



COMMON PERMIT TO WORK SYSTEM

Revision 11.3

**Revision history and version record**

Rev	By	Details	Date
1	Joint permit team	First rev	23/03/00
2	Joint permit team	Second revision	11/07/00
3	Joint permit team	Third revision	03/08/2001
4	Joint permit team	Fourth revision	03/10/02
5	Joint permit team	Full document revision	17/03/03
6	Joint permit team	Sixth revision	
6.1	Joint permit team	Section 6.12, Section 2.3	23/06/06
6.2	Joint permit team	Section 4.15	27/06/06
7	Joint permit team	Seventh revision	09/08/06
7.1	Joint permit team	Section 4.4	26/10/06
7.2	Joint permit team	Section 4.1.6	29/01/07
8	Joint permit team	Eighth revision	07/11/08
9	Joint permit team	Ninth revision	22/10/13
10	Joint permit team	Tenth revision	10/11/16
10.1	Joint permit team	Various minor updates	30/03/17
11	Joint permit team	Eleventh revision	21/06/2018
11.1	Joint permit team	Various minor updates to include changes to S3.7.3	19/06/2020
11.2	Joint permit team	Various minor updates, formatting etc	03/06/2022
11.3	Joint permit team	Approved users update; S3.7.1; Appendix 1	02/05/2024



Approved users

- a) OMV
- b) Todd Energy
- c) Liquigas
- d) Kinetic Well Services Ltd
- e) Horizon Energy Services Limited
- f) Port Taranaki
- g) Marshall Projects
- h) Technix
- i) Western Energy Services Ltd
- j) Tegel
- k) Beach Energy
- l) Westside
- m) Flexgas
- n) New Plymouth Underwater
- o) Warner Construction
- p) Kapa Solutions
- q) Dynamech
- r) Condor Energy



Disclaimer

While every effort has been made to ensure the practices recommended in this document conform to “best practice”, no liability is accepted for its implementation.



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1 Introduction

Permit-to-work (PTW) systems are an integral part of any operation where there could be incompatible or interlinked tasks.

They are a formal documented process used to manage work identified as significantly hazardous by making sure all safety measures are in place before work starts.

The PTW system is also a way to communicate between site management, plant supervisors, operators and those who carry out the hazardous work.

It is a signed statement by the appropriate permit signatories that identified work may be carried out under stated conditions & precautions and may include requirements for other certificates.

Essential features of the PTW system are:

- a) Clear identification of who may authorise particular jobs (and any limits to their authority) and who is responsible for specifying the necessary precautions
- b) Training and instruction in the issue, use and closure of permits
- c) Monitoring and auditing to make sure the system works as intended
- d) Clear identification of the types of work considered hazardous
- e) Clear and standardised identification of tasks, risk assessments, permitted task duration and supplemental or simultaneous activity and controls
- f) To coordinate & manage the application and removal of Isolations, ensuring isolations are fit for purpose, in place prior to issuing permits and ensuring all permits associated with the isolations are complete prior to allowing isolations to be removed
- g) To provide an opportunity for work parties to consult, co-operate and co-ordinate activities to ensure all can meet their own and joint responsibilities.

1.1 Objective, purpose and outline

Objective

- a) To provide a work management system which assists to protect People, Assets and the Environment through proper; Control, Communication, Co-operation and Co-ordination, when work is carried out in a specified area
- b) To assist User companies to fulfil their legal obligations under the Health and Safety at Work Act 2015, The Resource Management Act and associated Regulations

Purpose

- a) The CPTW system has been developed for the purpose of improving the quality of permit to work safety management and as such there are no restrictions on its use
- b) To be a Common System across industry. (requested by Taranaki industries in 2000)
- c) To allow User Group Companies flexibility for compliance within a prescribed framework



- d) To define minimum training requirements for Permit to Work users
- e) It is available for use in non-hazardous areas, e.g. Administration buildings and workshops if the combination of the environment and the work activity create a significant Risk. E.g. re-roofing the admin building
- f) It is NOT intended for routine operations covered by written procedures; maintenance workshop activities, or minor work allowed at the discretion of the Permit Issuer (PI).

Outline

The system includes:

Training	To ensure understanding of the system and how to use it.
Competence	To ensure anyone working under the PTW system has sufficient knowledge, experience and skill to implement the requirements of this system.
Planning	Work planning is recognised as an important activity affecting the PTW system. Work planning is deciding the sequence, personnel and equipment required. However, planning is <u>not</u> considered within the scope of this document.
Work Definition	To ensure that the nature, content and location of the task are defined.
Hazard Management	To ensure that hazards are identified, and precautions are correctly specified to prevent harm to personnel, assets and the environment.
Co-ordination	The provision of a focal point on a site/installation to ensure that tasks that might clash with each other are not authorised to be carried out at the same time.
Communication	To ensure that all those who need to know that the task is being carried out are made aware of it. One element is the briefing (or toolbox talks) to discuss with those involved the content of a job, how it will be performed and the precautions necessary.
Authorisation	Work can proceed if the conditions and controls are met.
Endorsement	Confirmation/Approval that the workplace is safe, and that work may proceed
Supervision	An appointed person in charge of each worksite, responsible for ensuring that the requirements specified on the Permit to Work are complied with.
Discipline	The system can only operate effectively if all personnel associated with a job understand and comply with the Permit requirements.



Housekeeping	To ensure that the worksite is left clean, clear and safe when the work is completed or suspended, and as regularly required to Permit safe and effective operations.
Verification	An audit system to assist in ensuring that the requirements of the Permit To Work System are being met, and that common standards are being applied.

Note: The issue of a permit does not, by itself, make a job safe.

It requires compliance with precautions and other conditions by all personnel involved in the job. It shall not be used to compensate for staff who are not trained or competent in the work that they are carrying out.

For all work covered by a Permit, it is important that everyone associated with the job:

Understands	The work content and how it will be carried out, the hazards, and controls that are required, the work environment and problems associated with it, any emergency actions necessary should a problem arise, their own responsibilities, and
Complies	With all of the requirements of the Permit, to ensure the continued safety of personnel and the site/installation.

1.2 Document management

- a) By having your Company / Site name and an authorising signature added to this document, you undertake to use these procedures as your Permit to Work System
- b) Task and job consequence lists (PCF Aids) may be used that are specific to your operations and comply with the Health & Safety At Work Act 2015 and regulations
- c) All requests for suggested improvements/changes must be directed to the Review Committee
- d) This system will be fully reviewed every five (5) years
- e) This document is "uncontrolled" unless signed by the respective company's authorised person
- f) Administration and control of this document will be undertaken by Todd Energy
- g) Any reference to Unit Standards in this manual is referring to New Zealand Qualifications Authority Unit standards of learning
- h) The manual applies to any Company that undertakes to use this system and to any employees and contractors of that company.

IT IS RECOGNISED THAT SOME COMPANIES MAY NOT COMPLY WITH ALL OF THE CONTENT WITHIN THIS MANUAL. THEREFORE, SITE SPECIFIC PROCEDURES AND SUPPORTING PRACTICES MAY BE USED IN CONJUNCTION WITH THIS MANUAL



1.3 Glossary of terms

AT	Area Technician	OP	Operating Procedure
COP	Code of Practice	PA	Permit Applicant
CRO	Control Room Operator	PCF	Permit Co-ordination Facility
EPI	Extended period Isolation	PI	Permit Issuer
EX	Explosion Proof Electrical Equipment	PICWS	Person in Charge of the Worksite
Hazard ID	Hazard Identification and Control	PSM	Permit System Manager
IC	Isolation Certificate	PTL	Production Team Leader
IP	Isolation Procedure	PTW	Permit to Work
IPF	Instrument Protection Function	ROS	Responsible Operations Supervisor
IS	Intrinsically Safe Electrical Equipment	SIMOPS	Simultaneous Operations
JHA	Job Hazard Analysis	SO	Safety Observer
MTL	Maintenance Team Leader	SRB	Sulphate Reducing Bacteria

1.4 Definitions

Angle of repose	The angle to the horizontal at which the material in the cut face is stable and does not fall away.
Batter	The inclination of a slope expressed as vertical units/horizontal units.
Benching	Excavation of a sloping ground in horizontal steps.
Blind	For the purposes of this procedure the term “blind” can be taken to mean any solid plate of specified dimensions and material (spade, spec plate, blind flange etc.) or spool removal.
Competent person	A person possessing adequate qualifications such as suitable training, and sufficient knowledge, experience and skill for the safe performance of the specific work to a specific standard and approved at the work site.



<p>Confined space</p>	<p>An enclosed or partially enclosed space, as defined in AS/NZS2865-2009, that is not intended or designed primarily for human occupancy, within which there is a risk of one or more of the following:</p> <ul style="list-style-type: none"> a) an oxygen concentration outside the safe oxygen range. b) a concentration of airborne contaminant that may cause impairment, loss of consciousness or asphyxiation. c) a concentration of flammable airborne contaminant that may cause injury from fire or explosion. d) engulfment in a stored free-flowing solid or a rising level of liquid that may cause suffocation or drowning. <p>Notwithstanding this definition, The PI may, at their discretion, classify any area as a confined space.</p>
<p>Conforming confined space entry</p>	<p>A confined space entry that conforms with all of the requirements of Conditions for a Conforming Confined Space Entry</p>
<p>Cold work</p>	<p>Work with no ignition potential.</p>
<p>Entry permit</p>	<p>That Permit issued solely for the entry into the confined space. It will have attached to it, all the relevant certificates and checklists associated with that entry. There SHALL only be one Entry Permit endorsed at any one time for any specified confined space. No other work activity is carried out on the Entry Permit except for the entry activity.</p>
<p>Excavation certificate</p>	<p>A certificate signed by the installation's Excavation Focal Point and a competent electrical person specifying controls and precautions for the excavation. The certificate is signed by the PICWS indicating agreement with the controls. It does not replace a Permit.</p>
<p>Excavation focal point</p>	<p>The person responsible for day-to-day construction activities, and typically the resident Construction Engineer/Maintenance Team Leader.</p>
<p>Hazardous residue</p>	<p>Any materials such as scale, sludge, sand, slops, loose paint, coatings, deposits or any other residual materials which may be harmful to health or safety.</p>
<p>Hold card</p>	<p>Hold cards are placed by an individual at the point or points of isolation to indicate that the individual is currently working on that isolated equipment and could be injured if the isolation were removed.</p>
<p>Hot work</p>	<p>Any work which involves a source or potential source of ignition.</p>



Hot work category 1 & 2	Category 1 Hot Work will be recorded on a "red" permit form and Category 2 Hot Work on a "yellow" permit form. The division will be based upon whether a positive source of ignition, such as welding or grinding, will exist this being Hot Work Category 1. All other Hot Work will be Category 2.
Isolation	The process whereby sources of harm (pressure, temperature, chemicals, electrical or mechanical power, engulfment) are physically separated from persons carrying out work, are protected from inadvertent operation and have been proven. Examples are blinds and locked or tagged valves (Note: An isolation does not exist once a lock or tag has been removed).
Lock box	A numbered box which contains the keys to the production locks which have been applied in the field.
Multiple locking device	A device which allows the application of multiple locks to a single isolation point.
Non-conforming confined space entry	A confined space entry that does not conform to all the precautions of the Conforming Confined Space Entry as stated above. Additional requirements must be satisfied before Conditions for a Non-Conforming Confined Space Entry proceeds
Notifiable work	The Health and Safety in Employment Regulations 1995, require employers as well as the person who controls a place of work to provide at least 24 hours notice to WorkSafe New Zealand of particular hazardous work. Examples of Particular hazardous work are: <ul style="list-style-type: none"> • Erecting or dismantling scaffolding with a risk falling 5 metres or more. • Work that in which a person breathes compressed air, or respiratory medium other than air (not diving) • Work in any pit, shaft, trench, or other excavation in which any person is required to work in a space more than 1.5 metres deep and having a depth greater than the horizontal width at the top.
Own isolation	This is an exception and when specified on the permit because no simple means of isolation is possible, or the nature of the work requires the power source to be energised for testing, then the isolation and it's verification will be carried out by the PICWS using normal "trade practices". In this case a multiple isolation list will be attached to the permit.
Permit System Manager (PSM)	This is the person, nominated by the company, as being responsible for the management of the Permit To Work System.



Permit to work	A form which documents a contract between the person in control of the place of work and the person carrying out the work. It specifies the work to be carried out, it's location, the hazards associated with the work and the environment and the required methods of control. It authorises the specified, and only the specified, work to be carried out.
PICWS lock	Uniquely numbered and keyed locks, which are controlled from the PCF, applied either to a "Lock Box" or in the case of a simple isolation, to a multiple locking device on an isolation, and the key retained by the PICWS while work is in progress.
Positive location	An underground service has been "positively located" when its position has been physically identified by means of potholing, probing or by the use of an approved line locator. The use of drawings or non-approved line locators are considered to be indicative only for the purposes of this procedure.
Production locks	Uniquely numbered and keyed locks controlled from the PCF which are applied and removed ONLY by competent personnel with the direct authority of the PI, and which are always <u>first on and last off</u> .
Safe atmosphere	An atmosphere is considered safe when the concentrations are within the following limits: Oxygen: 20 - 21.5% vol Flammables: Less than 5% LEL (Lower explosive limit) Toxics: Less than 50% of the WES (Workplace Exposure Standard) or the company standard, whichever is the lower.
Safe slope	The steepest slope that is stable against slips and slides. For faces above the water table, the slope is not to exceed 1V:1H, and for saturated soils the slope is not to exceed 1V:1.5H.
Sealing device / cable seal	A length of wire which can be permanently sealed in a closed loop. Seals have a unique number and the wire loop can only be opened by breaking the seal/wire. For example, a Cargo Seal.
Shoring	The use of timber or other structural material for the purpose of providing support for an exposed face of an excavation.
SRB	Sulphate Reducing Bacteria. These bacteria can produce Hydrogen Sulphide (H ₂ S) gas.



Tag	A uniquely numbered tag to identify a point of Process Isolation. It must be treated as a “Production Lock” and the number recorded on the IP.
Verbal permit	A verbal permit is permission from the PI allowing minor non-routine work to proceed without a written Work Permit. Verbal Permits control the access of non-permitted personnel into production areas.



2 Roles and responsibilities

Permit documents require a number of signatures from personnel who have different roles in establishing safe conditions at the worksite. The purpose of this section is to describe the responsibilities for each of the roles.

It should be noted that one person may hold numerous roles at any one time however the Roles of PI and PICWS (or SO for a CSE permit) cannot be held by the same person.

Anyone acting in the capacity of ROS/PI, PA, PICWS, AT, Safety Observer or Gas Tester shall have been assessed and authorised to perform in that role.

2.1 Permit System Manager (PSM)

The PSM is the manager of the Permit to Work System within their Company.

Responsibilities:

To ensure:

- a) Persons authorising or endorsing a Permit, are appointed and have their responsibilities and authorities clearly defined
- b) Persons acting as Permit Signatories, Persons in Charge of the Worksites, or doing work controlled by permits, have undergone the required training as defined in this document
- c) An accurate User Company Competency database is maintained to record details of persons who have undergone the required training and achieved the required standard
- d) Facilities under their control have the latest versions of all associated documents
- e) Compliance to the System is maintained.

2.2 Responsible Operations Supervisor (ROS)

The ROS is accountable for the operation of the PTW System on their site or facility, in accordance with the requirements of this manual. The ROS is an appointed position by the PSM.

Responsibilities:

- a) Ensuring there are sufficient trained personnel to effectively manage the PTW system on site
- b) Providing effective system auditing at their location
- c) Agreeing that the work description and precautions stated are correct for a high-risk Permit and authorising the work to be undertaken as quoted
- d) Ensuring that all lower risk alternatives for executing the task have been considered.

Where the ROS is required to authorise a Permit, it is to be signed only after Sections 1 & 2 on the Permit form have been completed.



2.3 Permit Issuer (PI)

The PI is responsible for the co-ordination and control of the issue and return of Permits. They authorise and endorse work to proceed, agree work content, precautions, and accept a job as complete.

They maintain an overview of all operations (in progress, planned and suspended) on the installation, in order to effectively manage hazards caused by simultaneous conflicting activities such that conflicting permits are not issued.

The PI **must** have the following competencies:

- a) Hold US 17588, US 17590 (or equivalent) and be appointed by the PSM or ROS
- b) Have knowledge in the plant and process
- c) Be proficient in the administration of company rules associated with the PTW system and applicable legal requirements
- d) Be competent in Hazard ID and control, and health and safety monitoring requirements
- e) Have experience in auditing of the PTW system at the worksite
- f) Have good oral and written communication skills.

Responsibilities:

- a) Administering the Permit Co-ordination Facility (PCF) and maintaining an accurate work status of the installation in particular of system isolations and work in progress
- b) Promoting discussion between work parties to identify and resolve conflicting requirements where safety may be prejudiced. The PI is a central co-ordinator for all permit work
- c) Ensuring isolations are fit for purpose
- d) Communicating to all those who need to be aware of the work (including the CRO), ensuring that the PICWS understands the conditions of the permit
- e) Reviewing the JHA for the work and adding the “hazards of the day” as appropriate
- f) Ensuring precautions are clearly stated to minimise hazards at the worksite
- g) Ensuring permits contain a clear description of the location and content of the work to be done and confirming that WorkSafe NZ have been informed of any notifiable work
- h) Ensuring all persons who prepare Permits or are responsible for the supervision and execution of the work, are competent and registered at each location
- i) Ensuring effective handovers (individual, shift & team) take place including permit status, in particular uncompleted work, and system isolations
- j) Ensuring ROS is fully informed of any high-risk work activity identified from the permitting process. Being involved in discussions on the sequencing of permits and isolations for plant shutdowns.



