



Integrated Safe System of Work (ISSoW) Manual

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RECORD OF AMMENDMENT

Revision	Section	Amendment
10	2.3	FPSO Cargo Tank Conops
10	6.1Types of isolations	Improved guidance
10	3.1 and 3.3 Established Practices	Removed
10	3.2	Isolations removed
10	3.4 Remote	Improved guidance remote PE issue
10	6.3 STT	Clarification BPCB
10	7.4 PAM	Additional Requirements & PAM checklist
10	12	Improved SA Clarification
10	7.2	Improved Guidance on • Grouping of work in permit packs • Supporting docs
10	Appendix A	Remove IA for BPCB re-issue
10B		Operations Coordinator added
11	1.1 & 2.2	JHA and Hazardous Energy
11	2.1	Line walking guidelines reference
11	2.2	Site inspection requirements JHA development
11	4.1	Hot work procedure updates
11	4.3	Permit duration guidance (ISRA)
11	5	NOA addendum added
11	6.1	EAC addendum added
11	6.2	Updated CSE guidance
11	6.6	GWC Contaminants and OTL requirements changes

Revision	Section	Amendment
11	8.4	Improved guidance for PAM attendees and responsibilities
11	9.1	Step 7 Card added
11	13.1	New support roles added
11	13.2	Guidance, persons performing multiple roles with a single work pack

About this Manual

Purpose

The purpose of this Integrated Safe System of Work (ISSoW) Manual is to detail the processes to ensure work execution is managed safely and consistently on all Ichthys Facilities. This Manual describes the rule sets, procedures, and controls required for safely executing works within the ISSoW framework.

Scope

ISSoW requirements are mandatory for INPEX operated Ichthys Facilities.

Intended User

The intended users of this manual are workforce who are:

- Trained and competent in ISSoW system.
- Required to manage or conduct permitted work scopes within the ISSoW framework.
- Required to oversee the ISSoW work process.

Training Programs

All personnel involved in the ISSoW system must be trained and assessed as being competent to the appropriate level defined as:

Level	Role
1	Work Party member
2	Applicant, Permit Holder and Work Scope Approver
3	Area Authority and Isolating Authority
4	Issuing Authority + Non-operational Area Approver
5	Permit Authoriser, Site Authority

Refer to [ISSoW Training Execution Plan](#) for specific training and assessment programs.

Competency Training and Assessment

Personnel assigned a role by their supervisors **shall** be assessed as competent before performing in the role. Level 5 roles shall be required to participate in an ISSoW interview to demonstrate competency, understanding and practical application of the role.

Electronic ISSoW System

ISSoW is managed electronically using Engica's Q4 Safety software. This manual shall also be used with a paper-based version of the system when the electronic system is not available.

Mandatory Requirements

Mandatory requirements are indicated by the wording 'must' or 'shall'. Mandatory requirements relate to critical controls, procedures, or are derived from the business rules in the INPEX standard. Any deviation from a mandatory requirement requires higher level authorisation through TA1 or TA2 ISSoW Written Approval.

Expected Requirements

Expected requirements are expected to use the wording 'Expected' where there is a strong organisational expectation to comply, unless sound technical judgment is documented i.e. Risk assessed to justify the exception. Will also describes something expected as a Responsibilities of the organisation or a role.

Recommended Practices

Where requirements utilise the wording 'should', these are recommended practices.

Deviations from these requirements can be approved by the Site Authority via conducting a High-Level Risk Assessment.

ISSoW Owner

The ISSoW system owner is the Vice President Operations.

1 ISSOW OVERVIEW

1.1 ISSoW Framework

Key Elements

The ISSoW is a work process designed to ensure execution of work is managed safely. It is supported by the following key elements:

Risk Assessment – The purpose of a High-Level Risk Assessment (HLRA) or Job Hazard Analysis (JHA) is to ensure that the work activity or task is executed safely by:

- Identifying sources of hazardous energy.
- Recognising potential hazards and implementing appropriate control measures.
- Ensuring that all hazards and controls are discussed, understood, and agreed upon by the Work Party, and
- Verifying that all controls are in place before the task begins.

Permits and Certificates – Permits and associated work practice certificates identify:

- Responsible persons
- Category associated with work activities
- Key controls for the category of work.

Isolation Management – Isolation management provides control of hazardous energy sources by:

- Identification of hazardous energy sources.
- Detailing the method of isolation.
- Monitoring isolation status.

Refer to [Integrated Safe System of Work \(ISSoW\) Isolation Manual](#) for specific details.

Site ISSoW Meetings – The site review meetings provide communication between key ISSoW roles to ensure alignment on scopes, risks, isolations and CONOPS / SIMOPS conflicts. Key meetings include:

Permit Application Meeting

Daily ISSoW meeting

Monitoring, Audit and Review – identifies and correct gaps or non-conformance in the ISSoW system.

Governance – ISSoW governance committee ensures ISSoW requirements and common practices are consistently applied. Refer to the ISSoW Governance Meeting Terms of Reference for more detail.

Competence – Training and assessment processes for key roles within the ISSoW system are contained in the [ISSoW Training Execution Plan](#).

2 WORK PLANNING AND RISK MANAGEMENT

2.1 Work Planning

ISSoW Work Planning

Work planning is managed through the following:

- Integrated Activity Plan
- Daily ISSoW meeting and Permit Application Meeting

Prepare for Maintenance and Return to Service

A procedure is required to detail the steps involved in preparing equipment for maintenance and return to service. Refer to [Integrated Safe System of Work \(ISSoW\) Isolation Manual](#) and the [INPEX Line Walking Guideline](#) for further guidance.

2.2 Risk Management

Work Requires a Risk Assessment

All permitted work on INPEX facilities must be risk assessed using formal documented processes.

The risk assessment (RA) must be specific to the identified work scope.

The risk assessment identifies work practice certificates and checklists required for higher risk activities e.g., Confined Space Entry.

There are two types of task-based risk assessment in ISSOW:

1. Job Hazard Analysis (JHA).

A JHA is used when the task:

- Contains well understood hazards and controls
- Is considered routine or low/moderate risk
- Meets none of the HLRA criteria.

JHA's do not require risk ranking as the task risks and controls are known and understood.

2. High Level Risk Assessment (HLRA).

High-level Risk Assessment (HLRA) is an ISSoW risk assessment that requires risk ranking and is conducted in a formal meeting. The Site Authority shall ensure the necessary technical personnel attend. HLRA should be performed with the following roles in attendance:

- Site Authority (typically)
- HSE Advisor
- Permit Authoriser
- Issuing Authority
- Work Scope Approver
- Area Authority (Optional)
- Technical Authority, as required
- Technician executing the task.

The Site Authority will approve the HLRA by signing as the Work Scope Approver.

A high-level risk assessment shall be used for:

- Tasks considered complicated but not requiring an Operational HAZID (as determined at the Planned Work Review)
- Tasks with a high residual risk (as determined at the Operational HAZID)
- Tasks requiring different controls not provided through certificates, controls or isolation e.g. removal of red spades.
- Tasks involving isolatable hazardous energies (see Section 4) and intrusive work, planned to be executed without isolating the hazardous energy.
- Activities assessed with a high or critical residual risk
- Tasks not considered routine or low risk.
- At the request of the RA Approver or Site Authority.

Complex work scopes requiring different controls than those provided through certificates, controls, or isolation e.g., removal of red spades, gas work.

Work scopes unable to meet the Isolation Safety Risk Assessment (ISRA) minimum isolation requirements. Refer to the ISSoW Isolation Manual for more details.

HLRA's shall be subject to initial and final risk ranking. The initial risk ranking shall occur without controls in place and the final risk ranking is with consideration to the controls stipulated on the HLRA.

Refer to the following additional documents for detailed information:

- [ISSoW Risk Assessment Guideline](#)
- [HSE Hazard and Risk Management Standard](#)
- [INPEX Risk Matrix Template](#)
- [Hazard Identification \(HAZID\) Workshops Procedure](#)

Personnel developing a risk assessment are expected to be familiar with or conduct a site inspection to become familiar with the scope of work and the work environment.

Risk Assessments developed off the facility are expected to be reviewed at the job site before being submitted to the Permit Application Meeting.

Risk Level Approval	The permit approval process requires the risk assessment be formally: • approved by the Work scope Approver • accepted by the Issuing Authority • reviewed by the Permit Authoriser / Site Authority. Any HLRA with a risk level of high or critical shall be reviewed and approved by the General Manager. The risk assessment shall be forwarded to the Site Authority for review for high or critical residual risk. If additional controls can be implemented to reduce the residual risk to moderate, the assessment can be signed by the Site Authority.
Risk Assessment within ISSoW	Risk assessments can be submitted by utilising: • Risk assessments application within the Engica system. Assessment is based upon the data within the INPEX ISSoW Hazard Tree Database. • ISSoW Risk Assessment / INPEX JHA forms for paper-based PTW activities.
Hazard Tree Database	The INPEX ISSoW Hazard Tree Database is a tool to support task-based risk assessments. The hazard tree uses work activities to define specific hazards and associated controls. The database hazards and controls can be edited and changed to ensure that the risk assessment is task specific. Permanent database additions / changes should be validated by the ISSoW Sub Committee.
Hazardous Energy Assessment (HEA)	All ISSoW Risk Assessments shall include a Hazardous Energy Assessment completed by the Permit Applicant / Work Party and Work Scope Approver. The Hazardous Energy Assessment should clearly identify the energy present and how the energy has been controlled. The HEA shall consider: • Any isolatable energy. • Knowledge of the equipment and plant status and whether an isolation can be achieved. • The potential consequence of a hazardous energy release. • The most effective controls should be selected with consideration to the hierarchy of control. All other non-isolatable hazardous energy shall be documented in the relevant job step of the HLRA or JHA To guide the assessment process, refer to ISSoW Risk Assessment Guideline.

Isolatable Energy

HEA outcomes shall be documented in job step one of the risk assessments (HLRA or JHA).

Hazardous energy that can be controlled by Isolation should be listed in Job Step 1 Hazardous Energy Assessment (HEA) with the relevant isolation certificate.

- Electrical
- Mechanical
- Process
- OIC
- Bypass.

If isolatable hazardous energy remains uncontrolled a High-Level Risk Assessment (HLRA) is required to record the hazards and controls within the JHA work task scope.

Non-Isolatable Energy

Non-isolatable hazardous energy is hazardous energy that cannot be isolated. This also includes scenarios where the energy is necessary to perform the task — for example: riding on top of a lift for fault finding, replacing luffing wire rope on a crane, or leak testing/pressure testing.

Any energy considered during hazardous energy assessment that is not isolatable must be detailed in the appropriate job step, as a task specific hazard with suitable control.

Hazardous Energy Controls

Approved HEA control selections are available in the Hazardous Energy Assessment section of the hazard tree:

1. Isolation required (EIC, PIC, MIC...)
2. Conduct Hazardous Energy Assessment at PAM (*RA cannot be approved with this selected)
3. Non-intrusive task - isolation not required
4. No Isolatable Hazardous Energy
5. Identified Isolatable Energy for intrusive task NOT ISOLATED. Controlled by details in HLRA/RA.

Control Selection for Multiple Hazards

A specific control may be selected for multiple energies.

Example: EIC selection to control process energy (pressure) and Electrical Energy (electrocution).

PAM Hazardous Energy Assessment

The PAM hazardous energy assessment is expected to review the submitted energy assessments associated with the task, with the PAM SME's and Attendees.

A PAM hazardous energy checklist [HOLD X060-A1-LIS-70007 **Not on Issue**] is available to assist the assessment process if required.

Specific Hazards and Controls

Task Specific

The primary focus of JHA risk assessment should be on identifying task specific hazards and controls.

This refers to hazards and controls that are:

- Introduced or required as a direct result of the work activity.
- Hazards or controls specific to a work location or work environment.

Non-specific Generic Hazards

Hazards that are encountered on a day-to-day basis while being at work on an operating facility are considered Generic Site Hazards. These are controlled by site rules, signage, Step Back 5x5's or toolbox talks and do not need to be documented in a JHA.

For example, PPE only needs to be mentioned if it is specialist PPE above the minimum site requirements.

Further guidance can be found in the [ISSoW Risk Assessment Guideline](#).

Amendments to Risk Assessments

The work group can add controls to the RA (with pen at the worksite) and implement the control when:

- A workgroup identifies a new control for an existing hazard already captured in the task RA.
- A new low risk hazard is identified that is not captured in the RA.

The work group shall contact the Area Authority and seek advice from the Permit Authoriser if a moderate or high-risk hazard is identified at the worksite.

Field Changes:

The above changes may be added to the field copy of the RA and counter initialled by the Permit Holder and Area Authority.

Redlined / marked up risk assessments are expected to be scanned and attached to the original risk assessment in Engica prior to close out and sending to history. Additional measure can be taken to record the changes as a lessons-learned should the Permit Holder deem it appropriate.

Alternatively – The work group can use the 'Enter Additional Hazards and Controls' function directly in Engica to capture changes. Once updated the Risk Assessment can be re-printed to provide an up-to-date version for field use.

Risk Assessment Templates

Risk assessments can be templated for all standardised and/or reoccurring planned maintenance work activities.

Templated Risk assessments are to be used as a priority where available.

Template Process

Templates are to be created from field validated risk assessments.

Template reviews will be conducted at the Permit Application Meeting by the following roles in attendance:

- Permit Authoriser
- Issuing Authority
- Work Scope Authoriser
- HSE Advisor.

The Permit Authoriser shall approve Templated Risk Assessments.

Changes to an approved template will be authorised by the Site Authority when a formal After Action Review (AAR) identifies changes are required.

Formal Hazard Identification Workshop

An operational HAZID is required for a complex scope of work, project or task involving multidisciplinary work groups or third-party contractors and is considered to be a high / critical risk.

The operational HAZID worksheet is a standalone document and is not directly linked to ISSoW or Engica. To progress a HAZID work within ISSoW, an Engica HLRA or JHA is expected be completed.

The HAZID worksheet may be attached or referenced by the Engica Risk Assessment with all task related Hazards and Controls documented in the JHA or HLRA.

Refer to [Hazard Identification \(HAZID\) Procedure](#).

2.3 Conflicting Activities**Simultaneous Operations (SIMOPS)**

Simultaneous Operations (SIMOPS) is defined as: performing two or more activities in a Company-controlled site where any, or all, of the activities could pose a significant risk by impacting the health and safety of personnel, the environment, assets, the schedule or performance of operations at that site. The operations could fall under individual control of another facility, business owner or project operating adjacent to Company facilities Onshore or Offshore.

SIMOPS Permits are issued under the ISSoW system.

SIMOPS are managed in accordance with the [Offshore Operations SIMOPS Plan](#).

Isolations and Third-Party Control

Required facility process or safety system isolations shall be managed through the INPEX ISSoW system.

SIMOPS isolations that have to be applied by a 3rd party e.g. ROV operated valves shall be managed via ISSoW. The specific details of this are described in the Offshore Operations SIMOPS Plan.

Work within control of a 3rd party facility and under the umbrella of the SIMOPS Permit shall be executed under the 3rd party's permit system.

Concurrent Operations (CONOPS)

CONOPS will be conducted under Site Authority control and as per the ISSoW system. The site CONOPS matrix shall be referenced at the daily ISSoW meeting where potential conflicts will be assessed and prioritised. Refer to facility CONOPS matrices.

Interfacility IC Linking

Interfacility CONOPS involving isolation require the application of OIM / SA teal locks and tags to be secured against their respective facilities IC's lockbox as per the agreed CONOPS hierarchy.

The SA shall coordinate and liaise for all status changes of this lock.

