


Petroleum	Health, Safety & Environment Management System Permit to Work Standard	
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HSE MANAGEMENT SYSTEM PROTOCOL

PERMIT TO WORK STANDARD

Petroleum HSEC Protocol No: PR10.03	
Reference: HSEC Management Standard 10 – Operations and Maintenance	
Date: July 1, 2008	Revision: 0
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1.0 INTRODUCTION

1.1 Background

BHP Billiton Petroleum facilities and operations are managed so as to minimise the potential for incidents to people, the environment and the community. Our facilities are generally complex and inherently hazardous with many handling large quantities of flammable and toxic materials. All facilities and operations are subject to safe systems of work in accordance with the corporate HSEC Management Standards, the Fatal Risk Control Protocols and other regulatory and industry best practice guidelines. One component of such systems is the application of an effective Permit to Work (PTW) system.

A PTW system is used to determine how tasks can be conducted safely, and communicates this to all personnel affected by the job. A PTW system is not simply a mechanism for permission to carry out work. An authorised and issued permit does not make the job safe – safety is achieved by proper preparation, planning, understanding & knowledge, control, communication, supervision and adherence to procedures and systems.

The PTW system must ensure that authorised and competent personnel have clearly defined the job tasks, planned for adequate resources, assessed the foreseeable risks associated with the tasks and the work place environment, and implemented controls and precautions to avoid these risks.

1.2 Purposes


The primary objectives of a PTW system are to:

- exercise control over designated non-routine activities by assigning responsibilities
- ensure communication between work teams and key personnel
- ensure that hazards are identified
- ensure appropriate risk management precautions or controls over the work being conducted are designated.

Specifically, the PTW system is to:


- Provide a process for competent personnel to provide clearance and authorise non routine and/or high risk routine work, taking into account simultaneous operations

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- Control access, activities and movement to certain areas
- Clearly identify the location, specific nature and scope of the work to be carried out in relation to the plant and equipment involved
- Ensure that all hazards are identified and that appropriate controls are in place prior to work commencing and that they remain in place during work progress
- Ensure that the working environment is safe for the nature of permitted work before the job commences and that such environment continues to be safe throughout the duration of the job
- Clearly identify the person(s) (employees and/or contractors and their employees) who:
 - have overall responsibility for the control of the work
 - are responsible for the execution of the work
 - may be affected by the work (and obtain their agreement before starting work or preparations for it).
- Identify and document:
 - personal protective equipment specific to the work
 - other permits required for the scope of work to be completed
 - safety devices such as pressure relief devices, interlocks, fire and gas detectors, deluges etc that have been inhibited or isolated
 - hazard identification and risk assessments including links to identified key risks such as major hazards and/or major accident events
 - emergency response procedures and equipment (where applicable).
- Provide communication:
 - to those affected by the work and status of progress until completion
 - to personnel involved in carrying out the work ensuring they are briefed as to the scope and limitations of work, the isolations, the hazards and controls
 - between those persons carrying out the work and those persons responsible for the overall control of the work.
- Provide a documented formal hand-over process to ensure the relevant plant and equipment is available for taking out of service and the nominated work will not affect the safety of the rest of the facility
- Ensure the isolations required for safe work have been identified, documented, effected and tested (in accordance with the BHPB Fatal Risk Control Protocols)
- Ensure plant and equipment, where required, has been decontaminated and as far as is practicable the working environment is safe for personnel, without specialised personal protective equipment (which should be a last resort)
- Provide authorisation from a responsible person to commence work
- Enable the efficient coordination of permits by ensuring that active permits are displayed in a central location (e.g. control room or permit issue office) and a copy is available at the workplace

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- Provide a system that manages situations where the work continues beyond the completion of a single shift (for 24 hour operations) or beyond the end of the work day
- Ensure that personnel carrying out the work using the PTW system have the appropriate skill and knowledge
- Provide a formal hand-back process to ensure the work area is safe to return to normal operation when the work is completed
- Provide a record of a safe system of work for non routine tasks or high risk work.

1.3 Scope

This Standard describes particular safe work precautions and other requirements that need to be considered when establishing work controls for non routine or high risk activities on the site. In implementing this Standard, the risk of their activities is assessed and specific areas and types of work (non routine), subject to Permit to Work (PTW) System are defined and documented.

1.4 Application

This Standard sets out mandatory safety requirements for all BHP Billiton Petroleum personnel (employees and contractors) in the application of a PTW system. The Standard shall as a minimum apply to:


- BHP Billiton Petroleum controlled producing installations, facilities or sites
- Start up and commissioning of controlled production facilities.

All other BHP Billiton Petroleum controlled sites and monitored activities should have an equivalent system in place that meets the intent of this procedure. The Standard defines minimum elements that shall be incorporated into a PTW system and these are aligned with the BHP Billiton HSEC Management Standards and Fatal Risk Control Protocols.

All BHP Billiton Petroleum personnel and their employees shall comply with the letter and the spirit of this Standard. This Standard will help to ensure:

- The safety of personnel and their employees
- A consistent company wide approach to authorise and control non-routine work, and ensure that all energy sources are identified and isolated.

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This Standard has been developed to cover many types of operations and situations. The terminology used within may not align with operational systems. Substitute terminology can be used provided the intent is met.

Partners, suppliers and contractors performing monitored activities are encouraged to adopt the intent and nature of the performance requirements specified in the Standard.

Consideration should be given to include this Standard as part of information supplied to suppliers and contractors bidding for BHP Billiton Petroleum contracts, as appropriate.

1.5 Document Structure

The PTW system encompasses the following core documents for designated non routine work and high risk work:

- Permit to Work forms and
- Certificates

A Permit may require further documentation such as work instructions, risk assessments, job safety analysis, HAZID, HAZOPs, lifting plans and material safety data sheets. When determining the hazards associated with a specific scope of work, the Permit Holder and Permit Authoriser should determine whether the work activity requires preparation of a certificate that lists specific additional hazard controls that should be in place prior to the authorisation of the covering Permit.

Certificates are to be used in conjunction with a Permit. Certificates should not be “stand-alone” and should always be linked to a Permit.

2.0 REFERENCES

[BHP Billiton HSEC Management Standards](#)

[BHP Billiton Fatal Risk Control Protocols](#)

[PP03.02 – BHP Billiton Petroleum Job Risk Assessment Procedure](#)


[PP03.01 – BHP Billiton Petroleum Case to Operate Procedure](#)

[PP10.02 – BHP Billiton Petroleum Lock Out Tag Out Procedure](#)

[Guidelines on Permit to Work Systems, International Association of Oil & Gas Producers, Report No. 6.29/189, Jan 1993](#)