Note: The Permit Issuer (PI) And the Person in Charge of the Worksite (PICWS) cannot be the same person.

2.4 Area Technicians (AT)

The person responsible for the safety and control of a process area and the assets within it and has been appointed by the PSM or ROS.

Based on all evidence and knowledge provided i.e. handover etc., the AT approves the work to proceed.

Responsibilities:

- a) Endorsing permits on a shift-by-shift basis considering carefully all work in that area and any potential conflict that may occur
- b) Ensuring that the PICWS and the PI are aware of all work in their area
- c) Confirm that the controls specified on the permit are appropriate for the area
- d) Monitoring all permits in their area and reviewing all permits when any operating or other circumstances change.

2.5 Person in Charge of the Worksite (PICWS)

The PICWS is the person appointed by the Permit Applicant (PA) to exercise direct supervision of the worksite and is the person responsible for the safety of that worksite. This is the person to whom the work permit is issued. They will be responsible for the execution of the work. **The PA and the PICWS may be the same person.**

Responsibilities:

- a) Fully understanding the work scope and hazards associated with the work
- b) Ensuring individual & team competencies are in place for safe execution of the work and the JHA identifies all hazards relating to the task
- c) Reviewing the JHA for the work and adding the “hazards of the day” as appropriate
- d) Ensuring that everyone involved, are fully briefed on the work, the controls necessary and the conditions of the Permit, including Safety Checklists and JHA’s are complied with. This is usually carried out via the daily toolbox meeting
- e) Ensuring that the Permit is displayed at the work-site when work is in progress
- f) Ensuring that there is a valid endorsement of the Permit for each period in which work takes place, and that the work-site copy of the Permit is returned to the PCF at the end of the endorsement period
- g) Stopping work if the work scope, circumstances or conditions within the working area change or if any additional hazards are identified and ensuring the PI, AT and PA are advised
- h) Ensuring that the work-site has been left in a safe and tidy state on completion or suspension of work
- i) The PICWS advises when the work is complete for acceptance by the PI.



Note: The frequency and duration of the PICWS to be in attendance at the worksite is to comply with the Category of worksite presence

2.6 Permit Applicant (PA)

The person who applies for the Permit and is responsible for the planning and preparation of the Hazard ID for the work is known as the **Permit Applicant (PA)**. The PA may be the Contractor's supervisor on site, but in all cases, it is the person organising the work. They are not required to sign permits except when acting as the PICWS. The PA is the PI's point of contact for the purposes of planning and work detail. The PA's name is entered in the "application" section of the permit. The PA and PICWS may be the same person. The PA must be current on the User company competency database.

Responsibilities:

- a) Appointing a PICWS that is competent to supervise all the work being undertaken and be current on the User company competency database
- b) Notifying WorkSafe NZ of all "Particular hazardous work" on the prescribed form 24 hrs in advance of the works commencement. Use the [WorkSafe NZ "Particular Hazardous Work" Notification Form](#)
- c) Identifying the hazards associated with the task and listing the precautions to ensure the work can be carried out safely in the appropriate format i.e. JHA, / section 2 of the work permit.

2.7 Safety Observer (SO)

The Safety Observer is a person approved by the PI and is responsible for monitoring hazardous work, stopping work if a dangerous situation arises, and initiating rescue/emergency procedures if required.

A competent Safety Observer is one who has successfully completed an approved training course and holds qualifications as detailed under Training listed below. During major plant shutdowns, the Safety Observer may be used to monitor two activities providing that both are within direct line of sight, a good view of the area is maintained and that both parties are within audible range of the Safety Observer. This use of the Safety Observer in this situation must be approved by the ROS.

Responsibilities:

General:

- a) Constantly monitoring the work and adjacent areas
- b) Ensuring that any hazards which arise as a consequence of the work or changes in the area environment are immediately communicated to other workers and to the PI and the AT i.e. change of weather condition
- c) Ensuring that a means of communication is in their possession and in full working order for the term of appointment
- d) Ensuring that all safety requirements specified on the permit or Hazard ID, are in place before work proceeds and continue throughout the job



- e) When required, monitoring the atmosphere for oxygen and flammables using approved and calibrated atmospheric test equipment, and ensuring that any tests required for toxics are carried out at the frequency specified on the permit
- f) Recording gas / atmospheric test results at the frequency prescribed on the permit
- g) Stopping work if the circumstances or conditions within the working area changes
- h) For HW-1: detecting, containing and extinguishing all sparks, hot debris etc.
- i) Undertaking **no** other duties which interfere with their role as a Safety Observer.

Confined space:

- a) Having overall control of the entry on behalf of the PI. The additional responsibilities associated with a confined space are covered in the confined space section of the Manual. See section 5, [Confined Space Entry](#)

Excavation:

- a) Additional responsibilities associated with excavation are covered in the excavation procedure. See section 6.3, [Excavation Certificate](#)

2.8 Atmospheric / Gas tester

Responsibilities

- a) Recording test results at the frequency prescribed on the permit, or if continuous monitoring is required, recording the initial result and any changes within the prescribed limits
- b) Must be trained and hold Unit Standards as detailed under [Training](#)
- c) Ensure current 'field calibration/bump test' of atmospheric test equipment, in particular prior to the start of work.



3 Management and rules of the Permit to Work System

This section provides details on rules and the administration of the system at a management level

3.1 Deviations from the Permit System

A "Deviation" is a method of controlling hazards associated with a proposed work activity which differs from those laid down in the Common Permit to Work System. **It will be temporary, authorised in writing by the PSM, Asset Holder or Delegated Authority of the facility and, as a minimum, meet the same standards of safety required by the Permit to Work System.** This is an exception and is to be used when a conflict exists between the work activity and the permit to Work System such that the standard procedure is unable to be followed or is inappropriate. **It will not be invoked for convenience.**

3.2 Classification of work

The way in which work is authorised to commence depends on the type of work involved.

There are two classifications of work which are Routine and Non-routine.

Routine work is work being carried out by competent personnel in accordance with documented installation operating procedures. (This includes work or activities in which the process is being operated in a normal mode. It does not include the isolation of safeguarding systems or routine maintenance that has a higher level of risk etc.) It also includes work being carried out in non-hazardous areas such as workshops, administration and recreational areas. Work Permits are not generally required for this type of work.

Non-routine work or routine work having a higher level of risk (i.e. maintenance, engineering, construction, etc.), will normally require a written Permit to Work however, higher risk routine work, supported by an approved Operating Procedure (OP) and minor tasks with a low hazard score may proceed under a verbal permit.

3.3 Work requiring a Permit to Work

A Permit to Work is required for most activities carried out on site. It will be in the form of a written PTW or a verbal PTW.

A PTW can be issued for:

- a) A single task being performed by an Individual or Single Discipline work group. E.g. Scaffolding
- b) A single task being performed by a Multi Discipline work group, providing all hazards associated with the task have been addressed. E.g. Coil tubing operations.

Work requiring a Permit to Work falls into the following categories:

- a) Hot work 1
- b) Hot work 2
- c) Cold Work
- d) Confined Space.

Exemptions for non-hydrocarbon areas and sites

Due to the nature of such sites, there are a number of routine activities which do not require a permit (verbal or otherwise). These routine activities are controlled via trade skills, procedures, toolbox meetings



and JHAs to ensure they are conducted safely. Examples where these exceptions would apply are **stores/logistics base, administration buildings and offices.**

For the avoidance of doubt, all work within administration areas or on non-hydrocarbon sites will comply with the requirements specified within the Permit to Work manual, unless specifically exempted in the table below.

Table 1 Exempt activities

Exempt activity	Examples (but not limited to)	Reason
Use of hand tools (incl. battery-operated drills or screwdrivers)	Using a screwdriver or hammer to open a packing crate or to hang a white board.	Very low risk tasks.
	Basic plumbing work i.e. fitting a new toilet or replacing a tap.	
Movement and assembly of office furniture.	Assembling a stand-up desk in the main office.	
Use of a step ladder <1.8m within an office building.	Using a step ladder to change bulbs or fluorescent tubes.	
Interior decorating	Painting and wall papering within administration buildings	
Vehicle movements on made-up roadways.	Courier and truck deliveries. Loading/unloading utility vehicles etc.	Risk is managed through gate access procedures, signage and Traffic Management systems
Routine work conducted within designated workshop areas	Valve inspections or repair in maintenance workshop	Routine work (low risk) carried out by competent personnel in accordance with documented installation operating procedures.
Forklift operations onsite	Unloading trucks	
	Loading containers for shipment	
Biosecurity inspection of imported container (MPI Approved Transitional Facility)	A sealed container arrives from overseas, which needs to be opened and inspected for biosecurity risks	
Delivery and pick-up of goods within DG storage areas.	Forklift picking up a pallet of paint tins from DG shed or waste disposal truck picking up a drum of waste oil	



3.4 Work not requiring a written Permit to Work

The Permit Issuer (PI) must authorise all work to be undertaken. This is to ensure that conflicting tasks are considered. The determination of the requirement for a permit (verbal or otherwise) is at the PI's discretion.

Verbal Permits control the access of non-permitted personnel into production areas and allow minor non-routine work and some routine work to proceed without a written Work Permit. Activities being carried out under a verbal permit should be preceded with a task/hazard discussion with the PI to ensure that a verbal permit is appropriate for the activity.

Verbal permit rules are as follows;

Minor works which are completed under a verbal permit must meet the following criteria;

- a) Must be low risk (risk score of 4 or less)
- b) Must be completed in current shift
- c) Must have no additional certificates.

Verbal permits require PA and PI endorsement and the AT is to be notified. The PA is to sign off the verbal permit on completing the task.

Verbal permits, for the purpose of visual inspections are acceptable for a CSE providing the Safety Observer holds a current valid CSE Permit.

Typical examples of activities that may be carried out on a verbal permit:

- a) Visual inspection of areas except when working at height
- b) Equipment operation for authorised operational training activities
- c) Handling and use of materials and substances that do not present a risk to personnel under their established conditions of use
- d) The use of non-IS electrical/electronic equipment in non-process related areas
- e) The correct use of "hazardous area" certified equipment by a competent person within a hazardous area. This applies to the equipment only and not the activity, which may still require a written permit
- f) The use of cameras equipped with batteries in non-hazardous areas
- g) The use of specified cameras assessed as suitable for use in hazardous areas
- h) The use of electrical soldering irons or heat shrink blowers within administration areas, authorised workshops, switchboard rooms and control rooms
- i) Operation of fixed non-IS electrical equipment in non-hazardous areas
- j) Typical workshop activities
- k) Installing labels on process equipment
- l) Carry out routine Fire Extinguisher checks and repairs in non-hazardous areas
- m) Changing light bulbs in non-hazardous areas, and not requiring any isolation



- n) Replacing GC and Instrument gas cylinders (not transporting large N2 bottles)
- o) Manual Landscaping and general clean up in non-hazardous areas
- p) Lawn mowing in non-hazardous areas
- q) Taking routine lab samples using lab staff and procedures
- r) Fabricate paint and install signs and similar items in a non-hazardous area
- s) Tightening valve glands or pump packing that does not require disassembly or operation of the valve
- t) Taking vibration readings on rotation equipment that does not require removal of safety guards or the use of non-IS equipment
- u) Greasing of valves and fan bearings without disassembly, removal of guards or operation of the valve
- v) Service checks and routine maintenance of air conditioners
- w) Low level maintenance in non-hazardous areas and offices such as floor and lock repairs, small paint touch ups, minor framing etc.

Higher risk, routine works can also be carried out under a verbal permit if supported by an approved Operating Procedure. Work managed in this way must meet the following criteria;

- a) Work must be of a routine nature
- b) Work must always be carried out in the same sequence and using the same methods
- c) Work must not require any additional certificates
- d) Work must be completed within a few hours (short-term).

Examples of work that may be managed in this way are Pigging operations, filter change-outs, compressor/pump oil changes and other similar works, provided that a procedure which supports these tasks is documented on the "Routine Work", OP template and shall include the following;

- a) A description of the work to be carried out
- b) Required tools and associated equipment
- c) Required parts including part numbers for reorder where appropriate
- d) A hazard analysis including any required controls
- e) Specific controls and mitigations associated with the inhibition of fire and gas detection devices shall be included in the OP and inhibits are to be recorded in the isolation register
- f) Recovery measures to take in the event of an emergency or incident
- g) A step by step work procedure which includes the following:
 - i. "Done by" and "Checked by" sign offs on the isolation and reinstatement phases
 - ii. Leak testing/pressure testing requirements.
- h) Approval by site Operations Engineer or equivalent.



On completion of the task, the completed OP shall be archived within the PCF as per other PTW DOCUMENTATION or as required by individual company protocol

Note: There may be occasions where concurrent routine operations require special controls to avoid becoming a hazardous situation. In this case the ROS/PI should control these tasks under a written permit.

3.5 Authorisation of work

Authorisation of all permits will be by PI or ROS based upon the Risk Assessment Number.

Each company will determine their own Risk Assessment Number.

For HW-1 in all locations and HW-2 in hazardous areas, the ROS is to set a limit on the number of Hot Work Permits allowed at any one time. This limit is to be based on the judgement of the ROS as to a safe number of concurrent Hot Work tasks, taking account of the operational status and the complexity or hazardous content of the Hot Work.

Once signed and providing the stated conditions do not change, the Permit is deemed to be an Authorised Permit. It will still require to be endorsed on a shift by shift basis.

PI's must attach as much importance to the issuing of Cold Work Permits as they do Hot Work Permits, paying particular attention to the hazards associated with the work, the Risk Assessment number and the conditions existing on the plant.

High risk activities will typically be:

- a) Confined space entries requiring the use of BA
- b) Naked flame hot work in high hazard areas
- c) Work at extreme height from a temporary platform
- d) Excavations which are notifiable or where there are hazardous underground services.

3.6 Major activity work

For major activities such as shutdowns, with multiple tasks being undertaken under the Permit coverage and Isolations Certificate, a sequencing procedure defining the isolation plan and sequencing of Permits should be produced indicating the following; E.g.

- a) Total work scope
- b) Permit requirements
- c) Major precautions
- d) Isolation boundary plan, together with planned changes as work proceeds.

3.7 Training

Persons operating in PTW roles must have completed the Common Permit to Work training course. The course content must ensure that personnel are tested to confirm their competency. While the levels of



responsibility differ, all those involved need to have an understanding of each other's roles. Training and assessment will be carried out at two levels, one for the ROS, PI's and AT's, and one for other users of the system in particular PICWS and PA's. Initial assessments of the ROS, PI and AT shall be conducted by the Permit System Manager or designate

The exception to the required Permit training is in relation to Verbal Permits. A verbal permit may be issued to an individual who has not completed training or assessment but has completed the corporate and site inductions for the site they wish to hold a verbal permit at.

3.7.1 Common Permit to Work trainers

To ensure that the CPTW training is carried out by trainers with the appropriate competency, minimum criteria have been set. All requirements in relation to the CPTW Approved Trainers can be found within [Appendix 1](#) (CPTW Training Guide)

3.7.2 ROS, PI, AT competency requirements

ROS / Permit Issuer / Area Technician: progressing towards full competency in the PTW system – Require the following;

- a) Knowledge of the plant & process
- b) US 17588 (Apply for, accept, and carry out work according to a work permit in the workplace)
- c) US 17590 (Issue worksite specific work permits) or
- d) Complete a site-specific assessment which demonstrates a sound understanding and familiarity with the operation of the common permit to work system.

Any site-specific assessment or reassessments shall be conducted by the Permit System Manager (PSM) or their delegate and should include a demonstration that the permit signatory is familiar with their responsibilities and with the content of this CPTW manual. The reassessment should consist mainly of verbal questioning within the sites Permit Coordination Facility (PCF).

When a person progresses from AT to PI or PI to ROS, they shall undergo a reassessment of their competency specific to the role they are progressing to. This reassessment shall be carried out by Permit System Manager (PSM) or their delegate

3.7.3 PA / PICWS competency requirements

Require the following unit/s:

- a) 17602: (Apply Hazard identification and risk assessment procedures in the work place), 19522: (Undertake job safety analysis), 30265 (superseded 17602) or another recognised competency in hazard management; and
- b) 17588 (Apply for, accept, and carry out work according to a work permit in the workplace).

Note: Hazard management training shall be completed prior to completing the initial CPTW training course (17588).



3.7.4 Gas Tester competency requirement

Requires the following unit:

- a) 3058 (Perform gas tests for an energy and chemical plant).

The “Gas tester” is the person who carries out initial gas testing for Confined Space Entries (CSE’s), process purging and venting activities and completing “Gas Free” certification.

3.7.5 Persons required to carry out Atmospheric Testing / Monitoring during CSE or Hot Work activities competency requirement

Requires the following unit;

- a) 25510 (Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely).