FPSO Tank Management

FPSO tank CONOPS shall be managed by soft locking mechanisms imbedded into the permit to work system. Each of the 27 Hydrocarbon blanketed tanks shall always be isolated onto the 3-tier status arrangement and shall only be approved to transition between each of the three status bar locations via an approved concurrent isolation and de-isolation certificates to move the associated tank ISO HASP.

- IN SERVICE (27 x HASP slots)
- IN TRANSITION (1 x HASP slot)
- IN MAINTENANCE (27 x HASP slots).

The single Transition HASP shall be used by all tanks.

Gas Export Pipeline (GEP)

Work on or adjacent to the GEP will be controlled by Company through ISSoW.

ISSoW roles and responsibilities upstream / downstream of onshore beach valve L510-MOV-0005 are as follows.

ISSoW Role	Upstream	Downstream
Requester	CPF Operations	LNG Operations
Permit Authoriser	CPF Site Authority or delegate	LNG Site Authority or delegate
Issuing Authority	CPF Issuing Authority	LNG Issuing Authority
Area Authority	CPF Operations OTL	LNG Operations Technician
Awareness Role	CPF Site Authority or delegate	LNG Site Authority or delegate

3 WORK NOT REQUIRING A PERMIT

3.1 Task Categories

A permit is not required for tasks that fit into the following two categories.

Category	Work Defined as:
Routine Operations	• Operation and monitoring of production and utility systems as per approved procedures. • Preparing equipment for maintenance or return to service, as per approved procedures where no additional work practice certificates are required. • Non-intrusive isolation and de-isolation e.g., valves of designated items of plant and equipment when performing isolation for an isolation certificate under isolation or de-isolation. • Operation of fixed cranes as per approved procedures. • Actions necessary due to activation of the site emergency response plan as directed by emergency command personnel. • Site visits by personnel to non-restricted operational areas for the purposes of visual inspection only.
Routine Duties	• Low risk repetitive / routine tasks carried out with an approved risk assessment and may include an approved procedure / maintenance work instruction. • Duties that do not add an additional risk to planned activities on the facility and do not require formal assessment against all other activities at daily ISSoW meeting. Examples of routine duties include, but are not limited to: • Testing of process equipment for process contaminants using non-ex-equipment • Lube oil top up / filling of atmospheric tanks using portable pump • Condition monitoring • Oil sampling • Lubrication.

3.2 Routine Duties

Valid Period	Routine duties are valid for a period of 12 months. Reviews will be conducted at the period end. If required, routine duties can be revalidated for continued use. The Site Authority can remove a routine duty from circulation at any time.
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Creating a Routine Duty

Creating a routine duty is as follows:

3. Identify a task as being low / risk (documented risk-assessment).
4. Create routine duty risk assessment in the electronic permit to work system and prefix with the words: 'ROUTINE DUTY'.
5. Include a concise / defined scope of work in the risk assessment to ensure no doubt about what can be done.
6. Attach supporting documents to the risk assessment e.g., procedures, MWI's, QRGs, etc., if required.
7. Convene a F2F review with IA, PA, SA, AA, HSE, & Work party.
8. Obtain electronic approvals as follows:

Approval Role	Details
Assessment team member	Relevant discipline Supervisor reviews routine duty assessment.
Awareness role	Site Authority acknowledges routine duty risk assessment and provides endorsement.
Work scope Approver	Operations Team Leader approves the routine duty risk assessment.
Final Approval	Issuing Authority reviews and completes final approval.

Creating a routine duty procedure is complete.

Performing a Routine Duty Task

Performing a routine duty task in field is as follows:

1. Work Party member obtains a copy of the routine duty risk assessment and any associated document when requested to perform the task.
2. Area Authority is notified. Verbal endorsement to proceed is given once conflicts in the field have been reviewed.
3. Work party reviews RA and any associated procedure, etc., performs a Step Back 5x5 prior to starting the task to identify any local hazards / risks.
4. Work party performs routine duty. Equipment operation verified as per Procedure / MWI.
5. Area is left in a clean and safe condition when work finishes.
6. Area Authority is notified of task completion and verifies work site is left clean and hazard free.

Performing a routine duty task is complete.

Routine Duty Revalidation

RD can be revalidated by putting the expired Risk Assessment back into the raised status for reapproval.

3.3 Remote Access and Cyber Security

Remote Access

Remote access may be provided to some systems for use by both 3rd party vendors and INPEX personnel e.g. Engineering Services.

Remote access is implemented via Remote Access Domain (RAD) System. Systems accessed may include:

- ICSS
- Packages
- Telecoms.

Remote Changes

Each remote session is classified as 'Remote Monitoring' and has no capability to modify the target system, or 'Remote Change' where there is an ability to modify the target system, regardless of the purpose of the session is to modify the system or not.

Remote changes shall be communicated in advance to the facility and correct permits shall be obtained and protocols followed as per below.

Remote Access Type	Details
Remote Monitoring	Remote user is logged in with Read Only access. The user can monitor the system or transfer files (e.g. logs) outbound. The user cannot modify the target system. Remote monitoring sessions have been assessed as unable to impact the target system and so shall not require a work permit. The I&C TA-2 shall approve capability for individual users to request Remote Monitoring sessions for each required target system. Requests are expected only be granted where the user has an operational need.
Remote Change	• Used for maintenance purposes. Remote change sessions provide the ability to modify the target system including inbound file transfers. Remote user has change access. • The I&C TA-2 approve capability for individual users to request Remote Change sessions for each required target system. Requests shall only be granted where the user has an operational need. • The Site Engineer or Operations Team Lead will approve individual Remote Change sessions to be conducted with specific time, duration, user and target system. This request shall only be granted after submission or discussion of specific scope, assessment of conflicts with current work scopes on site and confirmation of either of the following: – Valid permit to work (May include work practice certificates). – Approved Routine Duty

- There may be cases where a remote change session is required for monitoring or troubleshooting however with no intent to make a change. In such cases the session does not require a work permit in the same fashion as Remote Monitoring, however the session still requires permission from the Site Engineer or OTL to ensure facility awareness.
- In any case where visibility may be affected by remote access, the facility must be notified immediately prior to commencement of the remote access session and once the session is completed.

Remote Access Permit Application (PAM)

Remote access permit application is expected to be managed as per sequence below:

1. Permit Applicant/Work scope Approver contacts the Dayshift Issuing Authority 24hrs ahead of intended PAM date to inform them of intended work scope.
2. Issuing Authority calls Permit Applicant/Work scope Approver via phone / teams during PAM.
3. Permit Applicant / Work scope Approver discusses RA content and work scope as per normal PAM requirements.
4. Issuing Authority manages work pack and coordinates document preparation as per normal PAM Process.

Remote Access Work Scheduling

Scheduling and conflict management via Daily ISSoW meeting should be managed as per sequence below:

1. Permit Holder / Work scope Approver to set scheduled start date in Engica.
2. Permit Holder/Work scope Approver notifies Operations Team Lead (OTL) by email by 13:00 on the day prior to first issue request of the Permit.

Note- No requirement for ongoing notifications for re-issues unless requested by the OTL.
3. Operations Representative from specific discipline and/or present during PAM to discuss work scope at Daily ISSoW meeting if requested.

Remote Access Issuance / Suspension

Remote access permit issue shall be managed as per sequence below:

1. Permit Holder contacts the Issuing Authority via teams (Call / IM)
2. Residual Low risk tasks i.e. Routine Health checks. The Issuing Authority makes the Permit 'Ready for Issue'.
3. For Increased risk tasks with higher level issue selected. The PA makes the Permit 'Ready for Issue'.
4. Issuer notifies Area Authority (Control Room) that the permit is ready to be issued.
5. Area Authority will make the permit 'Issued'.

6. Permit Holder prints off permit pack and performs work whilst ensuring team members sign on as Work Party Members
7. On completion of daily activities, the Permit Holder shall contact the dedicated email account for the facility permit office and notify of requirement for permit to be suspended.

On Completion of the work the Permit Holder will scan in any logs with wet signatures and contact the Issuing Authority to close out the Permit.

Offshore Inter-Facility Network Extension

An INPEX Engineer (on facility) may access a target system on the other Offshore facility using a privileged session. The following protocol shall apply:

MTL or OTL shall be notified of troubleshooting session and if visibility will be impacted.

Risk assessment shall be completed with the Operations Team on the affected facility before work starts.

Any change resulting from a troubleshooting or monitoring session shall have the appropriate ISSoW and MOC, if required.

Process Control Tuning

A work permit is not required for process control tuning unless any other work certificate is required. The OTL shall be notified of tuning before work starts and a risk assessment shall be completed, where appropriate.

Third Party Vendor Laptops

Non-approved devices such as vendor laptops are not permitted to be connected to INPEX control, telecoms, package and safety systems. Refer to [Vendor Laptop Cyber Security Assessment Procedure](#). This control should be captured in the ISSoW PTW.

Removable USB Devices

Non-approved USB devices e.g., USB drives are not permitted to be connected to INPEX control, telecom, package and safety systems. Approved removable drives that are permitted to connect to INPEX systems are INPEX controlled.

Refer to the INPEX [Quarantine Kiosk Quick Reference Guide](#) for more information. This control should be captured in the ISSoW PTW.

4 WORK PERMITS

4.1 Work Permits

Control Document

A work permit is the document which controls approval to execute work on INPEX facilities. The permit shall:

- Establish and record responsibilities and accountabilities for activity execution.
- Detail the scope of the work activity, methodology and equipment to be used.
- Define and approve the activity duration.
- Identify equipment to be worked on.
- Link the defined work scope to supporting documents, work certificates and isolation certificates.

Permits for Multi-discipline Activities

Permits may encompass multi-discipline activities. In some cases, it may be safer and more efficient to break down a work scope into several permits to ensure:

- conflicting activities do not occur.
- controls are appropriate to the specific activity undertaken.

Permit Types

There are three permit types as listed in the below table.

Permit	Description	Examples
Cold Work	• A work scope that does not fall into either hot work category.	• Removal of lagging from process pipework, using hand tools • Scaffolding utilising only hand tools.
Hot Work Category 1 (Positive Ignition source)	• Includes all naked flame or spark producing activities that will produce a positive source of ignition. • Category 1 Hot Work in a live hazardous area shall only be considered if there are no other reasonable alternatives. • Refer to Hot Work Procedure for further details	• Welding • Burning • Grinding • Use of heat guns

Hot Work Category 2
(Potential ignition
source)

- Includes all non-spark producing/low energy spark (no potential for retained heat above hydrocarbon ignition temperature upon cessation of activity) work that has the potential to create an ignition source or where equipment is being used that is not electrically "intrinsically safe"
- Vehicles, motorized plant e.g., facility approved generator, compressor, elevated work platform
- Non-spark producing metal chipping and drilling
- Use of non-IS cameras
- Use of any non-IS battery operated equipment
- Use of electrical equipment that is not approved for the designated zone
- Use of ionising radiation
- Use of radioactive sources
- Opening electrical junction boxes e.g., lighting circuits
- Wet abrasive blasting

4.2 Extended Time Permit

When Used

Extended Time Permits (ETPs) are frequently performed tasks which do not require a work practice certificate.

Examples may include:

- Use of a non-IS digital camera.
- Use of non-IS condition monitoring equipment for vibration monitoring.
- Process sampling.
- Routine inspection of accommodation laundry facilities.

Risk Assessment

The risk assessment demonstrates the residual risk of the proposed work scope as low or moderate.

A review of the RA shall take place before start of the task. An approved procedure with defined steps and mitigating controls can also be used.

A toolbox card must be completed each time the ETP is placed on issue. This allows for the capture any hazards at the time of ETP issue.

ETPs and Limits

ETPs shall meet the following criteria:

- Documented risk assessment with a low or moderate residual risk as per INPEX Risk Matrix.
- Be a frequently performed task.
- Does not require process / mechanical or electrical isolation certificates.

An ETP shall not be:

- Used if an electrical or process/mechanical isolation certificate is required to execute the work scope.
- Linked to any isolation certificates.

OWN Isolations may be carried out when working under Extended Time Permits. Refer to [Integrated Safe System of Work \(ISSoW\) Isolation Manual](#) for more information.

Follows ISSoW Process

ETPs follow the ISSoW process flow but shall be approved by the Site Authority. All ETP's should be scheduled for execution and visible for review on the Permit Dashboard if required for conflict assessment during the Daily ISSoW meeting. Assessment is not mandatory.

ETPs are valid up to a maximum of 12 months at Site Authority discretion.

All supporting documents i.e. PFM, RTS, markups should be scanned and attached to the ETP at the completion of each task/use.

4.3 Duration of Permits

Limited Duration	A normal permit should be limited in duration to maintain effective control in changing circumstances. Limiting duration minimises the number of unused permits in the system and assists in management of CONOPS. Permits linked to process isolations, should nominate durations aligned to the nominated ISRA duration. To ensure isolations are reviewed prior to their continued use or prepared for LTI.
Valid Time Period and Work Type	The duration of a permit is determined after review of the risk assessment and during the approval process. There are no maximum time frames specified for the duration of permits, as a guide those with a validity period greater than 3 months should follow the extended time permit (ETP) process. The permit will stipulate a valid time period for planned completion of the work. SIMOPS permits have a maximum validity of three (3) months.
Permit Revision	Permits can be re-validated by the creation of a new revision. This new revision is considered a new permit, requiring all necessary Re-Approval / Awareness completed by the same role as the original permit. Linked Process isolations shall be reviewed to ensure the ISRA remains valid for the scope and extend duration. Along with the validity period, minor changes that do not alter the overall risk profile can be made to the Permit Work Description - Section 2 Controls, Permit Additional Instructions.

4.4 Work Permits and Isolations

Isolation Certificates	Isolation certificates are used to isolate any source of energy e.g., mechanical, electrical, process, hydraulic, pneumatic, radioactive or thermal prior to issuing a work permit. Refer to the Integrated Safe System of Work (ISSoW) Isolation Manual for detailed information.
Isolations and ISSoW Process	The Isolating Authority shall apply and confirm the integrity of the isolation as per the isolation scheme and prepare for maintenance procedure. The isolation is deemed isolated following an independent verification by a relevant Isolating Authority. The Issuing Authority secures the isolation key safes following the lockout tagout process. A permit can now be issued to work on the isolated piece of equipment once the lockout tagout process of applying a permit lock is complete. De-isolation and Sanction to Test – De-isolations are expected to follow the key principles outlined in the ISSoW Isolation Manual.

For Sanction to Test requirements refer to mandatory preconditions in this manual.

5 NON-OPERATIONAL AREA PERMITS

The Non-Operational Area Permit manages work scopes in designated non-operational areas. To ensure control of works is assigned to suitable work scope manager on the LNG facility that have been assessed for:

To qualify as NOA these permits shall be risk assessed to have:

- No impact on Facility integrity
- No potential to impact production; and
- No impact on environment.

It is acknowledged that works conducted outside of the Operational Area generally face reduced inherent risks when compared to works conducted within the Operational Area. The NOP process ensures impact on Operations ISSoW system is minimised to allow focus on operational priorities.

NOP Boundaries	The NOP shall only be issued and applied in areas on the facility that have been assessed and approved as suitable as per the NOP Approved Activity List (Appendix HOLD).
NOA Roles	NOPA MTL who is NOA and WA competent.
NOA RA	The WA reviews the RA, makes 'Ready for Approval' and manages the Work pack to create the Permit document. NOPA approves the RA and NOP.
Processes	The management of the NOP shall be in accordance with the permit process with the following exceptions: • The omission of the Area Authority (AA) endorsement from the NOP. • Issuing the NOP is undertaken by the Non-Operational Area Permit Approver (NOPA.) • The NOP is not issued to an individual as per normal work permits. The Permit holders' details will be added to the permit pack notes. A diagrammatic display of the NOP permit workflow is displayed in APPENDIX D: and APPENDIX E:.
NOA Issue	• The NOPA will undertake the CONOPS assessment when issuing the NOP. • The NOPA shall review the Risk Assessment and the NOP and when satisfied that the work scope may proceed safely, Makes the NOP ISSUED.
NA Validity	The validity of the NOP is set by the NOP Authoriser.
NOA Suspension and Closure	NOA permits are returned to the NOPA by the PH at the end of each shift or suspension or close out. Completed NOA permit are to be returned to the Permit Office.

