



XXX-OP-001

Hazard Identification and Risk  
Assessment

## 1.0 PURPOSE

The purpose of this procedure is to provide a standard model for systematic identification of hazards, assessment of risks and to implement control measures to protect the Health, Safety and Welfare of employees and others at [COMPANY NAME] sites and off-site work locations.

## 2.0 SCOPE

This procedure applies to all [COMPANY NAME] sites and activities.

## 3.0 INTRODUCTION

It is a legislative requirement to make a suitable and sufficient assessment of risks to health and safety of persons affected by Company operations. [COMPANY NAME] has a responsibility to ensure that all risks are systematically identified and managed accordingly in order to provide a safe place of work.

This requirement is principally laid out in the Health and Safety at Work Law Number [xxxx] and the various regulations that were issued under that act to cover specific aspects of health and safety, and risk management.

To be suitable and sufficient, a risk assessment has to identify all the potential causes of harm (Hazards) in the workplace. This includes not only dangerous substances and equipment, but energy sources, work processes and work organisation. It must cover both the risk of immediate injury and the long-term risks to health.

The risk assessment process shall be applied to: Health Risk, Safety Risk, Environmental Risk, Production and Plant Risk, and Reputation Risk.

Risk management shall be pre-emptive rather than reactive and must be a fully integrated part of planning and work delivery.

Risks are more easily assessed and managed in the planning stages of a work activity or operation. The later a risk assessment is left in the process, the more expensive and time-consuming it will become to implement the control measures prior to the work activity or operation commencing.

#### 4.0 RESPONSIBILITIES

- HSE Manager are responsible for:
  - Ensuring that this procedure is maintained and communicated to all relevant DMS personnel.
  - The implementation of this procedure at all DMS sites.
  - Ensuring risk assessments are completed to a suitable and sufficient standard and determine acceptable levels of risk and risk management for all DMS site operations.
  
- Operations Managers are responsible for:
  - Ensuring all tasks are adequately risk assessed.
  - Ensuring risk assessments are of a suitable and sufficient standard and determine acceptable levels of risk and risk management for their site operations.
  
- Site Foremen are responsible for:
  - Ensuring all risk assessment procedures are communicated to the workforce through pre-work meetings and toolbox talks.
  
- All employees are required to:
  - Participate in risk assessments as required.
  - Understand, accept and implement risk assessment requirements.
  - Apply the defined risk controls required.
  - Maintain a constant awareness of changing risks associated with the operation or task.
  - Make supervisors aware of any unrealistic risk reduction measures or high-risk procedures.
  - Stop an activity and re-assess if conditions at the work site change and/or additional hazards are identified or introduced as the work is in progress.

All [COMPANY NAME] employees have a responsibility to identify and report any hazards even if a hazard does not directly affect their own job or work area.

## 5.0 DEFINITIONS

### Hazard

A hazard is anything with the potential to cause harm.

### Hazard Effect/Severity

The most likely effect or consequence if a hazard realises its potential to cause harm. This is expressed as minor, moderate, serious or major.

### Probability/Likelihood

A measurement of the possibility of a hazard realising its potential to cause harm or an event happening. This is expressed as very unlikely, unlikely, possible or probable.

### Risk

A risk is the likelihood that a hazard will cause a specified harm to someone or something. It is based upon;  
 $\text{Hazard Effect} \times \text{Probability} = \text{Risk}$ .

### TBRA – Task Based Risk Assessment

A risk assessment that is based upon a specific task or specific elements within a task or activity.

### Risk Assessment

Risk assessment is the process where hazards are evaluated for their severity and likelihood or potential to cause harm or damage, in order to quantify levels of risk.

### Third Party Risk Assessment

Third party risk assessment is a risk assessment prepared by a company out with the content and process of this procedure. Therefore, it shall typically be material prepared by original equipment manufacturers, contractors, vessel services etc.

### Risk Management

Risk management is a process that involves assessing the risks that arise in your workplace, putting sensible health and safety measures in place to control them and then making sure they work in practice.

### Acceptable Risk

The level of risk that is deemed allowable to persist or be tolerated, usually due to the controls and mitigation in place to reduce the risk.

