



Hazard and Risk Management Standard

SPA-PLAN-3

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Hazard and Risk Management

The following defines the minimum standard for hazard and risk management for all employees and contractors of SPA-PoE

Supporting Documents

Forms:

Take 5 Form
JHA Form
HAZOB
SPA-PoE Risk Assessment
JHA Audit

Safe Work Instructions:

Standards:

Purpose

The purpose of this Standard is to define the minimum structured methods for identifying, assessing and controlling hazards and risks through thorough risk assessment techniques to allow work to be carried out in a safe manner with minimal impact to Health and Safety, the Environment, Community/Media/Government and Loss or Damage to Operations.

Scope

This Standard ensures that all SPA-PoE Employees and Contractors comply with the applicable legislation while conducting work on site including but not limited to the Mines Safety and Inspection Act and Regulations as well as the Occupational Safety and Health Act and Regulations.

Definitions and Abbreviations

The following definitions and abbreviations are used throughout this standard:

Term / Abbreviation	Definition
ALARP	<u>As Low As Reasonably Practicable</u>
Contractor Personnel	An employee or other person engaged by a contractor, including sub-contractors
CRAW	Construction Risk Assessment Workshop
Employee	An individual carrying out work on the SPA-PoE site or SPA-PoE managed infrastructure (including public access gardens and houses/buildings) and includes: <ul style="list-style-type: none"> • SPA-PoE Employees and contract workers. • Contractor Personnel • Sub-contractor personnel
SPA-PoE	Southern Ports Authority – Port of Esperance
Hazard	Anything that has the potential to cause injury, illness, damage or harm.
JHA	Job Hazard Analysis
Principal	A person who engages a worker not as an employee but as a contract worker under a contract for services.

Term / Abbreviation	Definition
Project Personnel	An individual carrying out work or visiting the SPA-PoE site (including public access gardens and houses/buildings to conduct work) and includes: <ul style="list-style-type: none"> • SPA-PoE Employee and contract workers • Contract Personnel • SPA-PoE or Contract Personnel visitors
Risk	A measurement of the likelihood of harm arising from exposure to any hazard.
Shall	The word “shall” is mandatory.
Should	The word “should” is not mandatory but is advisable or recommended.
Workplace	The place, whether or not in an aircraft (including helicopter), ship, vehicle, building, other structure, SPA-PoE managed public access parks, gardens and houses/buildings or other structure where employees or self-employed personnel work or are likely to be in the course of their work.

Hazard and Risk Identification

There are many opportunities for hazards to be identified on site at SPA-PoE. These include:

- Hazard and Risk Workshops
- Take 5’s
- HAZOB’s (Hazard Observation)
- JHA’s (Job Hazard Analysis)
- Risk Assessments
- Incident Reports (INX)
- Inspections – workplace inspections provide a system of recognising and correcting hazardous situations.
- Experience – Personnel have experience from previous work places/employers that add value to improving the management of hazards and the risk they present on site.
- Statistical Analysis – review of incidents, injuries and near miss reports, we can determine the type of injuries that are being experienced at SPA-PoE and how they are being caused or if there are any contributing factors for them.

Hazard and Risk Workshops

The SPA-PoE risk management process will be followed during Hazard and Risk Workshops as well as when any other risk assessment process that is being conducted either on site or off site. This includes vehicle risk assessments, contractor risk assessments, hazardous substance risk assessments (ChemAlert), CRAW. Contractors will be supplied with a copy of the SPA-PoE Hazard and Risk Management Standard as well as all risk management documentation and forms including the SPA-PoE Risk Matrix.



Safe Work Instructions

Safe Work Instructions (SWI) are developed as a result of a task that is completed regularly as identified in the JHA. The process of determining whether a JHA is to be made into a SWI includes the recognition that there needs to be a method of educating others into the hazards associated with the task or activity being undertaken where a task or activity may be repeated.

Safe Work Instructions are designed to detail how the task is to be completed, any resources required (including PPE) and all hazards associated with the task.

Safe Work Instructions must have a JHA as a basis for the SWI to be developed. Any variation to the SWI requires a new assessment of the situation/hazard and risk and a new JHA to be developed prior to the changes to validate that all hazards, and the risks they pose are identified prior to the SWI being modified.