NOA Cranes	Crane operations are permitted under the NOP system with the following conditions as per the Checklist found in the Lifting Operations Management Procedure .
NOA GDPC	Ground disturbance / penetrations are permitted under NOP subject to Electrical Technical Authority approval with Ground Disturbance / Penetration Certificate.
NOA Competency	Applicants, WA and NOPA's shall all be WA and NOA competent.

6 WORK PRACTICE CERTIFICATES

6.1 Overview

Defining

Work Practice Certificates are used to further define, assess, verify and approve risk controls for certain type of hazards.

Work Practice Certificates

On all facilities the following work practices require further control and assessments. Technical Authority (TA) awareness roles shall be required as shown.

These controls have been formalised with a work practice certificate as follows.

Certificate	Work Practice	TA Aware	Document
Confined Space Entry Certificate	Confined space entry	N/A	INPEX Confined Spaces Standard INPEX Confined Space Entry Procedure
Bypass Certificate A or B	Bypass of safety systems	Engineering*	Operations Functional Safety Management Strategy
Electrical Safety Certificate	Proximity to live electrical sources	Facility RPE	Electrical Safety Operating Procedure
Electrical Access Certificate	Authorisation which grants access	Facility RPE	Electrical Safety Operating Procedure
Gas Work Certificate	Work involving gas	N/A	High-Level Risk Assessment - CONOPS Matrix
Dive Certificate	Diving	Diving Specialist / focal point	Diving Management Standard
Ground Disturbance / Penetration Certificate	Ground disturbance / penetration work	Ground Disturbance and Penetration Authority	Ground Disturbance and Penetration Standard Ground Disturbance and Penetration Procedure
Critical Lift Certificate	Critical Lift Work	Category 3 – Site Competent Lifting Authority	Lifting Standard Lifting Operations Management Specification

*Engineering required when either selected in the control requirements or as specified by the functional safety management strategy.

Process Flow

Initial risk assessment process determines certificates required. Population of the certificate is coordinated by the Issuing Authority. The certificate drives the authorisation to the appropriate level for specific categories of work. Refer to process flow in APPENDIX C:.

Approval, Issuing Acceptance and Endorsement	Certificates shall have specific approval roles dependent upon the type of work practice covered. Approvals as detailed in APPENDIX C: shall be applied. The Issuing Authority or Permit Authoriser are responsible for designating the certificate 'on issue'. The Permit Holder shall then sign to accept the certificate. The Area Authority shall make the final field check and endorse the certificate.
Valid Time Period	Valid time period of a work practice certificate is determined by the permit. Refer to Duration of Permits. The exception is the Confined Space Entry Certificate where the CSE certificate must be in place before the space can be entered via a permit to work. Isolation certificates including the Bypass Type A certificate may stand alone and are not governed by permit duration.
Issuing Hierarchy	Certificates shall be issued prior to issuing an associated permit. All conditions specified on the certificate shall be in place before the work may start. Initial gas testing requirements shall be performed before the certificate is issued, if required.
Suspension	Certificates, with the exception of CSE, are not required to be suspended. Once issued, certificates remain on issue until such time as all associated permits are closed. All requirements and conditions on the certificate shall be reviewed and proven to be in place prior to re-issuing a suspended permit.
Certificate Completion	Following the completion of a particular work scope and closure of the permit(s) the following process shall occur: 1. Permit Holder will complete the certificate closure section. 2. Area Authority performs a site check to confirm worksite is safe and clean. 3. The certificate may then be closed. In the case of a Bypass or CSE certificate, several permits may be associated and all require completion. The Permit Holder for the final permit should also sign off any associated certificates, if necessary.

6.2 Confined Space Entry Certificate

Certificate Hierarchy

The Confined Space Entry (CSE) Certificate will:

- follow the 'parent-child' concept of linking and locking on to isolations
- have the Confined Space Entry Certificate as the 'parent'.

The certificate must be locked on to the isolation key-safe-key-hasps via a hasp to ensure single-point lock on. A confined space entry tag shall be attached to the key-safe-key hasp to identify where the permit tags shall be placed.

Initial Entry for Gas Testing

Entry to a confined space to perform preparation activities such as initial gas testing shall be carried out under a PTW with the CSE certificate issued for initial entry only.

Atmospheric Contaminants

Atmospheric conditions identified in the CSE risk assessment shall be recorded on the CSEC in Section 2 initial atmospheric testing.

The CSEC lists hazardous conditions (H₂S, Benzene, CO, Mercury, Hydrogen, NORMS, VOCs, O₂, N₂, etc.) and the associated limits for entry without respiratory protection. Respiratory protection options allow for entry at levels outside these limits as per the CSE and Hazardous Process Contaminant procedure (HPC).

In cases where an atmosphere is outside the 'allowable limits' they should be recorded in the 'other' box in the initial atmospheric testing section.

Suspension and Re-issue

The Confined Space Certificate is suspended at completion of each shift and re-issued at the beginning of the next shift. The atmosphere shall be tested before re-issue.

Certificate Closure

The CSEC Permit Holder will have the Area Authority sign the Certificate as completed on completion of the Vessel Closure Checklist. The Permit Holder shall take the CSEC to the Permit Authoriser for final sign off.

6.3 Bypass Certificate

When Used

A Bypass Certificate is primarily used when:

- Authorising and controlling defeats on Fire and Gas or safety instrument function (SIF) safeguard systems for the purpose of executing planned work.
- Defeating a system which affects the performance capability.
- An override is required until an MOC is implemented.

Examples include:

- Override of SIS or Fire & Gas devices if an approved procedure does not exist.
- Forcing a control valve or ESDV on a live system.

Types Available

Two types of bypass certificates are available:

Certificate	Used for
Bypass A	When the bypass is required to be in place for the entire duration of the task e.g., Fire & Gas detection devices located within turbine enclosures to perform planned maintenance activities.
Bypass B	Short term overrides that are not covered by approved MOS procedures. The override can be applied continuously or toggled active / inactive depending on work activity.

Additional Detail

Refer to the [Operations Functional Safety Management Strategy](#) for detailed information.

Operational Impact and Information Assessment

When applying a bypass certificate the operational, impacts, risks and controls associated with its application shall be assessed:

- Risk assessment for the consequences of applying the bypass.
- Mitigation specifying the controls / action required for the duration of the bypass.
- Performance standard impacts assessed.
- Cause and effects.
- Safety bar drawings.
- HIMA panel screen grabs.

6.4 Electrical Safety Certificate

When Used	The Electrical Safety Certificate (ESC) shall be used when working on or near live exposed conductors rated LV and above or where deemed necessary by risk assessment.
Work Controls	The ESC shall clearly state the following work controls: • Which apparatus the Work Party has access to. • What hazards and controls have been identified. • Warning and / or instructions to be observed by the Work Party. • Location of the nearest point of live HV and LV supplies. • Issuer of the ESC including time and date of issue. • Receiver the ESC including time and date of receipt. Drawings and Attachments – The ESC should be: • Accompanied by the relevant drawing clearly identifying the locations of live conductors. • Attached to the work permit highlighting the additional controls, when required. Communications – Communication relating to the performance of electrical work or to the operation of, or access to electrical apparatus, shall be clear, direct and definite and delivered by verbal or written means only. Hand signals shall not be used to indicate live or dead electrical apparatus. Communication systems or equipment shall be in place to enable: • required communications between Work Party members. • the Work Party or the Electrical Safety Observer (where required), to sound the alarm or otherwise initiate emergency rescue procedures.
ESC and ISSoW Process	The CCR shall be informed prior to any LV or HV switching or isolation / de-isolation. Verbal or written confirmation of work completion from the person in charge of the Work Party shall be received prior to energisation.

6.5 Electrical Access Certificate

When Used

An EAC is issued to ensure safe access to Isolated and Earthed High Voltage and High Energy Low Voltage Electrical Apparatus.

The EAC shall specify the required controls to be implemented to minimise the risk associated with working on isolated and earthed electrical apparatus.

- Intrusive high-voltage or low-voltage high-energy electrical work refers to activities that involve physical access to electrical systems or equipment by removing protective barriers or enclosures to reach internal components or circuits. This type of work typically deals with systems operating at high voltage levels above 1,000 volts for alternating current (AC) or 1,500 volts for direct current (DC) and for low-voltage apparatus with currents equal to or greater than 800 Amps or having electrical arc-flash energy exposure above 8cal/cm².

Additionally, an EAC is required for work that:

- involves removal or demolition of HV and LV high energy cables.
- higher risk electrical activities deemed required by a risk assessment.

Exceptions:

RPE Approved motor isolations were connected by moulded plugs and no provision to apply a working earth

or

When there is an applied earth and no provision to apply a working earth within the HV terminal box.

The EAC is issued prior to the test for de-energised.

EAC Paper Certificate

Two copies of the EAC are provided in the Electrical Access Certificate pad.

White:

- Master placed in a yellow bag with copy of child EIC and secured with IC lock (Teal with EAC hasp).

Blue:

- Permit Office copy with Master parent and child EIC.

The issuance and relinquishment of the EAC is expected to take place at the work site.

EAC Roles

Key personnel involved in the EAC process and their responsibilities include:

- RPE / SAEP: Issue EAC, validate RIC, ensure controls are in place.
- RIC: Accountable for work under EAC. Must be HVAEP authorised. Cannot delegate accountability.
- TIC: Must be HVAEP competent. (also acts as RIC for STT)
- Work Party: Sign on / off, follow RIC direction, verify safe conditions.

EAC Submission Requirements

The EAC shall clearly state the following work controls and include as a minimum:

- A reference to the associated Switching program number.
- Drawings references.
- Controls for test for de-energised.
- Working earth schedule.
- details of access to the Electrical Apparatus (a sketch of the work area may also be provided).
- Details of hazards, precautions, Live HV / LV near the Work Area.

Abnormalities section for recording anything the HV Operator is to be advised of before restoring the switching.

EAC Processes

EAC Administration

The paper EAC must be properly linked and administered through the ISSoW system:

- EAC must be linked to Engica hazard tree and associated with a child EIC. Example: APPENDIX B:
- Only one RIC per EAC.
- EAC remains valid for the duration of the work.
- PTW is required for TFD unless exempted by RPE.

EAC Working Earths

Working earths are critical for ensuring electrical safety and must be managed as follows:

- Must be applied before EAC issuance and documented in Section 2 of the EAC.
- Only RIC under RPE direction may place/remove working earths.
- Changes to working earths must be communicated and documented.
- Reinstatement must restore safety and be verified before resuming work.

EAC Transfer

If the RIC becomes unavailable, the EAC must be transferred to another authorised individual:

- Transfer must be documented, communicated, and acknowledged in Engica.
- No work may proceed until the new RIC signs on and secures the EAC.

EAC Suspension / Reissue

Suspension and reissue of the EAC are governed by the following principles:

- EAC is only suspended for long-term isolation.
- RPE determines whether to suspend or cancel.
- Reissue only occurs once original conditions are restored.

Change to EAC Conditions

No changes to isolation points of an EAC shall be made after it has been accepted and signed by the RIC. If changes to isolations are required, the EAC shall be cancelled and a new one raised.

Note: The 'moving or adjustment of working earths' does not constitute a change to the conditions specified in the EAC.

6.6 Gas Work Certificate

When Used

All reasonably practicable efforts to render equipment gas free must be made before considering the use of gas work, including shutdown. Activities requiring a gas work certificate include breaking into equipment that is impractical to isolate or gas free. For example:

- Removal or installation of an LNG loading pump.
- Pigging.
- Change-out of dehydrator adsorbent.
- Any other gaseous contaminant that is present that is potentially hazardous i.e. carbon monoxide, H₂S, etc.

BA is Specified

Breathing apparatus (BA) shall be specified on the certificate when:

- The quantity of expected vapour release could have an adverse effect on workers' health.
- Hazardous or toxic process contaminants are present e.g. mercury or benzene.
- Quantity of potential release cannot be ascertained prior to breaking flanges.

Planning

The following shall be considered when planning for gas work:

Aspect	Description
Hazards	• Identify the exposure risks and health risks of the different gases likely to be encountered e.g., H₂S, BTEX compounds. • Hazards associated with the work method and hazards introduced by the work method e.g., equipment required – non-spark tools. • Confirm leakage rate and pressure. • Environmental conditions are reviewed e.g., no gas work shall be undertaken during periods of potential lightning. • Conflicts are identified and addressed e.g., ensure no hot work (level 1 or 2) within the specified exclusion zone.
Work Method	• Identify and review alternative means of performing the activity to minimise worker exposure. • Determine number of persons allowed in the gas work area. • Check for existing procedures with details for the work method required. • Determine ventilation requirements. • PPE requirements taking escalation and ignition potential into account. Breathing apparatus and PPE shall not be relied upon to mitigate potential ignition.

Work Controls

	• Develop a contingency plan for any escalation of leakage during the gas work. This plan shall identify: • Back-up isolation valves • Shutdown systems • Units to be shutdown.
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The following work controls shall apply for gas work certificates:

Control	Details
Exclusion Zone	• Established for all gas work • Size of zone determined by prevailing wind conditions, leakage / exposure rate / volume of maintenance activities, type of gas • Activities concurrent with gas work shall be strictly segregated
Personal Gas Monitors	• PGMs shall be worn by the Work Party or be present at the work site as per risk assessment.

Gas Work and ISSoW Process

The use of gas work certificates shall be strictly controlled. The following shall apply:

High Level Risk Assessment – It is mandatory for the Site Authority to work scope approve gas work certificates via the high-level risk assessment due to the hazardous potential of this work.

Overall Command of Gas Work – The Operations Team Leader (OTL) shall maintain control of the gas work. The OTL shall: be present immediately prior to and for the duration of the gas work. monitor environmental conditions to assess whether the conditions are acceptable for work to continue.

For longer duration activities the OTL may delegate the duration responsibility to a competent Area Authority.

Emergency Response – ERT leader is expected be involved at the planning stage of gas work and briefed before work starts. The Emergency Team shall review all gas work emergency escape plans before the issue of certificates.

6.7 Dive Certificate

Dive Certificate Application

All diving operations shall require a Dive Certificate when:

- Diving operations are to take place on or within 500m from a facility.
- Work on subsea infrastructure is required.

Dive Project Plan and ISSoW

A detailed comprehensive Dive Project Plan should accompany the Dive Certificate. The plan will:

- Include rescue plans and associated check sheets.
- Be subject to a formal HAZID workshop risk assessment.
- Require technical authority approval.

6.8 Ground Disturbance and Penetration Certificate

When Used

The Ground Disturbance and Penetration Certificate (GDPC) is applicable to any activity that involves break, scraping or penetration of a surface. This includes:

- Earthworks or ground disturbances of any kind.
- Penetrations into walls, floors and ceilings which conceal services or provide structural support.

The certificate shall have application as follows:

Onshore – including the LNG processing plant at Bladin Point together with its administration buildings, offices, workshops, etc.,

Offshore – including the CPF and the FPSO excluding subsea activities.