Guidance on Permit to Work Systems, UK HSE


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3.0 DEFINITIONS AND TERMS


ALARP	As Low as Reasonably Practicable
BHP B	BHP Billiton
CBTA	Competency Based Training and Assessment.
Cold Work	Work that under no circumstances is capable of producing a source of ignition and typically managed under a Permit. Examples of cold work may include pressure testing of pipes and vessels, complex lifts and working at heights.
Competent Person	A person who has demonstrated competency in a specified activity or task by having successfully completed the necessary BHP Billiton Petroleum CBTA's and holds any mandatory certification that may also be required for the task.
Confined Space	<p>Refers to any space which:</p> <ul style="list-style-type: none"> • Is at atmospheric pressure during occupancy; • Is not intended or designed primarily as a place of work; • May have restricted means for entry and exit; and may: <ul style="list-style-type: none"> (i) Have an atmosphere which contains potentially harmful levels of contaminant; (ii) Not have a safe oxygen level; or (iii) Cause engulfment. <p>Confined spaces may include but are not limited to:</p> <ul style="list-style-type: none"> • Storage tanks, tank cars, process vessels, boilers, pressure vessels, silos and other tank-like compartments; • Open-topped spaces such as pits or degreasers; • Pipes, sewers, shafts, ducts and similar structures. <p><i>This definition is taken from the Australian Standard AS 2865. The definition shall reflect the local applicable regulatory requirements.</i></p>
Confined Space Entry	Confined Space Entry is the entry of a competent and qualified person into any Confined Space. Entry into a confined space is generally established when a person's head passes through the point of entry.
Delegate	Will have the same competencies as the person normally conducting those duties. The appointment of a delegate shall be authorised by the most senior manager or authority for the onshore or offshore facility.
Excavation	Breaking of the normal ground level or disturbance of soil to a depth of greater than 150 mm. This includes driving spikes or posts into the ground, drilling or cutting of concrete or bitumen surfaces, and subsidence of vehicle tyres into soil.

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Flame Hot Work	Work where the task involves the use or production of a flame, spark or other high-energy source of ignition. Flame Hot Work includes but is not limited to: <ul style="list-style-type: none"> • All forms of welding; • Burning and cutting by oxy-acetylene torch and use of blowlamps; • Brazing, soldering, gas burner and heating lamps; • Grinding, concrete chipping, percussion tools; • Non diesel power engines
FRCP	Fatal Risk Control Protocol
Hazard (HSEC Management Standards)	The intrinsic potential for an agent, activity or process to lead to harm and/or an incident.
Hazardous Area	Area in which an explosive atmosphere exists or may be expected to be present in such quantities such as to require special controls for the construction, installation and use of electrical or electronic equipment or the conduct of hot work.
Hazard Controls	Measures, including activities and equipment, which are intended to have the effect of ensuring that people are competent to undertake the particular work, that the equipment being used for the work is fit for the purpose, and that the work practices in place are designed to be safe
HAZID	Hazard Identification
HAZOP	Hazard and Operability Assessment
Heights	Where it is possible for a person to fall 2.0 metres or more
Hierarchy of Control	Use of Elimination / Substitution / Engineering Controls / Administrative Controls / Protective Equipment, in that order, to reduce risks associated with a particular hazard
High Voltage (HV)	A difference in potential between conductors or between conductors and earth exceeding 1 KV AC or 1.5 KV DC.
Hot Work	Work which involves the use of, or possible creation of any source of ignition within a hazardous area.
Irradiating Apparatus	Any apparatus capable, when energised, of producing ionising radiation of any prescribed type eg: X-ray machine, or holds a fixed irradiating source (radioactive isotope).
JSA (JHA or JRA)	Job Safety Analysis (Job Hazard Analysis or Job Risk Assessment)
Lower Explosive Limit (LEL)	In relation to a flammable contaminant, the concentration in air below which the propagation of a flame does not occur on contact with an ignition source.
MSDS	Material Safety Data Sheet. Provides a full description of a product, its physical properties, hazards etc and the required safety precautions to be taken when handling the product and during emergencies.

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No-Flame Hot Work	<p>Any work in a hazardous area where the task involves the use of a potential source of ignition or which may produce or expose a possible source of ignition. No-Flame Hot Work includes but is not limited to:</p> <ul style="list-style-type: none"> • Use of electrical / electronic equipment which has not been certified as suitable for use in flammable atmospheres (e.g. mega/insulation testers, multimeters, battery drills, power tools, laptop computers, data loggers, instrumentation testing devices, etc.) • Opening live junction boxes (includes flameproof/explosion proof enclosures) • Use of battery powered cameras (including video, still and digital varieties) with / without flash; and • Wire buffing • Concrete breaking drills or hammers, mechanical or hand use of sand blasting equipment • Non-mobile diesel power engine
Non-routine Work	All activities, which are outside the regular operation of the facility. Non-routine Work is not normally covered by a Management System procedure or work instruction, however, some procedures and work instructions may stipulate the use of a permit.
Penetration	Breaking, cutting or drilling into any wall, ceiling or floor surface.
Permit Recipient (PR)	The Permit Recipient is the person who receives authorisation via the Permit to conduct work on the plant and is competent to do so in the identified tasks. The name of the Permit Recipient shall be clearly specified on the Permit.
Permit Status Board	A board in the Control Room (or other designated area) used for displaying active permits, isolation lists and blind lists, lists of forces and bridges and notice tags in use. During special project or a major plant shutdowns a separate Permit Display are may be used and all permits will be controlled from there.
Personnel	BHP Billiton Petroleum employees and contractors
P& ID	Pipe and Instrument drawing(s)
Relinquish	To hand back a permit where the work is incomplete allowing the Permit to be re-issued at a later time or date
Risk (HSEC Standards)	The risk of an activity/product/service is the product of likelihood of an impact on the health and safety of people, the environment, the community or property, and the severity of that impact
Routine Work	Routine work does not require a permit and is covered by a Management System procedure or work instruction (as detailed in the “List of Facility Tasks Not Requiring a Permit to Work”).
Sanction To Test	Permission to temporally remove isolations to test the mechanical and/or electrical function of equipment.

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"Shall" or "Must"	Means a mandatory requirement.
Should	Means a guideline which is strongly recommended.
Standby/Support Person	A person nominated to oversee an activity, support the Work Team such as conducting gas tests and to provide communication between persons conducting the activity and the Control Room.
Upper Explosive Limit (UEL)	In relation to a flammable contaminant, the concentration in air above which the propagation of a flame does not occur on contact with an ignition source

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4.0 PERMIT TO WORK SYSTEMS REQUIREMENTS

4.1 General Requirements

The BHPB Petroleum controlled producing installation, facility or site shall establish, document, implement, maintain and continually improve a PTW system in accordance with the requirements of this Standard and determine how it will fulfil these requirements.

4.2 Permits and Certificates

4.2.1 Types


The PTW system shall be developed, but not limited, to cover the following types of work permits:

- Cold work
- Hot work no flame
- Hot work flame
- High Voltage Switching
- Scaffolding.

As required, the PTW system shall also be developed, but not limited, to cover the following types of work Permits or Certificates:

- Isolation
- Confined space entry
- Vehicle entry
- Excavation and ground/surface penetration
- Radiography or activities involving radioactive source
- Diving operations
- Lifting operations.

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4.2.2 PTW System Procedure

The installation, facility or controlled site shall define and document the PTW system procedure. This process shall describe all aspects associated with the performance of work including:

- The mechanism for initiating a work request
- Planning & scheduling of the work
- Outlining the discreet tasks and specific steps to conduct the work
- Hazard identification and risk assessment
- Risk control, mitigation and acceptance
- Identification of the type and need for a Permit/Certificate
- Permit/Certificate document control
- Approvals process. Under normal circumstances all permits should be prepared at least the day before work is to commence and shall be reviewed at a dedicated permit meeting by Permit Authorisers
- Change management process
- Work completion and closure.

The procedure shall clearly define routine and non-routine work as it applies to the BHPB Petroleum installation, facility or controlled site.


A Permit is generally not required for:

- Routine operational tasks/inspections conducted with standard operating procedures within environments that do not change considerably or present a high risk such as external visual inspections of plant and equipment
- Work carried out to prevent the escalation of or response to an emergency.

