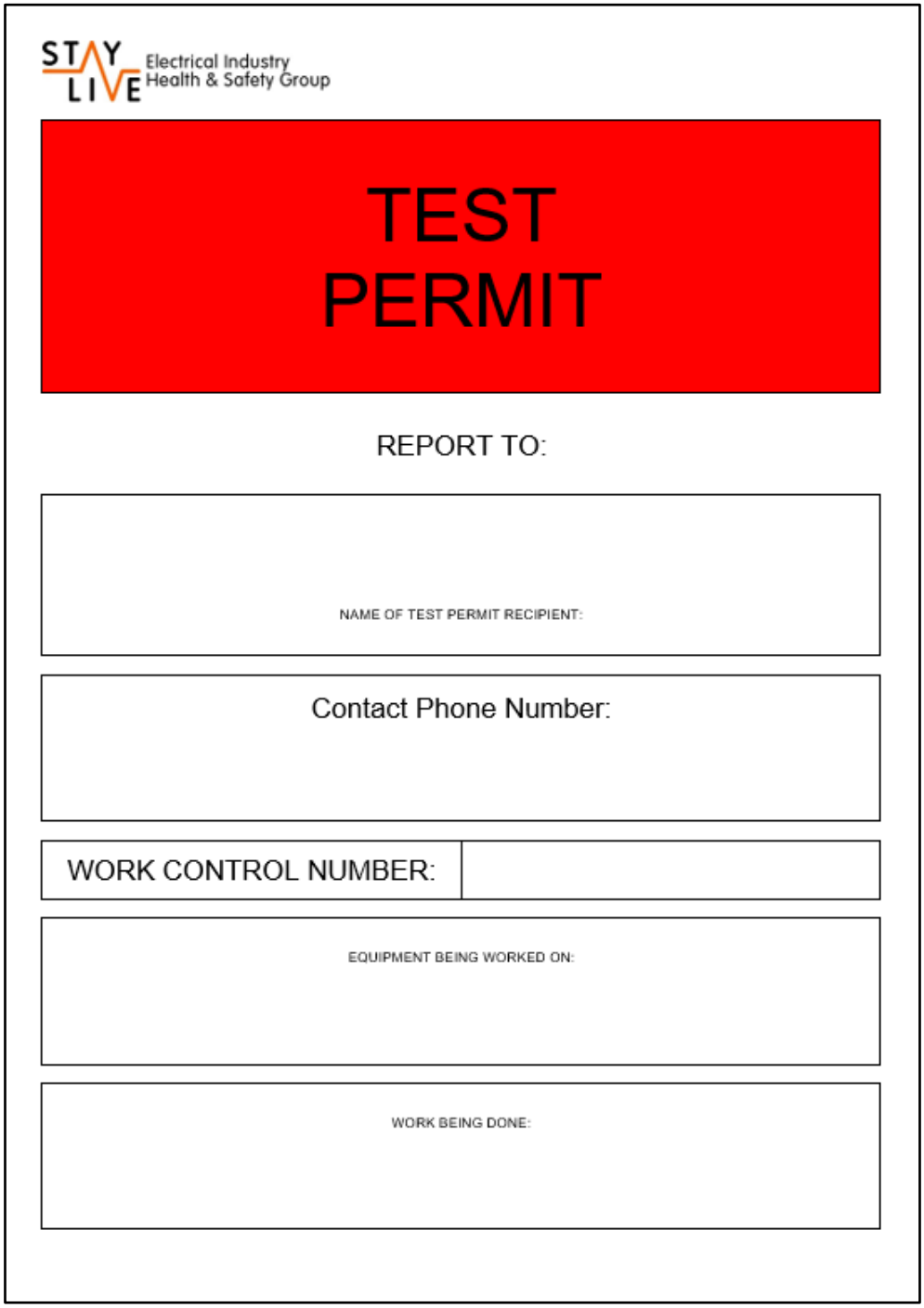


Figure 5 - Example TP Entry Point Signage

9. WCP GLOSSARY

Terms	Definition
Access Permit [AP]	A Works Management System used to present out of service equipment in an agreed and defined state for work, using issuer applied safety measures, where the work does not include the introduction of primary energy sources, test voltages or potentially lethal hazards
Actioner	The competent person physically carrying out actions defined in the operating order or isolation instruction.
Allocate	To pass from one operating employee to another the instructions for carrying out defined operating actions.
Alteration	An agreed addition or deletion of an issuer applied safety measure on an issued Access Permit. Not allowed on a Test Permit.
Approved	Having an asset owner's or employer's endorsement for a specified function or purpose.
Asset Owner [AO]	A participant in the electricity supply industry who owns plant or equipment used for generating or conveying electricity ultimately responsible for safety at site.
Assurance	The Assurance is an administrative system between different asset owners used to confirm the agreed and defined state, of equipment not under the control of the Issuer, necessary for Access or Test Permits.
But Note That:	Field on a permit where the Issuer indicates any remaining hazards.
Checker	The second competent person that verifies the draft operating order or isolation instruction sequence and content achieves the objective.
Competent	Has the necessary ability, knowledge, and skill to carry out work safely and to the quality and standard required.
Compiler	The competent person developing a draft operating order or isolation instruction.
Conductor	Material used for the conveyance of electricity.
Daily Meetings	A meeting to communicate the key aspects for the intended work, specifically for all work party supervisors to meet with the asset owner to discuss and document the nature and location of each party's work and the hazards that may be created through their work.
De-energised	Not connected to or containing a source of energy, e.g., electrical, steam, compressed air, hydraulic.
Delegate	To assign a task or responsibility to another competent person. E.g. a Permit Recipient may delegate the application and removal of approved RASM's to an AP Supervisor
Departing Recipient	The Recipient of a Permit that is to be transferred to a New Recipient
Earthed	Effectively connected to the general mass of earth.
Earthing Device	An approved device to effectively connect equipment to the general mass of earth.
Earth switch	A switch that when closed provides an electrical connection between equipment and the general mass of earth.
Energised	Connected to or containing a source of energy, e.g., electrical, steam, compressed air, hydraulic.
Equipment	Electrical and mechanical apparatus and civil infrastructure, which is typically fixed in location, and used for generation, transmission, or distribution of electricity.
Extra Low Voltage [ELV]	Any voltage normally not exceeding 50 volts AC or 120 volts ripple-free DC

Gate	Spillway, sluice, headgate, control gate or valves performing the same (or similar) function
General Work	A Minor Works Management System, applied to manage work that presents no risk to equipment operation, or resource consent compliance.