### Unacceptable Risk

The portion of identified risk that cannot be tolerated and must either be eliminated or controlled to an acceptable level, or the activity cannot be allowed to occur.

### Residual Risk

The portion of risk that remains after risk management mitigation and controls are implemented. Residual risk may be acceptable or still unacceptable.

### Mitigation

Mitigation is something that that can be used to reduce either the severity of an event or the likelihood of the event occurring, e.g., a work at height harness may reduce the likelihood of a fall from height, but if not connected the result is the same and the hazard can realise its full potential. However, if you used a large air bag this would prevent contact with the ground and reduce the severity of a fall injury.

### ALARP

As Low as Reasonably Practicable – requires the implementation of all reasonable and practicable measures.

### Reasonably Practicable

This means that you must take action to control the health and safety risks in your workplace except where the cost (in terms of time and effort as well as money) of doing so is “grossly disproportionate” to the reduction in the risk.

## 6.0 PROCEDURE

The following risk assessment process is applied to all [COMPANY NAME] risk assessments and is a five-steps process, defined as:

Step 1 – Identify the Hazards.

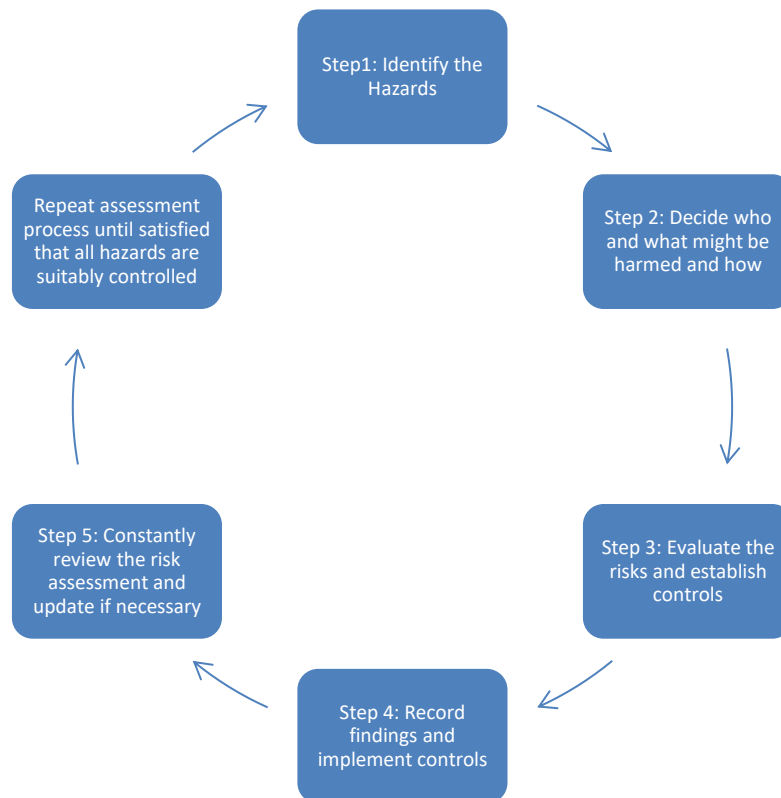
Step 2 – Decide who and what might be harmed and how (People, Environment, Business etc.)

Step 3 – Evaluate the risks and decide on precautions.

Step 4 – Record your findings and implement them.

Step 5 – Review your risk assessment and update if necessary.

All [COMPANY NAME] Risk Assessments will be undertaken using XXXX Risk Assessment Template



## 6.1 Identify the Hazards

Fully define the activity scope by means of thorough evaluation and site visit/survey, identify and document all the direct and indirect hazards with potential to cause harm.

To ensure the process is thorough, the person in charge should:

- Look at all aspects of the work.
- Include non-routine activities such as maintenance, repair, or cleaning.
- Look at accident / incident / near-miss records.
- Look at the way the work is organised or done (include experience and age of people doing the work, systems being used, etc.).
- Look at foreseeable unusual conditions (for example: possible impact on hazard control procedures that may be unavailable in an emergency, power outage, etc.).
- Examine risks to contractors, visitors or the public.
- Include an assessment of groups that may have a different level of risk such as young or inexperienced workers, persons with disabilities etc.