Typical Non Routine Work activities include, but are not limited to:

- Activities that involve multiple work teams and disciplines
- Isolation of energy sources for intrusive work
- Isolation of multiple energy sources
- Isolation of hazardous materials with high safety or health risk
- Working in a confined space
- Working at heights
- Hot work
- Working with radiation sources
- Excavation and ground/surface penetration
- High voltage work
- Removal of flooring or safety barriers
- Installation, removal or modification of software overrides

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- Installation, removal or modification of hard wired overrides
- Inhibition of critical equipment or critical systems
- Other activities designated by the operation.

There will be certain activities (routine) that do not normally need to be covered by a Permit. These routine activities shall have been risk assessed and be listed in a Management System document. They usually include two types:

- those activities which require competent people using approved procedures and relevant risk assessment to carry out tasks and,
- those activities which rely predominately on operation's generic safety management system to manage safety and health. This level would typically include office workers or administration personnel.

This in no way relieves the Responsible Person of the need to control work effectively.

A suggested work flow is provided in Appendix A. Appendix B provides a suggested guideline to determine the need for a Permit/Certificate, based on the nature, scale and impacts associated with the work.

4.2.3 Expiration

Permits shall be valid for the maximum duration detailed below:


- Confined Space Entry Permits shall be valid for a maximum of 12 hours and automatically expire at the end of the work shift
- Flame Hot Work Permits shall be valid for a maximum of 24 hours
- No-Flame Hot work Permits shall be valid for the length of the job, up to a maximum of 28 days
- Cold Work Permits shall be valid for the length of the job, up to a maximum of 28 days.

The permit validity shall be clearly specified on the form itself.

Those permits which continue beyond the end of the shift shall be subject to strict controls at shift handover prior to re-validation and recommencement of work. Specifications relating to shift handover are provided in section 4.12.

At any time, if the work scope or identified hazards change, or old hazards have recurred, the Permit and attached documentation shall be reviewed by the authorised person and at their discretion, a new Permit and documentation shall be issued.

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4.3 Authorities, Roles and Responsibilities

4.3.1 Authority Matrix

The PTW system shall clearly define and document the authority levels required for each of the following functions:

- Approval of each type of permit and Certificate
- Verification of Isolations
- Completion of works
- Competency.

4.3.2 Role and Responsibility Statements

“Personnel involved on a site or installation, facility or controlled site, including owners, employees, contractors and their workers, may have responsibilities under Permit to Work procedures. It is important that personnel know what his/her own responsibilities and duties are and undertakes them properly.”
(Paraphrased from Paragraph 10 Oil Industry Advisory Committee “A Guide to Principles and Operation of Permit to Work Procedures”)


The roles defined below have very specific and important duties within the PTW system. They must therefore be formally appointed to their role by an appropriate level of management to confirm their experience and competence to perform those duties. Normally this will be the Person In Charge (onshore and offshore).

4.3.3 Person In Charge

The Person In Charge (offshore and onshore) is responsible for ensuring that:

- A PTW system that conforms to this Standard and any other relevant regulatory requirements is established, implemented, maintained and continually improved
- Competence, awareness and training programmes are established and maintained to ensure the principles of Zero Harm are practiced for all jobs and tasks carried out at the installation, facility or controlled site
- There is a process for open and effective communication and consultation for jobs and tasks carried out at the installation, facility or controlled site so as to ensure the safety of all personnel associated or potentially affected by jobs and tasks carried out at the installation, facility or controlled site

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- All personnel are familiar and competent to use the PTW system
- All jobs and tasks carried out at the installation, facility or controlled site are properly planned and managed including the provision of adequate resources
- Adequate time is allowed during shift or personnel changes to ensure effective transfer of information on outstanding permits
- The planning, issue and return of permits is properly co-ordinated and clearly understood
- There is a secure and effective method of isolating all energy sources (electrical, process and mechanical, etc) in accordance with the BHPB Fatal Risk Control Protocols and that these isolation methods are verified as part of the PTW system
- The PTW system is regularly monitored, audited and reviewed to establish its ongoing effectiveness
- Provides guidance, instruction and uses discretion where under certain circumstances, work may be carried out without issuing a Permit
- Carries out the necessary action after being informed of the tasks which require inhibiting safety devices (e.g. fire detectors) to ensure that contingency plans and precautions are in place
- Formally appoints personnel at the site (typically those below) and confirms their levels of experience and competence to perform their respective duties under the PTW system.

The Person in Charge may include:

- Installation Manager
- Offshore Installation Manager
- Field Manager
- Project Manager.


4.3.4 Permit Authoriser

A Permit Authoriser(s) is appointed by the Person In Charge for the installation, facility or controlled site, providing they have completed and are competent in the PTW competency based training and assessment (CBTA) prior to having responsibilities under the PTW system.

The Permit Authoriser shall be responsible for ensuring that:

- The nature, scope and objectives of the work is clearly understood and communicated

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- All hazards associated with the job are identified and controlled so as to reduce the risks to as low as reasonably practicable (ALARP)
- All necessary precautions and controls are implemented before work commences
- Verifying the isolation is effective and sufficient for completing the task as outlined in the Permit. This includes checking and verifying by observation and/or testing that:
 - Process Equipment isolations are in place
 - Electrical isolations are in place
 - The work site is safe for work to commence prior to Permit authorisation.

Note that except in the case of a Confined Space, the inspection of isolations and checks of precautions and controls may be delegated to another competent person. The Permit Authoriser must nominate and record the name(s) of the delegate(s).

Only the Person In Charge can nominate the Confined Space delegate.

- Verify that all personnel carrying out the work described by the Permit (the Work Team), or other personnel and/or visitors to the installation, facility or controlled site that may be affected by the work are informed before work commences, when the work is suspended and when the work is complete
- Effective arrangements are in place to ensure that the work place is inspected before work commences, on completion of the job and as appropriate, when the work is suspended or handed over at shift change
- There is sufficient time available at shift and/or personnel change over to discuss all ongoing and related work fronts with the new Permit Authoriser and/or delegate
- The Permit Authoriser shall issue the Permit to the Permit Recipient and shall explain the hazards, controls, conditions and requirements of the Permit to the Recipient via a verbal face to face briefing. If required, the Permit Authoriser or delegate shall take the Permit Recipient to the worksite and explain the scope of work
- The Permit Authoriser shall brief the Firewatch or Standby/Support Person of the work and their role and responsibilities
- The most important function that the Permit Authoriser fulfils in the Permit authorisation is to ensure that all credible hazards and suitable controls have been identified and implemented.

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4.3.5 Responsible Person

The Responsible Person is the person that is taking the overall responsibility of the work being conducted under the relevant Permit and whose name is clearly specified on the Permit form. The Responsible Person may be the Permit Recipient (see section 4.3.6). The identity of this person depends on the job, its scope and the areas it will or could potentially affect.

The Responsible Person shall:


- Receive training in the PTW system and be deemed competent in its use by the Person In Charge, or delegate
- Have the responsibility for safety and control of the Job being approved
- Have the knowledge and experience to fully appreciate the potential hazards which might be present in a task and which could affect or be affected by other tasks presently being pursued
- Check all associated documentation is attached to the Permit and is stamped and signed.