This competency covers the use of a standard portable 4 sensor, gas detector e.g. MX4 or similar and is suitable for subsequent entry into a C.S.E, continuous monitoring for C.S.E and Hot Work activities. It does NOT cover Initial gas testing for a CSE or carrying out testing during purging or venting activities.

3.7.6 Safety Observer competency requirement

Requires the following units;

- a) 17596 – (Demonstrate knowledge of safety observer responsibilities in the workplace)
- b) 25510 (Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely).

This competency covers the use of a standard portable 4 sensor, gas detector e.g. MX4 or similar and is suitable for subsequent entry into a C.S.E, continuous monitoring for C.S.E and Hot Work activities. It does NOT cover Initial gas testing for a CSE or carrying out testing during purging or venting activities.

3.7.7 Workforce competency requirement

While it is essential to train those who work under permit controls, it is not practical to train all to the level of permit signatories. The necessary training will be covered in the site induction programme and/or during on-site training, under direct supervision and should provide an overview of:

- a) The function of permits and PCF
- b) Management of hazards and toolbox talks
- c) Use of safety checklists
- d) Isolation procedures.

3.8 User Company competency database

To maintain control over individuals performing roles in the PTW System, all persons who are Permit Signatories shall have their competencies formally registered onto the Companies Competency Database.

To be registered, persons SHALL:

- a) Hold a recognised Hazard Management competency



- b) Have successfully completed the approved **CPTW training course and Assessment**
- c) Hold (or be gathering evidence for assessment to) NZQA unit standard 17588
- d) Have satisfied the management on the site at which work is to be carried out, that they have sufficient knowledge (about the plant, the environment and the organisation) and experience, to be considered competent.

All persons included in the Database will be approved and have their competency monitored and can be removed from the database by site management if competency is less than required.

Validity for all Roles will be for **three years**, after which the individual must again formally demonstrate competency for the required role. Persons who successfully complete the required permit related training course and/or reassessment will have the database updated.

3.9 Permit System auditing

Auditing is an integral part of managing the PTW System. It is a documented activity that verifies that the requirements of the system:

- a) have been established
- b) have been documented
- c) is effective and being adhered to
- d) if not effective initiates corrective actions.

Permit to Work audits check for compliance and non-compliance with the PTW System.

Audits are conducted on a 3-tiered system of regular local monitoring supported by less frequent external audits.

- Level 3:
Weekly monitoring (minimum of 10% of new permits issued per week). This level of audit examines each individual site for compliance with the overall PTW System and takes the form of a field audit of a randomly selected permit, including its display and filing in the PCF.

Guide to content:

- Hazard ID and Control (JHA's & Checklists) of adequate quality?
 - Permits authorised and endorsed by correct permit signatories?
 - Permit Signatories are current in the PTW Register?
 - Permits are legible?
 - The PCF being managed in accordance with this manual?
 - Is the specified safety equipment available and functional at the worksite (PPE, gas detectors, rescue equipment etc).
- Level 2:
Three monthly audits of the overall PTW System.
This audit checks for the compliance of PTW Management Systems. These audits should be carried out by at least two persons, one of which should be a senior supervisor or site manager. The PSM is required to participate in at least one of these audits per site per year. The starting point for these Level 2 Audits should be the checking of corrective actions from the last Level 2 Audit.



Guide to content:

- Have level 3 audits been carried out and corrective actions implemented?
 - Have the corrective actions from the previous level 2 audits been implemented?
 - Are there sufficient competent ROS's, PI's, AT's, and PICWS's, available?
 - Is documentation current and available at the control locations?
 - Are all management systems associated with the PTW system functioning effectively?
- Level 1:
This is an audit carried out annually at each site by either the PSM, or an independent party. These audits are to ensure compliance with the PTW System and consistent application across all sites.

Guide to content:

- Are the management systems being applied consistently at the site?
- Training
- Auditing and documentation
- Permit Co-ordination Facility
- Safe Work Practices.

All Level 1 Audits will be collated and compared by the PSM to ensure consistent application across all sites within the one company

The responsibility for organising each level of audit on each site will usually be:

- a) Levels 2 & 3 - ROS
- b) Levels 1 - PSM.

Persons who perform PTW audits should have received training in the PTW system.

Level 1 auditing should be undertaken with the assistance of someone with auditing experience.

Isolation Procedure auditing shall be conducted with a frequency of 6-12 audits per year depending on the size of the plant.

Each company/site should have a record of findings and corrections relating to recent audits and have a method that demonstrates completion of action items.



4 Permit forms: Description, completion, status and lifecycle

This section defines and provides guidance in completing and progressing permit forms through the lifecycle of the permit.

4.1 Permit forms

Hot Work Permits

Any work which involves a potential source of ignition is Hot Work.

This is subdivided into Categories 1 and 2. Category 1 Hot Work will be recorded on a "red" permit form, and category 2 Hot Work on a "yellow" permit form. The division will be based upon whether a positive source of ignition, such as welding or grinding, will exist this being Hot Work Category 1. All other Hot Work with a potential ignition source will be Category 2.

Hot Work Permits have distinguishing edge colours as follows:

Hot Work Permit - Category 1,	RED edge
Hot Work Permit - Category 2,	YELLOW edge

To distinguish the working copies of the Permit, the face colours are as follows:

Original	RED	Work-site copy
Carbon Copy	BUFF	PCF copy

Cold Work Permit

All other tasks that do not involve any potential source of ignition eg. rigging, mechanical fitting, scaffolding. Cold Work Permits have a distinguishing BLUE edge colour.

To distinguish the working copies of the Permit, the face colours are as follows:

Original	BLUE	Worksite copy
Carbon Copy	BUFF	PCF copy

Confined Space Entry Permit

Confined Space Entry Permits have a distinguishing PURPLE edge colour and for detail on their use refer to [Confined Space Entry](#)

Additional forms and certificates compliment the permit forms for the control of work.



4.2 Permit Form completion

Layout of the forms

HW-1, HW-2 and Cold Work Permit forms are set out in a standard format having 4 main sections covering the processes that determine the lifecycle of the Permit:

- a) Application
- b) Work description and controls
- c) Authorisation
- d) Cancellation.

Task

The PA is to summarise the work details in the TASK box located directly under the Permit Name. The summary shall be in the format of major equipment No./area, type of work, followed by the minor equipment No. and the type of work. (e.g. V-0709, MDI - PIC 0709A, Inst repair, or Inlet area, weed spraying.) The purpose is to be able to identify the work location and type of work easily while the Permit is located in the Permit rack. This is especially important for Endorsed Permits.

Application

The PA, normally the person with overall responsibility for planning and preparation of the work, enters their name, department or company, and the date the Permit is required in the first application box.

If this is an extension of a previous permit, in the next box, the PA enters the type and number of the previous Permit. This number provides a reference for the PI and establishes a clear audit trail.

The PA then inserts the duration of and number of persons expected to be working at the work-site. This allows the PI to make better informed judgements on factors affecting personnel safety. The PA also nominates the expected PICWS. The PA and the PICWS may be the same person. The PA should check to ensure that the PICWS is competent to be in charge of the work-site.

The Process Area, Equipment Description and the Tag No. are entered into the last box. The PI may be able to assist in providing a more accurate description of the area/equipment.

Work description and controls

This section is also to be completed by the PA. A description of the overall work scope is required along with the Hazard ID and Control measures required for the involved tasks. In completing this section, the PA is to indicate the special precautions necessary to carry out the work safely and in particular, hazards which the persons undertaking the work should be aware. Alternatively, the PA may attach a Hazard ID (JHA) to the Permit where the work includes multiple hazards. This process requires planning and forethought and must be completed prior to work starting along with communicating this information to the workers. Where a precaution requires communicating to a third party, the person responsible for communicating is to be named.



The PA is to complete the Hazardous Area No., Consequence No., and the Risk Assessment No. using the method set out in [Risk assessment and control](#) This will also allow the PI to check that the Category of Presence of the PICWS has been correctly set as required in Category of worksite presence

Where an Excavation Certificate is known to be required, the Permit Applicant should attach it to the Permit.

The Permit Applicant is to enter the numbers of the Isolation and other Certificates required in applicable box after consulting with the PI as necessary.

Note: Any Isolation Procedure (IP's or Isolation List) attached to the IC should remain in the PCF as this ensures the minimum relevant documents are at the worksite. Anyone wishing to check the Isolation List for an isolation can do so by contacting the PI in the PCF.

A list of the required Safety Checklists shall be stated and checklists attached to the work-site copy of the Permit.

The PI is also required to complete parts of this section. The PI is to set the frequency of gas tests for work such as welding or vessel entry taking into consideration the Risk Assessment No. and the Category of Presence. The frequency would generally be in the form of 2 hourly, 4 hourly, test after absence from area and if required, continuous monitoring etc.

PI is responsible for ensuring that all necessary precautions such as isolations, depressurising, purging, cleaning, or the provision of special equipment have been included on the Permit and IC.

Authorisation

The Permit is taken to the PCF by the PA minimum of 24 to 72 hours (1 to 3 days) before the work is due to start for authorisation by the Authorised Permit Signatory. Where isolations are required as part of the work, the PI/PA is to fill out the details of the isolations on an IC and present it 1 to 3 days prior to work starting. The PI will arrange for the isolations to be carried out as per "Isolation Procedures" section of this manual.

Depending on the risk assessment of a job and site requirements, the Permit is authorised by either the ROS or the PI. ([See Responsible Operations Supervisor \(ROS\)](#)). It will be based on a combination of the hazards associated with the work and the hazards associated with the area in which the work takes place. The resultant assessment of risk will determine the level of authorisation and supervision required and will provide guidance as to the expected controls.

The signatory is to examine the Permit and any associated IC and is to add any additional controls/precautions as necessary. It may be considered necessary for the ROS/PI to visit the work-site together with the PA/PICWS. to consider whether there are any potential clashes between the new permit and any other work in progress.

Before handing a Permit to a PICWS for endorsement, the PI is to check that there are no conflicting isolations or work.

Endorsements

Endorsements on a Permit are required on a daily/shift basis by the PICWS, AT and PI.



The PICWS is to collect the Permit from the PCF and obtain the appropriate endorsements. These are required on a shift by shift basis (normally the first 30 minutes is reserved for the endorsing of suspended Permits and no new Permits will be accepted by the PI other than urgent work).

The PICWS indicates on the Permit the date, time, and their name. The PICWS then signs to indicate agreement to the conditions of the Permit and that they will ensure that others working under the Permit understand its conditions.

Endorsement by the Area Technician (AT) is required as the person responsible for the area in which the work is taking place.

The AT, in signing, approves the commencement of work in his area and is aware of all work in progress, or planned to occur, in the area and that the preparations undertaken to ensure the safety of the work-site remains in place. The AT must take particular note of any hazardous work, required frequency of atmospheric tests, and plant conditions.

The AT is to be available in or near the PCF at work start time in order to sign for current shift endorsements. In doing so the AT must have had a comprehensive hand-over from the previous shift. As a general rule for endorsing Permits, after a period of 45 minutes has elapsed since the shift changeover, the AT should not rely on hand-over information as an indication of the plant status. If the AT has any concerns about permits, they should be put on hold until the AT has addressed those concerns, either with the PI or by visiting the work-site.

Note: If the area of work falls outside that under the control of any AT, then the Control Room Operator (CRO) shall complete the endorsement. If the work is taking place in more than one area, the permit must have endorsement for the work to be carried out in both areas.



The PICWS is then to take the Permit to the PI who shall check:

- a) There are still no conflicting Permits or isolations
- b) The PICWS is registered in the Company Competency Database
- c) The description, controls and signatures on both the Permit and any applicable IC are all correctly filled out
- d) The Permit Location Board has had the appropriate coloured disc attached
- e) The precautions and conditions are still valid
- f) The Safety Checklist and any additional controls are applicable
- g) The Toolbox meeting requirements are being met.

The PI shall then endorse and issue the Permit.

Note: The endorsement is normally for the period for which the current shift has responsibility for the work area. It expires with the change of shift.

When operating from a remote site or perhaps a remote well site or other facility, it is acceptable to allow the PICWS at the remote site to electronically transfer the PTW forms to the PI for approval and signature and then transfer the forms back to the remote site for issue and execution of the work. All other normal requirements and controls of this PTW system shall be applied and adhered to on the remote site.

Once the Permit has been authorised and endorsed, the bottom BUFF copy of the Permit is to be filed in the Permit Rack by the PI.

The PICWS is to retain the work-site copy of the Permit which is to be placed inside a waterproof plastic envelope obtainable from the PCF. The displayed Permit should be in such a position as to be visible and accessible, and not likely to be damaged by the work activities. The displayed Permit is then available for information and inspection by workers and auditors, and for the recording of gas tests.

A Permit is considered to be suspended ([4.6 Permit suspension](#)) when the PICWS returns the Permit to the PCF, having left the work-site in a safe and tidy state and work is intended to continue. The Job Status is to be completed by PICWS advising current status and when it is likely to be progressed.

Cancellation

Section 4 of the Permit form is the cancellation box.

Note: If the Permit is not endorsed for 10 consecutive days, ie no work has been performed, without a satisfactory explanation; the PI may cancel the Permit.

Work completed

The PICWS is to provide their signature, and date this section to indicate that the work is complete and that the work-site has been left in a safe and tidy condition.

It is the PICWS responsibility to ensure that:

- a) The work has been properly performed



- b) The work-site and the equipment affected by the work, have been left in a clean and safe condition, with all tools and equipment removed.

The PI responsibilities are to:

- a) contact the AT to check that the work-site is safe
- b) Sign the cancellation section when this has been confirmed
- c) If isolations are associated with the permit, update The Master Isolation Register on the Isolation Certificate
- d) Check that all relevant signatures are on the form and that all necessary documentation has been prepared for archiving.

Work not completed

If work is not completed and:

- a) No further endorsements are available the work is to be transferred to a succeeding Permit; or
- b) The work is to be suspended for a period exceeding the Permit validity period (typically 10 days), isolations are to be retained under an Extended Period Isolation (EPI).

The PICWS signs the cancellation section of the permit

Where work is not complete, the PICWS must state the reason why in the comments box.

The PI should check that any related certificates and documents are satisfactorily completed or transferred to the succeeding Permit. If work is to continue on a succeeding Permit, then the preceding permit number shall be entered by the PICWS on the new permit.

The permit is then cancelled and no further work can take place under that Permit.

Cancelled Permits are to be archived.

4.3 Rules for permit validity and endorsement

The permit validity period is from the time of permit authorisation until cancellation. In order to ensure that the risk controls required for long duration tasks are reviewed regularly, a limit of 10 endorsements has been set for all Work Permits. A Permit that has been suspended for a period of more than 10 consecutive days is deemed to be invalid unless it meets criteria as set out in Section 4.6 below.

The maximum endorsement period for permits is 12 hours. (i.e. The work would normally continue for the duration of one operational shift for which it was endorsed. It does not straddle an operations shift change.)

Where work starts part way through a shift, the endorsement is only for the remaining time for which the current shift has responsibility for the work area. If a shorter endorsement period is required, the Permit Issuer is to indicate this by a statement in the Authorisation Section of the Permit.

For any work not completed within the maximum validity period, the Permit is to be cancelled and a new Permit issued. In issuing the new Permit the PI and the PICWS are to check for changes to the work scope and to consider the effects any new or existing hazards may have on the work. It is the PA's responsibility to raise the new Permit.



4.4 Valid changes to permits

Once the Permit has been issued, changes to the Permit may only be made under the following conditions:

- a) The work description stated on the Permit may only be amended if:
 - The Signatories who authorised the Permit agree to the changes
 - The work covered by the change is in the same permit category as the original work
 - The change does not extend to include work on work-sites not covered by the original Permit.
- b) Precautions and controls may be added to, but not deleted from.

To make an amendment to the work-scope, the PA is to make the amendment in the work description section of the permit, clearly stamped “**VALID CHANGE**”. After making any changes to the precautions and controls, Authorised Permit Signatories are to indicate their acceptance by initialling and dating the permit adjacent to the change.

Note: Where changes are significant, the permit shall be cancelled and rewritten

4.5 Handovers

Everyone who takes responsibility as a PICWS must sign the endorsement section of the Permit. Persons taking over at shift changeover are to be fully briefed, whenever possible at the work-site, by the previous PICWS.

A Permit may be endorsed for 10 days of normal daytime work, or 5 days for work that is continuous. Where the task is necessarily continuous, it may proceed whilst the Permit is away from the work-site for endorsement, subject to the agreement of the AT. The period for which the Permit is away should be kept to an absolute minimum. In this case the endorsement is to be obtained by the relieving PICWS with the outgoing PICWS remaining at the work-site.

When a PICWS is to be replaced by another suitably qualified PICWS during a normal work period, the permit must be formally handed over to the oncoming PICWS with work status and all key hazards being discussed.

For Category C permits the oncoming PICWS shall complete name, signature and time of change on the permit to indicate that they have taken responsibility for managing the PICWS role, this handover must be documented and approved by the AT.

For Category “A and B” permits a full re endorsement of the permit should take place. At the PI’s discretion a worksite handover may take place, with the AT signing the permit and notifying the PI of the change.

4.6 Permit suspension

A Permit is termed “suspended” when the Permit has been endorsed for work at least once and has been returned to the PCF with the work not completed.