Job Hazard Analysis (JHA)

The JHA is a process to identify, discuss and record the steps required to undertake a task and any hazards that are present or have a potential to arise while completing the task. The JHA step by step process identifies and records the hazards in each of the job steps and suitable preventative measures must be implemented using the Hierarchy of Control to determine the interventions to reduce the potential of a hazard and the related risks.

A JHA must be written by a minimum of 2 people and where possible, all the crew performing the task should be on the team that writes the JHA. This validates that all personnel with experience and knowledge have input to identify the job steps, the hazards associated with the step, related risks as well as the control measures to be implemented. The JHA is to be conducted at the work site where the activity is to be conducted – not in an office or a crib room. The JHA is to be completed before the task commences with each person provided an opportunity to agree and / or disagree with the proposed course of action.

No generic JHA documents are to be used on site at SPA-PoE. A generic of general based document detailing work activity for a wide range of situations does not meet the requirements of an assessment of hazards and risks at SPA-PoE work sites. A JHA is a specific to task form used at SPA-PoE. If the task is going to be ongoing or completed numerous times, a SWI is to be developed.

The JHA team should include:

- JHA Team Leader
- Personnel experienced with the task
- All other persons completing the job
- Specialists as required (Engineering, Environment, Contractors and OHS to assist with discussions and details)

The JHA must be held at the work site for review while the task is being completed. Supervisors / OHS Advisors / HSR's / Superintendents or Managers will conduct spot checks to ensure that the JHA is at the work site.

A JHA is valid for a maximum of seven (7) days from revision date or seven (7) days from when the JHA was written. After the JHA has been used, it is returned to the area Administrator who will type out the JHA and give it a number from the JHA Register. If the JHA used again, the revision date is populated automatically when the JHA is printed.



JHA's must be reviewed each and every day that it is used by all persons working under the JHA. Any changes to the work environment, work activity or the work area must be recorded on the JHA at the time it is identified.

Each person is required to sign onto the JHA each and every day they are using it in the relevant box with the date recorded on it.

A JHA Register shall be maintained for each Department and contractors shall maintain their own JHA register.

The SPA-PoE JHA template (SPAFM004) is available from the intranet. A copy will be provided to Contractors to use or they can use their own form if they are similar format to SPA-PoE and conform to this standard.

JHA forms and any related documents will be audited and the SPA-PoE JHA Audit tool (SPAFM003) will be used by Supervisors / OHS Advisors / HSR / Superintendents or Managers to conduct spot checks to confirm the standard of the JHA compliant with this standard.

Take 5

The SPA-PoE Take 5 is a checklist in the format of a safety tool to identify hazards and assess the risks where the individual is performing a task.

The Take 5 is an individual risk assessment tool and is not to be completed by a group. Each person will complete their own Take 5.

The Take 5 is completed to review the task being undertaken to check that the workplace, the system of work is safe and the work environment is reviewed for any hazards that are present.

Another Take 5 is to be completed if the task changes, the work environment changes or if an employee does not feel confident completing the task taking into consideration matters such as skills, experience, uncertainty and fatigue or any other factor that would increase the level of risk.

The Take 5 places responsibility on the individual to make the decision to proceed or not to proceed with the task being undertaken.

A Take 5 is completed at the work area (not in the office or crib room prior to going to the work area) and:

- Confirms the understanding of the task, the steps involved, a clear plan is in place.
- Confirms Procedure, SWI or JHA in place (e.g.: working at heights, working in confined spaces).
- Confirms if isolation and lockout is required, all permits are in place, all tagging is completed.
- Confirms that tooling is in good working order.
- PPE is in good condition and is being used in the correct manner.
- Guarding is in place and has not been removed.
- Risks of operating equipment in the work area.
- Hazardous Materials have been considered.