Work Description and Details

The GDPC or referenced documents will detail the limits of the excavation or penetration in which it covers as follows:

Aspect	Details
Work Details	• Include the location, size and depth of the agreed excavation or penetration. • Location and type of any nearby services shall be identified. • All applicable documents shall be referenced on the certificate with mark-up printouts highlighting the proposed excavation or penetration. • Current work-related technical drawings shall form part of the onsite work package.
Electrical Services	• If the excavation contains potentially concealed electrical conduits, then the certificate shall specify: • Hand tools only until the service is physically identified. • Electrical spotter is required.

	CSE Certificate	- The excavation shall be risk-assessed to determine whether as a result of the excavation a confined space has been created. - Should the excavation be categorized as a confined space; a CSEC shall be prepared and implemented.
GDPC and ISSoW Process	In all cases, a pre-work site inspection by the Permit Holder and Area Authority shall take place. The location and limits of the excavation shall be clearly identified.	

6.9 Critical Lift Certificate

When Used	Reference should be made to INPEX's Lifting Standard and Lifting Operations Management Specification. A Critical Lift Certificate (CLC) is required to be raised in conjunction with a risk assessment for all Category 3 Critical Lifts. A Lift Certificate is not required for lifts classified as 'simple' or 'complicated' lifts. Local procedures are expected to clearly identify when lifting operation activities or tasks shall be subject to a PTW. Competent persons who have the experience and knowledge of lifting operations shall categorise the lift according to the criteria described in INPEX's Lifting Operations Management Specification.
Facility Developed Procedures	All facilities shall develop, implement, and maintain safe work procedures for lifting operation describing: - Roles, responsibilities and accountabilities for safely managing the task. - Authorisation and supervision requirements - Risk assessment requirements. - Interface with the applicable Permit to Work (PTW) - Any special precautions for working around infrastructure, pedestrian areas or hazardous energy sources e.g., overhead or underground power lines, gas pipelines, etc.
CLC and ISSoW Process	The CLC ensure the appropriate levels of authority and technical competence have thoroughly risk-assessed the activity and ensured that all risk-mitigating measures are implemented. Critical lifts require a lift plan approved by: - Site-competent Lifting Person - Lifting Specialist.

Exceptions

A critical lift certificate is not required for 'routine critical lifts' including:

- Personnel transfer to / from the CPF and FPSO via the 'FROG personnel transfer capsule'
- Routine over process lifts, e.g. mini containers to designated laydown areas.
- Provided that an approved critical lift procedure is used and signed by the same personnel as the critical lift certificate. The approved procedure shall contain the applicable controls from the certificate.

7 ISOLATION MANAGEMENT

7.1 Isolation Certificates

When Required

The application of an isolation varies from isolating a single item, to an integrated activity involving the isolation, draining and purging of large items of process equipment.

Refer to the [Integrated Safe System of Work \(ISSoW\) Isolation Manual](#).

Isolation involves physical segregation from sources of energy or hazardous substances. When an item is considered 'isolated', it is rendered incapable of being made live without deliberate.

manual intervention. Any isolation of energy will be managed under an isolation certificate e.g. mechanical, electrical, process, hydraulic, pneumatic, and radioactive.

Types of Certificates

There are four types of isolation certificates:

1. Electrical.
2. Mechanical.
3. Process.
4. Own Isolations.

Types of Isolation

Equipment Isolation

An isolation to protect personnel and the facility, for the purpose of undertaking invasive work. Isolations shall be developed and applied as per the ISSoW manuals.

Segregation Isolation

An isolation is required to separate a section of plant / process for non-invasive work, a segregation isolation may be applied. Segregation isolations are not required to conform with ISRA as the isolation is not for intrusive works.

Segregation isolation certificates shall state in the reason for isolation field that the **isolation shall not be used for invasive work**.

Examples include.

- Isolation inboard and outboard riser isolation valves for flowlines during rig moves.
- Segregating the slave cylinder outlet from the downstream piping on a water mist skid in case of inadvertent activation
- Prevent pump rotation from process induced flow for non-intrusive scopes.

Segregation isolations are recorded on an isolation certificate and shall state within the Reason for Isolation field that the isolation shall not be used for invasive work and be approved by the OTL.

Long Term Isolations

An isolation that is required to remain in place without any work being carried out. Refer to isolation manual.

7.2 Changes to Approved Isolation Certificates

Altering Approved Certificates

Isolation Certificates may need to be altered after initial approval when an isolation point may require to be:

- de-isolated temporarily to carry out testing on a piece of equipment, and reapplied following testing.
- added to an isolation to improve the isolation integrity.
- removed permanently from the Isolation Certificate in order to progress a particular work scope.

Isolated position amended permanently on the isolation certificate in order to progress a particular work scope.

Change Process

When an Isolation Certificate is at the isolated state and a change is required, the following processes apply:

Process	Details
Isolation Modification	• The intent of Isolation modification is for a permanent change as per the following: – Permanent removal of an isolation point – Permanent addition of an isolation point – Permanent change to an isolated position • Isolation safety risk assessment shall be carried out on the proposed amendment before approval. • The modify function is incorporated into the isolation certificate process as follows: – Issuing Authority will communicate with the Area Authority and Work Parties affected to request return of all associated permits e.g., signed off or suspended and returned to the Permit Office. – Issuing Authority will review entire work scope and account for all associated permits before changing state of isolation to 'modify'. – Isolating Authorities shall prepare and review the modifications – All isolation modifications are to be approved by the Permit Authoriser. – Isolation modifications are not intended to be circular i.e. adding and removing the same points to the same IC.

Sanction to Test (STT - temporary adjustment of isolation points)	• May also be used to allow additional equipment preparation e.g., purging of equipment already isolated • A Sanction to Test Certificate is required to be created and used to facilitate the Sanction to Test process. Refer to Section 6.3 for more information. • A permit is expected to be raised and reference the Sanction to Test Certificate if the test involves additional equipment.
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Minimum Considerations

The minimum considerations required before modifying an isolation scheme are as follows:

Assess modification alternatives e.g., linking a new isolation certificate to an existing scheme.

Determine impact on type of equipment and process isolated e.g., additional draining, flushing, purging or venting required.

Assess overall isolation integrity e.g., modification maintains integrity and satisfies an [Isolation Safety Risk Assessment \(ISRA\)](#) or the Electrical Isolation principles in the [Electrical Safety Operating Procedure](#)

Assess the changes required to prepare for maintenance / return to service procedure.

Add or Remove Isolation Point

Add isolation point(s) is as follows:

1. Review ISRA if process / mechanical isolation.
2. Identify the isolation point(s) to be added.
3. Add isolation point(s) to bottom of isolation list.
4. Allocate a unique number identifier to the isolation point(s).
5. Amend / add to marked up P&ID if applicable.
6. Apply and verify as follows:
 - Isolating Authority applies the isolation point(s) and signs the Confirmation section of the isolation list.
 - A second Isolating Authority verifies that the isolation is correct and signs the list.
 - The Isolating Authority changes the status of the Isolation Certificate to 'Verified'.
7. Change status – The Issuing Authority makes the Isolation Certificate status 'Isolated' allowing all permits to be reissued.

Add isolation point(s) complete.

Remove isolation point is as follows:

1. Review Isolation safety risk assessment if process / mechanical isolation.
2. Identify the isolation point(s) to be removed – Issuing Authority selects and removes isolation point(s) from the Isolation Certificate List.
3. Remove isolation point(s) as follows:
 - Issuing Authority engages Isolating Authority to de-isolate point in the field and confirms de-isolation on Isolation Certificate.
 - Confirmed removed, Isolating Authority shall make the Isolation certificate status 'Verified'.
4. Change status – The Issuing Authority makes the Isolation Certificate status 'Isolated' allowing all permits to be reissued.

Change isolation point(s) positions is as follows:

1. Review ISRA if process / mechanical isolation and / or the ESOP for Electrical isolation requirements.
2. Identify the isolation point(s) to be changed.
3. Change the isolation point(s) in the isolation list.
4. Amend the marked up P&ID / Electrical drawing to show the changes.
5. Apply and Verify as follows:
 - Isolating Authority unlocks the isolation and re-isolates in the new position (s) and signs the Confirmation section of the isolation list.
 - A second Isolating Authority verifies that the isolation is correct and signs the list.
 - The Isolating Authority changes the status of the Isolation Certificate to 'Verified'.
6. Change status – The Issuing Authority makes the Isolation Certificate status 'Isolated' allowing all permits to be reissued.

Change isolation point(s) complete.

Using STT for Additional Purging

An approved prepare for maintenance / return to service procedure shall be used where an STT is used for additional purging / re-pressurisation. The procedure shall clearly outline:

Key steps involved.

- Testing medium and pressure to be used.
- De-pressurisation method.
- Removal of any possible trapped pressure within existing isolation.
- The activity and associated procedure shall be treated as increased risk and require Site Authority Approval.



NOTE:

STT is not intended to be used routinely for additional purging.

7.3 Sanction to Test

Sanction to Test Certificate

A Sanction to Test certificate is required to be created and is used to facilitate the Sanction to Test process. The Sanction to Test certificate only covers minor safety precautions such as barricading the area. Consideration shall be given to whether an additional permit and risk assessment for test equipment or test activities is required.

Mandatory Pre-conditions

The following mandatory pre-conditions are required prior to issuing a Sanction to Test:

- All permits and associated certificates reliant upon the Isolation or bypass certificate subject to sanction to test must be completed, signed off or suspended.
- All associated isolation schemes shall have all permits and associated certificates completed, signed of or suspended.
- The Permit Holder will notify the Area Authority and together will ensure that all Work Party members are aware of the planned test.
- Consideration will be given to whether an additional permit and risk assessment for test equipment or test activities is required.
- The Permit Authoriser shall only approve the Sanction to Test once all associated permits have been either suspended or completed.
- No work shall be undertaken once a Sanction to Test is approved.
- Testing that requires the temporary suspension or removal of bypassed isolation points shall ensure the original approver level, Site Authority, has acknowledged awareness of the STT certificate.

Testing Process

The following testing process shall occur:

1. Issuing Authority will confirm with the Area Authority the worksite has been left in a clean and safe condition. Non-essential personnel have been notified and removed from the work site.
2. Issuing Authority completes the following:
 - Issues certificate to Sanction Test Holder who accepts by signing the appropriate section.
 - Provide the appropriate isolation lock key for temporary reinstatement of the identified isolation points.
 - Sanction to Test (STT) tags are placed on the key safe/key hasp that has the isolation temporarily removed while the test is being conducted. This tag is to give a visual indicator as to why a key safe/key hasp is currently open.
 - Sanction to test tags are also placed on each of the isolation points that have been restored to allow the test to be conducted. This action is performed by the Isolating Authority.
3. Sanction Test Holder meets Area Authority at work site to discuss test and confirm all additional safety precautions are in place.
4. Area authority endorse the Sanction to Test if satisfied precautions are adequate.
5. Isolating authority temporarily removes the isolations as per Sanction to Test.
6. Sanction to Test Holder may then perform the test

If	Then
Test successful and no additional work required.	• Sign off certificate with isolation remaining de-isolated. • Return to Issuing Authority.
Test successful and additional work required.	• Place isolation back into isolated position. • Sign off certificate. • Return to Issuing Authority where permits may be re-issued.
Test unsuccessful.	• Return isolations to their isolated position. • Certificate can be suspended while rectification work takes place. • Repeat process to re-start testing.

STT for EAC

STT does not require EAC suspension.

8 ISSOW WORKFLOW

8.1 Workflow

Approvals

The ISSoW Permit Certificate Approval outlines the sequence of authorisations and approval necessary to safely conduct work.

Intent of Process Flow

The intent of the process flow is to guide and control the safe execution of planned work. It should not be used as a work planning tool. The Work Scope Approver is responsible for fully understanding the planned work scope and ensure work scopes are aligned with the current execution plan.

8.2 Grouping of Work

It is acceptable to group several tasks into one RA / PTW, provided that hazards are adequately identified and mitigated. If hazards cannot be adequately mitigated due to many or conflicting activities on the same RA they may have to be separated to more than one risk assessment. Consider the following when planning and preparing RA / Permit documentation:

- Guide for package outages or larger scopes involving several work groups.
- Worksite preparation activities such as lagging removal, rigging installation, scaffolding are typically put in place before equipment is isolated or invasive work commences. Therefore, it is preferential for these activities to have dedicated RA's.
- Group work (RA) together for similar scopes, trades or work groups, i.e. inspection, instrumentation, electrical, commissioning.
- LV and HV electrical cable disconnection shall be separated from any related mechanical work.
- Geographical area – each work party requires access to the RA / Permit.
- While planning large / package scopes consideration should be given to reducing / minimising the number of RA's / PTW's, while still maintaining effective control over the work. Campaign coordinator to liaise with facility coordinators / OTL to review and agree on permit map / hierarchy.
- Guide for smaller / individual scopes.
- Worksite preparation and electrical disconnection, as per package outage.
- Smaller / less complex tasks can typically be carried out with one or two RA / PTW.

8.3 Develop Risk Assessment

Risk assessments are expected be developed in accordance with Section 2.2. All necessary documents shall be attached.

- SAP W.O
- MWI or CWI if applicable
- P&ID or SLD electrical drawings with the item(s) of equipment to be worked on highlighted (magenta box as per guideline)
- OEM specific information.

8.4 Permit Application Meeting (PAM)

Alignment on Work Scope

All planned permitted tasks shall be submitted to the Permit Application Meeting for new or complicated tasks. The meeting is conducted a minimum 48 hours prior to the planned start of work. The PAM attendees shall determine the extent of the review required based upon their acceptance of the following:

- Proposed scope
- Energy assessment
- Work methods ISSoW compliance
- Risk Assessment type
- Knowledge of the task being performed
- History of the task being undertaken.

The meeting is attended by the following as a minimum:

- Permit Applicant / Work Scope Approver or delegate.
- HSE
- Facilitated by the Issuing Authority.
- Technical SME (RPE, Radiation officer, Inspector ERTL...)

The Issuing Authority, as the custodian of the risk assessment process, is responsible for making the final decision, taking into consideration the following factors: whether the work has been previously performed, the quality and completeness of the information provided by the Permit Applicant, the nature of the process involved (e.g., LNG, CCPP, or simpler utility operations), the existence of an agreed and approved Risk Assessment (RA) template, and the skill set of the Issuing Authority, including their background in electrical or mechanical disciplines.

The Risk Assessment and key supporting documentation detailing the equipment to be isolated / worked upon is presented to the Issuing Authority for Approval post agreement of:

- Proposed work scope and its intended validity period.
- A task-specific risk assessment with all hazards identified and suitable controls identified that reduce the risks to ALARP.
- Hazardous energy assessment.
- All forms of energy have been considered / identified, and any specific OEM requirements are documented in the work pack.
- Isolation requirements, and if identified potential isolation hierarchy.
- The final element requiring isolation shall be clearly identified via a drawing mark-up (e.g., P&ID) and attached to the Risk Assessment prior to being submitted.

Shaded magenta box as per isolation markup guideline to be utilised.

The Issuing Authority should commence populating the control documents and formally approving the Risk Assessment as soon as possible post PAM. If supporting documentation is not supplied the permit application will be rejected.

PAM Checklist

The [PAM Checklist](#) provides detailed guidance to Permit Applicant on preparedness to submit their RA's and associated work packs to the PAM.

The checklist should be used as a guideline to ensure all the readiness requirements are complete, known or managed and that the associated work packs are ready to be approved.

Permit Submitted for Approval

The Issuing Authority progresses the permits and certificates to the Permit Authoriser or Site Authority for approval.

The approved permit may then be reviewed at the daily ISSoW meeting for any conflict with other work scopes.

8.5 Permit Approval

Requirements

The Approver (Permit Authoriser or Site Authority) shall review the contents of the whole work pack prior to providing approval on the associated documents. Review of the whole work pack will ensure that control selection does not contradict the intent of other documents in the work pack.