When a Permit has been suspended both the Work-site and PCF copies of the Permit are to be retained in the “Work Suspended” section of the Permit Rack in the PCF.

If work is to be suspended for a period exceeding the permit validity period, the permit is to be withdrawn by signing off in the “cancellation” section of the Permit form. This should be accompanied by an



explanation as to why the work is not proceeding, i.e. awaiting spare parts. Isolations may be retained under the Extended Period Isolation (EPI) procedure.

If work is suspended, and no work has been carried out under the Permit for at least 10 consecutive days **without reasonable explanation**, then the PI is to withdraw the Permit as above. Where a **reasonable explanation** is given the PI must manage the process to limit excessive validity extension. Where isolations are involved, the PI is to attempt to return the permit to the PICWS, seeking a satisfactory explanation or permit cancellation. If the PICWS cannot be contacted, the PI may cancel the Permit after checking the area and retaining the isolations as an EPI. Such isolations can only be removed after the PI has thoroughly investigated the matter and sought approval from the ROS.

4.7 Permits revoked

Work Permits may be revoked at any time and are automatically revoked in the event of an emergency or Emergency Exercise at the Installation. In this case all work SHALL cease and persons proceed as per the site Emergency Procedure. Permits SHALL be re-applied for, once the all clear has been given. This may be either a verbal or written confirmation that work may proceed or a written reissue from the PCF.

4.8 Risk assessment and control

Introduction

This is a **guideline** to assist the PA/PI in identifying the Risk Assessment Number related to a task. The Risk Assessment, number enables the level of "Authorisation" and the "Category of Work-site Presence" to be determined. It is reliant on the individual's knowledge of the plant, the task details, and any other activities that may be affected by the area environment and the work tasks.

The assessment is carried out by the PA when applying for the Permit but SHALL be checked and confirmed by the PI.

Plant **Hazardous Area Number** has been based on hazardous area zones (each installation will define the drawing to be used).

The **Task Consequence Number** is determined by Table below or predetermined by the company's PCF Aids for the task

Method

Use the Hazardous Area drawing located in the PCF to identify the hazardous area in which the task is being performed. Determine the **Area Number** using the table below.

Table 2 Hazardous areas

AREA	NUMBER
Zone 1 / High hazard	3
Zone 2 / Medium hazard	2



Non / Low hazardous	1
---------------------	---

Assess the Potential Task Consequences resulting from exposure to the hazards associated with the specific task and the conditions at the worksite. This could be a work injury, plant or environmental damage. There may be more than one consequence identified but select the most serious. Determine the **Task Consequence Number** using predetermined Task Consequence as per PCF Aids. Or refer to Table 3 - Task consequence below

Table 3 - Task consequence

Task Potential Consequence is categorised into 5 groupings and assigned a numeric value as follows:

Score	Class	Safety	Environment	Production / property
12-15	Disaster	Possible multiple fatalities, probable single fatality. Risk to all installation personnel.		
10-11	Very serious	Possible single fatality, probable serious harm (HS&E Act Sched 1). Risk to personnel in the area of the work.	Release outside the fence with intense long term (more than 12 months) damage to the environment and widespread impact.	Damage to essential equipment causing major economic loss or major loss of containment. Major damage to neighbour (several houses destroyed)
7-9	Serious	Possible serious harm, probable LTI (AS 1885). Risk to person undertaking the work due to the environment in which the work is being performed.	Release outside the installation fence with intense local but short term (less than 12 months) damage to the environment.	Major operational upset, major damage to equipment (less than \$500,000). Portion of facility destroyed, temporary total loss of production (3 months), significant damage to neighbour. (one house destroyed)
3-6	Important	Possible LTI, probable medical treatment. risk to person undertaking the work if the method of performing the work is incorrect or if precautions other than those expected from trained personnel are required.	Possible release within the installation fence with short term (less than 12 months) damage to the environment. Breach of resource consent.	Moderate operational upset, moderate damage to equipment (less than \$50,000). Part of own premises, or minor damage to neighbour.
1-2	Noticeable	Possible medical treatment or minor injury requiring first aid. Task is non-hazardous for trained personnel.	No release or negligible damage to the environment	Minor operational upset, minor damage to equipment. (Less than \$10,000). Minor damage to own premises.





Assign a Risk Assessment Number as follows:

Hot work

Risk Assessment Number = Area Number X Task Consequence Number

Cold Work

Risk Assessment Number = Task Consequence Number

The aim is to achieve standardisation of Risk Assessment for all users of the PTW System.

The **Risk Assessment Number** for hot work tasks is calculated by multiplying the **Area Number** and the **Task Consequence Number** together as shown in Table 4 - Hot Work Risk Assessment Number. The higher the Risk Assessment Number (darker shading), the more consideration should be given to alternative methods and controls.

For cold work tasks the Risk Assessment Number = the Task Consequence Number.

Where a permit covers Hot and Cold work tasks; each task shall be assessed, with the highest risk assessment outcome recorded on the permit.

Note: For a hot work permit, the Risk Assessment Number may relate to a higher cold work risk. In this case the Risk assessment Number = Task Consequence Number of the cold work activity.

Table 4 - Hot Work Risk Assessment Number

AREA SCORE	3	3	6	9	12	15	RISK ASSESMENT NUMBER
	2	2	4	6	8	10	
	1	1	2	3	4	5	
	X	1	2	3	4	5	
TASK SCORE							

	High risk	Consider alternatives
	Medium - High risk	Hazard ID & Control (JHA's), toolbox meetings checklists etc.
	Medium - Low risk	
	Low risk	Possible verbal permit/ toolbox meeting

Cold Work controls

When specifying the necessary controls/precautions, for many of the more common tasks, the precautions can be checked against those found in the PTW Safety Checklists. For non-standard jobs, the precautions to be applied will vary depending on the task and the associated risk (risk assessment number). The higher this Risk Assessment number, the more consideration is to be given to additional or alternative methods and controls. This is indicated by the level of shading in Table 4 above. For numbers 12 and above, the ROS is to be involved in and agree to the specified controls. For work that is normally signed by the PI, but has a Risk Assessment number of 8, 9, 10, consideration is to be given to involving the ROS in the authorisation process, depending on the nature of the activity.

The PI must still exercise judgement in using the risk assessment numbers. An area that has been designated as a non-hazardous area may become an area of risk as a consequence of work being carried out



or changes to the area environment, e.g. a Confined Space Entry into new and unknown equipment which is for the time being, in a safe area.

**Hot Work controls:**

These are guidelines to assist the PI in assessing the hot work hazards and in specifying appropriate controls. The "Risk Assessment" tool **must be used cautiously** and must be overlaid by the PI's knowledge of local conditions at the time.

There are many general precautions which may be applied to Hot Work such as fire extinguishers, running water, fire blankets, use of habitats and spark containment etc. and these will vary from task to task and location or proximity to live processes. Two important considerations for all Hot Work are the use of a **Safety Observer** and the need for **Atmospheric Testing**.

The following table provides guidance.

Table 5 Risk assessment tool

Risk assessment score	Safety Observer	Atmospheric testing frequency	Examples & comments
15	Yes	Continuous	This could be welding in a <u>high</u> hazard area. Consider alternatives such as design out the need for the hot work or shutdown and isolate the process and if neither of these are possible then a habitat would be required
12	Yes	Continuous	Carrying out Electrical Induction pre-heating in a <u>high</u> hazard area. Consider alternatives such as moving operation to a safe area.
9	PI discretion	Continuous	Use of an electric power tool in a <u>high</u> hazard area. A Safety Observer may not be required however, an initial gas test followed by continuous monitoring would be appropriate.
8	PI discretion	Continuous	This could be running an IC engine in a <u>medium</u> hazard area. Consider placing IC engine outside of hazardous area.
6	PI discretion	Continuous	Opening live junction boxes in a <u>high</u> hazard area.
5	PI discretion	PI discretion	This could be welding in a <u>low</u> hazard area. A safety observer may still be appropriate however atmospheric testing not required in most cases.
4	No	Continuous	Use of a heat shrink blower in a <u>medium</u> hazard area.
3	No	No	Use of a battery drill in a low hazard area.
2	No	No	<u>Low</u> risk may be done on a verbal permit e.g. use of a camera in a low hazard area.



1	No	No	Manual de-scaling in a low hazard area
---	----	----	--

Gas testing for Hot Work will be specified by the PI. If the gas monitor alarms, immediately stop all Hot Work activity, evacuate the area and advise operations staff. Await authorisation / clearance from the site Permit Issuer before recommencing work.

Note: In the case of Sandblasting, an Earth Continuity Check is to be carried out at the start of work and after any relocation of the sandblasting equipment. The results will be recorded on the permit.

4.9 Category of worksite presence

Depending on the nature of the work, its location and hazard, the requirement for the frequency and duration of presence at the work-site of the PICWS will differ. Using the Categories of Presence listed below, the Permit Applicant is to propose a category on the Permit form for approval from an Authorised Permit Signatory.

Category A: Continuous attendance of the PICWS, with signed transfer of responsibility when one individual is replaced by another. Work must stop when the PICWS is not present. A PICWS can only hold one category A permit at a time.

Category B: As with CATEGORY A, except that work may continue during short absences of the PICWS. The PICWS may additionally be responsible for a single Category C job. The PICWS must remain on the installation.

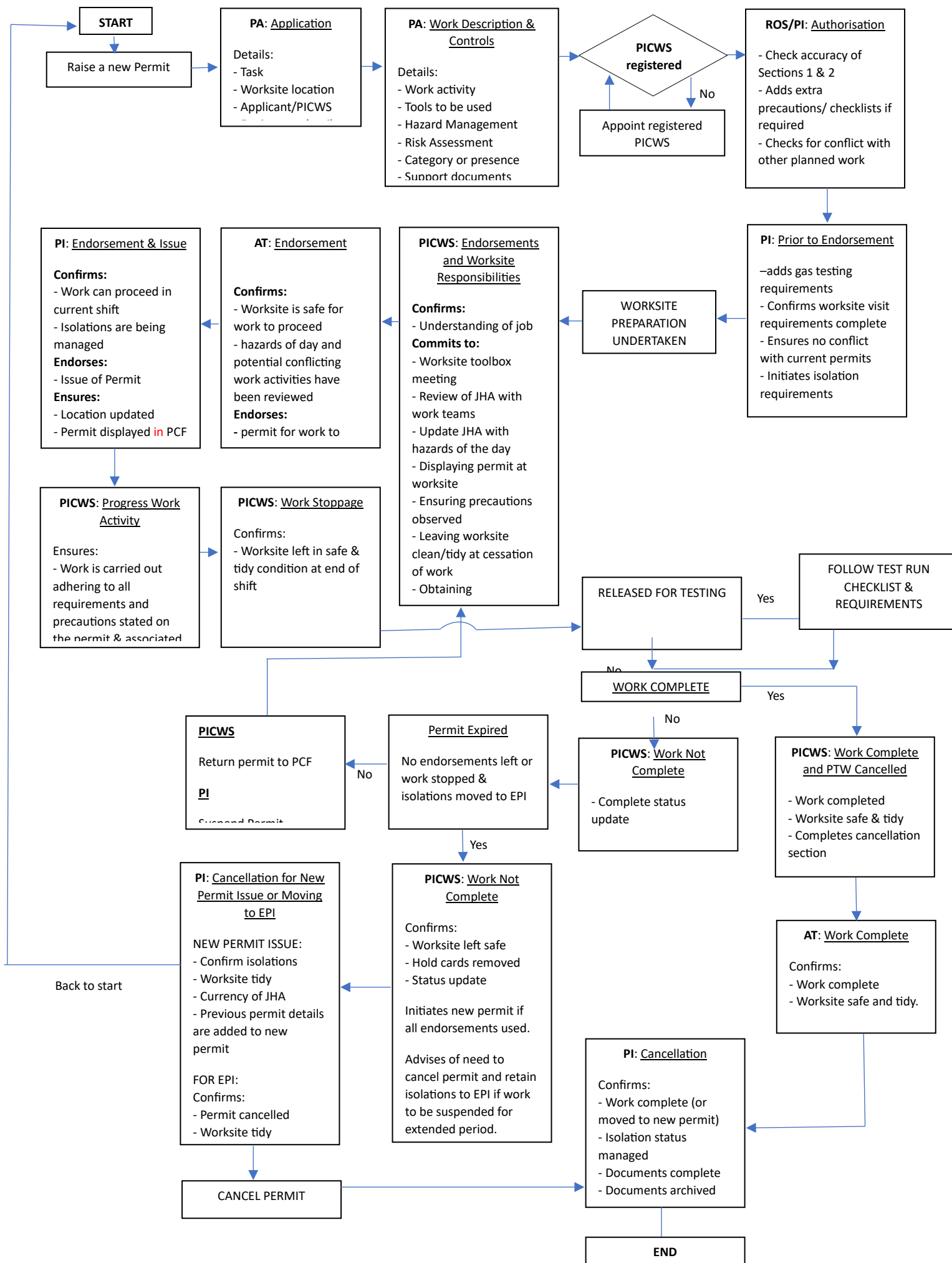
Category C: The PICWS is to be present at the start of the job and is then required to make periodic appearances to the work-site (at least every 3 hrs). The PICWS can be responsible for several Cat C jobs simultaneously.

The PI should be guided by the Risk Assessment Number in approving the Category of Work-site Presence. (Refer to Risk assessment and control e.g. 1 to 5 = **Cat C**; 6 to 9 = **Cat B**; and 10 to 15 = **Cat A**.)

4.10 Lifecycle flow diagram

The Permit Lifecycle Flow Diagram showing the responsibilities of the Permit signatories for each stage in a typical lifecycle is included over page.

CPTW LIFECYCLE





5 Confined Space Entry

5.1 Introduction

Confined Space entry is one of the most high-risk activities undertaken. Entries into a confined space are controlled by a Confined Space Entry Permit and associated Safety Checklist. For all entries it is **mandatory** that the Confined Space Safety Checklist #45 is completed.

5.1.1 The Permit will be issued to the Safety Observer who will be in overall control of the entry.

Work within the confined space will be undertaken by the issue of Hot or Cold Work Permits, to the PICWS responsible for the work inside the confined space. Such permits retain their own risk numbers which are task specific. These are not related to the CSE risk. Controls for Confined Space Entries are detailed in this section of the manual and or specific Company procedures and include the Entry Permit and Safety Checklist.

5.1.2 General Rules:

- a) All entries will have a qualified Safety Observer present at the entry point for the duration of the entry. NO SAFETY OBSERVER NO ENTRY. The Safety Observer will normally be in overall control for the entry
- b) All entries will have the atmosphere tested prior to entry for oxygen, flammables, and any toxic materials which may be present and continuously monitored during the entry for oxygen and flammables and for toxics at the frequency specified on the permit
- c) NO ENTRY FOR WHATEVER REASON IF:

Oxygen is: greater than 21.5%
or Flammables are: greater than 5% LEL

NO ENTRY WITHOUT RESPIRATORY PROTECTION IF:

Oxygen is: less than 20%
Or Toxics are: greater than 50% of the Work Exposure Standard or the site standard,
whichever is the smaller.

NO HOT WORK IN A CONFINED SPACE IF:

Flammables are: greater than 1% LEL

All entries require a "Rescue Plan" and rescue team members nominated in the rescue plan will remain on site throughout the duration of the entry.



5.2 Conditions for a Conforming Confined Space Entry

- a) All hazardous liquids and residues SHOULD be removed by external methods from the confined space prior to entry, and when not practical, additional measures and precautions SHALL be implemented to allow it to be done safely
- b) The isolation, de-pressuring and opening of a confined space SHALL be done in accordance with an approved procedure
- c) The confined space should have a nominal man-way/opening size of 450mm (18") to allow for the safe retrieval of personnel and equipment (as defined in AS2865 '2009)
- d) Internal and external access ways SHALL be kept clear at all times
- e) All vessels SHALL be isolated from process pipe-work in such a manner as to allow for the free draining of all liquids and natural ventilation
- f) There SHALL be nozzles opened at remote points to allow prescribed gas tests to be carried out from outside the confined space
- g) Confined spaces will be purged either by natural or forced ventilation until the atmosphere is confirmed safe and recorded on the "gas free certificate" and the temperature is below 35°C. Acceptable methods are a venturi or air driven fan placed as far as practical from the point of entry and these should provide ~10 air changes per hour
- h) Unauthorised entry SHALL be prevented by the use of either people, signs or barriers
- i) A rescue plan is required for all entries
- j) For the duration of the conforming entry, the Rescue Plan shall determine the required resources and their location and availability for effective rescue
- k) The Confined Space Safety Checklist is to be used for all Confined Space Entries
- l) The requirement to repeat initial atmospheric gas tests is only when the environment conditions change, isolations are altered, or process operations may affect the area.

5.2.1 Duties and responsibilities

The PI/ROS SHALL:

- a) Specify initial gas tests required as per Isolation Procedures
- b) Gas Free Certificate
- c) Confirm approved procedure is being used for isolation/spading
- d) View initial gas test results on Gas Free Certificate and consider the requirement for repeat gas tests as per Gas Free Certificate
- e) Discuss work-scope with PA and specify conditions for additional precautions if required
- f) Consider simultaneous activities and set priorities for Permits



- g) Ensure a "Rescue Plan" is prepared
- h) Authorise the Entry Permit.