The Take 5 is a simple 5 step process:



1. Think through the task – *what has to be done, who has to do it, when will it be done, where and how it will be done which includes answering questions like do I need a permit and is it in place, do I need to isolate and lockout and is it done, do I have the correct PPE, do I have the correct tooling.*

2. Spot the hazard – *review the workplace, the environment and anything else relevant to the task to identify all hazards present. If more than four hazards that are identified on the back of the sheet so that they can be controlled are present, a JHA must be completed if one is not already in place. If it is a common task, a SWI must be completed from the JHA.*

3. Assess the Risk – *(consequence and likelihood) – using the SPA-POE risk matrix (in the centre sleeves of the book). If the final risk rating is low, you can commence the task remembering the hazards and controls that were identified in the Take 5. If the final risk rating is Moderate, High or Extreme, STOP and contact the Supervisor. A JHA must be completed or the JHA must be reviewed and further controls put in place to ensure that all hazards are managed to ALARP.*

4. Make the changes – *Remove or isolate the hazards, prevent people from coming into contact with the hazards, put permits and other controls into place, change the original plan and ensure all personnel complete the task or interact with the people completing the task safely including wearing the correct PPE.*

5. Do the task safely – *Complete the task remembering to continue to monitor the hazards that were identified during the Take 5 process. If the task changes in any way, STOP and complete another Take 5.*

Work cannot start if there are any uncontrolled hazards or if the person conducting the work cannot complete the task safely.

The Take 5 forms one part of the safe work process at SPA-PoE and the booklets will be issued to employees and contractors at SPA-PoE to use on the job. The aim is to have every task checked every time via the Take 5 process to check every person completing a task has the tools to safely identify the hazards, analyse the task related risks and check the work place every time they do it.

Every person will be provided with training in the Take 5 process to confirm that they fully understand the process and are able to apply a Take 5 to a work situation.

Replacement books can be obtained from the Supervisors in the SPA-PoE worksite and from the OHS Department.

HAZOB's

The Hazob books are given to all personnel and contractors with the Take 5 books as part of the General Site Induction.

Hazob's can be completed by anyone and they must be completed each time a hazard is identified – even if controls are put in place immediately and no further action is required. This allows us to track the number of hazards identified and also provides valuable information to all personnel as the hazard may be present in other work areas. This will improve safety, decrease injury and minimise environmental impact on the job.

When a hazard is identified, the employee will complete the Hazob form detailing their name, date, time, location, task being done or observed, description of the hazard, any action that was taken at the time it was identified. The employee will also add their proposed solution for long term control of the hazard and then finally, they will rank the risk using the SPA-PoE risk matrix in the plastic sleeves.

The Hazob form is then torn out of the book and handed to the Supervisor for review, allocation of further action and initiate an incident report with appropriate level of investigation if required.



If the risk rating is low, the Supervisor can be notified of the hazard at the next break or the next time the employee sees the Supervisor. If the risk rating is Moderate, High or Extreme, the Supervisor must be notified immediately of the hazard. The Supervisor is then responsible for ensuring that the hazard is managed until permanent controls are put in place.

All Hazob's are entered into INX by the relevant department person to ensure that the hazard management process is completed.

Hazob reports will be generated weekly and will be distributed to be placed on all site Information boards.

Personnel shall not walk away from or leave identified hazards uncontrolled.

Risk Assessments

A risk assessment will be developed and presented for each work group for the work or task that they are contracted to perform on site. The Risk Assessment will detail the entire scope of the work from mobilisation to demobilisation. The Risk Assessment will identify all hazards and risk associated with them as well as all controls to be implemented to control the risk.

The risk assessment will be reviewed by the Senior Manager for the area which the work is being undertaken as well as the OHS Department.

Wherever the work being completed requires the installation of temporary equipment including structures, facilities, plant, hardware, scaffolding, the Risk Assessment will include the activities to construct and de-construct these temporary structures as well as the associated hazards to safely perform the work.

Risk Assessments shall be divided into 6 sections as follows:

1. Pre-mobilisation
2. Mobilisation
3. Early works and site set-up
4. General works
5. Scope of works
6. Demobilisation

Risk Assessment meetings shall be arranged in stages if required according to the work planned on being undertaken. The initial risk assessment will include the first 4 sections and further meetings to establish the scope of the last 2 will be completed prior to those two stages being done.

Risk Assessments shall be completed by a team of people including (but not limited to) SPA-PoE, contracting personnel, management representative, supervisors, OHS personnel, HSRs, experts in the field and general employees.

The SPA-PoE Risk Assessment workbook is used for all Risk Assessments. Contractors may use their own risk assessment workbooks if they are of similar nature to SPA-PoE and meet the requirements of this standard.