The approver is responsible for identifying the correct level of issuance and completing the controls and approvals section of the document and determining if each listed control is required or not. All controls shall be marked with either a Yes (Y) or No (N).

8.6 Daily ISSoW Meeting

Use Of

The daily ISSoW meeting is used to identify, eliminate, or manage potential conflict between planned activities for the following day. The meeting focuses on each work scope individually and its implication on all work scopes collectively.

Actions Performed

The following actions are performed:

- New relevant pre-planned permit activities are reviewed against ongoing activities, and non-permitted activities (CONOPS) with consideration for ETP's. Refer to site CONOPS Matrix.
- Simultaneous operations (SIMOPS) and planned work scope activities are assessed and any potential conflicts are identified, resolved, or managed. This includes assessment of external influences e.g., weather.
- Any work scope that may affect the availability of safety and emergency systems being available are identified / discussed and suitable mitigative controls are agreed to.
- Production impacts caused by the planned work activities are assessed.

Attended By

The meeting should be attended by:

- Site Authority (or delegate)
- Permit Authoriser
- Maintenance Team Leader
- Issuing Authority
- Facility HSE Advisor
- All relevant work scope approvers, or their delegates.

The meeting is facilitated by the OIM, Operations Superintendent or delegate.

Set for Execution are Issued

Only work scopes reviewed through the daily ISSoW meeting and 'set for execution' are available for issue over the next 24hrs.

Any permit deemed as unsafe to proceed or identified as conflicting with other work scopes will be classified as 'not for execution' until deemed safe to proceed.

8.7 Urgent or Unplanned Work

Approvals Required

All urgent work shall be approved by the Site Authority or delegate. The requirement for risk assessment remains unchanged and shall consider any SIMOPS or CONOPS.

**NOTE:**

The Site Authority may delegate the approval responsibility to the Operations Team Lead.

Onshore - Approvals for urgent or unplanned activities onshore can be provided by verbal or written authorisation from the Site Authority who may be absent from site at the time of request.

Offshore - Approval for urgent or unplanned activities offshore can be delegated to the Operations Team Lead for tasks that do not require Site Authority signature during standard ISSoW processes.

9 PRE-START ACTIVITIES

9.1 Permit Issue

Permit Package Review

The issuer (Issuing Authority or Permit Authoriser) is expected to directly engage the Permit Holder in a discussion to review permit package contents prior to issuing the permit and associated documentation.

Responsible roles for Initial Issue and Re-Issue are identified in APPENDIX C:. If the 'Higher Level Issue Required' control is selected by the Site Authority the initial and re-issues will be done by the Permit Authoriser.

The Permit Authority and Issuer shall insure that.

- Process isolations scope and durations are aligned to the ISRA duration.
- Associated PFM / RTS procedures are valid and fit for purpose.

Signatures

The permit holder shall sign the permit and supporting certificates, confirming an understanding of the work to be conducted, hazards involved and controls to be in place during the work.

The permit or certificate is issued at this stage; however, work cannot start until the documents have been endorsed in the field by the Area Authority.

Toolbox Talk

The permit holder should lead the toolbox talk to guide the work party through all stages of the job scope. A review of the specific job hazards and controls must be conducted onsite using the Step 7 Card (HOLD link) and the associated ISSoW Risk Assessment (HLRA or JHA). This applies to both group and single permit holders.

A new toolbox talk must be completed at the start of each shift to ensure:

- The job plan is clear and understood
- Hazards are identified and communicated
- Equipment and the work area are ready
- Hazardous energy is effectively controlled.

This consistent approach supports disciplined planning and hazard management.

Further guidance on toolbox talks and application of the Step 7 can be found in the Pre-Start and Toolbox Talk Guideline (HOLD)

TBT Topics covered include:

Aspect	Details
Hazards and Controls	• A review of the HEA • A review of the risk assessment and its associated hazards and controls. • Adjacent activities are explained. • Conflicting activities identified and controlled. • Lessons learned
Permit to Work Package	• A description of the complete Permit to Work Package requirements applicable to the work
Permit to Work and Isolations	• No energy within the isolation envelope is demonstrated by the Permit Holder e.g., via open vent • Equipment identification tag (EIT) attached to equipment to be worked on and acknowledged by Permit Holder and work party
Work Environment	• Explanation of the work environment • Identification of access and evacuation points • Location of emergency equipment, nearby systems and processes • Explanation of emergency actions
Work Party	• Clarification of responsibilities and activities to be carried out by the work party. • Questions addressed from the work party. • Safety responsibilities • Content of Toolbox Talk is understood by everyone. • All work party members have signed on to the permit

Toolbox Talk sheets are not required to be archived with the Permit Pack. Copies can be retained by the work party of future reference.

Area Safety Check

Area Authority shall perform the following at the worksite prior to final endorsement of the permit:

- Reviews work scope and understands identified risks.
- Where applicable confirms no energy within the isolation envelope
- Confirms equipment stated on the paperwork is the equipment to be worked on and equipment identification tags are attached to the equipment to be worked on.

Undertakes an area check to identify:

- Other work parties that may impact the area.
- Potential process condition changes that may impact the area or process equipment that could be impacted by the work party.
- Safety system hardware that could be impacted by the work party.

Work Party Discussion

The Area Authority is expected to discuss the following as a minimum with the Permit Holder and as required with the work party:

- Risk Assessment review, HEA, hazards and controls.

Ensure that the work party has identified relevant procedures for their task:

- Work Party safety responsibilities.
- Access and evacuation points identified.
- Location of emergency equipment / systems nearby / emergency actions explained and identified.
- Isolations identified and demonstrated to the Permit Holder.
- Isolation integrity is demonstrated as per [Integrated Safe System of Work \(ISSoW\) Isolation Manual](#) Section 5.3

Process: AA shall demonstrate the zero-energy open vent / bleed within the isolation envelope to the PH / WP

Electrical: AA shall conduct a try test with the PH / WP

Example: PH or AA to contact CRO to confirm equipment is unavailable or will not start.

Equipment identification tag (EIT) attached to the equipment to be worked on and acknowledged by permit holder and work party members.

Adjacent activities explained.

Address questions from the work team.

Confirm that everyone understands the content of the Toolbox Talk

All work party members have signed on to the permit.

Once satisfied that all conditions have been met and there is no conflict from other work activities or production activities, the permit may be endorsed.

The permit and associated certificates are officially on issue following the Area Authority endorsement.

Permit Endorsed

The Permit is endorsed by the Area Authority when they are satisfied that all conditions have been met and there is no conflict from other work activities or production activities. The permit and associated certificates are officially on issue.

Permit Holder and Multiple Permits

Permit Holder may in some cases hold more than 1 permit and be responsible for more than 1 work party. The Permit Authoriser and Work Scope Approver shall agree to holding multiple permits based on the level of worksite supervision required and risk associated with the activity.

Permit Holder shall ensure supervision of the worksite and communication is maintained between Permit Holder and work parties.

Equipment Identification Tag (EIT) Requirements

Equipment identification tags (EIT) requirements are as follows:

All pieces of equipment identified on the permit for intrusive work scopes or, if stipulated by the approver shall have an EIT attached.

The Area Authority shall demonstrate the location of each EIT to the Permit Holder.

Each blind / spade point broken apart/disturbed should have an EIT or IC tag applied.

The EIT is expected to:

- be applied by the Area Authority to exact location of the planned work on the piece of equipment, where practicable.
- state the work description from the permit along with the permit number.
- be removed by the Area Authority on completion of the work and prior to signing off on the permit.

10 PERMIT TO WORK COMMENCES

10.1 Permit Package Documents

At Worksite	Worksite copies of all permit documentation including work practice / parent isolation certificate inclusive of the marked-up drawings (drawings exception if larger isolations) are expected to be available at the worksite by the Permit Holder.
Lost or Damaged Documentation	If any original copies of the permit documentation package are lost or damaged the following shall occur: 1. Work must stop. 2. Area Authority must be informed. 3. Issuing Authority shall be contacted to organise permit documentation reissue and reprinting.

10.2 Temporary Cessation of Work

Possible Reasons	Work may stop or be required to stop temporarily for the following reasons: • Emergence of an unsafe condition • End of shift • Change of work scope • Requirement to complete sanction to test • Emergency alarm.
Unsafe Conditions	On the emergence of an unsafe condition the following actions shall be taken if safe to do so: 1. Work shall be stopped, and the worksite made safe. All equipment and power tools shall be de-energised. Personnel shall then leave the area. 2. Permit Holder shall inform the Area Authority and CCR, if specified that the work has stopped due to an unsafe condition.
Change of Work Scope or Conditions	When a change of work scope or conditions, including environmental is identified, the Permit Holder shall ensure the job is stopped and Issuing Authority is informed. Refer to Risk Assessment Process Section 2.2

Emergency Alarm

In the event of an emergency alarm, the following shall apply:

1. Work shall be stopped, and the worksite made safe. All equipment and power tools shall be de-energised. Personnel shall then leave the area.
2. Work permit shall be considered suspended.
3. Work may only resume after:
 - Site Authority declares 'ALL CLEAR'. If required, the Site authority will advise of any areas where access is restricted.
 - Permit Holder and work party shall conduct a TBT prior to work re-start and confirm the work environment has not changed since suspension.
 - Permit Holder shall contact Area Authority for authorisation to re-start work.

Permit Suspension

The permit is required to be suspended:

- at end of shift
- during a sanction to test
- when the work scope can no longer be progressed.

SIMOPS permits are required to be suspended at a minimum every 24hrs and up to a maximum 1 week – This timeframe shall be stipulated in the Risk Assessment
The following shall apply:

1. Permit Holder shall sign the suspended section of the Permit to Work Log to confirm:
 - area is left safe and tidy.
 - all personal locks have been removed.
 - work party has signed off the permit.
2. Permit Holder is expected to inform the Area Authority that work has ceased.
3. Permit Holder shall return all documentation to the Permit office. Field documentation will be stored in the Permit Office.
4. Issuing Authority shall change the permit status to 'Suspended'.

10.3 Permit Re-issue

Permit Re-issue

A Permit within its validity period can be re-issued from a suspended state. The Issuer will review or reassess the permit package and will authorise the re-issue of the permit using Pre-Start Activities requirements. The permit will be 'marked for execution' at the daily ISSoW meeting before re-issued.

Permit Re-issue will typically be done by the higher-level role designated in APPENDIX C:, unless otherwise stated by the approver.



NOTE:

There is no particular limit to the number of times a suspended permit can be reissued, provided it is marked for execution in the permit register and has not passed the validity date.

10.4 Transfer of Responsibilities

Continuous Working Over Shift Change (Hot Handover)

Where work must continue over shift change, 'Continuous Work' should be written in Additional Instructions section of the permit during the Permit Application Meeting. Approval from the Permit Authoriser must be obtained prior to the hot handover where it has not been identified within the original permit approval process.

The following process shall occur:

1. Incoming Permit holder shall:
 - Have an initial hand-over conversation with the outgoing Permit Holder
 - Collects the Permit-to-Work Log
 - Attends the Permit Office and discusses ongoing work scope and permit requirements with the Issuing Authority.
2. Issuing Authority signs the Suspended section of the Permit to Work Log and reissues it to the incoming Permit Holder by signing the Re-issue section.
3. Incoming Permit Holder and Work Party:
 - apply their personal locks and personal danger tags to the appropriate key safe or key hasp, if applicable.
 - Perform a detailed handover with the outgoing shift.
 - Review the RA
 - Conduct a pre-start Toolbox talk.
4. Outgoing Work Party shall sign off the permit and - remove all locks and personal danger tags.

5. Outgoing Permit Holder shall sign the Suspended section of the Permit to Work Log.
6. The Area Authority expected to ensure the following prior to endorsing the permit for continuation:
 - Correct discussions have taken place.
 - Conditions and controls of the permit are in place.

Bypass Certificate B Hot Handover

Where work has to continue over shift change and a Bypass is required to remain in place for a Bypass Certificate B, the following process is expected to occur:

1. Obtain Approval from the Permit Authoriser to leave the Bypass on.
This shall be recorded as a notification applied to the Certificate with the following wording.
 - a. Notification Heading – 'Hot Handover'
 - b. Notification Body – 'Approved for Hot Handover' [enter shift] [enter date]
2. Outgoing Permit Holder to Notify the CCR and inform them the Bypass will remain in place.
3. Follow Standard Hot Handover Process for the Permit to Work
4. Incoming Permit holder is expected to:
 - verify the bypasses are applied and co-sign the bypass list.
 - notify the CCR that they have commenced work once the Permit has been endorsed by the Area Authority

Own Isolations Hot Handover

Where work has to continue over shift change and an Own Isolation is required to remain in place, The following process should occur:

1. Outgoing Permit holder obtain approval from the Permit Authoriser to leave the equipment in the isolated position. This will be recorded as a notification applied to the Certificate with the following wording.
 - a. Notification Heading – 'Hot Handover'
 - b. Notification Body – 'Approved for Hot Handover' [enter shift] [enter date]
2. Outgoing Permit Holder to ensure that all points are secured with a yellow lock and the isolation key is secured in a triple key hasp with the equipment left in a safe state.
3. Follow Standard Hot Handover Process for the Permit to Work and OIC, Issuing Authority to ensure approval has been granted by Permit Authoriser prior to suspending and re-issuing.

4. Incoming Permit holder shall:
 - Check the integrity of the isolations in the field and Confirm they are applied correctly
 - Co-sign the Own isolation List in the Isolation Confirmed Column.
-

11 WORK COMPLETION

Permit Completion

When permits are completed or no longer required, the Permit Holder and Work Party must ensure:

- Work on the equipment is completed.
- Equipment is in a safe condition to be operated or is left in a safe condition for further work.
- Work area is left in a safe and tidy condition.
- Locks and personal danger tags have been removed prior to final sign off.

Permit Close Out Field Check

Permit Holder and Area Authority should meet at the work site to confirm site conditions and work status as follows:

- Confirm if task completed as per original work scope or if additional work is required.
- Permit holder checks tick box on PTW if work has been completed, not completed and add comments (at work site or PTW office).
- Confirm if isolation can be removed after permit closure or if it is required to stay in place e.g., PSV may be removed and blinded, but isolation will be required to remain in place until PSV is replaced.
- When the Area Authority is satisfied the condition have been met, the permit is signed as completed and returned to the Issuing Authority for final sign off.

Permit Close Out Permit Office

Permit Holder and Issuing Authority confirm:

- Status of task and isolation requirements.
- Task completed as per original scope or if additional work is required.
- If isolation can be removed, remain in place or go to long term isolation.

12 DOCUMENT, PROCESS CONTROL AND ASSURANCE

12.1 Distribution of Permits and Certificates

Work Packs

Work pack consists of the work permits and certificates together with supporting documentation. Work packs are distributed and displayed as follows:

Document	Display
Permits / Certificates and supporting documents	• Originals are placed with the work pack documentation at the worksite or in a recognised location adjacent to the worksite.
Isolation Certificate	• Original remains in the permit office/Engica • Copy placed in the work pack for the job and taken to the field with the Permit Holder

Where the paper-based permit system is operating, refer to [INPEX Paper Based ISSoW Guideline](#) for additional requirements.

Archiving

Archiving is completed differently for electronic and paper copies as follows:

Electronic System: Electronic system documents with wet signatures can be either:

Scanned in and attached to the work pack before being transferred to history. No need to keep the paper copies.

Archived as per the paper-based system with the archive box details recorded on the certificate before it is transferred to history. Details are recorded in the Close out Comments and Lessons Learnt section.

