



Government of **Western Australia**
Department of **Mines, Industry Regulation and Safety**

Petroleum safety and major hazard facility – guide

Involvement of members of the workforce

February 2020

Disclaimer

The information contained in this publication is provided in good faith and believed to be reliable and accurate at the time of publication. However, the information is provided on the basis that the reader will be solely responsible for assessing the information and its veracity and usefulness.

The State shall in no way be liable, in negligence or howsoever, for any loss sustained or incurred by anyone relying on the information, even if such information is or turns out to be wrong, incomplete, out-of-date or misleading.

In this disclaimer:

State means the State of Western Australia and includes every Minister, agent, agency, department, statutory body corporate and instrumentality thereof and each employee or agent of any of them.

Information includes information, data, representations, advice, statements and opinions, expressly or implied set out in this publication.

Loss includes loss, damage, liability, cost, expense, illness and injury (including death).

Creative commons

The State of Western Australia supports and encourages the dissemination and exchange of its information. The copyright in this publication is licensed under a Creative Commons Attribution 4.0 International (CC BY) licence.

Under this licence, with the exception of the Government of Western Australia Coat of Arms, the Department's logo, any material protected by a trade mark or licence and where otherwise noted, you are free, without having to seek our permission, to use this publication in accordance with the licence terms.

We also request that you observe and retain any copyright or related notices that may accompany this material as part of the attribution. This is also a requirement of the Creative Commons Licences.

For more information on this licence, visit creativecommons.org/licenses/by/4.0/legalcode

Contact

This publication can be available on request in other formats for people with special needs.

Further details of safety publications can be obtained by contacting:

Safety Regulation Group – Regulatory Support

Department of Mines, Industry Regulation and Safety

100 Plain Street

EAST PERTH WA 6004

Telephone: +61 8 9358 8001

NRS: 13 36 77

Email: SafetyComms@dmirs.wa.gov.au

Guides

A guide is an explanatory document that provides more information on the requirements of legislation, details good practice and may explain means of compliance with standards prescribed in the legislation. The government, unions or employer groups may issue guidance material.

Compliance with guides is not mandatory. However, guides could have legal standing if it were demonstrated that the guide is the industry norm.

This Guide has an operations focus and is set out in the context of risk assessment and legislative requirements of all responsible persons. Consequently, each operation needs to understand its limitations and skills base.

The Guide is based on current experience and is not claimed to be complete.

Who should use this Guide?

You should use this Guide if you are responsible for development of safety cases or other safety related documentation as well as hazard identification and risk management.

Contents

1	Introduction	1
1.1	Scope and objective of this Guide.....	1
1.2	Definitions and abbreviations	1
2	Key success factors for workforce involvement	2
3	Safety case requirements	2
3.1	Identifying the need for workforce involvement.....	2
3.2	Demonstration of workforce involvement within the safety case.....	3
3.2.1	Involvement in the formal safety assessment.....	3
3.2.2	Involvement in the facility description and safety management system.....	3
4	Effective Workforce Involvement	4
4.1	Why involve the workforce?	4
4.2	Who should be involved?	4
4.3	When should the workforce be involved and for how long?	5
4.4	What are the key areas of workforce involvement?	5
4.4.1	Management of risks	5
4.4.2	Management of change	5
4.4.3	Investigation of accidents and dangerous occurrences	5
4.5	How should the workforce be involved?	6
4.5.1	Communication.....	6
4.5.2	Sharing information.....	6
4.5.3	Providing reasonable time for review and comment.....	7
4.5.4	Review and comments to be taken into account	7
4.5.5	Advising the workforce of the outcomes.....	7
4.5.6	Documenting workforce involvement.....	7
	Appendix 1 Legislative provisions	8
	Appendix 2 References and acknowledgements	8
	Appendix 3 Glossary	8
	Appendix 4 Further information	9

1 Introduction

This document has been developed to provide assistance and guidance to licensees and operators to meet the Western Australian Petroleum Safety and Major Hazard Facility legislation administered by the Department of Mines, Industry Regulation and Safety (the Department).