Hierarchy of Control

Having identified any hazards, the Hierarchy of Control is to be used to identify what controls can be put in place to manage the hazards.



Elimination: the complete elimination of the hazard e.g.: eliminating toxic or hazardous substances, hazardous plant or process not required to complete the task. Take away the shark

Substitution: replacing the material or process with a less hazardous one e.g.: using a less toxic chemical. Change the shark for dolphins

Redesigning and Engineering the Equipment or work process: Redesigning the equipment or work process, the removal of potential hazards by engineering them out e.g.: redesigning pipework, reconfiguring a crane. Take the sharp bit off the front of the shark

Separation and Isolation: isolating the hazard by guarding or enclosing it to prevent contact between the hazard and the employee. Putting the shark in a cage.

Administration: Providing controls for hazards such as limiting the time of exposure, rotating personnel, training or retraining, SWI's, Take 5's, JHA's. Put up a sign warning of sharks.

Personal Protective Equipment and Clothing (PPE): use properly fitting PPE and clothing in good condition where all other controls have been considered and implemented where practical; includes impact minimisation equipment such as spill clean-up materials or dust suppression materials. **Remember** PPE does not eliminate the hazard – it only shields the individual from the hazard. Put the swimmer in a metal diving suit.

The controls outlined in the hierarchy of controls can be used individually or in groups – the complete hierarchy of control must be used for all hazards as more than 1 control may be implemented.

Incidents

All incidents will be investigated to a level appropriate for the actual and potential seriousness of the incident.

All hazards identified that contributed to the incident, could have contributed to the incident or were identified at the time of the investigation and did not contribute to the incident will have controls put into place using the hierarchy of controls.

All actions put in place from incident investigations will be entered into and managed by INX.



Hazard and Risk Monitoring

Hazard and risk monitoring will be conducted continuously on site at all times and any hazards or risks identified will be managed at the time they are identified.

All hazards identified as serious or serious potential will be addressed by the Site Safety Steering Committee meetings.

All hazards and the controls will be reviewed at Pre-start and toolbox meetings with record of review on the relevant meeting minutes. Hazard reports will be placed on all site information boards.

Roles and Responsibilities

It is the responsibility of all personnel in the work place to assess the work area and identify all hazards present (whether visible or hidden hazards) and ensure appropriate controls are in place prior to commencing work.

It is the responsibility of Supervisors, Superintendents and Managers to ensure that all hazards are identified, assessed and controlled to ALARP.

Risk Matrix

		Consequence				
		Low	Minor	Moderate	Major	Critical
Likelihood	Rare	1	3	6	10	15
	Unlikely	2	5	9	14	19
	Possible	4	8	13	18	22
	Likely	7	12	17	21	24
	Almost Certain	11	16	20	23	25

Risk Level	Description
Low	Acceptable - no further actions or controls are necessary
Moderate	Only acceptable if not other controls can be implemented and after approval by Senior Management
High	Only acceptable if not other controls can be implemented and after approval by CEO
Extreme	Unacceptable - the task cannot commence



Likelihood Table

Likelihood	Description	Frequency at Location
Rare	The event may occur only in exceptional circumstances	Less than once every 15 years
Unlikely	The event could occur at some time	At least once every 10 years
Possible	The event should occur at some time	At least once every 3 years
Likely	The event will probably occur in most circumstances	At least once per year
Almost certain	The event is expected to occur in most circumstances	More than once per year

Consequence Table

Consequence	Health & Safety	Environment and Heritage	Community / Media / Government	Financial Loss / Damage
Low	No Injury	No significant impact	Public concern restricted to local complaints	\$0 - \$6K
Minor	First Aid Injury	Minor short-term damage to the environment / heritage	Minor adverse local public or media attention and complaints	\$6K - \$35K
Moderate	Medically Treated Injury	Moderate effects on heritage / environment	Attention from media and/or heightened concern from the community	\$35 - \$450K
Major	Fatality or severe permanent disability	Significant environmental / heritage damage	Significant adverse national media / public attention	\$450K - \$1.5M
Critical	Multiple fatalities / severe permanent disablements	Severe damage to environment / heritage with permanent effects	Serious public or media outcry	>\$1.5M