To identify potential hazards, the following questions may be asked (this is not a complete list):

- Can any body part get caught in or between objects?
- Do tools, machines or equipment present any hazards?
- Can the worker make harmful contact with objects?
- Can the worker slip, trip or fall?
- Can the worker suffer a strain from lifting, pushing or pulling?
- Is the worker exposed to extreme heat or cold?
- Is excessive noise or vibration a problem?
- Is there a danger from falling objects?
- Is lighting a problem?
- Can weather conditions affect safety?
- Is harmful radiation a possibility?
- Can contact be made with hot, toxic or caustic substances?
- Are there dusts, fumes, mists or vapours in the air?

## 6.2 Decide who/what may be harmed/damaged and how

For each hazard identified determine who and what might be harmed, this will help in identifying the most appropriate method of risk management.

## 6.3 Evaluate the Risks and decide on Controls

Once hazards are identified, legislation requires that everything "reasonably practicable" is done to protect people from harm.

Risk = hazard effect/severity x probability/likelihood.

During this process consider the hierarchy of risk management and steps to control risk, as described below and in order of priority:

- Eliminate – remove hazard.
- Reduce/Substitute – seek alternative methods.
- Isolate – prevent or stop flow/operation/energy.
- Control –

- Design/Engineer – interlock guards or alternative operation.
- Procedural – develop operational processes and procedures.
- Minimise exposure – minimise time and personnel in area.
- Personal Protective Equipment (PPE) – last option as PPE failure leads to injury.

Controls do not always have to be expensive and often simple solutions are the most effective in protection and reliability of implementation. e.g., barriers and the identification of Safe Areas for personnel.

#### 6.4 Record Findings and Implement Them

All risk assessments should be recorded to ensure effective communication with all [COMPANY NAME] sites and the employees using the [COMPANY NAME] risk assessments.

To demonstrate that the risk assessment is suitable and sufficient, as a minimum you will have:

- Conducted a site visit to observe the task being carried out.
- Identified any risk: to personnel, the environment, asset or equipment.
- Dealt with all the significant hazards, considering the number of affected personnel.
- Ensured precautions/mitigation is reasonable and the remaining risk is ALARP.
- Ensured personnel's responsibilities are clearly defined.
- Ensured all employees involved with the task/operation/activity have participated in the risk assessment process or as a minimum had the opportunity to review and comment on the risk assessment.

Once the control has been put into place, the workers need to be trained in how to use it. This applies whether it is an engineering control such as a guard or interlock, an administrative control such as a safe work procedure for cold weather or particular PPE when handling a chemical. Training records and/or documented sign-offs are required to show that the workers have been made aware of the hazards and the controls.

#### 6.5 Review risk assessment and update if necessary

Things rarely stay the same, and it is expected that a worksite may change, or a deviation will be required at some point either during the activity or where the activity may be repeated routinely. At the point of



recognising a change in the work scope, work site conditions, or the need to deviate from the original approved plan, the original risk assessment should be reviewed to ensure that any new hazards introduced have been suitably documented and controlled.

For repetitive tasks or activities, the risk assessment should be reviewed prior to commencement of an activity to ensure that the content is applicable to the current work scope and worksite.

## 6.6 Categorisation of risk

From the [COMPANY NAME] risk assessment there are four categories of risk and residual risk.

### Care

Deal with any quick fixes and manage with routine procedures, deal with higher rated issues first.

### Caution

Investigate risk reduction and follow corrective actions and control measures. Control measures should be reviewed to ensure risk level is at ALARP.

### Alert

Reduce risk immediately by following and or implementing control measures, precautions and actions. Control measures should be reviewed to ensure risk level is at ALARP condition.

### Alarm

Stop the process and reduce risk immediately. Risk Management is insufficient and Intolerable risk levels exist. Therefore, the activity cannot be permitted to proceed. Alternatives should be sought, in activity and controls.

## 7.0 REVIEW

This procedure will be reviewed regularly, at a minimum on a yearly basis, at the annual management meeting. Additional review maybe required due to changes in legislation, operations, technology, personnel etc.