When a Sanction to Test (section 4.10.2) is requested, the Responsible Person shall ensure that the specified plant or equipment is safe for testing, associated permits and personnel have been withdrawn and authorise it to proceed by signing the Permit. The Responsible Person shall inform the Permit Authoriser who shall authorise the Sanction To Test alongside the Responsible Person's initials acknowledging the notification.

The Responsible Person shall ensure that:

- Personnel working under his/her control are trained in the requirements of this procedure and that their understanding is validated at periodic intervals
- All isolations are carried out and verified
- Fully communicate the details of the job including the hazards and precautions, with the Permit Authoriser, the Permit Recipient and the Work Team. This includes effective and immediate communication of any changes or deviations from the original work scope
- Ensure that all affected personnel including the Permit Recipient, the Work Team and surrounding personnel understand that if a circumstance changes, work must be stopped and advice sought
- Confirm that all required statutory licences are held and are current
- The Permit is available at the work site
- The precautions and conditions of the Permit and associated risk assessments (such as a Job Safety Analysis) are met and effectively maintained

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- The work is carried out within the limitations set on the Permit (physical boundaries, nature of work and validity time)
- All required documents are attached to the Permit and have been signed as approved
- After performance of a task; the site is clean and safe to return to service.

Note that the Responsible Person may delegate these activities except in the case of work requiring Confined Space Entries which shall only be appointed by the Person In Charge

4.3.6 Permit Recipient

The Permit Recipient of the Permit shall:


- Communicate with the Permit Authoriser and the Responsible Person until they understand the hazards, controls, conditions and requirements of the Permit
- Understand that authorisation is limited to the location, equipment, time validity and work as detailed on the Permit
- Communicate the duties and responsibilities and the conditions of the Permit to the Work Team. This includes an understanding of the hazards and the precautions taken or to be taken
- Confirm all persons working on the Permit are competent for their assigned tasks and signed onto that Permit
- Not commence work until appropriate support personnel (Firewatch / Standby Person, etc) where required, are at the worksite, and the rescue and safety equipment specified on the Permit is in place
- If the Site Emergency Alarm sounds, the Permit Recipient shall make the workplace safe, vacate the worksite as soon as is practicable and then proceed to the emergency assembly area.

The Permit Recipient shall return the Permit to the Permit Authoriser when the job is complete or at the end of each shift. The Permit Authoriser advises the Responsible Person of the status of the equipment when the Permit is relinquished or closed off.

The Permit Recipient is responsible for leaving the work site clean and tidy.

The Permit Recipient and the Authoriser cannot be the same person.

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4.3.7 Work Team

All other employees / contractors (and their employees) who are working on the Permit are required to ensure:

- They receive a briefing from the Permit Recipient as to their duties and responsibilities and the conditions of the Permit. This includes an understanding of the hazards and the precautions taken or to be taken
- Once they have fully understood their role, they are to sign the back of the Permit to confirm their understanding
- Follow all instructions specified on the Permit
- On completion of each day's work, or if no longer working on the task, they are to leave the work site in a safe condition and sign off from the Permit
- If in any doubt or if circumstances change, they must stop work and consult with the Permit Recipient, Responsible Person or their direct supervisor.

Note: All personnel understand that they have the right and responsibility to stop work or refuse to work in situations that may cause HSEC harm, and to immediately bring these situations to the attention of those at imminent risk and to management. (BHPB HSEC Management Standards Performance Requirement 1.12, Issue No.3)

4.3.8 Support and Other Personnel

4.3.8.1 Firewatch Person

A Firewatch Person(s) shall be present for all hot work. The Firewatch Person shall discuss the work with the Responsible Person and the Permit Authoriser. The Firewatch Person shall read and understand the conditions of the relevant Permit and any cross-reference Certificates.


At the completion of the briefing by the Permit Authoriser and/or the Responsible Person, the Firewatch Person shall complete an appropriate work site inspection.

Details and confirmation of this inspection shall be noted on the Permit.

The Firewatch Person shall:

- Periodically conduct gas tests within a 15 metre radius of the worksite, while work is being carried out. Particular attention shall be given to all hydrocarbon containing equipment, flanges, screwed connections and manways. In the event

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there are multi-levels of equipment, then testing shall cover all levels and may require a second Firewatch Person

- Maintain visual surveillance of all parts of the work area whenever hot work is being performed
- Be in a position to quickly shut down the tools or equipment being used
- Be in a position to monitor any sparks that may escape from an enclosure or be created during the hot work
- Be equipped with a radio to communicate any problem quickly to the control room
- Ensure there is ready access to the fire fighting equipment
- Ensure that the area is free of combustible material or that combustible material is adequately protected to prevent possible ignition. This may include flushing or flooding open drain skids, sumps or recessed areas where residual liquid hydrocarbons may accumulate
- Stop work if there is any doubt about the safety aspects of the work being performed
- Ensure the area continues to remain safe and free from ignition sources or contaminants after hot work has ceased for a significant break in work activities such as a meal break, or time out for a work debrief.

If the site emergency alarm sounds, the Firewatch Person shall advise the Work Team of the alarm and provided it is safe to do so, shall remain in attendance until the workplace has been made safe, and then with the recipients proceed to the emergency assembly area by the safest route.

4.3.8.2 Standby Person(s)


For all Confined Space Entry (CSE) work, the Standby Person(s) shall be accredited with the local authority (or equivalent) for CSE and Emergency Response.

The Standby Person shall discuss the work with the Permit Authoriser and/or the Responsible Person. The Standby Person shall read, communicate and ensure all authorised work team members understand the conditions of the CSE Permit and any cross-referenced Permits.

At the completion of the briefing by the Permit Authoriser and/or the Responsible Person, the Standby Person shall complete an appropriate work site inspection.

Details and confirmation of this inspection shall be noted on the Permit.

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The type of rescue equipment with which the Standby Person shall be equipped with shall be determined prior to the CSE occurring.

Particular attention during the briefing shall be given to the method of rescue of any employee from the space, the first aid to be provided to any employee in the space, and after the rescue from the space. The Standby Person shall:


- Ensure that the confined space is safe to enter before work commences. This includes:
 - confirmation that isolations are implemented and validated
 - the environment has been gas tested and is safe to enter
 - controls and safeguards are implemented and functioning
 - the use of appropriate and correctly fitted personal protective equipment
 - all contingency plans are implemented and ready.

Under no circumstances shall the Standby Person(s) enter the confined space.

- Monitor any gas detection equipment located external to the confined space including equipment that is being used to monitor the atmosphere inside the confined space
- Carry a radio for communication back to the Control Room
- Ensure that the location status of all personnel associated with the CSE is documented and current at all times. This includes visual display of the personnel status and signatures of all recipients as they move in and out of the confined space
- Be in attendance when any personnel are inside the confined space
- Remain in visual and/or verbal contact at all times
- Remain in control of the attached lifeline if used
- Stop the CSE if there is any doubt about the safety aspects of the confined space entry or the work being performed.

If the site emergency alarm sounds, the Standby Person shall advise the Work Team in and around the confined space of the alarm and provided it is safe to do so, shall remain in attendance until all personnel have vacated the confined space then with the recipients proceed to the emergency assembly area by the safest route.

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4.3.8.3 Rescue Personnel

As required given the nature of the work being conducted, rescue personnel shall be available to respond to emergency situations. Rescue personnel shall be considered for all high risks activities such as working at heights or in confined spaces.