Paper Based System: The permit package and associated documentation will be filed in accordance with facility standards and archived within the bounds of legislative requirements. Archiving should be done via permit type and on a month-by-month basis. The following are archived:

Document	Display
Permits / Work Certificates	• Work site and office originals are stapled together
Isolation Certificate	• Copies to be maintained in the PTW pack. • Originals are archived individually. • Isolation lists, P&IDS and Single line drawing form part of the archive pack
Supporting Documents	• JHA and Risk Assessments must be archived with the pack. Only supporting documents with wet signatures or required by regulatory requirements are archived.

Archive Box requirements are as follows:

- Register of box contents is maintained.
- Box is kept at the facility a minimum of 3 months, space permitting.
- Box is transferred to Document control team in Perth for formal processing and long-term offsite archive.

12.2 Work Permit Audits

Formal Audit Purpose

All Ichthys facilities shall use formal work permit auditing to ensure:

- Gaps and non-conformances are identified and corrected.
- Compliance with detailed work instructions and control measures is validated.
- Competency is verified of those using the system.

Audit Frequency

ISSoW audit frequency for each facility is defined in the annual Operations Business Plan. Permits selected for audit should be representative of the range of work being carried out on site. Audits shall be conducted by personnel from all levels of the ISSoW including:

- Site Authority
- Permit Authoriser
- Issuing Authority
- Area Authority.

Audit Form

Permit to work and Certificate audits are carried out using the [Permit to Work and Certificate Audit Form](#).

12.3 Process Governance

Common Documents, Process, Forms

The Operations ISSoW, associated documents, processes and forms shall be common across all Ichthys facilities including:

- ISSoW Manual
- Paper based guideline and associated forms.
- Engica, electronic ISSoW
- ISSoW Isolation Manual
- ISSoW Key Decision Log - single log across onshore and offshore
- INPEX ISSoW Hazard Tree

The System shall be used as intended and applied consistently across all facilities.

Steering Committee and Key Decision Log

The steering committee shall only add items to the key decision log after the item has been raised through the onshore / offshore subcommittee and the ISSoW Focal Point.

Key Decision Log

The key decision log is utilised to:

- List proposed changes to the system that have passed through the subcommittees and ISSoW Focal Point.
- Record steering committee decisions on proposed changes.
- Clarify queries on how the system operates.
- Identify different system utilisation by CPF, FPSO or ILNG approved by committee.
- Record, routine activities not requiring a permit to work.

Annual Review Process

A formal annual review on ISSoW system performance and related matters for each site shall be conducted by the steering committee. Inputs and deliverables shall be collected by the ISSoW Focal Point and presented to the steering committee for review and analysis.

13 ROLES AND RESPONSIBILITIES

13.1 Roles and Responsibilities

ISSoW Roles Codes Role codes (signatories) and role descriptions for the approval process within ISSoW can be found in the Engica guideline.

Responsibility by Role Responsibility by role for ISSoW system is as follows:

Role	Responsibility
Site Authority	Responsible for day-to-day management of the facility. The Site Authority shall: • Ensure effective application of the ISSoW and all associated systems and procedures • Ensure work activities that may interact or conflict with other activities are adequately controlled • Ensure personnel engaged in the preparation and issuance of permits and associated certificates are ISSoW competent • Ensure all findings reported from monitoring and auditing activities are followed-up and closed out • Ensure work scopes are clearly defined, limits are placed on execution duration and actions to address site emergencies are clear • Ensure ISSoW requirements are complied with • Approve all high-risk certificates, permits and high-level risk assessments • Approve the removal of personal locks that have not been removed by the lock owner • The SA shall be appointed by the GM of operations • Where more than one SA is at site the work roster shall clearly identify who is performing the role at any given time • Typically OIM for offshore and Superintendent on shift for onshore.
Permit Authoriser	Responsible for assessing individual and cumulative risk to personnel and facilities from work activities and is accountable to the Site Authority for safe operation within the area of responsibility. The Permit Authoriser possesses extensive local experience and knowledge of the facility and plant systems and associated hazards and controls. The Permit Authoriser shall: • confirm proposed isolations are appropriate for the task and have been reviewed and approved by appropriate isolation authorities • review and approve procedures for preparation and reinstatement of equipment pre / post maintenance • Ensures all designated personnel are trained

	and competent to use ISSoW • consults with the Permit Applicant to review risk assessments to ensure adequate for the activity • conducts initial issue / reissue of permits as deemed necessary from a risk perspective; ensures the appropriate level of scrutiny and discussion is given to high-risk activities • assesses all permits for potential conflicts with other activities on the facility • authorises the isolation, modification of isolation or de-isolation of equipment.
Issuing Authority	An experienced Operations Technician who will have extensive knowledge of the ISSoW system and local facility and plant systems. The Issuing Authority will have a thorough understanding of the inherent hazards and control mechanisms in the facility or plant. The Issuing Authority is responsible for the following: • The administration of the ISSoW system, including issuing, suspending, cancelling, completing and archiving of permits and certificates. • Participating in work activity planning. • Reviewing and Approving risk assessments including the validity and currency of all attached documentation. • Identifying and addressing potential conflicts between activities, whether permitted or not. • Coordinating the preparation of certificates and permits. • Coordinating isolation and de-isolation of equipment, including the correct sequencing of electrical and process or mechanical isolation schemes.
ISSoW Support Tech Level 1	ISSoW Support Technician Level 1 – individual who has deemed proficient* and has the relevant industry experience with ISSoW or permit to work Systems at user or administrative level. Duties: • Support the administration of the ISSoW system, including, General Admin, FM, and archiving Not permitted to: • Issue any ISSoW Permits or Certificates • Approve any ISSoW Permits or Certificates • Create or sign PFM/RTS. *proficient = Min 6 week on the job.
ISSoW Support Tech Level 2	ISSoW Support Technician Level 2 - individual who has the relevant industry experience with ISSoW or permit to work Systems and has gained onsite experience with the required proficiency as Issue Authority Level 1.

	Duties: • The administration of the ISSoW system, including Re-issuing, suspending, closing and archiving of permits and certificates. • Participating in work activity planning. • Reviewing and Approving risk assessments. • Identifying and addressing potential conflicts between activities, whether permitted or not. Not Permitted to: • Undertake First issue • Prepare or Review IC's • Create or issue STT • Modify IC's • Create or sign PFM/RTS • Coordinating isolation and de-isolation of equipment, including the correct sequencing of electrical and process or mechanical isolation schemes. *proficient =Min 6 week on the job.
ISSoW Support Tech Level 3	ISSoW Support Technician Level 3 - individual who has relevant industry experience with ISSoW or permit to work Systems and has gained onsite experience and is proficient Issue Authority Level 2 and completed ISO Level 3. Duties: • The administration of the ISSoW system, including issuing, re-issuing, suspending, cancelling, completing and archiving of permits and certificates. • Participating in work activity planning. • Reviewing and Approving risk assessments. • Identifying and addressing potential conflicts between activities, whether permitted or not • Prepare IC's • Assist the coordinating isolation and de-isolation of equipment, including the correct sequencing of electrical and process or mechanical isolation schemes. • Prepare PFM / RTS and other procedures. Not Permitted to: • Review IC's • Undertake First issue permits • Create or Issue STT • Modify IC's • Issue CSE, GWC's • Create or sign PFM/RTS • Coordinating isolation and de-isolation of equipment, including the correct sequencing of electrical and process or mechanical isolation schemes. *proficient =Min 6 week on the job.

Area Authority	Area / role competent technician is responsible for control of the work and ensuring the safety of people and plant within his/her assigned areas of responsibility. General responsibilities include: • participates in work planning and risk assessment, as required • ensures hazards, precautions and conditions are defined, and agreed controls are implemented prior to permit issue • verifies all precautions specified for the work are implemented via a site check; includes check of any isolations prior to first associated permit issue • ensures work party is clear on the equipment to be worked on. Conducts a physical identification and placement of an EIT where practicable. • Endorses all permits within their area of control prior to work start and at start of each shift. • Actively monitors the area for changes to plant, environmental or work activity, assessing changes and stopping activities if conditions warrant • Ensures all work carried out by personnel with their area is covered by a valid risk assessment or permit when required • Verifies on site that work is properly completed and work area is left in a clean and safe condition Within nominated areas on the facility there may be an additional Area Authority assigned to manage PTW activities for the area. (See Secondary Area Authority for role responsibility). Primary Area Authority maintains overall control of the area at all times. Secondary Area Authority: • Supports the Primary Area Authority • Are not required to be competent for the assigned area but must hold an area & role competency at relevant facility. • Can endorse permits provided: – Approved by Permit Authoriser – Aware of all work scopes in the area – Isolation status of equipment in the area is known • Inherent hazards in the area are known
Field Technician Level 3.1	Field Technician Level 1 - Industry experienced technician that has worked in hydrocarbon or utility system processing system who holds a minimum PMA03 in process plant operations or Power station equivalent High-risk licenses for Advanced boiler and steam turbine operations. • Participates in work planning and risk assessment, as required

	- Actively monitors the area for changes to plant, environmental or work activity, assessing changes and stopping activities if conditions warrant - Ensures all work carried out by personnel with their area is covered by a valid risk assessment or permit when required - Verifies on site that work is properly completed and work area is left in a clean and safe condition. - Can assist AA to isolate plant. Not Permitted to: - Isolate or verify - Sign on or off Permits and Certificates - Gas testing.
Field Technician Level 3.2	Field Technician Level 2 - Industry experienced Technician who has spent a minimum period of 4 months at the relevant facility acting in a field technician level 1 capacity. - Participates in work planning and risk assessment, as required - Ensures hazards, precautions and conditions are defined, and agreed controls are implemented prior to permit re-issue - Verifies all precautions specified for the work are implemented via a site check; includes check of any isolations prior to associated permit re-issue - Ensures work party is clear on the equipment to be worked on. Conducts a physical identification and confirmation of an EIT where practicable. - Endorses all permits within their area of control prior to work start and at start of each shift. - Actively monitors the area for changes to plant, environmental or work activity, assessing changes and stopping activities if conditions warrant - Ensures all work carried out by personnel with their area is covered by a valid risk assessment or permit when required - Verifies on site that work is properly completed and work area is left in a clean and safe condition - Apply isolations - Prepare isolation schemes - Complete bleed checks. Not Permitted to: - Issue CSE 1st issue H1P - Create PFM / RTS - Review Isolations - Verify isolations.

Isolation Authority	• Is a technician assessed as a competent Isolating Authority • Prepares and reviews isolation schemes • Executes approved isolation schemes • Verifies an implemented isolation scheme carried out by another isolating authority • Undertakes de-isolation work - Reinstates equipment after isolation.
Process / Mechanical Isolating Authority	• In all cases the Team Leader shall assign personnel to perform isolations, de-isolations / return to service • Either the isolator or isolation verifier shall be competent in the process area where the equipment is being isolated • Can isolate, prepare process equipment for maintenance and return to service and verify isolations in any area, in accordance with the following: - Their skill and experience level - Or in conjunction with someone who is competent in the process area • Applies isolations with process or utility areas • Proves integrity of applied isolations • Prepares equipment for maintenance and returning to service • Works with electrical isolating authorities to ensure the correct sequence of isolations • Provides review for isolation schemes developed by another ISO P/M • Verifies isolations performed by another ISO P/M
ISO-ELV, LV and ISO HV	• Applies electrical isolations within authorisation limits • Proves integrity of applied isolations • Works closely with the ISO-P/M to ensure correct sequencing of isolation scheme • Reviews and approves an electrical isolation scheme developed by another Electrical Isolating Authority • Verifies isolations performed by another Authorised Electrical ISO.
ISO-BPC Bypass Isolating Authority	• Prepares or reviews bypass isolation schemes • Applies, proves integrity and confirms Bypass Isolations within area of authorisation • Verifies Bypass Isolations applied by another Bypass Isolating Authority • Performs de-isolations of Bypass Isolation schemes
Work Scope Approver	• Is a discipline Supervisor or Team Leader responsible for the delivery of the work scope • Understands the full job work scope and the work execution sequence

	• Participates in work planning • Ensures suitability and competency of Permit Holder and work party to perform task • Ensures work scope has been clearly defined and appropriate responsible personnel are assigned to develop and document risk controls • Reviews and approves risk assessments to ensure hazards are clearly identified and appropriate precautions, conditions and controls are defined and implemented • Ensures overall activity risk ranking supports safe execution of the work activity.
Permit Holder	• Ensures work party members are familiar with the assigned task • Facilitates a Toolbox Talk to ensure all conditions of work are fully understood • Reviews RA with work party • Ensure all work party members are locked on to the corresponding isolation with personal locks • Ensures the permit is endorsed by the Area Authority for the shift and is displayed at the worksite • Ensures if work scope changes, the work is stopped, reassessed. Area Authority is informed of work stop and restarts. • Ensures work party is aware of equipment to be worked on • Ensures work site is left in a safe and tidy condition on suspension or completion of the work • Ensures effective handover of work at the end of shift, including a status update to the Issuing Authority, Area Authority and oncoming Permit Holder if required • Formally signs off on the permit for completion or suspension of work • Ensures all work party members have signed off and removed personal locks at the end of shift or upon completion of activities.
Work Permit Applicant	• Develops and demonstrates a detailed understanding of the activity to be performed • Defines the detailed scope of work, identifies perceived hazards associated with the task and proposes controls to mitigate • Submits prepared risk assessment to Work Scope Approver for approval.
Authorised Gas Tester (AGT)	• Ensures relevant conditions specified on a permit and associated control document are correct • Performs atmospheric testing as specified by permit requirements and associated control documents • Endorses permits and control documents as

	and AGT signatory.
Personal Gas Monitor User	• Checks PTW and associated documents to verify monitoring requirements • Checks work area with PGM prior to start of work • Stops work if PGM reading deviate from normal values
Responsible Person Electrical	• ISO-HV isolation authority • Approval of electrical switching programs • Approval of Sanction to Test (Electrical) and Electrical Safety Certificates
RIC	• Competent (ISO-HV) person, authorised by INPEX to receive an access authority for work on, near, or in the vicinity of HV or LV high energy apparatus. • All work conducted under an EAC is under the control of a RIC. • Is the signatory of the EAC and cannot delegate accountability of any task to another individual.
TIC	• The TIC shall also serve as the RIC of the STT.
Work Party	• Ensures competent to perform the task • Attend risk assessment process, if possible • Reviews RA at work site • Participate in and understand Toolbox talk • Signs on to permit, locks on to relevant lock box, if applicable • Understands terms and conditions of work • Ensures the correct equipment is worked on • Keeps Permit Holder informed of progress and problems
Awareness	• Personal made aware of proposed work via the permit system to ensure correct level of concurrence/ approval is obtained for particular activities • Specified for technical input or approval e.g. critical lift • Activity approval for concurrent or simultaneous operations
Technical Authority	• Awareness role to ensure the correct level of approval is obtained for particular activities

13.2 Users with Multiple Roles Assigned

Some users may be assigned multiple roles within the permit to work system to fulfill various positions beyond their primary duties. Examples include higher duties, development opportunities, roster coverage, switching facilities, or other requested positions changes.

When a user is provided with multiple roles, they must ensure they understand and operate within the boundaries of the role they are assigned at any given time.

If a user is required to approve or process a scope of work they have previously been involved with, they must seek alternative signatories to maintain the independence and integrity for each of the identified ISSoW roles.

Note: Position changes for extended durations are typically managed through formal HR correspondence.