The PI SHALL:

- a) View results recorded on the Gas Free Certificate
- b) Confirm isolation/spading of the process using the approved procedure by checking the signatures on the IP
- c) Carry out a visual inspection of the confined space prior to the first entry to confirm that it is as per Conditions for a Conforming Confined Space Entry and Simultaneous Activities
- d) Assemble and brief the rescue team
- e) Confirm if any conflicting simultaneous activities and if so discuss priorities with the ROS. Withhold or withdraw any conflicting work Permits
- f) Check that the Confined Space, Safety Checklist has been correctly completed
- g) Endorse the Entry Permit.

The Safety Observer SHALL:

Have checked the Permit precautions and that the requirements of the Safety Checklist have been completed. Confirms requirements and signs the Safety Checklist daily.

- a) Ensure Gas Free Certificate and Entry Permit are correctly completed
- b) Discusses work-scope communications and responses with PICWS and persons entering the confined space
- c) Authorise and control those entering and leaving the confined space using an "entry log"
- d) Ensure, without entering the confined space that no personnel remain in the confined space at the conclusion of the day's work
- e) Regularly verifying the status of those working in the confined space
- f) Recognising and responding to abnormal conditions inside and outside the confined space and raising the alarm if required
- g) Communicating with the CRO at the beginning and end of every work period in a confined space
- h) Evacuating the confined space if the emergency alarm sounds (except for routine alarm tests)
- i) Isolating those services specified in the rescue plan in the event of an emergency
- j) Barricading the entry point during breaks and at the end of the work period
- k) Displaying all permits and certificates at the point of entry
- l) Ensure all entrants in a confined space are aware of the entry control requirements
- m) **Never, under any circumstances, enter the confined space**
- n) **Having no other duties which interfere with his or her role as a Safety Observer, and never leaving their post while an entry is in progress.**

The AT SHALL:

- a) Have endorsed the Entry Permit and be aware of the conditions of the Permit



- b) Check that there is no conflicting work or Permits in the area. Refer to Simultaneous activities or Manual of Permitted Operations (MOPO)
- c) Perform any additional gas tests or monitoring as may be required
- d) Be familiar with the emergency response procedures and the proposed rescue plan for the entry
- e) Confirm checklist requirements and signs appropriate section of the Confined Space Entry Safety Checklist daily.

The CRO (or designated person) SHALL:

- a) Be familiar with the emergency response procedures
- b) Be aware when entries are in progress.

The person entering the confined space SHALL:

- a) Be working under the control of a PICWS holding a valid permit for the work to be carried out
- b) Accept the authority of the Safety Observer holding the Entry Permit
- c) Wear head protection
- d) Wear a full body harness for column work below man-way levels or as specified
- e) Complete the requirements of the Confined Space Safety Checklist.

5.3 Simultaneous activities

- a) Unnecessary vehicles or internal combustion engines SHALL NOT be operated in the restricted area of a confined space. Where they are necessary they shall be placed downwind or as far as practical from the entry.
- b) No sandblasting or painting should take place in the vicinity of the entry in an upwind position. This does not preclude sandblasting inside the vessel for which a separate breathable source of air is supplied (note the latter is notifiable work).
- c) The use of paints, sprays or other chemicals SHALL only be Permitted on the basis of strict compliance with precautions stated on their Safety Data Sheet (SDS).
- d) Respiratory protection SHALL be considered for all work which includes sandblasting, painting, welding and grinding.
- e) Process venting or draining SHALL NOT take place in the vicinity of a confined space entry.
- f) The number of separate confined space entries that can take place on site at the same time, SHALL be dictated by:
 - i Sufficient personnel on site to form a designated rescue team.
 - ii Sufficient rescue equipment on site to carry out the rescue.
- g) It may be assumed that concurrent rescues will not be required.

5.4 Conditions for a Non-Conforming Confined Space Entry

A Non-Conforming entry is one that cannot satisfy any of the conditions defining a Conforming Confined Space e.g.: sludge or contaminants are still present in the confined space or the temperature inside the confined space is greater than 35°C.

Where all practicable steps have failed to ensure the confined space environment criteria as defined in Conforming Confined Space Entry, the site ROS may begin the following procedure to allow entry into a Non-Conforming confined space.

Note: This may now become a Notifiable activity to WorkSafe NZ as it will require Respiratory Protection (BA) in a confined space.

Environment

Ensure that requirements for [Conforming Confined Space Entry](#) and [Simultaneous Activities](#) have been carried out and the results evaluated to ensure the necessity to continue with this part of the procedure.

Personnel Protective Equipment (PPE)

Personnel entering a non-conforming space SHALL be provided with suitable clothing and equipment to protect them from any harm that may be caused or may arise out of the entry into a non-conforming environment.

The rescue equipment is as specified in the Rescue Plan and Safety Checklist and any other requirements as indicated on the Permit.

Where the non-conformance is occasioned by residues, process fluid etc, the persons entering the non-conforming confined space SHALL wear as a minimum, the following equipment:

- a) Impervious full body suit (coveralls)
- b) Chemical compatible resistant gloves
- c) Gumboots
- d) Compressed air breathing apparatus (CABA)
- e) Safety Harness with safety line fitted.

Personnel: Selection and monitoring

- a) Entry into a Non-Conforming Confined Space is voluntary
- b) Personnel selected for entry SHALL have been assessed as suitable taking into account, their size, medical condition, temperature, environment, ability to rescue and the size of the entry point
- c) General wellbeing of personnel involved is to be monitored:
 - i. Prior to entry
 - ii. During entry
 - iii. After entry.

This monitoring may include but is not limited to exposure monitoring as required under the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.

For the duration of the non-conforming entry, the following personnel SHALL be present at the work-site (entry point) and those listed in brackets(-) SHALL be available on site to attend as back-up if required:



- a) Personnel entering confined space
- b) 1 Safety Observer
- c) 1 Rescue team leader
- d) 2 BA trained personnel
- e) (2 BA trained personnel)
- f) (2 Additional personnel)
- g) (Other members of the rescue team as nominated on the rescue plan).

At least one of the persons indicated in (1) to (4) is to have a current First Aid Certificate as is one of the persons indicated in (5) to (7). A First Aid Certificate is NZQA Unit Standard 6400 or 6401 and 6402, Manage First Aid. In addition, there should be a person on site who holds an advanced First Aid Certificate or similar.

5.4.1 Duties and responsibilities

The duties and responsibilities listed for non-conforming entries are to be in addition to those previously listed in Conditions for a Conforming Confined Space Entry.

The ROS *SHALL*:

- a) Confirm Conditions for a Non-Conforming Confined Space Entry are complied with, and notifies WorkSafe NZ if applicable.

The PI *SHALL*:

- a) Confirm PPE is suitable and present at the worksite
- b) Confirm additional precautions for the non-conforming entry are in place
- c) Confirm personnel are available to attend the worksite for the duration of the entry as detailed in Personnel: Selection and Monitoring
- d) Check to ensure that there are sufficient numbers of personnel available with a current First Aid Certificate.

The Safety Observer *SHALL*:

- a) Confirm that equipment as described in the rescue plan and checklist and in Personnel Protective Equipment (PPE) is available at the confined space.

The AT *SHALL*:

- a) Ensure the restricted area around the entry site has been defined and identified.

The Person(s) entering the confined space *SHALL*:



- a) Be physically and mentally fit
- b) Have received adequate training and be competent in the use of the equipment involved
- c) Wear PPE as detailed in the checklist and [Personnel Protective Equipment \(PPE\)](#).

6 Certificates and Forms Associated with a Permit

Certificates and associated forms are signed statements that specified checks or tests have been carried out by an authorised and competent person and that conditions are acceptable.

Certificates DO NOT replace Permits, they are controls, precautions and conditions that SHALL be observed.

Certificates are appended to a valid Work Permit and on their own DO NOT authorise work to be carried out.

6.1 Isolation Certificate

The Isolation Certificate (IC) is used for:

- a) Process Isolation
- b) Electrical Isolation
- c) Instrument Isolation
- d) Extended Period Isolation (EPI)
- e) Isolation and de-isolation of safety/ emergency systems.

For details on the use and the procedural requirements attached to each section refer to Isolation Procedures

6.2 Gas Free Certificate

There are two Gas free certificates used in the Permit to Work System, one for confined space entry and one for process equipment

6.2.1 For Confined Space Entries

The Gas Free Certificate is found in Section 8 of the Confined Space Entry Permit. It is a signed statement by an Authorised Gas Tester that the appropriate gas tests have been taken immediately prior to a confined space being entered and that the results are below the limits as specified on the certificate.

Procedure for completing a CSE PERMIT (Section 8) Gas Free Certificate:

- a) PI specifies the gases/toxics to be tested by striking out those that are not applicable
- b) PI records additional tests required by adding them to the certificate in the "other" section
- c) PI sets frequency for any subsequent tests and indicates on the permit
- d) PI nominates an Authorised Gas Tester to carry out the initial testing, Must hold Unit 3058
- e) Authorised Gas Tester completes the tests and records the results on the certificate
- f) Authorised Gas Tester records their name and initials against each test result
- g) Completed Gas free certificate returned to the permit office for the PI to review prior to issuing the CSE permit.

Subsequent gas testing for oxygen and hydrocarbons is normally required when carrying out Confined Space Entries. Other gases may also be tested for on the advice of the PI having due regard for the type of product previously stored in the vessel, the environment, and the means of removal. The declaration is completed by the authorised gas tester after testing the area for combustible vapours and obtaining readings of less than 1% LEL. If applicable, they are also to test the area to verify that the oxygen content is between 20 and 21.5% by volume. The tests are to ensure that the health and safety of personnel are not compromised, due to changing or existing circumstance in the confined space.

The full initial tests are to be repeated if an event occurred between entries that has the potential to alter the atmosphere in the confined space, such as an isolation that has been altered or interfered with.

If the frequency specified for gas testing during the execution of the work requires several tests during a shift, then the results are to be recorded on the back of the worksite (purple) copy

6.2.2 For purposes other than Confined Space Entry

Where a general Gas Free Certificate is required, a standalone Gas Free Certificate is used. This certificate is to record that process equipment has been appropriately cleaned and gas freed prior to carrying out category 1 hot work or prior to the equipment being transported off site. Examples where this certificate is required are;

- a) To confirm a vessel has been appropriately gas freed prior to completing a weld repair on a nozzle
- b) To confirm redundant piping, process valves or other process equipment has been appropriately gas freed prior to transporting offsite.

Procedure for completing a Standalone Gas Free Certificate:

- a) PI specifies the gases / toxics to be tested by striking out those that are not applicable.
- b) PI records additional tests required by adding them to the certificate in the "other" section
- c) PI nominates an authorised gas tester to carry out the initial testing, Must hold unit 3058
- d) Authorised gas tester completes the test and records the results on the certificate
- e) Gas tester completes Section 3 (Declaration) of the gas free certificate by completing the declaration checks and recording their name, signature and date
- f) Completed gas free certificate returned to the permit office for the PI to review prior to issuing associated permit.

6.2.3 Gas testing specifications that are applied to Gas Free Certificate

A reading of <1% LEL must be obtained.

It is desirable that zero readings for toxic components are obtained. Any non-zero reading should be investigated with the view to completing further cleaning/purging to further reduce the toxics prior to work proceeding or equipment being sent offsite. Where appropriate, work may proceed as long as the reading is below the safe range as listed on the Gas Free certificate.



Note: An authorised “gas tester” is a person who has been deemed competent by successfully completing NZQA Unit Standard 3058 (perform gas test in an energy and chemical environment).

The limits specified on the Gas Free Certificates are based on 50% of the Time Weighted Average (TWA) as published in current “Workplace Exposure Standards” (WES) or company guidelines, whichever is the lowest. The WES-TWA is based on continuous exposure for an eight-hour day for the normal working life, however some persons may suffer adverse effects at these levels because of a higher individual susceptibility to such chemicals. If in doubt or further advice is required, contact a HSE Advisor.

6.3 Excavation Certificate

An authorised Excavation Certificate stating that the excavation may proceed in accordance with the stipulated controls, must accompany the Work Permit for all excavations deeper than 150 mm. *This includes mechanical digging, hand digging and driving in pegs or stakes.*

Excavation Certificate forms are coloured orange (edge and face) and the top-coloured copy is attached to the permit. The bottom buff face coloured copy of the certificate is filed in the endorsed section of the permit rack along with the buff copy of the permit.

The PA, the person responsible for the planning and execution of an excavation (ie. contractor's engineering supervisor) completes the application and excavation detail sections of the certificate. The PA or PICWS also indicates that the checks specified in the Excavation Safety Checklist have been carried out.

The Excavation Focal Point (Engineering Supervisor) may stipulate controls and authorises the certificate. An Electrical Supervisor will also apply controls where applicable. The PICWS in signing the Acceptance Section acknowledges acceptance with the stated controls and conditions.

Note: An Excavation Certificate does not permit entry into, or allow other work in an excavation, but only the activity of the excavation itself. *Other work to be carried out within the excavation will be undertaken using the appropriate permit.*

Note: When an excavation exceeds 1.5m in depth and the depth is greater than the width at the top, it should be considered to be a “Confined Space”.

Requirements:

- a) Details of excavation construction and hazard management shall be as per [WorkSafe NZ Good Practice Guidelines Excavation Safety](#)
- b) The installation focal point for excavation work SHALL be consulted when planning for excavation work
- c) The Excavation Certificate including a marked-up U/G services drawing showing the proposed excavation is to be submitted by the PA to the PI before a Permit will be issued for an excavation. The Permit is processed in the normal manner. The Buff copy of the Excavation Certificate is retained with the Buff copy of the Permit
- d) An Excavation Safety Checklist is to be attached to all excavation Permits



- e) The Excavation Focal Point is to co-ordinate any updates to U/G drawings. They are also to ensure that excavations are completed according the appropriate engineering specifications, or where not specified to a site standard
- f) Drawings of the location of the excavation are to be submitted to the Excavation Focal Point/Construction Engineer who is responsible to ensure that the location has been checked against the Underground Services Drawings for civil, mechanical and electrical obstacles and to provide the appropriate controls
- g) The area of the proposed excavation should be surveyed using a pipe/cable locator to identify/confirm the locations of the underground services
- h) Prior to a machine excavation, the position of underground pipe-work and cables shall be determined by hand digging (potholing) at selected locations. Such services must be uncovered and identified/confirmed irrespective of whether they are deemed to be below the target excavation depth. Potholing does not require a separate Permit, but must be completed before machine digging
- i) Any cables or pipe-work uncovered which are not shown on the site drawings are to be reported immediately to the PI and work must stop until authorised to proceed by the PI
- j) The Excavation Focal Point and the PICWS are to inspect the excavation each morning prior to work starting on the excavation, and weekly where an excavation remains open but no work is being performed
- k) The PICWS is to be competent in the application of the:
[WorkSafe NZ Good Practice Guidelines Excavation Safety](#)
- l) A qualified Safety Observer will be used where the excavation is notifiable or when it is considered to be a Confined Space and at the discretion of the PI for mechanical digging where there is a possibility of hazardous underground services, The General and Confined Space duties of the Safety Observer are defined in Sections 2.7, 5.2.1 and 5.4.1. Specific additional responsibilities are as follows:
 - i. To watch for underground services
 - ii. To communicate with digger operator
 - iii. Never to enter the excavation
 - iv. To stop work if an unidentified service is exposed and to report to the PI. Work may not restart without the approval of the PI.

Notifiable excavations:

There are legal requirements around certain excavations and Reference needs to be made to: [WorkSafe NZ Good Practice Guidelines Excavation Safety](#)

Note: Notifiable excavations should not be undertaken unless other alternatives have been duly considered.

6.4 Certificate of Multiple Isolations

The Certificate of Multiple Isolations is a form that allows for the recording of multiple isolations, especially as the IC allows only for a limited number of isolations to be recorded.

The Certificate of Multiple Isolations shall only be short term (valid for current shift – maximum of 12 hours).

A Certificate of Multiple Isolations can be used for the following applications:

- a) Low risk electrical isolations i.e. isolations for lighting repairs
- b) Isolation of instrument impulse lines
- c) Managing well services control of wellhead safety valves.

The equipment isolated, the point of isolation, the isolation card number and the method of isolation used SHALL be filled out for each isolation. The multiple copies are used as follows:

- a) White copy remains with the permit
- b) Pink copy remains with the isolation certificate
- c) Blue copy remains with the CRO.

The names and signatures of those involved in isolating/de-isolating are to be filled out along with the time and date of the isolation or de-isolation.

Where the Certificate of Multiple Isolations is used, on permit return, it is to be attached to and filed with the Isolation certificate.

6.5 Safety Checklists

Safety Checklists have been developed to assist all personnel in identifying precautions associated with various tasks. **They are developed by individual companies and are specific to their work operations.** They provide a common statement of the key safety aspects requiring action or understanding and act as memory joggers at the worksite. They do not replace work instructions, procedures, industry standards or codes of practice.

Safety Checklists compliment other precautions, Hazard ID's, either as specified on the Permit or implicit in a trade. The use of the checklist provides consistency in generating and communicating safe working methods and aids to ensure that work does not start before essential safety requirements are in place and that the work party is adequately briefed.