4.3.8.4 Control Room Personnel


Control Room Personnel (or equivalent) shall review the status of all issued Permits as part of the ongoing management and control of the installation, facility or controlled site.

Control Room personnel shall be responsible for maintaining an up-to-date register of all active Permits, Certificates and changes to safety controls such as fire and gas detection, and emergency shutdown systems.

Additionally, they must be aware of all plant isolations/de-isolations and confined space entries.

The Control Room Personnel must be available at all times to communicate with and between the permitted Work Teams, Permit Recipients, Responsible Persons and the Person In Charge (and delegate) as required to facilitate a safe system of work for all task and jobs conducted at the installation, facility or controlled site.

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4.4 Legal and Other Requirements

The PTW system shall ensure that all relevant legal and relevant best practice requirements relating to the installation, facility or controlled site and permitting are identified, accessible, understood and complied with. The system must be maintained and regularly updated.

Compliance with legal and other requirements shall be determined for all relevant activities including but not limited to:

- Confined space entries
- Working in areas zoned or identified as being hazardous
- Working at heights
- Lifting operations
- Diving activities
- Handling dangerous and hazardous substances including ionising and non-ionising radiation sources
- Requirements for installing, calibrating and maintaining critical controls such as:
 - Gas Detectors
 - Alarms
 - Emergency shut off valves and devices
 - Communication devices

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4.5 Hazard Identification and Risk Assessment

4.5.1 General

The PTW system shall include a process to ensure the appropriate hazards are identified that relate to the intended scope of work including the consideration of the following:

- Health and safety
- Environment
- Community
- Simultaneous operations

These shall be clearly identified and recorded on the Permit.

The PTW system shall include a process to allocate controls and precautions relating to the hazards associated with the work activity as described above.

The Risk Assessment procedure involves breaking a job down into its component tasks/steps, identifying hazards, evaluating the risk potential and identifying control measures to reduce the residual risk to as low as reasonably practicable (ALARP) and tolerable.


The Responsible Person and the Work Team shall consider all necessary information prior to carrying out the Risk Assessment, which may include:

- Existing procedures
- Temporary operating procedures
- Technical deviations
- Other assessments (e.g. hazardous substance, lifting, manual handling, etc)
- Drawings / P&IDs.

Carrying out a Risk Assessment as part of the permit process shall be mandatory for activities involving deviation from an existing policy or procedure when controlled by a Permit.

The risk assessment procedure shall be in accordance with the BHP Billiton procedure [PP03.02 Job Risk Assessment](#).

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4.5.2 Defining the Work and Identifying the Steps Involved

The job or task being assessed must be broken down into a number of discrete tasks/steps. The job should be broken down in such a way that the steps or tasks describe what is to be done, and in what order.

Each step description shall:

- Provide a statement of what is to be done, without reference to how it is to be done or who is to do it
- Begin with an action verb (install, remove, assemble;
- End with the subject being discussed (pump, valve, hoist)
- Hazards should not be identified at this stage.

This part of the system shall also include any limitations on the extent of the work and time during which the job may be undertaken.

4.5.3 Potential Hazard Analysis

All identifiable possible hazards or potential dangers shall be identified for each step and all the identifiable persons or equipment that could be harmed or damaged is identified. In particular, consideration should be given to simultaneous operations and potential conflicts. During this stage, it may be necessary to visit the worksite and review the surroundings.

The risks created by each hazard on the list should be evaluated according to the:


- Realistic severity of the hazard effect should anything go wrong and
- The probability of the hazard being realised and resulting in the specified hazard effect.

To enable the risk potential to be calculated, quantified and/or qualified, a suitable method shall be used (e.g. a Risk matrix). The initial level of risk should be calculated assuming there to be no control measures in place.

4.5.4 Identifying Control Measures

For each of the steps, consider what controls need to be put in place. When identifying controls, the following hierarchy of risk control measures should be applied in the

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following order (a number of these options may be considered and applied individually, or in combination):

- **ELIMINATE:** the complete elimination of the hazard
- **SUBSTITUTE:** replacing the material or process with a less hazardous one
- **REDESIGN:** Redesign the equipment or work processes
- **SEPARATE:** Isolating the hazard by guarding or enclosing it
- **ADMINISTRATIVE:** Providing controls such as training, procedures, etc
- **POLLUTION CONTROL / PERSONAL PROTECTIVE EQUIPMENT:** Use appropriate pollution control equipment and//or properly fitted PPE. Pollution control devices and PPE includes impact minimisation equipment such as spill clean up material or dust suppression measures.

All permits must document the safeguards, controls including safety ad emergency systems that are in place.

4.5.5 Risk Assessment

Once the controls have been identified, the risk is assessed, quantified and/or qualified to evaluate whether the risks have been reduced to ALARP. Those carrying out the risk assessment must decide whether each risk for each step can be accepted, basing their judgment on the effectiveness of the control measures available.


The risk assessment team may recommend supplementary assessments to be carried out by trained specialists for example; hazards involving chemicals, noise, manual handling or lifting operations.

4.5.6 Acceptability of the Risk

Finally, the overall work scope must be considered as an entity, to ensure that, as a whole, the overall risk is ALARP and the combined residual risk from each step is tolerable to allow the work to proceed before the risk assessment is approved by the Permit Authoriser or the Person in Charge, as appropriate.

Where the overall risk is assessed to be acceptable, the work can proceed. Where the risk is assessed to be unacceptable, further assessment is required before the work shall be allowed to proceed.

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4.6 Planning and Operations

4.6.1 Simultaneous Operations

The PTW system shall refer to a matrix or risk based process for indicating which simultaneous tasks are permitted and those which are restricted.

By outlining restrictions to specified operations when conducted simultaneously, this is to provide for the:

- safety of personnel
- protection of equipment and
- the environment.

In establishing this matrix, factors to be considered include the adequacy of controls required (e.g. barriers and signs) to keep nearby areas clear of people and other interactions with plant and equipment such as forklifts, vehicles, product, power lines, and process pipes.

This matrix shall be consulted by the Permit Authoriser and the Responsible Person taking into account existing and planned work activities in the area. This will enable the opportunity to consider adjacent and associated tasks.


The PTW system shall ensure that all Permits document and acknowledge approved simultaneous operations in the work area.

4.6.2 Major Projects and Shutdowns

The PTW system shall establish and maintain processes to manage unusual circumstances such as those associated with major projects and shutdowns conducted on the installation, facility or controlled site. Such processes can be either:

- A stand alone system and enacted under authorisation from the Person In Charge during a major project or a shutdown, or
- Integrated into the normal PTW system.

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The PTW system for use during a major project and/or a shutdown should give consideration to the following factors, as appropriate:

- Increased number of contractors (and their employees and sub-contractors) during the major project or shutdown that are unfamiliar with the installation, facility or controlled site function and the PTW systems
- A high number of simultaneous activities required to be carried out
- Limited capacity and resources (competent personnel, permit display boards, permits, etc) on the installation, facility or controlled site to manage the increased volume of Permits required for the major project or shutdown.

The PTW system shall be reviewed prior to and post a major project and/or a shutdown for adequacy, and learnings implemented and shared.

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4.7 Training and Competence

No personnel (including contractors and their workers) shall undertake work on any installation, facility or controlled site, or check work unless they have received appropriate training and demonstrated the required competence. Training and competency assessments commensurate with the persons function, roles and responsibilities, shall be developed and implemented. Specifically, training and competency assessment shall be developed and implemented for the following functions, roles and responsibilities:

- Person In Charge
- Permit Authoriser
- Responsible Person
- Permit Recipient
- Work Team
- Firewatch Personnel
- Standby Personnel
- Control Room Personnel

An induction training programme shall be used to train and assess personnel as competent in the PTW system (i.e. prior to them having any responsibilities under the system including any PTW procedures).