The legislation covered by this Guide is listed in Appendix 1.

1.1 Scope and objective of this Guide

This Guide has been developed to provide licensees and operators with assistance to meet their obligations for effective involvement of members of the workforce.

For the purpose of this Guide, the term “safety case” will be used to cover all of the safety documents referred to in the respective regulations.

Under the Dangerous Goods Safety (Major Hazard Facility) Regulations 2007 reference is made to a “major incident” which is defined as “an incident involving or affecting a Schedule 1 substance (Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007) that causes serious harm to people, property or the environment”.

Under the Petroleum (Submerged Lands) (Pipelines) Regulations 2007, reference is made to “significant pipeline accident event” (SPA). This is defined as an event that (a) is connected (whether immediately or after delay) with work carried out on, or in relation to, a pipeline; or, (b) causes, or creates a significant risk of causing, human death (for example, because of hydrocarbon releases).

Reference within this Guide is made to MAE, which will encompass the term “major incident” and also “significant pipeline accident event”.

The objective of this Guide is to provide clarity to both industry and Department personnel on areas of the legislation that may be ambiguous or open to interpretation.

The following appendices are included:

Appendix 1 Legislative provisions

Appendix 2 References and acknowledgements

Appendix 3 Glossary of terms

Appendix 4 Further information

1.2 Definitions and abbreviations

Definitions and abbreviations are included in Appendix 3 Glossary of terms.

2 Key success factors for workforce involvement

There are three key requirements for successful workforce involvement. These are:

- **Commitment.** There should be a genuine commitment from both management and members of the workforce to invest time and effort into workforce involvement. Genuine involvement by management can enhance the impact of their authority by generating a consultative and cooperative environment. Workforce commitment can result in decisions and outcomes that are more likely to be relevant, appropriate and useful to their work.
- **Competence.** Managers and leaders seeking to involve members of the workforce should ensure they are willing and competent to do so. Members of the workforce should have sufficient levels of knowledge and expertise in the areas under review. Where workforce involvement includes activities such as risk management and incident investigations, consideration should be given to training in these areas with the tools and techniques used by the licensee or operator.
- **Cooperation.** Workforce involvement only succeeds with the willingness of all parties to cooperate with each other. This will include licensees and operators and members of the workforce being willing to compromise and having the ability to modify their own opinions in light of new information. Teams established for the resolution of more complex issues and actions are more likely to be successful if all parties have a genuine commitment to cooperation as a means of achieving the desired improvements in safety and health outcomes.

3 Safety case requirements

3.1 Identifying the need for workforce involvement

This document explains the need for workforce involvement in the preparation and revision of safety cases, including hazard identification and risk assessment.

A member of the workforce is essentially an individual who does work at the facility.

The need for involvement of the workforce is expanded further in Section 4 Effective workforce involvement.

The overall responsibility for the preparation of the safety case is with the licensee or operator. The involvement of the workforce is important as it provides access to and understanding of the key safety and health document for the facility.

Involvement of members of the workforce in preparation and revision of a safety case supports the key objectives of:

- providing an understanding of the hazards and risks identified and the decisions made concerning the control measures and safety management systems implemented to control those risks. This ultimately meets the objective that members of the workforce become more actively involved in implementing those controls and safety management systems and of their own responsibilities in relation to the hazards and risks identified
- informing members of the workforce about the risks to which they may be exposed and the control measures implemented for eliminating or reducing those risks. This can result in a more positive safety culture being promoted/encouraged throughout the organisation with a high level of workforce involvement in major accident event (MAE) identification and controls as well as awareness of other safety issues
- effective consultation and participation of the members of the workforce in processes for the development and maintenance of both the safety case and the safety management system (SMS), including emergency response plans and associated drills and exercises, task-based hazard identification, risk management, management of change and permit to work systems.

Meeting the above objectives results in members of the workforce (who have an active role in implementing, managing and maintaining the technical controls and the supporting processes and procedures) becoming more aware of their own roles and responsibilities in relation to the controls in place for a facility.