The Safety Checklists are subject to review on a 5-yearly cycle. The review is carried out by the team or individual who is seen as the most appropriate due to exposure and experience. All Checklists are approved by the PSM. Checklists should be reviewed every time they are used to see that they are still relevant, and any proposed changes discussed with the PI who will forward them to the PSM for review.

Once checklists are specified on the Permit by the PA and PI the PICWS must treat them as mandatory. The checklist(s) reference number(s) are to be recorded on the Permit.



The PICWS is responsible to ensure the Checklist has been reviewed and conditions complied with. When there is a change of PICWS, in signing the hand-over of the Permit, the new PICWS not only accepts responsibility for the Permit conditions but also the precautions and requirements of any attached Safety Checklists.

Deleting inappropriate items from the checklist is permissible prior to validation and must be initialled by the PI. The Checklist is to remain with the work-site copy of the Permit, and be available for supervisors, auditors, AT's and most importantly, the work-party.

The Safety Checklist is archived along with the Permit.

6.6 Toolbox Meetings

Safe working requires that both the work-site and the personnel doing the work have been adequately prepared. A work-site briefing or Toolbox Meeting is a briefing held by the PICWS and attended by all those involved in carrying out the work. The purpose of the Toolbox Meeting is to discuss the plans for the job, identify the individual responsibilities, identify and discuss the hazards, and review procedures and Hazard ID.

Toolbox Meetings shall be undertaken for all permitted activities and be reasonably brief. As a general rule Toolbox Meetings should be held prior to the work commencing, thereafter daily, and when there is a significant change of work-scope or personnel. All Toolbox meetings shall be recorded on the "00 Checklist" that is required with all permits.

Topics to be covered are:

- a) Objectives of the job
- b) Hazards associated with the job
- c) Precautions and controls for the hazards
- d) Emergency plans for the job
- e) Consider conflicting activities (adjacent activities / other personnel) responsibilities.

Other topics that may be covered depending on the work involved are:

- a) Manpower and skills
- b) Access egress and evacuation
- c) Work environment
- d) Emergency equipment / systems
- e) Equipment
- f) Materials handling
- g) Isolations
- h) Earthing
- i) Questions from the work party.

Prompt sheets to assist in carrying out Toolbox Meetings are available from the PCF.

7 Isolation Procedures

This section of the manual covers the use of the Isolation Certificate (IC), Written isolation procedures and Isolation Methods.

Any of the following types of Isolations can be managed through the use of the IC and these Procedures.

- a) Process Isolation (Refer to section [7.4](#))
- b) Electrical Isolation (Refer to section [7.5](#))
- c) Instrument Isolation (Refer to section [7.7](#))
- d) Extended Period Isolation (Refer to section [7.13](#))
- e) Isolation of safety/emergency systems (Refer to section [7.8](#)).

Often one Isolation Procedure will contain several of these elements. i.e. A large procedure for vessel inspection work will generally involve Process isolations, Electrical Isolations, Instrument Isolations and Safety/emergency system isolations.

7.1 Isolation Certificate

The Isolation Certificate (IC) is used to record all details for a specific isolation. It includes 7 sections covering the following:

- a) Application
- b) Master Isolation Register
- c) Extended Period Isolations (EPI)
- d) Isolation of Safety/ Emergency Systems
- e) Isolation Procedure
- f) Approved to proceed with the application of isolations
- g) Approval to remove isolations.

7.1.1 Application

This section is completed by the PA. It is the PA's responsibility to inform the PI that an isolation is needed well in advance of when the work is required to be carried out.

The PA is to provide the details of the equipment to be isolated, the reason for the isolation and when the isolation is required by, through completing the IC application section.

7.1.2 Master isolation Register

The Master Isolation Register of the IC records all permits issued for work involving the specified isolations. This section records the details of when a permit is registered as issued under the IC. It records the Date of registration, Type of permit, Permit number, PICWS name and if applicable the PICWS Lock number applied to a lock box. This section is also used to record when a permit is Cancelled and is no longer registered on the Master Isolation Register.



Only once all permits that were registered on the Master Isolation Register have been cancelled, and it is safe to do so, can the de-isolation process be applied.

This is one of the fundamental purposes of the PTW system; to ensure all work happening under an isolation is recorded and completed prior to isolations being removed.

7.1.3 Extended period isolations

This section is used to record isolations that are in place with no permits issued against them. Refer to section 7.14 for more details.

7.1.4 Isolation of safety/emergency systems

This section is used by the CRO to show their awareness of the proposed isolation of a Safety or Emergency System. Refer to section 7.8 for more details.

7.1.5 Isolation Procedure

This section is where the details of the Isolation Procedure are recorded. This is a statement signed by competent personnel that the equipment to be worked on has been isolated from energy sources and that appropriate measures have been taken to ensure containment of product.

The details may be written in section 5 of the IC or a reference may be made to an attached Procedure. Refer to section 7.3 for more details.

7.1.6 Approved to proceed with the application of isolations

This section is completed by the PI once an Isolation procedure has been compiled and checked and the isolations are ready to be applied

7.1.7 Approval to remove isolations

This section is completed by the PI once it has been confirmed that all associated permits, as recorded on the Master Isolation register (section 2) of the IC, have been cancelled and it is safe to de-isolate

7.2 Overview of isolation / de-isolation process

Isolations

On being presented with an application for isolations, the PI then nominates/agrees a Competent Person to plan for the isolation. The PI, Competent Person, and the PA SHALL discuss the details of the isolation and agree on the isolation points and the isolation method.

A Compiler will be assigned to develop an Isolation Procedure for the isolation required and a checker will also be assigned to verify the procedure is correct. (Refer to section 7.3 Isolation Procedures)

The PI then checks existing isolations to determine any isolation points that may be in conflict with other isolation points. Any individual point which is already isolated for another system will have an additional lock/tag applied in the field and recorded on the appropriate IC.

The Competent Person SHALL complete the IP section of the IC. Any isolation / deisolation procedure that exceeds ten lines SHALL be attached to the IC as a separate IP.

The Competent Person assigns an Isolation Lock/Tag for each point of the isolation. The isolation lock/tag will have a unique number. This number is entered onto the IP. Where applicable the Competent Person enters the colour of the Tag Series into section 5 of the IC and writes the last 3 digits of the IC on each tag assigned. The number of Mechanical and Electrical locks/tags issued for the isolation are also to be entered on the IP.

Note: Where tags are used all isolations specific to one IP are to be tagged with Isolation Tags of a single colour.

The PI SHALL then:

- a) Check the content of the IC/IP for correctness and confirm the IP has been signed by the compiler and checker
- b) Check there is no conflict with other work underway and advise the installer accordingly
- c) Confirm competency of installer and checker
- d) Sign the IC (section 6), approving that the isolation can take place
- e) File the IC in the Authorised Section of the permit rack in the PCF.

When undertaking the isolation, the Installer and the Checker shall initial at each step on the IP to acknowledge that it has been completed correctly.

Note: If the isolation requires change for any reason, the 'Valid Change' process shall be followed. Refer to Changing an Isolation Section [7.12](#).

The PI is then to check that the isolations have been signed for (Installed - Initial & Checked) on the IP.

The IC is then filed in the ISOLATION section of the Permit Rack. This indicates that the isolation is complete, and they can now authorise permits relating to the isolation.

The PI can now "Endorse" permits applicable to that isolation. When endorsing a permit, the PI must ensure the following is completed:

- a) The Permit number is recorded in the Master Isolation Register section of the IC
- b) The IC number is recorded in Section 2 of the applicable permit as a cross reference
- c) The PI will file the IC in the ISOLATION section of the permit rack.

All permits that are approved under the same set of isolations will have their Permit Numbers, Date, Permit Type and the name of the PICWS recorded on the Master Isolation Register of the IC.



Isolations must stay in place until all Permits issued working under these isolations have been cancelled on the Master Isolation Register, unless: -

- a) A Test Run is being carried out using the Test Run Checklist. See section 7.13
- b) The need arises to relocate an isolation, e.g. where a common boundary isolation point has to be relocated for operational reasons, or the scope of work changes
- c) A piece of equipment carrying an isolation tag has been removed from the plant. In this case, the isolation is to be cancelled.

De-isolation

The person requesting the de-isolation is to inform the PI of their requirement for the equipment to be de-isolated.

Prior to allowing de-isolation of the equipment, the Permit Issuer SHALL check that the 'Permit Cancelled' section of the IC has been completed, i.e. all Permits listed on the IC have been returned and cancelled.

Note: The number of the relevant IC is written in Section 2 of the Permit. This is to ensure that there is cross-reference with the IC.

If there is more than one Permit operating under an isolation, the PI SHALL only sign and date the 'Permit Cancelled' section of the IC for the Permit applicable to the job that has been completed. The Isolation Locks/Tags **are not to be removed** until all permits applicable to that IC have been returned and signed off on the Master Isolation Register.

Upon completion of ALL jobs operating under an isolation, the PI SHALL have the work-site inspected to ensure all work is completed and no other work is proceeding under the isolation.

The PI then grants approval to start the de-isolation by signing Section 7 of the IC.

A competent person undertakes the de-isolation initialling each step in the removed column to acknowledge that it has been completed. This is to also be checked and initialled by another competent person.

If an isolation point is to be de-isolated and it is also common to another isolation, only the isolation lock/tag applicable to the relevant IC is to be removed.

Once the de-isolation is complete, the IC and the locks / tags are returned to the PCF.

PI verifies that, the number of locks / tags returned correlates with the number issued, record of the de-isolation is complete (all signatures present) and signs the IP and IC where applicable. Should lock/tag numbers issued/returned not correlate, an investigation to determine the reason for the missing lock/tag(s) will be conducted.

7.3 Compiling an Isolation Procedure

Once the work scope, equipment and reason for the isolation is known the Isolation Procedure (IP) is to be compiled by and signed by a competent 'Compiler' and checked by and signed by a competent 'Checker'.

In all cases the 'compiler' has ultimate responsibility for the completeness and accuracy of the IP.

The Isolation Procedure (IP) is a step-by-step sequence of actions leading to an isolation. This forms part of the Isolation Certificate (IC). If more than thirteen steps are involved, then the IP must be written separately and attached to the IC.

Note: The procedure is identical both for process and electrical isolations and both will be included on the same IP.

The 'compiler' & 'checker' SHALL always 'walk the line' to ensure that an isolation procedure developed from as-built information (i.e. drawings, operating procedures, etc.) is complete and accurately reflects site and equipment conditions. 'Walk the line' applies to process and electrical isolation.

Any discrepancies observed between as-built information and field during the 'walk the line' will require a review of the isolation procedure between Compiler and Checker.

Any discrepancies identified SHALL be brought to the attention of the PI for appropriate action.

Writing an Isolation Procedure

The text should be a clear item by item description of actions; abbreviations are to be avoided.

Typically, each item should be in a standardised format:

Action - Identification - Method.

There SHALL be only one action for each item; e.g. "Depressure A-9501 gas pig receiver via pressure drain valve PD36"

The procedure should have the relevant drawings attached. These should be marked up at the appropriate isolation point with highlighter pen and the associated step number. Each isolation point on the drawing has its own unique number. An attached procedure is to be clearly labelled with its File Name and each page sequentially numbered i.e. page 1 of 3, page 2 of 3, etc. Each drawing relevant to the points of isolation is to be included and referenced in the procedure.

E.g.: "Lock closed, block valve F653 on the condensate pipeline, 50HC-6-20100, downstream of the pressure manifold. (Drawing No.XX)."

A procedure is typically grouped into 5 sequential categories and these are listed below.

- a) Isolation - Locking closed, Draining, Depressuring (confirm lock off and system is depressured)
- b) Spading and Water flushing (confirm all spading installed correctly)
- c) Complete the work activity within isolations and all equipment is re-instated
- d) De-spade (confirm all spading has been removed)
- e) De-isolate, Purge and Commission (close out of procedure).

Any action listed in categories a) and b) above must have a counter action in category 4 or 5 above.

An authorising signature is normally required before moving to the next sequential category.



Table 6 Common procedure terminology method

Equipment	Action	Action
Block valves	Close or lock / tag close	Open or lock / tag open
SDV's & XDV's	Disconnect air supply	Connect air supply
Spec blinds	Closed	Open
Equipment (pumps, filters, etc.)	Shut-In	Line-out
Relief valves	Remove	Refit
Blinds	Remove	Fit class #
Spades	Remove	Fit class #
Plugs / caps	Remove	Fit class # / rating
Unions	Disconnect	Reconnect
Spools	Remove	Install
Valves (general)	Remove	Refit
Control valves	Manually open / close	Return to auto control
Electrical	Isolate	Reinstate

The isolation procedure should generally reflect the following constraints:

- a) To be in accordance with company Safety Manuals
- b) All depressurising, draining and pressurising SHALL be done within plant design criteria (temperature, pressure limitations)
- c) Isolation spades, blind/blank flanges plugs, and caps SHALL be of the same class/rating as the pipe-work they are being fitted to. Procedures are to specify the required class or ratings (line numbers can be used to provide this)
- d) New gaskets are to be fitted upstream of isolation spades and blind flanges:

When a major project, with multiple isolation procedures, is performed, a formal debrief is to take place which shall include a review of the isolation procedures.

7.4 Process Isolation

A Process Isolation SHALL be required for opening any vessel or tank, breaking flanges or connections on pipelines, or process equipment.

Instrumentation that can be isolated from the process, by needle valves having a bleed facility, may be worked on without a Process Isolation provided that open lines are plugged or capped when equipment is removed.

Process Isolations may be carried out under a Verbal Permit at the discretion of the PI, but still following a written IP.

7.5 Electrical Isolation and Electrical Switching

(This is a signed statement by electrically competent personnel that the specified equipment has been electrically isolated and that appropriate measures have been taken to prevent reconnection (this shall be in line with the requirements of the NZ Electrical Safety Regulations)).

Competency requirements

- a) Simple isolations up to 415 volts, may be carried out by a process technician/operator that has been assessed as competent (recorded) by a qualified Registered Electrician
- b) Where the following conditions exist, electrical isolations and de isolations shall be carried out by a suitably qualified I&E technician (qualified in high voltage [>1000 volts] switching where applicable).
 - i. Where voltages exceed 415 volts
 - ii. Where the integrity of electrical equipment is impaired by an electrical fault condition
 - iii. Where maintenance work involves contact or potential contact with isolated electrical conductors
 - iv. Where there is a possibility of electrical back feeds.

Electrical Switching Procedures

A switching procedure is required to accompany an electrical isolation certificate or work permit in accordance with section 6.2 of the Electrical Safety Rules. This procedure is different from the IP template in that it is aligned with the Electrical Safety Rules and allows sign-off by a 'Competent Electrical Person'. A summary of when an electrical switching procedure is required is listed below:

- a) Required for all HV switching. Site specific HV competency required
- b) Required for commissioning of new HV or LV equipment
- c) Required for any LV switching involving 10 or more steps
- d) Required for LV switching involving key-transfer interlocks
- e) Required for opening & closing of LV incomer circuits and bus tie circuits in a manner likely to significantly affect power flows in parts of the network other than those immediately upstream or downstream.



Electrical Isolation Procedure

- a) Electrical Isolations may be carried out under a Verbal Permit granted from the PI where the act of isolation or switching has no risk of contact with live equipment. Where there is risk of potential contact with live equipment, a PTW is required
- b) Electrical isolation of safety critical equipment (i.e. fire pumps) SHALL only be carried out under a PTW and IC.

Note: Where the isolation or associated work involves contact (or the possibility of contact) with live electrical circuits, the person carrying out the activity must hold a current Electrical Practicing License.

- a) The competent person compiles the IC and checks against the appropriate electrical drawing to ensure the isolation will be effective. Note: Be aware of dual feeds to Junction Boxes and equipment
- b) The PI checks existing isolations to determine if any existing isolation points will conflict with the planned isolation points
- c) Where an electrical system is already isolated, the PI SHALL write the number of each subsequent Permit and the name of the PICWS in the Master Isolation Register section of the IC in the PCF
- d) The PI grants approval to the Competent Person to carry out the 'act of isolation' ensuring that all possible sources of electrical supply are isolated.

Note: Where there is a possibility of contact with live electrical conductors while in the process of carrying out an isolation, the work SHALL only be performed under the control of a written Permit to Work. Refer also to Approved methods

- a) The competent person fits an electrical isolation lock and isolation card on the point of isolation
- b) The competent person SHALL follow the steps of isolation as specified in the IC/IP
- c) The competent person SHALL check the isolated equipment to verify that the isolation is effective. When confirmed, he signs and dates the 'isolated-by' section of the Isolation Certificate/Isolation Procedure
- d) A second competent person SHALL verify that the isolation procedure has been correctly followed, then signs and dates the 'checked-by' section of the IP
- e) All isolation cards/Do Not Operate Cards (white copy) and associated keys are returned to the PI who places them in the lock box or isolation key rack.

Approved methods

Caution: It is critical that ALL POSSIBLE sources of electrical supply are considered when isolating any piece of equipment.

Approved methods for electrical isolation SHALL ensure at least one primary barrier, and where the facility exists, one secondary barrier between the equipment or plant and the electrical supply. The isolation will be locked, and the lock number recorded on the IC.