All personnel shall be provided with written confirmation of successful completion of relevant training and these documents are checked before appointments are made within the PTW system.

Details of personnel successfully completing the formal training programme shall be entered in an authorisation and training database. Other functions and roles require other assessments of competence in accordance with approved competence standards.

The Person In Charge shall ensure that personnel working within the PTW system has a satisfactory level of knowledge to enable them to competently fulfil their responsibilities as defined in the system and also in the following areas:

- Familiarity with the plant within their own area
- Knowledge of other areas of the facility
- Understanding of areas/boundaries on the facility
- Knowledge of the Standing Instructions affecting precautions to be taken for particular tasks
- Knowledge of potential hazards on the installation, facility or controlled site.

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Personnel shall also complete a Permit to Work on the job assessment and be able to demonstrate continuous competency throughout their appointment.

The organisation shall have a method in place to screen out, prevent or lock-out (e.g. electronically) any persons who are not competent, or whose competency may have lapsed.


Refresher training shall be required on a regular basis, at least every two years. If, however, an individual does not use the system for a period of six months or more, they shall be (electronically) locked-out (or the equivalent) of the system and will be required to be re-trained.

Where the PTW system is revised, the changes are communicated and the need for a competency re-evaluation is determined as either:

- Formal training not required where the change is minor and the consequences of non-compliance are determined as low risk. An appropriate document update information notice or presentation will suffice or
- Formal training is required where either the change is major or a number of minor changes have been made which could lead to significant consequences of non-compliance. The formal training programme shall be current and updated, in line with the latest version of the PTW system. Where training programmes are reviewed, all relevant personnel must be retrained to an appropriate extent and the training records updated accordingly.

Records of all PTW system training (initial and refresher), shall be retained in an appropriate system. This System shall include the facility to schedule the necessary competency reviews and training courses and to report on any non-compliance.

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4.8 Communication

4.8.1 General

Communication procedures shall ensure that:

- The requirement for a briefing such as a pre-start toolbox meeting that conveys and acknowledges understanding of the scope of work, hazards, safeguards and controls and all relevant aspects of the permit is carried out prior to commencement of work
- Communication resources (people & equipment) are available between the Control Room Personnel, the Responsible Person and the Work Team at all times during the validity of the Permit
- Support and Standby Personnel shall always maintain verbal and/or visual contact of the Work Team especially when this has been assumed as a control or contingency as part of the initial hazard assessment, or necessary to effectively respond in an emergency scenario
- The Person In Charge is informed of the tasks which require inhibiting safety devices (e.g. fire detectors) to ensure that contingency plans and precautions are in place.


4.8.2 Signatures

Before work subject to the permit is allowed to commence all required signatures shall be obtained. The PTW system shall define and document the number and designation of the signatories required and this shall be determined based on the nature and type of the permit and/or certificate.

Signatures on permits and certificates are required as specified in the whole of this Standard these include but are not limited to the following:

- All permits and certificates must include signatures from Responsible Person, Permit Authoriser, the Permit Recipient and the Work Team prior to commencement of work
- Gas testers shall sign the permit or certificate with the recorded gas testing readings
- All Firewatchers and Standby Personnel shall sign onto the permit
- Electrical isolations that require HV isolations must be approved and signed by a certified, qualified and competent HV switching person
- All changes to the scope of work shall be acknowledged and initialled by the Responsible Person and the Permit Authoriser.

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Personnel who need to be aware of the permit or aspects of the work tasks should also sign. Where there is a transfer of responsibility for the permit or for the work tasks, provision shall be included for outgoing and incoming personnel.

4.8.3 Display

A system of a display board and registers shall be provide high visibility overview of the status and location of work controlled with Permits and Certificates (in numerical order) at any time. The display and registers shall be located in the Control Room (or similar controlling location) and are monitored by the Control Room Personnel.

The display board shall display a copy of the Permit and as a minimum the related isolation lists and drawing.

Other related documents pertaining to the task should include as (but not limited to):


- Copy of the JSA
- Copy of relevant MSDS
- Work orders
- Temporary Work Instructions
- Precaution and safeguard checklists
- Lifting plans
- Isolation lists.

The PTW system shall require the display of live and suspended permits so that Control Room Personnel and other authorised personnel can readily see and check plant status.

4.8.4 Worksite Copies

The Permit Recipient’s copy of the Permit and Certificate and all other associated paper work shall be available at or displayed at the entrance to the work site while work is in progress. The Permit and all other relevant documents should be kept in a Permit waterproof wallet to ensure the field copy is kept in a clean and dry condition.

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4.8.5 Cross Reference Information

Accurate cross-referencing between Permits and Supplementary Certificates is vital if a number of tasks are to proceed simultaneously.


A number of Certificates may be raised based on the required tasks to be performed. All associated Certificates shall be cross-referenced to the applicable Permit. It is essential to establish that these tasks will not adversely affect one another and that they can each be progressed safely at the same time.

The PTW system shall allocated space on the Permits/Certificates for such cross referencing. Any task, which will be affected by the proximity or technique of other tasks, shall be referenced. This gives the Permit Authoriser the opportunity to consider adjacent and associated tasks. When the Permit is issued, it will provide a reminder to the Permit Authority to discuss these tasks with the Permit Recipient.

It is vital that all cross-references are kept up to date. When a new Permit is being raised, careful scrutiny of the Permit Display Board should be made by the Permit Authoriser. This is to determine any area where existing Permits may be affected by the proposed Permit. Existing Permits that will be affected must be immediately recalled and the Permit Recipient briefed about the proposed task.

The simultaneous operations matrix and procedure shall be consulted to determine the restrictions of concurrent activities on the installation, facility or controlled site.

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4.9 Contractor Management

The PTW system shall extend to all contractors and their employees performing tasks on the installation, facility or controlled site.

Contractors performing stand alone activities on BHPB Petroleum controlled areas shall develop bridging documentation that links their respective PTW systems with this Standard. Such activities include:


- 3rd party facilities or contractors performing controlled activities such as mobile offshore drilling units, installation and construction sites
- Construction on sites controlled and managed by BHP Billiton Petroleum.

Contractors shall participate in risk assessments particularly where the tasks requires the use of goods and services not normally used by the installation, facility or controlled site.

All contractors shall be briefed on the job, hazards and precautions identified on the Permit.

All Contractors and their employees shall be required to complete competency based training and assessment before being allowed to perform work managed by the PTW system.

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4.10 Operational Controls

4.10.1 Isolations

The PTW system shall include provisions to ensure that all energy in area required for work has been safely and adequately removed. The PTW system shall define processes for managing isolations as follows:


- Isolation and blind lists may be required to cover the isolation of plant and equipment to be worked on, before a Permit can be issued for a task. All Isolations shall provide positive protection and be achieved by the use of locking devices or the establishment of a physical barrier or separation
- All separations or physical barriers shall be provided with either a permanent or temporarily locking device were possible
- If not possible, a documented risk based process shall be taken to determine the way forward
- The Permit Display Board (in Control Room or as appropriate) and the Permit Recipient's copy of the Permit shall include the relevant isolation documentation clearly identifying the nature, location and type of isolations in place
- The PTW system and the Permit shall have provision for the isolations to be verified and checked before the work is authorised to commence
- Only competent persons may verify and check that isolations for a Permit are implemented and effective
- If a long-term isolation (beyond shift end) has been necessitated by incomplete work then a copy of the cancelled Permit shall be attached to the isolation list.