3.2 Demonstration of workforce involvement within the safety case

The safety case for a facility should demonstrate the methodology used to ensure that members of the workforce are not only involved in the preparation of safety case documentation, but are kept involved and updated on all safety issues.

Workforce involvement can be demonstrated by a concise overview of the processes and systems used including:

- various meetings which have minutes available and distributed
- team briefings
- emails
- safety bulletins that may arise from incident/accident investigations
- notice boards.

In the case of risk or hazard assessments and incident and accident investigation workshops, evidence of workforce involvement can be demonstrated by signed attendance registers (showing details of dates, times and location) supporting the final reports.

3.2.1 Involvement in the formal safety assessment

The formal safety (FSA) assessment section of a safety case includes processes of workshops, brainstorming and analysis of information, knowledge of the risk of MAEs and the processes and methods in place required for prevention or mitigation.

Active participation by members of the workforce involved in design, engineering, construction and decommissioning activities as well as day-to-day operation of the facility is critical. Detailed minutes should be developed and reviewed for each of the risk assessment workshops conducted and this should include a signed attendance register to support evidence of workforce involvement.

Each of these workshops should be summarised in the safety case FSA stating that workforce involvement has taken place and the final signed workshop minutes should be available for Department inspectors upon request.

3.2.2 Involvement in the facility description and safety management system

Involvement of the workforce in the areas of the facility description and safety management system description can be achieved by the documented review and comment of the facility description to be included in the safety case by operations and engineering personnel.

Workforce involvement in the safety management system description can be achieved through participation in the preparation, review and approval of the various procedures and work related documents, such as job hazard analyses, safe work method statements and other procedures and work instructions that address risks and hazards associated with the tasks to be completed.

4 Effective Workforce Involvement

Licensees and operators benefit from an informed workforce. This benefit is achieved with a workforce that cooperates and collaborates to develop and review the effectiveness of control measures described in the facility safety case to ensure the safety and health of persons working on the facility.

Planning for effective workforce involvement in the preparation of a safety case can present a number of issues for the licensee or operator as the full workforce complement are not usually available in the early stage of facility development.

It is suggested that licensees and operators endeavour to use members of the workforce who have experience from a similar facility to join with design, engineering and other relevant personnel.

Contributions from the workforce should be considered on the basis of technical or working knowledge, and not on the seniority of the contributor. Workshops should not be dominated by individual persons or groups within the organisation excluding input from others.

Involvement in revision of safety cases should be planned to ensure that members of the workforce are provided with a copy of the revised safety case document with sufficient time to review and make their comments and also with allowance for responding to their comments prior to finalisation of the revision.

4.1 Why involve the workforce?

Apart from the legislative requirement to involve the workforce, it is also important and beneficial to the licensee or operator as:

- worksite planning and development of procedures and processes to be used around the workplace should result in better safety on site
- the workforce gains a better understanding of why those decisions have been made and obtains a sense of ownership over the outcomes
- participation can provide a better understanding of roles, responsibilities, interactions and duties in relation to occupational safety and health
- a collaborative safety culture and a commitment to safety at all levels of the organisation can be established
- the workforce has the most direct contact with work hazards. This information is fed into risk assessment workshops relating to hazard operability studies (HAZOP) and hazard identification studies (HAZID), incident investigations, lessons learned, safety alerts and industry best practice
- in situations where responsibility for safety and health is shared, this can help address any gaps in managing safety and health risks
- the identification of similar recurring accidents or incidents, can ensure appropriate preventative and mitigating controls and the assignment of corrective actions are assigned to the most appropriately qualified personnel
- recognition of workforce input and participation improves decision-making about safety and health matters and assists in reducing work-related injuries and disease.

4.2 Who should be involved?

When selecting members of the workforce to take part in activities concerning the development of the safety case, the licensees or operators should ensure that representation from all sections of the operations relevant to a particular facility are involved, including administrative staff from off-site offices.