Primary Barriers may include:

- a) Switch OFF isolator
- b) Disconnect battery leads
- c) Pull motor control cell
- d) Lift “knife switch” or “fuse blade”
- e) Remove fuses
- f) Remove plug from socket
- g) Remove wires from terminals.

Secondary barriers may include:

- a) Insulation tape applied to:
 - i. Bare cores
 - ii. Socket holders
 - iii. Isolator mechanisms
 - iv. Terminals
 - v. Fuse holders and sockets.
- b) Locks are to be applied to:
 - i. Doors and cabinets
 - ii. Stop / start stations
 - iii. Isolator switches and mechanisms.

For a section of a circuit where electrical power of greater than extra low voltage will be reinstated to the remainder of the circuit, the wiring of the isolated circuit SHALL be disconnected from the power source and, where practicable, connected securely to earth.

Isolation of circuits fed from intrinsic safety barriers SHALL include removal of wires on the field side of the barriers, insulation of the bare cores and securing of the wires so that they cannot contact any live equipment.



Any bare cores removed from terminals and not connected directly to ground SHALL be covered with a suitable insulating material.

Note: Where practicable, neutrals or negatives SHALL be disconnected for equipment in hazardous areas. Where it is not practicable to disconnect the neutral or negative, this SHALL be recorded on the Work Permit (and Certificate of Multiple Isolations if used).

CAUTION: All equipment SHALL be treated as “Live” until it is proven to be isolated.

Approved methods for checking that equipment is isolated may include:

- a) Checking with a suitable testing device to ensure that none of the isolated circuitry conductors or components are energised
- b) For work that is carried out on equipment, which is driven by an isolated electric motor, the local start to be operated to ensure that the motor will not run
- c) For equipment where the operation is controlled by process control, initiate a false signal to the process controller whereby changing state of the equipment to an operating condition.

Where it is not practicable to check the isolation using the above means, the Technician SHALL discuss the issue with the PI and determine an alternative acceptable means of proving the absence of electrical power.

Work on isolated equipment

Prior to starting any work and at the start of each working day or shift, the isolation SHALL be checked using approved methods and this SHALL include a check to ensure that all isolation locks/tags are attached.

For electrical work requiring the use of Hold Cards/Personal Locks: The PI SHALL ensure that the person who is to work on the isolated equipment has sufficient knowledge of the site to enable them to place the Isolation Cards/Do Not Remove Cards and/or Personal Locks on the correct isolation points and stop/start stations. The PI (or delegate) SHALL assist as required.

A separate Hold Card with padlock is fitted by work party/individual whilst working on isolated equipment and key is kept by the individual; hold card and lock is to be removed at end of their working day by work party/ individual.

The person who is to work on the isolated equipment fills out a Hold Card/Do Not Remove Card for each point of isolation and attaches with a personal lock wherever possible.

When the above is completed, work on the isolated equipment may commence.

Note: No verbal permits are to be issued for work on any equipment that has been isolated.

De-isolation - Electrical

Electrical de-isolation follows the same basic steps as process de-isolation.

7.6 Testing

Where testing of an electric motor is to take place, the PICWS is to notify the PI that a Test Run is required and supply all the necessary details.



The preference is for the isolations to be removed in the normal course of events, but if this is not possible then the Test Run Procedure and Safety Checklist (if applicable) must be used.

7.6.1 Test Run Procedure

- a) The PA or PICWS informs the PI on permit application that a “Test” will be required and they agree and document the procedure to be followed in the IP.
- b) Wherever possible all other work relying on the same isolations will be completed and the permits cancelled off on the Master Isolation Register.
- c) When ready for the “test”, the PICWS informs the PI who suspends all work dependent on the same isolations as the equipment to be tested and withdraws the permits.
- d) The PI informs any other persons who might be affected by the “Test”, then authorises removal of the isolations and these changes are recorded on the IP or checklist.
- e) The PICWS informs all those working under the permit that the “Test” is about to proceed and that the permit has been "released for testing".
- f) The PICWS and PI initial the IC to verify that the equipment has been released for testing.
- g) If the “test” was successful and the permit can be cancelled, the PI and PICWS sign the "Cancellation Section" of the Work Permit.
- h) If the equipment requires further work OR if other jobs require the reapplication of the isolations, the Issuer or authorised competent person, reapplies the isolations and the PI and PICWS initial the IP. Note if tags are used a new tag and number will be required and the new number recorded on the IP.
- i) The Issuer reissues other permits and where applicable PICWS isolation keys.

7.7 Instrument Isolation

Instrument Isolations can be managed on a standard Isolation Certificate or by using a “Certificate of Multiple Isolation”. The option selected will vary dependent on the number and duration of the isolations.

7.8 Isolation of Safety / Emergency Systems (interlock by-pass)

Section 4 of the Isolation Certificate is a signed statement by the Control Room Operator that they are aware of any isolation that directly effects the operation of safety and/or emergency systems. This normally requires a Work Permit together with an IC to cover the isolation. Examples of its use are as follows:

- a) Work on fire pump units or fire ring main systems
- b) Work requiring the isolation of shutdown trips/ interlocks in production process systems
- c) Work requiring the isolation of automatic emergency shutdown devices
- d) Hot Work requiring the isolation of automatic detectors for flame, heat and smoke
- e) UV detector isolations



- f) Routine maintenance of fire and gas detection equipment
- g) Work on any functional Relief Valves or plant integrity valves.

It is not intended for use by the Control Room Operator when bypassing systems such as DCS inhibits, for process reasons. "interlock by-passes" will be controlled by a separate procedure at each site and these will tie in with the PTW System (see site specific Production Lock-out/Process Safeguarding and Interlock By-pass procedures).

The following systems and equipment are classified as Safety and Emergency systems. Work which incapacitates any of them must be carried out under a Work Permit.

Table 7 Safety and emergency systems

Safeguarding systems	Emergency Shutdown, Process Shutdown and Control Logic Systems. (These are also known as Instrumented Protective Functions (IPF's)), integrity valves, relief valves and associated interlocks.
Alarms	Annunciator Panels, Safety System/EDP monitor, telephones (emergency), radio transmitter (including microwave links), emergency siren, fire alarms, status lights and rotating beacons.
Fire & gas detection	Heat, smoke, flame, and gas (hydrocarbon, hydrogen, etc.) detectors, FGCP.
Fire control	Firewater Distribution System, hydrants, back-up systems, monitor and sprinkler systems, extinguisher systems, pressurisation fans, dampers and louvers.
Emergency escape	Security gates and fences, roads and access ways, lifeboats, emergency exits, recovery systems.

The isolation, or inhibiting of safety systems, requires a different approach to that of normal isolation and de-isolation of Process and Electrical systems for maintenance or repair. During the time a Safety/Emergency system is isolated or inhibited, the Installation is without the safety protection of that system or equipment. This may limit the operability of the equipment that is being protected.

If the isolation is a Safety System Isolation, the PA will tick the appropriate box and enter the system/area to be isolated. He will then obtain the CRO's signature to ensure that the CRO is aware of the proposed isolation. A complete list of all Safety System Isolations will be kept in the control room and reviewed by the ROS at least once per week.

Isolations which have been in place for more than one week will be formally reviewed by the ROS.

7.9 Hold Cards/Do Not Operate Cards and/or Personal Locks

Hold Cards/Do Not Operate Cards and/or Personal Locks are placed by an individual at the point or points of isolation to indicate that the individual is currently working on that isolated equipment and could be injured if the isolation were removed. Hold Cards/Do Not Operate Cards and/or Personal Locks may be applied by individuals to any isolation that could have an impact to their work area, if they so wish.

The person placing the Hold Card/Do Not Operate Card at an isolation point is to fill in the following information on the Card:

- Name and signature
- Team or company
- Equipment details
- Isolation Certificate No.
- Date and time the card is placed.





Electrical Isolations

Hold Cards/Do Not Operate Cards **and** Personal Locks **SHALL** be used by individuals in the following circumstances:

- a) Where contact (or the possibility of contact) exists with isolated electrical conductors of voltages exceeding extra low voltage (including negatives and neutrals)
- b) Work is carried out on equipment which is driven by an isolated electric motor.

Removal

At the end of each working day or shift period, each person SHALL remove all of their Hold Cards/Do Not Operate Cards and/o personal keys/locks and return them to the PCF.

At the completion of the job, each person SHALL remove all of their Hold Cards from the work-site and dispose of or destroy them. (They are not to be left at the work-site as this may confuse someone into thinking it has come from an isolated piece of equipment.)

7.10 Locking / tagging

Two methods of securing and identifying isolation points are used within the PTW System, **Locks and/or Tags**.

General Rules:

- a) An isolation point common to two or more IP's, will have a lock and or tag attached for each procedure and the lock and or tag number will be recorded on only one IP
- b) Isolations will only be applied or removed by competent persons with the direct authority of the PI. Anyone else interfering with an isolation will be subject to disciplinary action
- c) No isolation will be removed without the authority of the Permit Issuer
- d) Blinds, spades etc are isolations and must be identified as such by the use of a numbered tag
- e) The PICWS or other permit user must be provided with a working copy of the Isolation Procedure on request and if necessary shown the location of each isolation
- f) Proving an electrical isolation which has an associated interlock may be difficult. All electrical isolations must be proven prior to permit issue and starting work
- g) Each isolation will be independently checked
- h) The Installer and Checker of each isolation are to sign the IP to signify the isolation has been installed and checked
- i) When the Installer returns to the PCF with the signed Isolation List and confirms the total number of locks / tags used, the PI is to check that the IC and IP are correctly updated
- j) Except where testing ([see Test Run Procedure](#)) is required, such as the direction of rotation of an electric motor, de-isolation of equipment will not normally take place until the PICWS has indicated



completion of the work by signing the work completed section of the Permit. De-Isolation will only take place after the PI has checked that there are no outstanding Permits registered on the IC

- k) The PI is to check that the number of locks/tags returned to the PCF match the number (and colour) issued.

7.10.1 Locking procedure

Table 8 Locking procedure

	Instruction	Comment
ISOLATION		
1	Prepare the isolation procedure (IP)	PI or nominee
2	Mark up a P&ID if applicable	PI or nominee
3	Identify blind locations in the field with numbered "Tags"	PI (if blinds required)
4	Apply, prove and lock field isolations	Competent person. Use numbered production locks. Apply locks as the isolation is applied
5	Record the lock numbers on the IP as locks are applied.	Competent person. Lock numbers recorded on the IP verify that the lock is in place.
6	When isolation is complete place isolation lock keys in a numbered "Lock Box"	Competent person. For simple isolations, "PICWS Locks" may be applied with the field "Production Lock".
7	Place "Production Lock" on "Lock Box"	PI. Use scissors (FIRST ON LAST OFF)
8	Where applicable, install blinds and record "Date Installed" on the IP. PI physically confirms the blinds are in the correct location.	Separate permit required. Permit registered on Master Isolation Register.
9	Record "Production" and "Lock Box" numbers on the IP	This must be done before permit issue
10	Issue work activity permit(s) and apply PICWS lock to Lock Box and record Permit and PICWS lock number on Master Isolation Register	PI. Where an isolation is used for more than one permit, an additional "PICWS Lock" will be applied to the box for each permit.
11	Attach the "PICWS" lock key to the PICWS copy of the permit and the "Production" lock key to the Isolation Certificate.	PI. This gives the PICWS control over de-isolation.
12	The IC and attachments will be displayed in the appropriate rack in the PCF.	The PICWS or other permit user must be provided with a copy of the IC on request, and if necessary, shown the location of isolations.





	Instruction	Comment
DE ISOLATION		
13	On completion of work, remove each “PICWS Lock” from the “Lock Box” when the permit is cancelled by the PICWS.	The permit for work is then cancelled by the PI and cancelled from the Master Isolation Register
14	PI checks that all PICWS locks for work activity are removed from Lock Box and permits cancelled on the Master Isolation Register. Approval to remove blinds can be given.	Permit for blind removal remains active
15	Remove blinds, where applicable, and record the “Date Removed” on the IP	“Date Removed” recorded on the IP by the person removing the blind, verifies that the blind has been removed.
16	AT physically confirms that the blind has been removed and removes the “Tag”	
17	PICWS cancels blind removal permit and removes PICWS lock from lock box	PI confirms all permits removed from Isolation Register
18	PI approves the removal of field “Production Locks” Section 7 of IC (approval to remove isolation) is signed by PI.	
19	Remove “Production Lock” from the “Lock Box”	“LAST OFF”. All “PICWS Locks” must be removed before the “Production Lock”
20	In the event that a field lock exists which cannot be traced to a permit, then the ROS and the appropriate engineering discipline supervisor's approval must be obtained before it is removed, and the fact recorded in the shift log.	

7.10.2 Tagging procedure

For valve isolations and installation of blinds, Isolation Tags are used. These are unique numbered tags having a sealing arrangement similar to an Electrical Cable Tie-Grip seal or a single use lock wire. Tags come in series, and each series is uniquely numbered

Coloured tags can be used to differentiate between systems or IP's if required. In addition to the unique number, the Isolation Tag has space for the last 3 digits of the IC number to be recorded on it as a tracking aid.

The person preparing the IC is to assign the colour series of tags (if applicable) and record the unique tag number against each isolation.

If a separate IP is required all details involving the tags will be recorded on it and it is to remain with the IC.

7.11 Securing methods

When attaching the Isolation Tags to valves etc, the securing tie-grip is to be pulled up to the extent that the tag is reasonably secure, does not come into contact with hot process piping, and the tag ID can be easily read.

The key function is to prevent inadvertent operation. Typically, a lightweight plastic fluoro-chain or similar can be used and secured with the unique numbered isolation tag.

Listed below are common methods for securing process equipment isolation tags:

- a) For valves with spoked handwheels, the tag and plastic fluoro chain, or similar, is to be secured to the outer spoke ring and around the pipe or a fixed structure
- b) For valves having a parallel bar handle, the bar has a welded ring or hole at the outer end. The tag and plastic chain is passed through the ring or hole and around the pipe or fixed structure
- c) Small instrument valves should, where possible, have the tag and chain attached through the handle and around the pipe or tubing. Care should be taken to keep the tag from contacting hot or cold processes
- d) For spades and blanks it is essential that they have a tang or ring by which the tag can be secured to them. This should be checked before the spade is fitted. Tying the tag to a stud or bolt head is not acceptable. Note: A hole drilled in end of a tang typically denotes an orifice plate is installed and not an isolation spade.

7.12 Integrity valve isolation

For Integrity Valve Systems, such as Locked Open or Closed Valves situated downstream of Relief Valves, and Safety & Emergency Systems, wire 'Cable Seals' and Red Tags are used. A typical method for this is the use of wire cable seals (or lock wires) consisting of high tensile steel wire with a small rust proof aluminium seal body. They are secured by hand and can only be removed with wire cutters. The wire lock mechanism is a 'wasted' screw which breaks off when the screw is tightened.

Any wire 'Cable Seal' or Red Tag removed will be fully reinstated upon completion of the task. This is to be documented and managed within the Isolation Procedure.

Red Tags or disks are used specifically for the isolation of Safeguarding Systems where opening and closing the valve/switch is to be controlled by means of a Permit. Red tags or discs may be used in conjunction with the cable seals as an aid to identifying the integrity valves. Philosophies and controls are located in site specific manuals for each facility. Red Tags should also be used on IPF's such as Emergency Shutdown (ESD) initiators (valves for pressure/level management) which need to be controlled and audited.



Each facility is to ensure that regular audits (routines) are performed on integrity valves. This audit is to be cross-referenced to documentation for the current list of valves to be checked. The PI is to ensure that safeguarding equipment control and reinstatement occurs as per Isolation Procedures

7.13 Changing an isolation

If an isolation point requires to be changed after it has been “approved” by the Permit Issuer (e.g. a valve is inoperable or passing), the change to the IP shall be managed via the valid change process (below):

- a) Discuss and agree requirement for, and extent of valid change with the PI
- b) PI to update the IP to reflect agreed changes – details of these are recorded in the valid change register within the IP. All changes shall be identified with a valid change stamp and initialled by the PI. The isolation, de isolation and P&ID’s are to be included in the update process. This applies to both the Master and Working copies.

7.14 Extended period isolation

Extended Period Isolations (EPI's) are isolations which are left in place after the work permit has been cancelled, e.g. when awaiting spares for a repair. They are not intended to be used for decommissioned equipment or equipment which is to be out of service for more than 3 months.

The procedure for documenting EPI's is as follows:

- a) When it becomes apparent that the work cannot be restarted within the validity period of the Permit, the associated Hot or Cold Work Permit is to be cancelled by the PICWS who indicates on the Permit that the work has not been completed, but that the isolation is to be retained under the relevant IC. The PI also then registers on the Permit by counter-signing in the cancellation section.
- b) The PICWS/PA is to indicate in the appropriate box of the EPI section of the IC:
 - i. The reason for the isolation and the type of systems that are to remain isolated
 - ii. The type and number of the Permit being signed off.
- c) The PI is to sign the EPI section of the IC, and the IC and the relevant IP are to be retained in the EPI section of the Permit Rack in the PCF.