14 REFERENCE DOCUMENTS

Reference the following documents as needed:

Document Name	Document ID
CPF and FPSO Operations CONOPS Matrix	X060-A1-MAN-60001
Diving Management Standard	0000-AG-STD-60004
EAC Form	X060-A1-FRM-70026
EAC Guideline	TBA
Electrical Safe Operating Procedure	C060-AE-PRC-00001
Formal Hazard Identification Workshop Procedure	0000-AH-PRC-60012
Ground Disturbance and Penetration Procedure	X060-AH-PRC-60010
Ground Disturbance and Penetration Standard	0000-AH-STD-60022
Ground Disturbance and Penetration Procedure	X060-AH-PRC-60010
Hot Work Procedure	X060-AH-PRC-60011
HSE Hazard and Risk Assessment Standard	0000-AH-STD-60003
INPEX Confined Space Entry Procedures	X060-AH-PRC-60008
INPEX Confined Space Entry Standard	0000-AH-STD-60021
INPEX Confined Space Entry Procedure	X060-AH-PRC-60008
INPEX Hot Work Procedure INPEX	X060-AH-PRC-60011
INPEX Isolation Manual	X060-A1-MAN-70002
INPEX Line Walking Guideline	X060-A1-GLN-70041
INPEX Management of Ionising Radiation Guideline	0000-AH-GLN-60011
INPEX Management of Non-Ionising Radiation Guideline	0000-AH-GLN-60012
INPEX Working at Heights Procedure	X060-AH-PRC-60009
INPEX Risk Matrix Template INPEX	0000-A0-TPL-60003
ISSoW Change Management Guideline	TBA
ISSoW Risk Assessment Guideline	X060-A1-GLN-70053
ISSoW Training Execution Plan	X060-A1-PLN-60010
Lifting Operations Management Procedure	0000-AG-PRC-60046
Lifting Operations Management Specifications	0000-A0-SPC-60005
Lifting Standard	0000-AG-STD-60006
Management of Change Procedure	0000-A1-PRC-60016
Offshore Operations SIMOPS Plan	X770-A1-PLN-60001
Onshore Operations - CONOPS Matrix	L060-A1-MAN-70001
Operations Functional Safety Management Strategy	X060-AJ-STR-60007
PAM Checklist	X060-A1-FRM-60213
Paper Based ISSoW Guideline	X060-A1-GLN-60043
Permit to Work and Certificate Audit Form	X060-A1-FRM-60176

Document Name	Document ID
Phase 2b CONOPS Matrix	B170-AB-MTX-70007
Quarantine Kiosk Commissioning Procedure	X060-AJ-PRC-70004
SIMOPS Manual Onshore	L060-AH-MAN-60001
Simultaneous Operations (SIMOPS) Procedure	0000-AH-PRC-60004
The Step 7 Safe Work Process	HOLD
Toolbox Talk Form	X060-A1-FRM-60107
Vendor Laptop Cyber Security Assessment Procedure	X060-AJ-PRC-60003

15 GLOSSARY & DEFINITIONS

Abbreviation	Definition
AA	Area Authority
AGT	Authorised Gas Tester
AIS	Air Insulated Switchgear
ALARP	As Low as Reasonably Practicable
BA	Breathing Apparatus
BC	Bypass Certificate
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
C&E	Cause and Effect
CCR	Central Control Room
CLC	Critical Lift Certificate
CONOPS	Concurrent Operations
CPF	Central Processing Facility
CSE	Confined Space Entry
CSEC	Confined Space Entry Certificate
DBB	Double Block-and-Bleed
DC	Dive Certificate
DFPV	Draining, Flushing, Purging, Venting
DHSEA	Designated Health, Safety and Environment Authority
DMS	Document Management System
DSV	Dive Support Vessel
EAC	Electrical Access Certificate
EIC	Electrical Isolation Certificate
EIT	Equipment Identification Tag
ELV	Extra Low Voltage
ERT	Emergency Response Team
ESC	Electrical Safety Certificate
ETP	Extended Time Permit

Abbreviation	Definition
FPSO	Floating Production, Storage and Offloading Facility
F&G	Fire and Gas
FOV(s)	Fail-open Valve(s)
GDPC	Ground Disturbance Penetration Certificate
GIS	Gas Insulated Switchgear
GWC	Gas Work Certificate
HEA	Hazardous Energy Assessment
HW1P	Hot Work Permit Category 1
HW2P	Hot Work Permit Category 2
HLRA	High-level Risk Assessment
HRC	High-risk Controls
H ₂ S	Hydrogen Sulphide
IC	Isolation Certificate
ICSS	Integrated Control and Safety System
IM	Incident Management
IS	Intrinsically Safe
ISO	Isolating Authority
ISO - ELV	Isolating Authority – Extra Low Voltage
ISO - HV	Isolating Authority – High Voltage
ISO - LV	Isolating Authority – Low Voltage
ISO - P/M	Isolating Authority Process / Mechanical
ISRA	Isolation Safety Risk Assessment
ISSoW	Integrated Safe System of Work
JHA	Job Hazard Analysis
KDL	Key Decision Log
LEL	Lower Explosive Limit
LNG	Liquefied Natural Gas
LOTO	Lock Out Tag Out

Abbreviation	Definition
LPG(s)	Liquefied Petroleum Gas(es)
LTI	Long Term Isolation
LV	Low Voltage
MIC	Mechanical Isolation Certificate
MIR	Minimum Isolation Requirement
MoC	Management of Change
MOS	Maintenance Override Switch
MTL	Maintenance Team Leader
N/A	Not Applicable
NDT	Non-destructive Testing
NGL	Natural Gas Liquids
NOA	Non-Operational Area
NOPA	Non-operational Area Permit Approver
NORM(s)	Naturally Occurring Radioactive Material(s)
NRV	Non-return Valve
OIC	Own Isolation Certificate
OIM	Offshore Installation Manager
OoS	Out of Service
P&ID	Piping and Instrumentation Diagram
PA	Permit Authoriser
PAM	Permit Application Meeting
PDT	Personal Danger Tag
PGM(s)	Personal Gas Monitor(s)
PH	Permit Holder
PIC	Process Isolation Certificate
PPE	Personal Protective Equipment
PSV	Pressure Safety Valve
PTW	Permit to Work

Abbreviation	Definition
RA	Risk Assessment
ROV	Remote Operated Vehicle
RPE	Responsible Person Electrical
RIC	Recipient In Charge
SA	Site Authority
SAEP	Senior Authorised Electrical Person
SCBA	Self-contained Breathing Apparatus
SDS(s)	Safety Data Sheet
SIMOPS	Simultaneous Operations
SIS	Safety Instrumented System
STT	Sanction to Test
TA	Technical Authority
TBT	Toolbox Talk
TIC	Tester In Charge
TSO	Tight Shut Off
UEL	Upper Explosive Limit
WA	Work Scope Approver
WO	Work Order
WP	Work Party

Term	Definition
ALARP	The acronym for 'as low as reasonably practicable'. Risks are considered to be "as low as reasonably practicable" if the sacrifice (cost, time, resources) required to implement further risk reduction is grossly disproportionate to the benefits received. Refer to INPEX's ALARP Demonstration Guideline (see APPENDIX A - <i>References</i>).
Bleed	A valve and / or point that is used to monitor or demonstrate the effectiveness / integrity of an applied isolation. Bleeds can be open or closed when applied with a double block & bleed isolation. Bleeds are tagged to reflect their normal position but are not locked.
Boundary Isolation	Boundary isolations are commonly placed at battery limits, providing isolation to a wider process area in situations such as train or full plant shutdowns. A boundary may also be described as an 'initial' isolation on equipment such as a pump set to allow the isolation of high-pressure sources, prior to draining and purging in preparation for maintenance.
Breaking Containment	The opening of a process or utility system containing hydrocarbons or hazardous or toxic streams.
BTEX	The low-boiling-point aromatic hydrocarbon compounds <u>b</u> enzene, <u>t</u> oluene, <u>e</u> thylbenzene and <u>x</u> ylenes, which are toxic to humans and to the environment in general.
Category 1 Hot Work	Category 1 Hot Work includes all naked-flame or spark-producing work with a positive source of ignition, i.e. an actual ignition source.
Category 2 Hot Work	Category 2 Hot Work includes all non-spark producing / low energy spark (no potential for retained heat above hydrocarbon ignition temperature upon cessation of activity) work that has the potential to create an ignition source or where equipment is being used that is not electrically 'intrinsically safe' (see 'intrinsic safety' below).
Competent Person	In relation to performing a task or activity, a 'competent person' is a person who has acquired, through a combination of training, qualification or experience, the knowledge, skills and behaviours required to carry out the specific task or activity to a defined standard.
Confined Space	In accordance with the Australian Standard, AS 2865) and the INPEX Confined Space Entry Procedure, reference Appendix A.
Confined Space Entry	A confined space entry is defined as being the point at which a person's head or upper body has crossed over the boundary of the confined space.
CONOPS	The acronym for 'concurrent operations'. Concurrent operations are defined as the execution of two or more activities at the same time at a site or on a facility, where both or all of the activities fall within the control of the facility.
Explosive Atmosphere	A mixture with air, under atmospheric conditions, of flammable materials in the form of gas, vapour, dust, fibres or 'flyings', in which, after ignition has occurred, combustion spreads through the entire unburned mixture.

Term	Definition
Hazard	A hazard is any source of potential harm to people, damage to property, damage to the environment, or damage to reputation.
Hazardous Area	An area in which an explosive atmosphere is or may be expected to be present, or may be expected to be present, in such quantities as to require special precautions for the construction, installation, and use of apparatus or equipment. Hazardous area classification divides areas into zones based on the likely frequency and duration of a release of flammable gas and vapour, taking into consideration also the release rate, concentration, and velocity of the release and the ventilation of the area: - A Zone 0 location is a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is present continuously or for long periods of time. - A Zone 1 location is a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is likely to occasionally occur in normal operation. A Zone 2 location is a place in which an explosive atmosphere consisting of a mixture with air of flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.
HLRA	The high level risk assessment is an ISSoW risk assessment that has been attended and reviewed by the respective site authority.
Ichthys Facilities	- Ichthys Explorer CPF - Ichthys Venturer FPSO - Onshore LNG Facilities
Initial Gas Testing	Initial gas testing is conducted before the work begins and is designed, for example, to determine the requirements for safe confined space entry and whether the area is safe for hot work.
"Intrinsic Safety"	This is a protection technique for the safe operation of electrical equipment in hazardous areas, in accordance with Australian Standard. AS60079.11:2011 Intrinsic Safety 'i', Type of protection based on the restriction of electrical energy within equipment and of interconnecting wiring exposed to the explosive atmosphere to a level below that which can cause ignition by either sparking or heating effects.
Isolation Envelope	The physical space between isolation points, when applied in accordance with an approved isolation certificate. This space will allow a work group to safely perform a work scope segregated from the isolated energy source.
ISSoW Key Decision Log (KDL)	Used to provide clarity and direction to eliminate ambiguity on how the ISSoW is to be applied to facility-specific issues. Ensures that facility-specific tasks are dealt with in a uniform manner. KDL does not authorise or approve deviation from the applicable INPEX Standard or the ISSoW Manual or associated procedures. KDL provides a record of Own Isolation, Routine Duties and ISRA Exemption Lists.

Term	Definition
Lower Explosive Limit (LEL)	The concentration of a flammable contaminant in air, below which the propagation of a flame does not occur on contact with an ignition source.
Major Accident Event (MAE)	An MAE is a man-caused or natural accident event connected with a facility, having the potential to cause numerous fatalities of persons at or near the facility.
MOS Procedure	This is an approved procedure to be used to manage the override of safety devices.
Non-operational area (NOA)	Non-Operational Area (ILNG Operations Complex) The Non-Operational Area includes the access road from Wickham Point Rd up to the vehicle security gate, including 1888 laydown yard, front car park, Gate house, Training Centre, Canteen, Operations Administration Building, Laboratory, Fire Station, Workshop and Warehouse, Central Control Building, Radio Communications Building (limited scope only) and Bens Hill. This excludes the Utes Annex and Beach valve compound.
Non-hazardous Area	An area in a facility in which an explosive atmosphere is not expected to be present in such quantities as to require special precautions for the construction, installation, and use of apparatus, i.e. not classifiable as Zone 0, 1 or 2 in the hazardous area classification (see "hazardous area" above). Buildings and enclosures in a hazardous location may be rendered non-hazardous by pressurisation in accordance with Australian Standard AS 2380.4:1994, <i>Electrical equipment for explosive atmospheres—Explosion-protection techniques—Pressurized rooms or pressurized enclosures, or by ventilation in accordance with Australian Standard AS 1482:1985, Electrical equipment for explosive atmospheres—Protection by ventilation—Type of protection v.</i>
Performance Standard	A standard of the performance required of a system, item of equipment, person or procedure (e.g. a control measure), which is used as a basis for managing the risk of a major accident event (MAE).
Plant Reinstatement	The controlled return of plant or equipment from maintenance to an operational state, completed under the direction of an approved procedure.
"Practicable"	The risk reduction action or measure should be taken if it is technically feasible and realistic to implement ('reasonably practicable'). For the measure not to be 'practicable' the 'sacrifice' (cost, resources, time, effort, etc.) in implementing the measure must be clearly and obviously disproportionate to the benefit. See also the definition of ALARP above.
Process or Mechanical Isolation	Isolation achieved by the construction of a physical barrier between an energy or hazard source and a work location. It may be achieved with closed valves or a positive isolation.
Reinstatement Leak Test	A pressure test performed using nitrogen, a nitrogen-helium mix, or a process medium to reduce the likelihood of having an uncontrolled loss of containment caused by incorrect assembly of bolted flange joints following maintenance.
Residual Risk	The risk(s) remaining after suitable controls are identified.

Term	Definition
Risk Assessment	A process where a work situation or work activity is evaluated, the potential hazards identified, and suitable controls assigned to reduce the risks involved in the situation or activity to ALARP. Where residual risk is unable to be reduced to 'moderate or 'low' on the INPEX Risk Matrix, an HLRA shall be performed.
Service Test	Service fluid is introduced into the system and pressure is increased in stages. Each joint that has been broken is taped and inspected for leakage with a gas monitor and/or testing solution at each stage.
SIMOPS	'Simultaneous operations'. Simultaneous operations are defined as the performing of two or more activities at an INPEX-controlled site where any, or all, of the activities could pose a significant risk by impacting the health and safety of personnel, the environment, assets, the schedule or performance of operations at that site.
Standby Person	A competent person who is required to remain on the outside of, and in close proximity to, the confined space and who is capable of maintaining continuous communication with and of observing those inside (if 'practicable'—see definition above). In addition, where necessary the standby person will initiate rescue procedures and operate and monitor equipment used to ensure safety during entry into and work in the confined space.
TA	Technical Authority. This person is the designated authority for a technical discipline. He/she has the responsibility and accountability to establish, approve, maintain, deviate, and change from technical requirements, standards, specifications, technical processes, and procedures. Technical Authorities own the decision on what is acceptable in technical matters involving their area / discipline.
Upper Explosive Limit (UEL)	The concentration of a flammable contaminant in air, above which the propagation of a flame does not occur on contact with an ignition source.
Vent	An open path or valve that is tagged open as part of an isolation.