Licensees and operators should also take into account the representation of the safety and health representatives (SHReps), safety and health committees and ensure there is representation from this area within risk assessment workshops, incident investigations and relevant procedures and processes.

4.3 When should the workforce be involved and for how long?

There is no specific timeframe within the legislation for the involvement of the workforce, however, involvement should be effective and timely.

It is therefore recommended that workforce involvement should be arranged to take place on a regular basis and not just on a case-by-case requirement. This regular involvement can result in early identification of potential problems and result in better consultation and cooperation.

4.4 What are the key areas of workforce involvement?

Key areas of workforce involvement are in:

- the development and revision of a safety case (Section 3 Safety case requirements)
- the identification and management of risks
- the management of change
- incident and accident investigations
- relevant procedures and processes developed by the licensee or operator which support the operation of the facility.

4.4.1 Management of risks

Members of the workforce are key to the identification and understanding of risks within their work areas, particularly safety and health risks. Workforce involvement can facilitate effective and accurate identification of new or changed hazards and the associated risks which will then flow into the identification and development of effective control measures.

Licensees and operators should ensure that during these types of decisions the members of the workforce involved have access to all relevant information including technical and historical data.

4.4.2 Management of change

Changes in the workplace can impact the safety and health of the workforce.

Management of change and risk management are closely linked and members of the workforce should always be involved where those changes may affect safety and health. This includes:

- proposed changes to the facilities
- introduction of new or modified tools, plant, software, equipment or substances
- proposed changes to rosters
- any new or modified procedures
- proposed organisational restructuring, such as changes to responsibilities of individuals that will result in the change to position descriptions, priorities and reporting lines.

During the consultation period it is critical that information including the reasons and the anticipated consequences be shared with members of the workforce.

Licensees and operators should ensure that sufficient time is allowed for the workforce to understand the proposed changes and provide any feedback, concerns and suggestions. This feedback should be taken into consideration before a final decision is made on the proposed changes and that decision should be communicated to the members of the workforce involved in the review.

4.4.3 Investigation of accidents and dangerous occurrences

Effective workforce involvement is critical for any investigation of accidents and dangerous occurrences that have happened in the workplace.

An investigation team should have representatives included from all the relevant areas to ensure a complete and cohesive investigation. This team will then be able to identify those similar issues and conditions that may be present across a number of areas that lead to similar accidents and dangerous occurrences across different areas of the facility.

Workforce members involved should have the technical and working knowledge of the relevant accident or dangerous occurrence being investigated.

It is important that workshops should not be dominated by individual persons or groups within the organisation excluding input from others.

The report developed from the investigation should be supported by corrective and preventive actions that will lead to ongoing continual improvement of the processes used by the organisation as well as prevent similar or repeated occurrences.

Members of the workforce involved in the investigation will then be in a position to discuss the results of the investigation with other personnel and provide feedback on the decisions made and the actions generated.

4.5 How should the workforce be involved?

The process for workforce involvement should relate to the organisation's size and culture in respect to safety and health issues. The process may be a mixture of informal conversations, discussions and formal meetings, minutes or a combination of each. The following elements should be present to ensure that workforce involvement is effective.

4.5.1 Communication

Two-way communication is critical to organisational effectiveness and improved safety and health performance. Strategies which can assist with effective communication include:

- Workforce interactions – site visits by managers and senior leaders should include individual workforce interactions.
- Meeting with SHReps – senior leaders should ensure they meet with SHReps during site visits.
- Safety meetings at a facility – meetings should be held at the facility involving facility management and should engage the workforce in active two-way discussions about relevant issues. These meetings should follow a pre-determined agenda with minutes and timekeeping and the generation of any actions that may arise from the meeting.
- Safety and health committee members and SHReps – SHReps and safety and health committee members should proactively engage other members of the workforce to ensure they are providing accurate and relevant representation during meetings with management.
- Employee surveys – employee surveys including safety and health culture surveys, may be used as a mechanism for two-way communication involving a large proportion of the workforce.

4.5.2 Sharing information

Where possible, information regarding safety and health matters likely to affect workers should be provided to the workforce for review and comment prior to decisions being made.