Generation Controller (Function)	An employee at a Generation Control Centre with Point of Control for plant operation within their area of responsibility.
Hazard	Anything that can cause harm, including a person's behaviour, that has the potential to cause death, injury, or illness to a person.
High Voltage [HV]	Any voltage exceeding 1000 V ac. or 1500 V dc.
In Service	The state of equipment that is not isolated: and is in a state to perform its designated function.
Isolated	Deliberately disconnected from external sources of harm, e.g., energy (electrical or mechanical) or asphyxiating, toxic or flammable gas, and rendered incapable of being reconnected without deliberate action.
Isolation (De-isolation) Instruction	A list of operating instructions (not sequenced) compiled in an approved format required to isolate or de-isolate a defined asset or equipment.
Isolation Point	A location designed as a facility to safely disconnect, separate, or provide a barrier between an energy source and intended work area for any work management system
Issuer	A competent worker that administers WA/AP/TP and Assurance documentation as prescribed within Issuer responsibilities.
Issuer Applied Safety Measures [IASM]	Safety measures under a Work Management System applied by, or on behalf of the Issuer for work or testing on equipment presented in a defined state, removed from and unavailable for service
Hazard ID and Risk Management Process	Summary of work scope, associated hazards and their controls and work party acknowledgement, understanding and compliance with these controls. Includes Job Safety Analysis and Worksite Safety Plans
Limited Testing	Limited testing is permitted under an AP, but only after a risk assessment has been completed to ensure such testing has insufficient capacity to cause harm.
Live	Connected to a source of electrical supply or subject to hazardous induced or capacitive voltage.
Live Work	Work performed inside the minimum approach distance of equipment that is live.
Lock Box	A lockable facility for securing keys, fuses etc. associated with safety measures controlled under a Works Management System.
Low Voltage [LV]	Any voltage exceeding 50 V ac. or 120 V ripple free dc. but not exceeding 1000 V ac. or 1500 V dc.
Main Boundary Isolation	IASM's on energy sources that form the main perimeter of isolations for a permit. These are of a nature that if altered, would introduce a safety risk to a work party.
Major Isolations	IASM's that isolate a primary or significant energy source or are of a nature that if altered would introduce a safety risk to a work party. Can be a main boundary isolation or within the perimeter.
Minimum Approach Distance [MAD]	The MAD is the minimum safe distance that workers, vehicles, and mobile plant shall be separated from live conductors to prevent the risk of accidental contact and electric shock.
Minor Works Management System [MWMS]	A system used to manage work where an Access Permit, or Test Permit is not required, and the supervisor manages the control measures. General work or a work authority is used in this context.
New Recipient	A Recipient accepting a Permit via the Recipient transfer process.
Objective	The purpose or outcome required for an operating order or isolation (de-isolation) instruction.