4.10.2 Sanction to Test

The PTW system must include the provision to conduct a Sanction To Test. The PTW system shall define the process for managing a Sanction to Test as follows:

- If a Sanction to Test is deemed necessary, the Control Room Personnel shall withdraw all Permits associated with the equipment to be tested. The Permits and associated Certificates will be kept in abeyance until the Sanction to Test activity has been completed
- Permits that have been suspended shall be reinstated only when the area has been deemed safe and isolated for permitted work to continue
- Dependant on the result of the Sanction to Test, the Certificate will either be signed off and the Permit closed or released for further work to continue
- Any isolation disturbed by a sanction to Test must be verified prior to work recommencing.

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4.10.3 Safety and Emergency Systems

The PTW systems shall include the provision to control all work which incapacitates or temporarily disables any of processes and equipment classified as safety and emergency systems. Such work includes but is not limited to the isolation of a safety or emergency system or work involving inhibiting or overriding safety or emergency system, or work where there is no redundancy in the normal controls. All such work must be conducted under a Permit. Safety and emergency systems include (but are not limited to):

- Safeguarding system such as emergency shutdown switches, process shutdown, relief valves and associated interlocks
- Alarms and alerts devices
- Fire & Gas detection including heat, smoke, flame, flammable gas
- Fire control, firewater main, hydrants, deluges, sprinklers, and fixed fire suppressant systems
- Evacuation and escape areas and equipment such as a helideck, lifeboats, and life rafts.

The Person In Charge must be informed of the above tasks which require inhibiting safety devices to ensure that contingency plans and precautions are in place.

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4.11 Document Control

4.11.1 General

As a minimum, PTW system records including closed Permits shall be managed in accordance with the relevant Performance Requirements in Standard 2 of the BHPB HSEC Management Standards.

4.11.2 Paper Based PTW system

The PTW system shall ensure that the document control system is established that ensures all PTW procedures, documents and forms are:

- Approved prior to use and the latest version of applicable documents are available at points of use
- Reviewed and updated and re-approved as necessary
- Legible, readily identifiable and traceable.


The PTW system shall prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.

4.11.3 Electronic PTW system

If the installation, facility or controlled site is using an electronic PTW system, the following factors shall be considered:

- There are effective and suitable back up means available to recover the coordination of work activities in the event of the electronic system failing
- The system is secure to prevent unauthorised issue or changes to Permits
- Permits cannot be issued without the normal process including work site inspection
- Permits cannot be changed without communication of these changes to the Work Team and all affected personnel
- Permits can be displayed at the work site
- Adequate training is provided
- Information on Permits cannot be copied from closed or previous versions.

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4.12 Change Management

4.12.1 Suspension

The permit to work system shall include provision for the suspension of a permit before the work is completed. Circumstances which may give rise to a suspension includes but is not limited to the following:

- An emergency
- Interaction with another activity (simultaneous operations)
- Shortage of resources to complete the job including materials and personnel
- Changes to the workplace environment including hazards
- Works scope changes
- Shift change (this does not apply to Confined Space Permits)
- Personnel change.

A permit cannot be suspended beyond the expiration date for that type of permit as specified in section 4.2.3.


4.12.2 Revalidation

Before revalidating a permit to allow the work to continue, the permit authoriser shall ensure that the conditions under which the permit was originally issued remained unchanged. Circumstances which shall require revalidation include but is not limited to the following:

- Suspended permit
- Shift change (this does not apply to Confined Space Permits)
- Personnel change.

A permit shall not be revalidated if the workscope or hazards have changed. This requires a new permit and a new risk assessment.

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4.12.3 Work Scope Change

If the work scope changes from that described on an active Permit, the Permit must be returned to the Control Room (or equivalent), and at a minimum, a new risk assessment shall be carried out by the Responsible Person, the Permit Authoriser, the Permit Recipient and other support personnel as required.

Where the change is considered significant a new Permit shall be issued.

All Work Team members and affected personnel shall be consulted regarding the changes, before work commences.

4.12.4 Personnel Change

4.12.4.1 Permit Authorisers

At shift change or personnel change the out-going and in-coming Permit Authoriser must set aside sufficient time to discuss the work status covering both technical and safety aspects of all active, suspended and Permits in abeyance.

Each Permit shall be reviewed to ensure its requirements are fully understood.

The in-coming Permit Authoriser accepts responsibility for an active Permit by signing in the appropriate section in the allocated form and this is counter signed by the out-going Permit Authoriser.


The in-coming Permit Authorisers accepts responsibility for the work whenever it is carried out.

4.12.4.2 Person Responsible

Acceptance of responsibility for an active Permit by an in-coming Person Responsible shall be indicated by the endorsing initials in the relevant section of the Permit, required at each shift commencement of work or a change initiated to any other circumstance.

The Person Responsible is required to follow the same process at shift handover (as outlined above) ensuring that they understand the status of all ongoing tasks. At shift or

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crew change, oncoming Person Responsible must ensure that they understand the scope of all the ongoing tasks in their areas and must countersign all Permits.

The Person Responsible shall ensure that a detailed handover takes place when responsibility is transferred to oncoming Permit Authorisers at shift change, which shall include the status of all permits and isolations under their control.

The Person Responsible shall ensure that all signatures are obtained.


4.12.5 Permit Recipient and Work Team Personal Change

The PTW system must include provision for safe and effective handover for all Permit Recipients and Work Team members within and between shifts.

The Permit shall record signatures of all in-coming and out-going authorised Permit Recipients and Work Team members.

After change-over, new incumbents will carry out a site inspection and familiarisation with activities prior to re-commencing work activities.

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4.13 Records

As a minimum, PTW system records including closed Permits shall be managed in accordance with the relevant performance requirements BHPB HSEC Management Standard.

Copies of all completed Permits and support documentation will be archived in a dedicated location.


The retention time for all PTW system records shall comply with local legislative requirements. If such retention times are not defined, then all records shall be kept for a minimum of five years before disposal. Deviation from this requirement to retain records for at least 5 years is retention times are not legally defined shall be approved by the Person In Charge and documented in the PTW system.

4.14 Emergency Preparedness and Control

In the event of an emergency, the job shall be made safe (relative to the emergency) and abandoned if required. The control or abandonment of the job shall be reported to the Control Room as soon as is reasonably practicable.

When there is no longer an emergency, the Control Room shall be contacted to renew the Permit after a revision of the initial risk assessment has been undertaken. Post emergency action should include a re-assessment of the work to ensure that conditions have not altered as a result of the emergency.

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4.15 Monitoring, Audits and Continual Improvement

4.15.1 Monitoring Isolation Integrity

The integrity of each isolation point shall be monitored at suitable intervals during the Permits validity to detect any actual leakage or deterioration in condition caused, for example, by vibration or disturbance (or changing pressure upstream). The minimum recommended frequency of monitoring is once per shift and immediately prior to breaking containment. However, the frequency for regularly checking the integrity of isolations and the locations of the checks, shall be determined and recorded by the responsible person and the permit authoriser, taking into account the risk of the work to be carried out and the nature of isolation methods employed.