APPENDIX A: PERMIT & CERTIFICATE APPROVAL

PERMIT & CERTIFICATE APPROVAL

Permits / Certificates	Role	Approver Onshore	Approver Offshore	Initial Issue Role	Reissue Role	Additional Authority
High Risk						
Hot Work Permit Cat I	SA	Production Manager (or delegate)	Offshore Installation Manager	PA	IA STL2, STL3 PA if Higher Level Issue selected by the approver	-
Bypass Certificate Type A	SA	Production Manager (or delegate)	Offshore Installation Manager	PA	N/A	Senior Discipline Engineer (Force only)
Bypass Certificate Type B	SA	Production Manager (or delegate)	Offshore Installation Manager	PA	PA	Senior Discipline Engineer (Force only)
Confined Space Entry Certificate	SA	Production Manager (or delegate)	Offshore Installation Manager	PA	IAPA if Higher Level Issue selected by the approver	
Critical Lift Certificate	SA	Production Manager (or delegate)	Offshore Installation Manager	PA	N/A	-

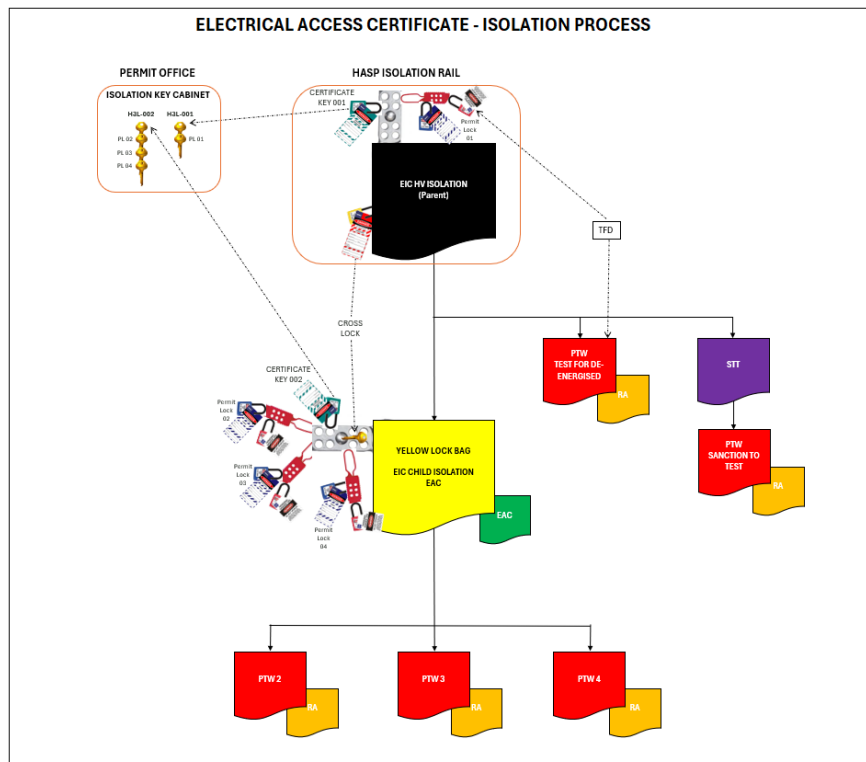
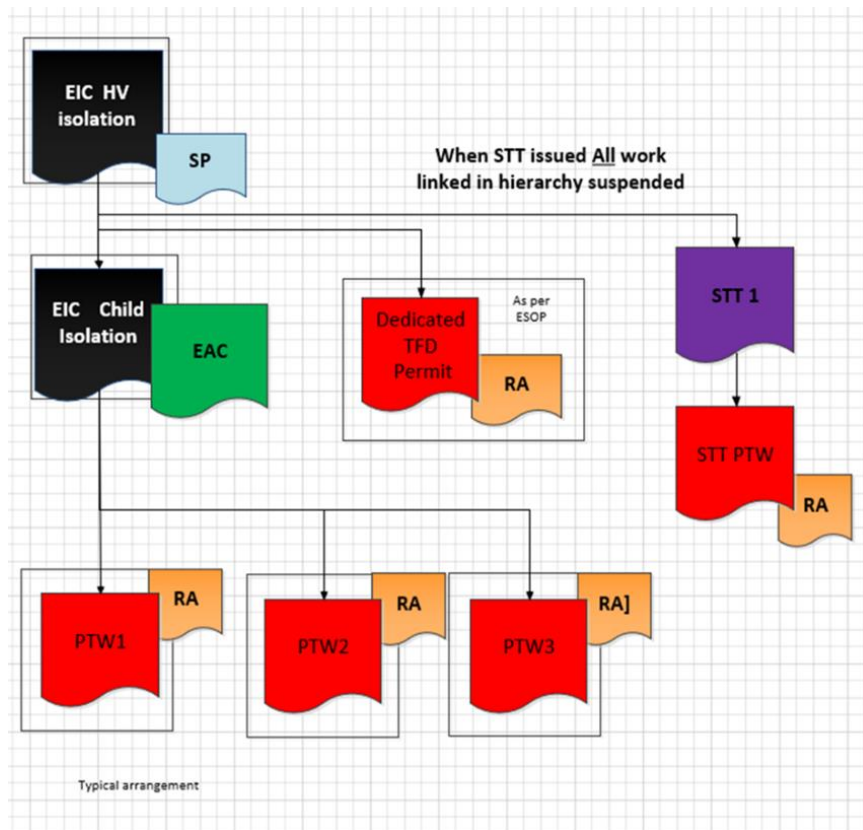
Permits / Certificates	Role	Approver Onshore	Approver Offshore	Initial Issue Role	Reissue Role	Additional Authority
Gas Work Certificate	SA	Production Manager (or delegate)	Offshore Installation Manager	PA	N/A	-
Dive Certificate	SA	Production Manager (or delegate)	Offshore Installation Manager	PA	N/A	-
High Level Risk Assessment	SA	Production Manager (or delegate)	Offshore Installation Manager	N/A	N/A	-
Low Risk						
Risk Assessment (JHA) Work Scope Approver	WA	Discipline Supervisor / Team Leader	Discipline Supervisor / Team Leader	N/A	N/A	-
Risk Assessment (JHA) Approver	IA	Operations Technician	Operations Technician	N/A	N/A	-

Permits / Certificates	Role	Approver Onshore	Approver Offshore	Initial Issue Role	Reissue Role	Additional Authority
Risk Assessment (JHA) Approver	STL2 & STL3	ISSoW Support Technician	ISSoW Support Technician	N/A	N/A	-
Cold Work Permit	PA	Operations Team Lead	Operations Team Lead	IA PA if Higher Level Issue selected by the approver	IA STL2 STL3 PA if Higher Level Issue selected by the approver	-
Hot Work Permit Cat II	PA	Operations Team Lead	Operations Team Lead	IA PA if Higher Level Issue selected by the approver	IA STL2 STL3 PA if Higher Level Issue selected by the approver	-
NOA Permit	NOPA	MTL	n/a	NOPA	NOPA	

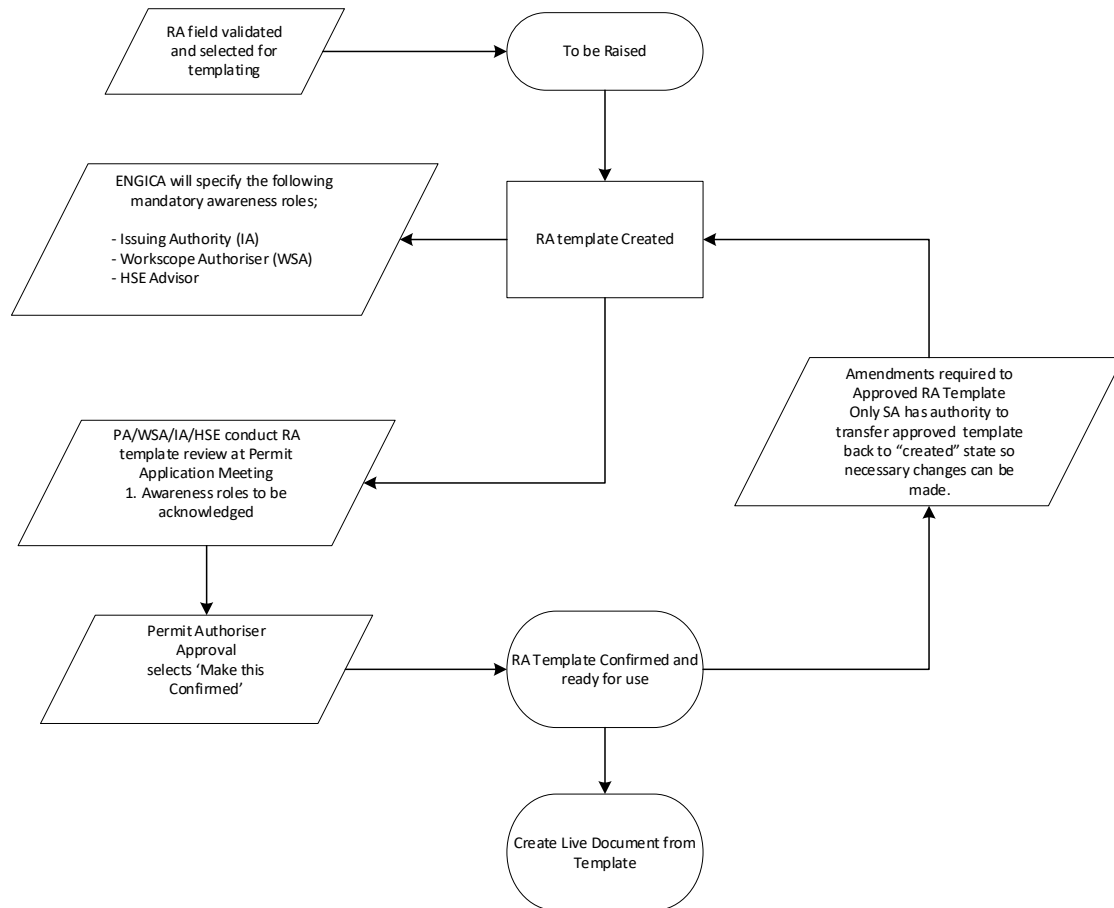
Permits / Certificates	Role	Approver Onshore	Approver Offshore	Initial Issue Role	Reissue Role	Additional Authority
Process Isolation Certificate	PA	Operations Coordinator Or Operations Team Lead	Operations Coordinator Or Operations Team Lead	IA STL3	N/A	Isolating Authority
Mechanical Isolation Certificate	PA	Operations Coordinator Or Operations Team Lead	Operations Coordinator Or Operations Team Lead	IA STL3	N/A	Isolating Authority
Electrical Isolation Certificate – Disconnection	PA	Operations Coordinator Or Area Team Leader	Operations Coordinator Or Operations Team Lead	IA STL3	N/A	Isolating Authority Responsible Person Electrical (RPE) – HV
Electrical Safety Certificate	PA	Operations Coordinator Or Area Team Leader	Operations Coordinator Or Operations Team Lead	IA	N/A	Isolating Authority Responsible Person Electrical (RPE) – HV
Electrical Access Certificate Authority to Issue	RPE	Responsible Person Electrical	Responsible Person Electrical	RPE	N/A	RIC TIC

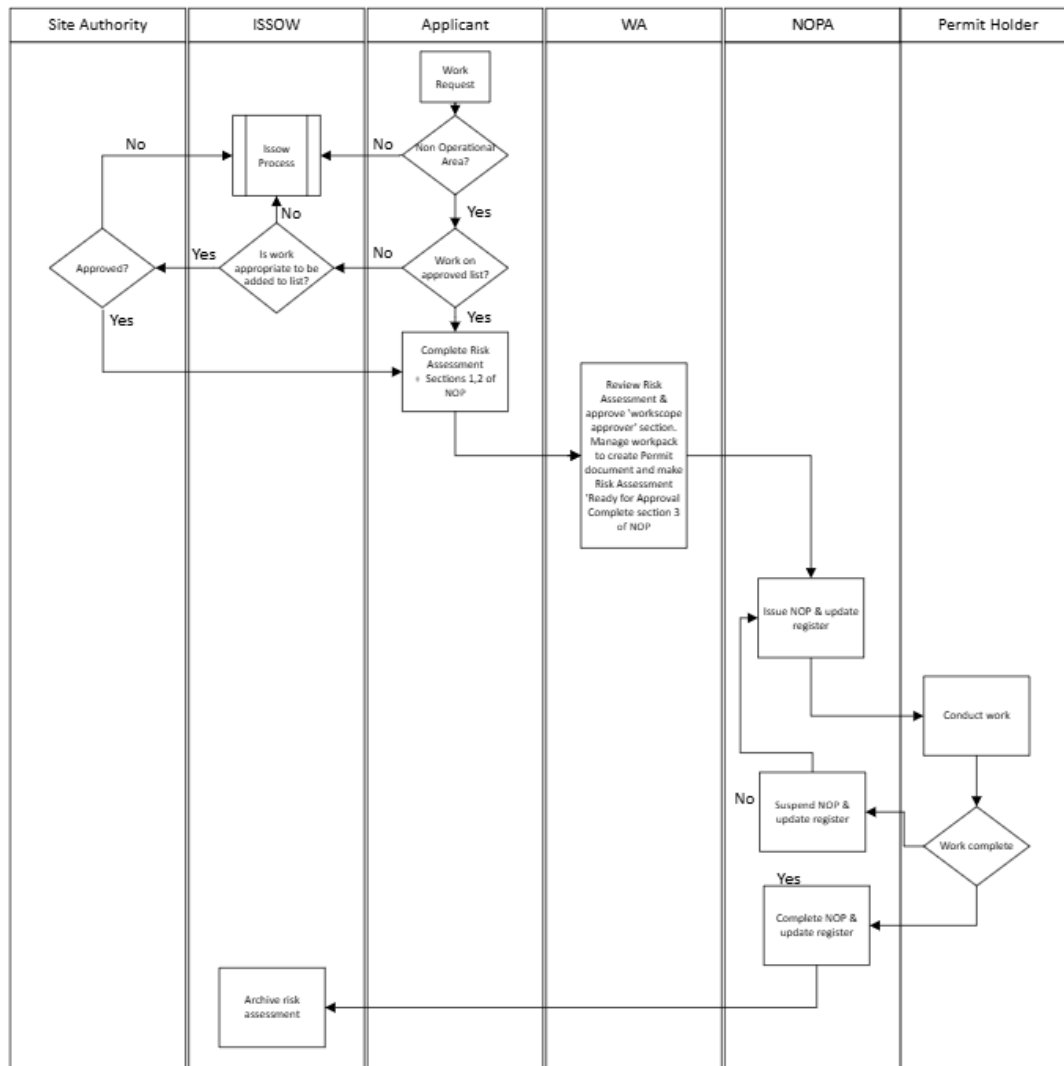
Permits / Certificates	Role	Approver Onshore	Approver Offshore	Initial Issue Role	Reissue Role	Additional Authority
Ground Disturbance and Penetration Certificate	PA	Area Team Leader	Operations Team Lead	IA	N/A	Maintenance Team Leader Offshore
Sanction to Test	PA	Area Team Leader	Operations Team Lead	IA	N/A	-

APPENDIX B: EXAMPLE EAC HIERARCHY AND LINKING



APPENDIX C: RISK ASSESSMENT TEMPLATING WORKFLOW



APPENDIX D: NON-OPERATIONS PERMIT WORKFLOW

Document Endorsement and Approvals

This page has been automatically generated and appended to this document by the INPEX Australia Controlled Document Management System (CDS). This page contains key events related to this document that are listed in the tables below and the information is unable to be manually edited.

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Delegation of Authority

From Name	To Name	Date and Time	Action

Name	Title

Electronic Endorsement and Approval

Electronic approval of this document complies with the issued INPEX Electronic Approval Standard (0000-A9-STD-60011) and records evidence that the applicable person has either endorsed and/or approved the content contained within this document. The reviewers of this document are recorded in the CDS.

Name	Title	Date and Time	Action
Richard Palumbo	Operations Support Man	09/03/26 10:20	Endorser
Andrew Dent	Production Superintende	18/03/26 09:49	Endorser
Jaco Blignaut	Onshore Maintenance M	18/03/26 13:38	Approver
Paul Cullen	General Manager Offshd	19/03/26 16:26	Approver