It is important that the safety and health information provided is available to all members of the workforce and facilitated by the SHReps and may include:

- policies and procedures
- technical guidance about hazards, risks and controls
- hazard reports and risk assessments
- proposed changes to the facility, processes, plant and substances
- data about incidents, injuries and illnesses (internal and industry data)
- safety alerts and bulletins (internal and external).

4.5.3 Providing reasonable time for review and comment

The workforce should be given sufficient time to review and comment on information available and provide a response to management. This should include:

- reviewing and discussion during working hours
- the review as an agenda item on meetings with work groups
- allowing time for SHReps to engage with designated work groups
- a variety of appropriate feedback mechanisms.

4.5.4 Review and comments to be taken into account

All legitimate workforce reviews and comments should be genuinely considered during a decision-making process. The final decision may not always reflect the feedback received from the workforce but the decision makers should demonstrate and document what was considered and the justification for inclusion or exclusion.

4.5.5 Advising the workforce of the outcomes

The workforce should be advised of the outcomes of their involvement in the decision-making process including the details of the final decision and associated expectations or requirements.

Where appropriate the decision-makers may provide interested parties with further information supporting the reasons for the decision.

4.5.6 Documenting workforce involvement

Apart from the legislative requirement to be able to support workforce involvement with documented evidence, it can be beneficial to keep records of involvement for future reference purposes. This will demonstrate a consultative process with the workforce.

These records need not be complex, but should include pertinent information, such as who was involved, date/time and location, details of the issue considered, options considered and the final decision.

Appendix 1 Legislative provisions

Petroleum (Submerged Lands) (Management of Safety of Offshore Facilities) Regulations 2007

r. 22 Involvement of members of the workforce

Petroleum (Submerged Lands) (Pipelines) Regulations 2007

r. 60 Involvement of members of the workforce

Petroleum (Submerged Lands) (Diving Safety) Regulations 2007

r. 21 Involvement of divers and members of workforce in DSMS and diving project plan

Petroleum and Geothermal Energy Resources (Management of Safety) Regulations 2010

r. 18 Involvement of members of the workforce

Petroleum Pipelines (Management of Safety of Pipeline Operations) Regulations 2010

r. 16 Involvement of members of the workforce

Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007

r. 23(2)(e) Risk assessment, operator of major hazard facility to prepare

r. 24(2)(b) Safety management system, operator of major hazard facility to prepare

Appendix 2 References and acknowledgements

Development of this Guide has used:

- reference to the NOPSEMA suite of guidance notes

Appendix 3 Glossary

ALARP. As low as reasonably practicable.

Facility. The term facility has been adopted throughout this document to cover offshore and onshore facilities and pipelines including above ground structures associated with onshore pipelines and major hazard facilities.

FSA. Formal safety assessment.

HAZID. Hazard identification study.

HAZOP. Hazard operability study.

SHRep. Safety and health representative.

MAE. Major accident event – an event connected with a facility, including a natural event, having the potential to cause multiple fatalities of persons at or near the facility. In this document the term “MAE” also covers SPAE (Significant pipeline accident event) and MI (major incident).

Safety case. In this document covers all safety management systems, safety reports, plans and other safety related documents referred to in legislation in Appendix 1.

Appendix 4 Further information

Other guidance available:

- *ALARP demonstration*
- *Audits, review and continual improvement*
- *Bridging documents and simultaneous operations (SIMOPS)*
- *Dangerous goods safety guide – risk assessment for dangerous goods*
- *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 – guide*
- *Diving safety management system*
- *Emergency planning*
- *Hazard identification*
- *Major accident events, control measures and performance standards*
- *Management of change*
- *Offshore facility safety case*
- *Pipeline management plan*
- *Pipeline operation safety case*
- *Records management including document control*
- *Reporting of accidents, incidents and dangerous occurrences*
- *Reporting dangerous goods incidents – guideline (6th edition)*
- *Risk assessment and management including operational risk assessment*
- *Safety management system*