Operating Action	An action that changes the status of equipment. Achieved automatically, manually, remotely, or actioned though an operating order or isolation instruction.
Operational Control	The assigned authority and ability to change the status of equipment.
Operational Locks	Locks used to maintain the operational status of plant and equipment, or control access to operational areas.
Operating Order [OO]	A planned sequence of operating actions (or a single action) that has been compiled in an approved format
Outage	The release of equipment or plant via a formal request and approval process.
Permit Area	The defined work area for an Access Permit or Test Permit
Permit Competency	An employer recognition of training and experience stating a person is competent to be an AP/TP Recipient, Issuer, or both.
Planning Function	Roles that support planning and coordination of work and work safety.
Plant	Additional to equipment, infrastructure at or associated with a generation facility.
Plant Outage Request [POR]	Formal request for an outage on generation equipment.
Plant Status Control	Measures required for managing changes to the status of plant rather than personal safety during a Work Control Procedure. Managed under RASM protocols.
Point of Control [POC]	The responsibility from which operational control of equipment is held within an organisation.
Portable Earth	An approved portable earthing device for temporarily earthing isolated equipment.
Pre-Work Planning	The process of developing a work plan prior to work commencing.
Primary Energy Source	The main source(s) of energy used to energise equipment e.g., live high voltage, high pressure steam, penstock pressure water
Production	Continuity of planned generation
Receiver	The person receiving an Assurance that safety measures have been applied as requested to assets under the control of the sender.
Recipient	A competent worker that receives and manages Work Authorities, Access, or Test permits.
Recipient Applied Safety Measures [RASM]	Safety measures applied by or on behalf of the work site Supervisor for General Work, or Recipient for Work Authorities, Access, and Test Permits.
Recipient Applied Safety Measures Register	Formal record of all recipient-applied measures to ensure safe management of isolation points or plant status.
Remote Access	Access to plant and equipment systems (e.g., control, protection, communication) via a network when physically located elsewhere.
Risk	Potential exposure to situations that may affect people's health and safety, plant and equipment operation or the environment.
Safety Manual - Electricity Industry [SM-EI]	Guidance on safety practices published by the electricity supply industry.
Safety Measures	Actions taken to present equipment in an agreed state.
Safety Measure Competence	Competence to apply safety measures as specified in the applicable WCP
Sender	The person sending an Assurance that safety measures have been applied as requested to assets under the control of the sender.
Standard Operating Procedures [SOP]	A documented and approved procedure or instructions for an established routine or specific operational activity.
State of Equipment	A description of the current status of the equipment.

Stored Energy	Any form of energy that remains in a system after it has been isolated, and which could unexpectedly release and cause harm if not properly controlled.
Supervisor (Access Permit)	A role performed by the Recipient, or competent person(s) agreed with the Recipient, with specific responsibilities for the Access Permit process, safety and integrity.
Supervisor (Test Permit)	A role performed by the Recipient with specific responsibilities for the Test Permit process, safety, and integrity.
Supervisor (Test Permit Work Position)	An additional role appointed by the Test Permit Recipient with specific responsibilities for work position process, safety, and integrity for every working position that the Recipient of a Test Permit cannot supervise directly.
Supervisor (Work Party)	A role performed by a competent person at the worksite responsible for the safety, quality, and control of the work activity.
Suspension	Status of an Access Permit when it is returned by the Recipient to the Issuer but not reissued or cancelled. A Test Permit shall not be returned for suspension.
Switchyard	A restricted area, enclosed by a security fence or other secure boundary, containing normally energised conductors and equipment.
Tag	A label used to visually identify a safety measure or isolation point.
Test Permit **[TP]**	A Works Management System used to present equipment in an agreed and defined state for testing, using Issuer applied safety measures, where testing includes the introduction of primary energy sources, test voltages or potentially lethal hazards. The process allows for the agreed removal of IASM's to facilitate testing.
The Log	A complete record of all operating actions and events, time stamped as they occur.
Transfer (Permit)	The process of transferring a Permit from one Recipient to another.
Work Authority **[WA]**	A Minor Works Management System, for work on or near in service or available for service equipment where that work may present a risk to equipment operation or affect resource consent compliance.
Work Authority Competence **[WAC]**	An employer recognition of training and experience stating a person is competent to be a work authority Recipient, Issuer, or both.
Work Management System	A documented system to control risks for work on or near equipment which is presented in an agreed and defined state. An Access Permit, Test Permit or Assurance is used in this context.
Work Position	The location(s) where work activity is taking place.