When it becomes possible for the work to restart again within the EPI boundary:

- a) The PA is to raise a new Permit, entering the IC number of the EPI in the appropriate box of the Permit, and the new Permit number in the Master Isolation Register section of the IC
- b) The PI will record the fact that the EPI has been cancelled by signing the appropriate box in the EPI section of the IC
- c) The IC is then to be filed in the ISOLATION section of the Permit Rack and the new Permit is handled in the normal manner.

Provision has been made for the IC to be recorded as an EPI twice but this would not be considered normal practice.



EPI's that that have been in existence for a period exceeding 3 months, are to be reviewed by the ROS. The review should aim to either return the equipment to its normal condition, or decommission and permanently isolate the equipment, or to remove the equipment permanently.



ISOLATION FLOWCHART

Permit Applicant

Permit Issuer

Competent Person

Requirements for isolation decided, method of isolation discussed and agreed and IP prepared

Appropriate permission issued for the application of the isolation
Section 6 of IC signed

When using tags single coloured tags are filled out

Installer applies and proves isolation

Locks/ Tags fitted to isolation points

Unique lock/tag numbers recorded on IC

Checker checks and proves isolation

Verify isolation procedure correctly carried out.
Note: The PI may delegate this

IC has been signed and countersigned as checked, record number and colour of locks/tags used.

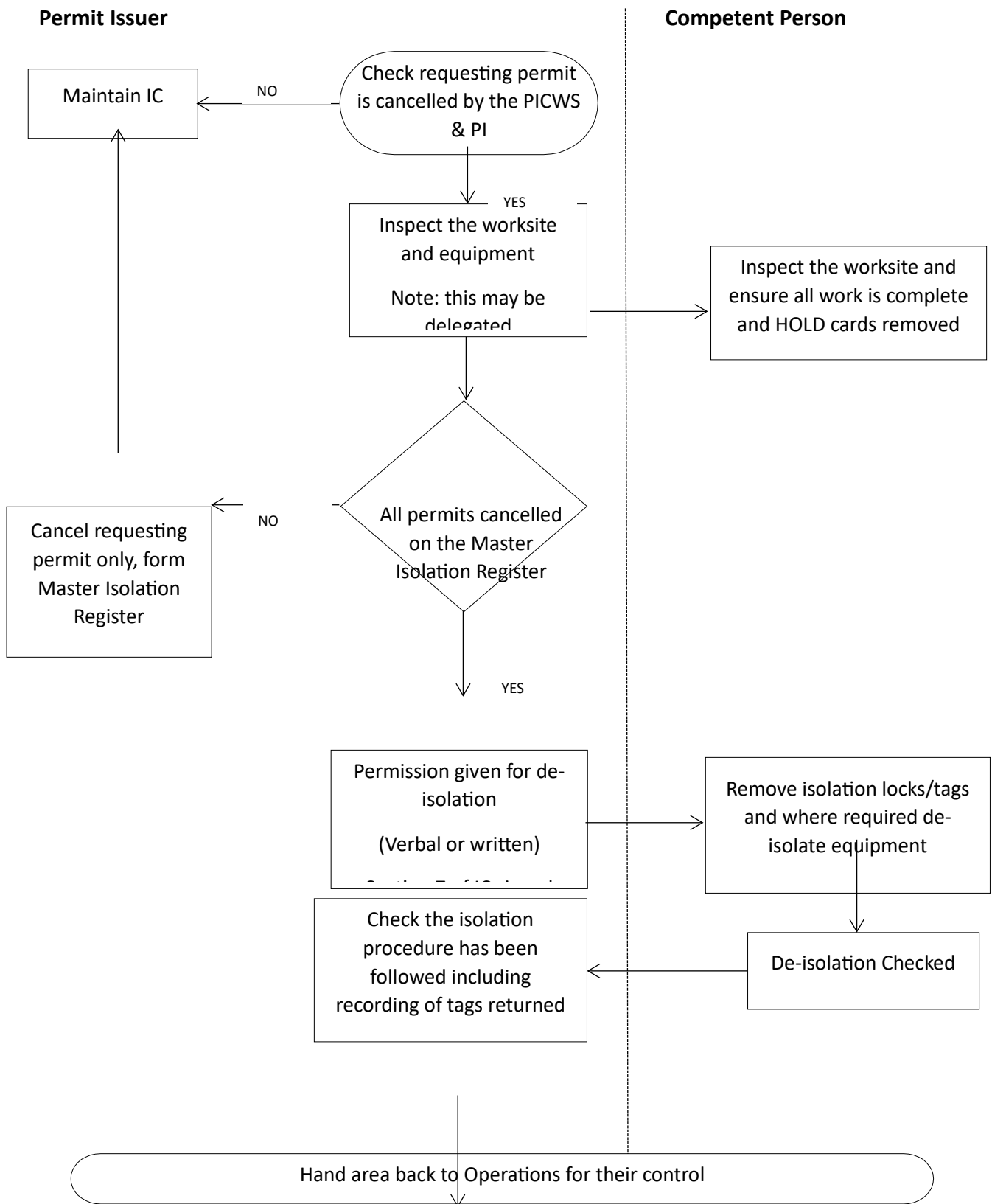
Note: The IC is filed in the isolation section of the permit rack and permits can be issued for work within this isolation

Note: Multiple Permits

The number of each permit is written on the Master Isolation Register section of the IC.



DE-ISOLATION FLOWCHART





8 The Permit Co-ordination Facility

8.1 Function of the Permit Co-ordination Facility (PCF)

The function of the Permit Co-ordination Facility (PCF) is to control and manage the Common Permit to Work system.

The PCF is the central hub on the installation through which all Permits pass each time their status changes, i.e. when Authorised, Endorsed, Suspended and Cancelled. The PCF is under the control of the PI.

In the PCF, all permits and system isolations are displayed in one location, and in a systematic arrangement, so that all operational staff can readily see and check which equipment is under maintenance and not available for operation. It also enables checks to be made that the work specified does not conflict with any other Permit work and/or Isolations.

For periods of high workload and/or significant risk, the ROS may appoint PI's for specific work locations. In some cases, this may require the set up and operation of a remote PCF. Should a Remote PCF be required, this will be discussed and agreed by both the Permit System Manager (PSM) and the respective site Manager. Once agreed, a formal deviation will be raised to record the operation of such, including any additional controls that may be required over and above the normal PTW requirements. Examples of such situations may include: Drilling activities and/or sizeable well intervention work programmes on remote well sites, significant project work etc.

8.2 Organisation of the Permit Co-ordination Facility

There are a number of items in the PCF which enable the PTW System to operate more efficiently. These include:

- a) Permit rack
- b) Permit location board
- c) Permit filing system
- d) Isolation cabinet/lock box cabinet
- e) Desk and counter arrangement.

Permit rack

This is a conventional rack in which paper copies of all Permits and supporting documents are stored. It is arranged in such a way that their location and status are readily visible. It enables installation staff to readily check which equipment is under maintenance and not available for operation.

Permit location board

This is a plan of all areas and major equipment on the installation, in their correct geographical orientation, on which the location of all permit work and possible conflicting permit work is indicated with appropriate magnetic markers. It is also an overview of hazardous areas within the installation.

This gives the PI a clear visual indication of work that is occurring at the installation at any time, and identifies areas where planned work could conflict with that already underway.

Permit filing

This is a system where cancelled Permits and associated documents are retained for historical records. Permits and associated documents will be stored for at least 12 months. The file should be labelled with the name of the installation and the time period.

Isolation cabinet/lock boxes

This is a cabinet / box where all keys from the isolating padlocks are held.

Desk and counter arrangement

This is set out in such a way to suit the configuration of the PCF and provides physical separation between Authorised Permit Signatories and their customers. The counter can also be a glass top and used to display CPTW Aids to assist with the operation of the system.

8.3 Permit Co-ordination Facility Operation

Function of the permit rack

All suspended Permits are to be carefully controlled and displayed separately from those endorsed and authorised. This is achieved through the use of the Permit Rack.

This rack has a number of vertical columns, each representing an area or module of the installation or factory. The horizontal layout is subdivided into sections, representing the status of any Permit in that particular area.

The following table 9 below defines the differing status of permits.

Table 9 Permit statuses

ENDORSED	Permits for which work is actually in progress
SUSPENDED	Permits for which work has started but is not currently in progress and is not yet finished
AUTHORISED	Permits for which work has been authorised but not yet issued
ISOLATION	Isolation Certificates for work covered by a Permit that is either Authorised, Endorsed or Suspended
EXTENDED PERIOD ISOLATIONS (EPI's)	Isolation Certificates for work whose Permit has been cancelled but the isolations are retained for a justified reason.

The colour of the Permit copy showing in the rack gives a double-check on the status of the Permit, as follows:

- a) Buff (PCF) copy showing. - The work is underway with the work-site copy at the worksite
- b) Buff copies will only be found in the ENDORSED section of the rack
- c) Work-site copy showing. - Both copies are in the rack, the work has either not started or has been stopped and the worksite made safe. These may be found in the SUSPENDED or AUTHORISED sections of the rack.



Use of the permit location board

The location of worksites on the Permit Location Board is indicated with coloured magnetic markers, the colour being that of the Permit edge colour. For Verbal Permits the colour orange is used.

It is recommended that these coloured discs are numbered, and the corresponding number recorded on the associated permit next to the unique permit number.



Table 10 Coloured disc allocation

Colour	Permit book
Orange	Verbal permits
Red	Category 1 Hot Work
Yellow	Category 2 Hot Work
Blue	Cold Work
Purple	Confined Space

Where Fire and Gas Detection Systems are isolated/inhibited either to carry out maintenance, or as a result of work underway, this will be indicated on the Permit Location Board by an appropriate maker symbol, i.e. Heat, Gas, Smoke, U/V.

Role of the Permit Issuer

The PI is to operate as the central co-ordinator of permit work. In this role, they have the responsibility of authorising every permit to ensure that there is no clash with any other –endorsed permits.

Such a clash may be:

- a) Geographical:
 - i. The work is not compatible with the safety of the people working in the area, either by its content or by limiting access or egress from enclosed areas. Geographical incompatibilities can be vertical as well as lateral.
- b) Systems:
 - i. The work itself, or isolations required for it, constitute a risk if carried out at the same time as work on another live Permit whose isolations connect with the same systems;
- c) Safety System Inhibits or Non-availability:
 - i. Safety System Inhibits or Non-availability resulting from work on one Permit could lead to an unsafe state for work on other live Permits i.e. Hotwork-1 while fire pump isolated.

Permits are brought to the PCF for endorsement. Once endorsed by the PICWS/AT/PI the PCF (buff) copy is placed in the Permit Rack, and corresponding coloured disc marked on the Permit Location Board.

When endorsing these Permits, the PI should consider the compatibility of the proposed work with other work currently endorsed. If there is a clash, the Permit is not to be endorsed and the PI will then instruct the PICWS to refer to the PA for allocation of priorities.

The PI should also not allow work to proceed on a new or endorsed Permit when the work would clash with any non-Permit work which they are aware of. Where considered necessary, the PI may decide that a visit to the work-site is required before agreeing that a particular task may proceed.



The PI is to run the PCF and keep all data in such a state that it correctly reflects the work state of the installation. This includes the following:

- a) Maintaining the Permit Rack to provide a visible and comprehensive summary of all the Permits in operation on the installation. This includes those that are authorised, endorsed, suspended or complete, but not yet cancelled. The IC's of all Extended Period Isolations (EPI's) are to be filed in the EPI section of the Permit Rack
- b) Accurately maintain the Permit Location Board, showing the location of all Permit work currently endorsed. The display on this board of Fire and Gas Inhibits, and barrier locations, is also to be maintained.

Note: The smooth operation of the PCF depends very much on the total number of Permits in the system. At busy times the ROS should limit this to what is manageable on the installation. Control may be exercised by limiting the number of coloured magnetic markers in use on the Permit Location Board. When the maximum limit is reached, no new Permit should be accepted until an equivalent number have been cancelled and taken out of the system.



Appendix 1: Training & Assessment Guide

Common Permit to Work - Trainers Guide

This guide is provided to support the Trainers who provide training in the Common Permit to Work (CPTW).

Trainer Criteria

To provide training in the CPTW trainers need to meet the following criteria:

- a) Hold as a minimum unit 17588 and preferably also unit 17590
- b) Has spent time in at least 2 different companies PCF's during permit issue (couple of days' exposure)
- c) Has completed level 2 and level 3 audits in the field
- d) To maintain competency, attend a trainers discussion and visit at least one PCF in operation every two years.

Monitoring of trainers

Trainers should make their training courses available to User Group Company representatives so the representative can receive feedback from and provide feedback to the trainer. This will help maintain required standards.

Training package

A training package is provided by the User Group and this includes a Power Point presentation and an Assessment pack.

For initial training in the CPTW Trainers are to be CPTW approved trainers and required to cover all the information in the presentation. This is the minimum that must be covered. Trainers may add other material to support their training and / or integrate the package within their existing package as long as the material provided is covered and is related to the CPTW.+

Assessment material

The assessment material provided is again the minimum evidence that is required for a PA/PICWS to complete to show Competency in the operation of the CPTW.

Full assessment to NZQA unit 17588 requires both training and then a detailed assessment component where the individuals are required to provide repeatable evidence of working under a permit and successfully completing the entire permit lifecycle. The CPTW user group has taken advice on the possibility of this assessment being undertaken in a "mock" workplace and advised this is possible but only if this mock workplace allows all the requirements of the NZQA standard to be assessed. It is the "assessors" responsibility to ensure this happens. The assessment package has been developed so that each question / activity relates to an ER (Evidence requirement) of unit 17588 and trainers / assessors are welcome to integrate this into any NZQA approved assessment package. This means candidates are not doubling up on evidence. The requirement is that to obtain recognition of competency in the CPTW the questions and answers MUST relate to the CPTW system.



Trainers / assessors may change any question to make it specific to a particular site, this is encouraged for the last exercises numbers 14 and 15.

Notification of trainee's competency in CPTW

The trainer/assessor is required to provide notification that the candidate has completed the training and the CPTW assessment. This could be in the way of a Letter, Certificate, Safety Passport Stamp, Electronic card or similar that has the Trainers name on it.

Achievement of Unit 17588 could be documented through any of the above or in addition through the candidates Record of Achievement from NZQA.

Reassessment of CPTW PA/PICWS after 3 years

The requirement of having competency revalidated every 3 years, as required in section 3.8 of the manual, can be met through the following options.

- a) PA/PICWS attends the standard training and assessment as run for first timers, this includes the requirement for a current Risk Assessment Competency (this may be appropriate for someone who does not use the system on a regular basis and or has not held a permit for one to two years)
- b) The PA/PICWS completes an assessment that includes the completion of the standard assessment questions and provides for assessment a minimum of two completed permits with all associated documentation e.g. Risk Assessment document, checklists etc., that they have been the PA/PICWS for in the past month
- c) A company approved assessor may carry out an "In Field" assessment. For this the assessor needs to:
 - i. document the evidence that they have seen the candidate using the CPTW system in accordance with the system requirements including the completion of appropriate Risk Assessment Competency documentation
 - ii. record what verbal questions were asked and the response given, (these questions should be similar to the written questions in the standard assessment)
 - iii. review and retain a copy of at least 2 recent permits that the candidate has been the PA/PICWS for to ensure they are as required by the system
 - iv. document that the on-duty PI verifies the candidate is competent as required on that site.

The documented evidence for each of these options should be held for 1 year for audit purposes.

When a revalidation has been completed by a user group company under scenario 2 or 3 above the assessor is company approved and does not specifically need to be an approved CPTW trainer. Under this scenario the user group has agreed that if proof of this revalidation is provided then other user group companies will accept it.

Appendix 2: Current trainer details

As at: 02/05/2024

Table 11 Approved trainers

Independants		
Name	Email	Contact number
Scotty Forsman-Jamieson	forsman-jamieson@xtra.co.nz	027 3290389

Private training establishments			
Name	Company	Email	Contact number
Tim Heap	Safety'n'Action	tim.heap@safetynaction.co.nz	021 575459
John Williams	Wood	healthandsafetyservices.wi@gmail.com	022 1085906
Admin	Wood	info@woodgrouptraining.com	06 7511101
Darcey Kitchener	Wood	darcey@scaffwise.com	27 8489331
Admin	BeSafe	info@besafetraining.co.nz	0800 333 899
John Williams	Vertical Horizons	john.williams@vhnz.co.nz	0800 72 33 848
Richard Martin	Wood	Richard.Martin@woodplc.com	021 512 337

User Group company trainers			
Name	Company	Email	Contact number
Ian Patterson	Horizon	ian@horizonenergy.co.nz	027 5545546
Marcus Garrett	Westside	Marcus.garrett@gmail.com	027 5478558
Dion West	Todd Energy	dwest@toddenenergy.co.nz	022 0238028



Appendix 3: Current document revisions

Table 12 Document revision list

	Description	Code	Revision	Last Update
1	Cold Work	PSK 3P 917	Rev 6	-
2	Hot Work 1	PSK 3P 918	Rev 7	-
3	Hot Work 2	PSK 3P 919	Rev 8	-
4	CSE Permit	PSK 3P 920	Rev 8	-
5	Isolation Cert	PSK 3P 921	Rev 6	-
6	Excavation Cert	PSK 3P 922	Rev 4	-
7	Gas Free Cert	15/61	-	March 2017
8	CMI form	24/081	-	April 95