4.15.2 Field Checks and Inspections

Field checks and inspections should be carried out by the Responsible Person(s) with sufficient knowledge of the subject site and its operations. They shall also be competent in undertaking such field checks and inspections. The inspection shall be carried out using a copy of the corresponding Permit on-hand.

Field checks and inspections are carried out to randomly capture at least 25 percent of all issued and active Permits and Certificates. Where the 25% requirement is not practicable, the Senior Person in Charge shall approve an alternative methodology for selecting a representative sample of Permits and Certificates, and this approved methodology shall be documented. This alternative methodology shall then be used to randomly check and inspect compliance with Permits and Certificates active in the field.


The Person In Charge is responsible to review this frequency based on the findings of these checks.

Checks and inspections shall include:

- Visual inspections of the Permitted work activities taking place
- Review of supporting documentation in addition to the Permit (e.g. JSAs, Certificates, etc)
- Interviews with the personnel including contractors and their employees undertaking the tasks outlined in the Permit.

A standard format check sheet shall be used to record observations/findings from the checks. It is essential that the findings be discussed with the persons involved with the

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permit and those performing the activities themselves on-site at the time of the checking (unless it is not safe to do so).

The Person In Charge (or delegate) of the personnel completing the checking reports oversees the follow up and close out of non compliances associated with these field checks.

4.15.3 PTW System Auditing

The operation of the PTW system shall be subjected to a structured audit programme (in addition to daily routine monitoring) carried out by a competent person.

Auditing shall be carried out in such a manner that all aspects of the system are covered. It shall be carried out by persons, considered to have sufficient knowledge and experience of the system to fulfil the requirements of the audit.

Evaluation of audits shall be conducted by experienced and knowledgeable personnel, who shall report and advise on the state of the system and provide advice on trends deficiencies and methods of improvement.

The PTW system audit criteria shall include conformance with the relevant requirements of this Standard. Full compliance is mandatory.


Records of audits and associated reports shall be suitably maintained and easily retrievable for verification of audit/audit standard and also to provide evidence of Permit competency.

The objectives of PTW system audits are to:

- Assess compliance with set/defined requirements
- Improve performance where non-compliance is identified
- Determine the level of compliance of personnel working within the system
- Verify suitable objective evidence of competency of personnel involved
- Verify that the system is both effective and efficient.

An initial audit shall be carried out within 1 month if implementing the PTW system. The PTW system shall be then be periodically audited at least annually by persons not normally working within the system to ensure an objective evaluation is made of the system's effectiveness, and the degree of day to day compliance is achieved.

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The results/findings shall be communicated to the appropriate persons. Any corrective actions shall also be communicated to the appropriate persons and if necessary, a plan ranking the priorities of the actions shall be prepared and implemented. The Corrective Actions, unless otherwise noted, shall be closed-out prior to the next System Audit. The Person In Charge is responsible for follow-up and close out of non-compliances associated with System audits.

Audits shall be carried out to ensure the PTW system is continually improved in accordance with the goal of Zero Harm.

5.0 UPDATES TO THIS DOCUMENT

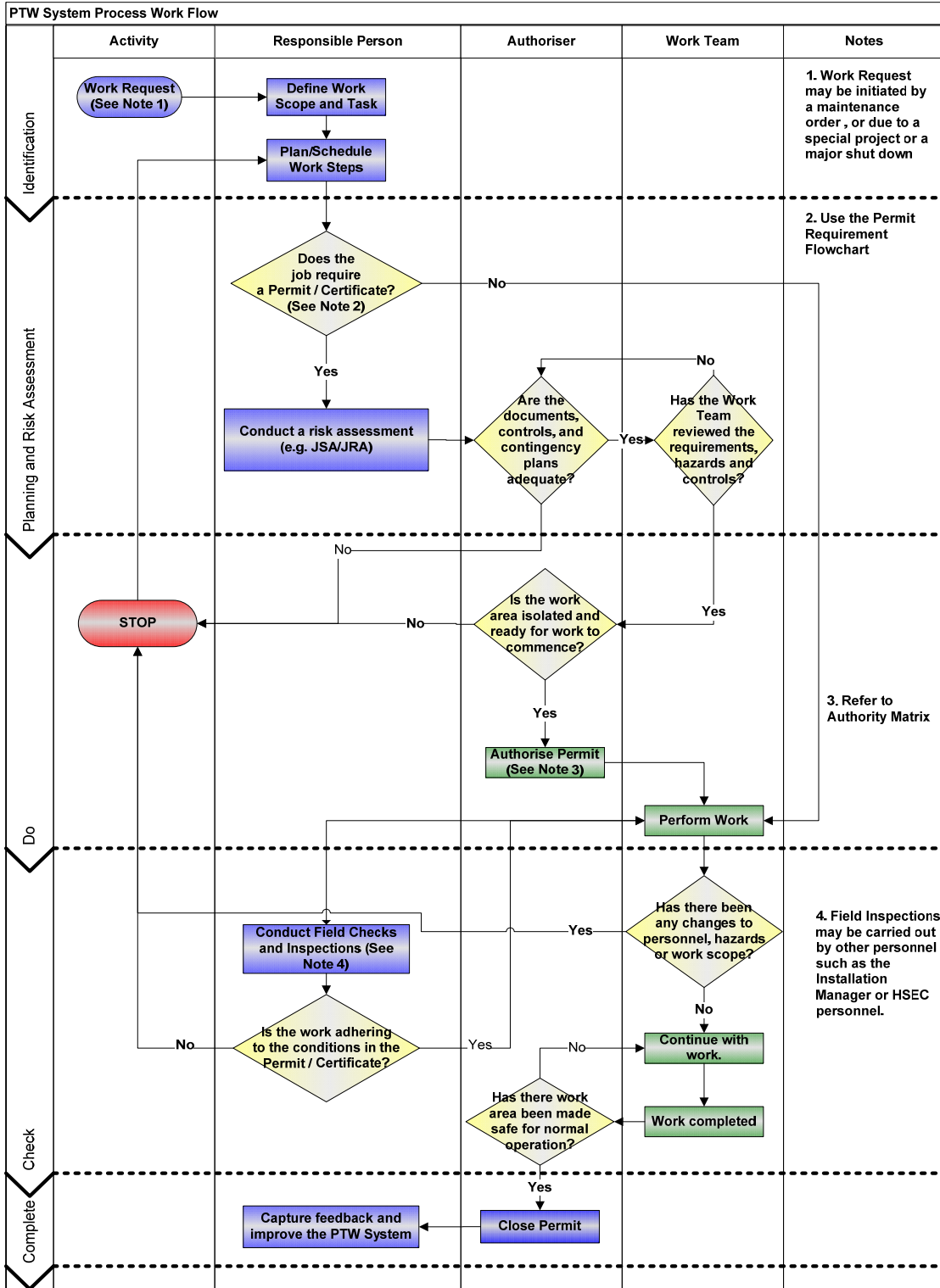
This is a Petroleum HSE Controlled Document. Requests for updates to Petroleum HSE Controlled Documents shall be documented on the Petroleum HSE Document – Update Request Form and sent to the **Petroleum HSE Systems Support** email in the GAL.

6.0 ATTACHMENTS

- 6.1 – PTW System Process Work Flow
- 6.2 – Requirement for Permit Decision Flowchart

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6.1 PTW System Process Work Flow



6.2 Requirement for Permit Decision Flowchart

