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

Major hazard facility – guide

Audits, review and continual improvement

May 2020

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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 auditing, management reviews and ongoing continual improvement of management systems for major hazard facilities.

Contents

1 Introduction

This document has been developed to provide assistance and guidance to major hazard facility (MHF) operators to meet the Western Australian Dangerous Goods Safety (Major Hazard Facilities) 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 assist MHF operators in the development and ongoing use of audit systems, management reviews and continual improvement. The intent is to provide clarity to both industry and Department personnel on areas of the legislation which 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.

1.3 Use of standards and approved codes of practice

The following standards may be useful to licensees and operators when developing procedures and processes on audits and continual improvement requirements.

- AS/NZS ISO 9001 *Quality management systems – Requirements*
- AS/NZS ISO 19011 *Guidelines for auditing management systems*
- AS/NZS ISO 31000 *Risk management – Guidelines*

Operators should reference the current versions of these publications to support the requirements of the safety case and how audits, review and continual improvement are managed within their organisation.

2 Audits

An audit is a systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled. It should not be confused with normal site inspections conducted during routine inspection and maintenance of a facility.

An effective audit process and procedure are key elements in monitoring and measuring the implementation of the safety management system and providing a means of continual improvement to that system. Therefore, licensees and operators should have an audit system in place that is clear, objective and evidence-based to show that they conform to the safety management system (SMS). This is one of the Department's main focus areas.

When establishing an audit program, licensees and operators may find AS/NZS ISO 19011 *Guidelines* for auditing management systems, a useful reference document.

2.1 Audit planning and scheduling

Licensees and operators need to identify suitably qualified members of the workforce who can take on responsibility for auditing. If those members of the workforce are not already competent in conducting audits, then training should be organised. Suitable training would include an appropriate course in auditing with a recognised training organisation, followed by participation in an audit team to gain practical experience.

An audit plan, taking into account the various systems and activities on a facility, needs to be developed. This plan needs to take into account the types of audit to be conducted; for example, internal, external or third party. The plan also needs to include how the quality of the internal audit system will be checked and, where necessary, improved.

Once the audit plan has been completed, the next step is to develop a schedule to identify when systems and activities will be audited and by whom. The audit schedule should be risk-based, taking into account the level of risk for each system, performance standard or activity and ensure that those areas with a higher risk level are audited more frequently than those areas with a low risk level. For example, a performance standard for the management of loss of containment of hydrocarbons might be audited more frequently than the document control system.

Audit schedules should be regularly reviewed (at least quarterly) and updated with the current status. Where scheduled audits are re-scheduled, the reason for the re-schedule should be included. This is an important step in risk-based audit scheduling as it can be very easy for a high risk area audit to be re-scheduled several times and consequently not meet the criteria for the periodic audits of that area.

Regular reviews also allow for the scheduling of follow up or interim audits. These can be used to address and verify issues raised during a scheduled audit and outline the corrective actions put in place as required and how those actions will prevent a recurrence of the previously identified issue.

The audit plan should be updated at least annually to reflect any changes to the facility or operational requirements and include any new facilities or systems that will also need to be audited.
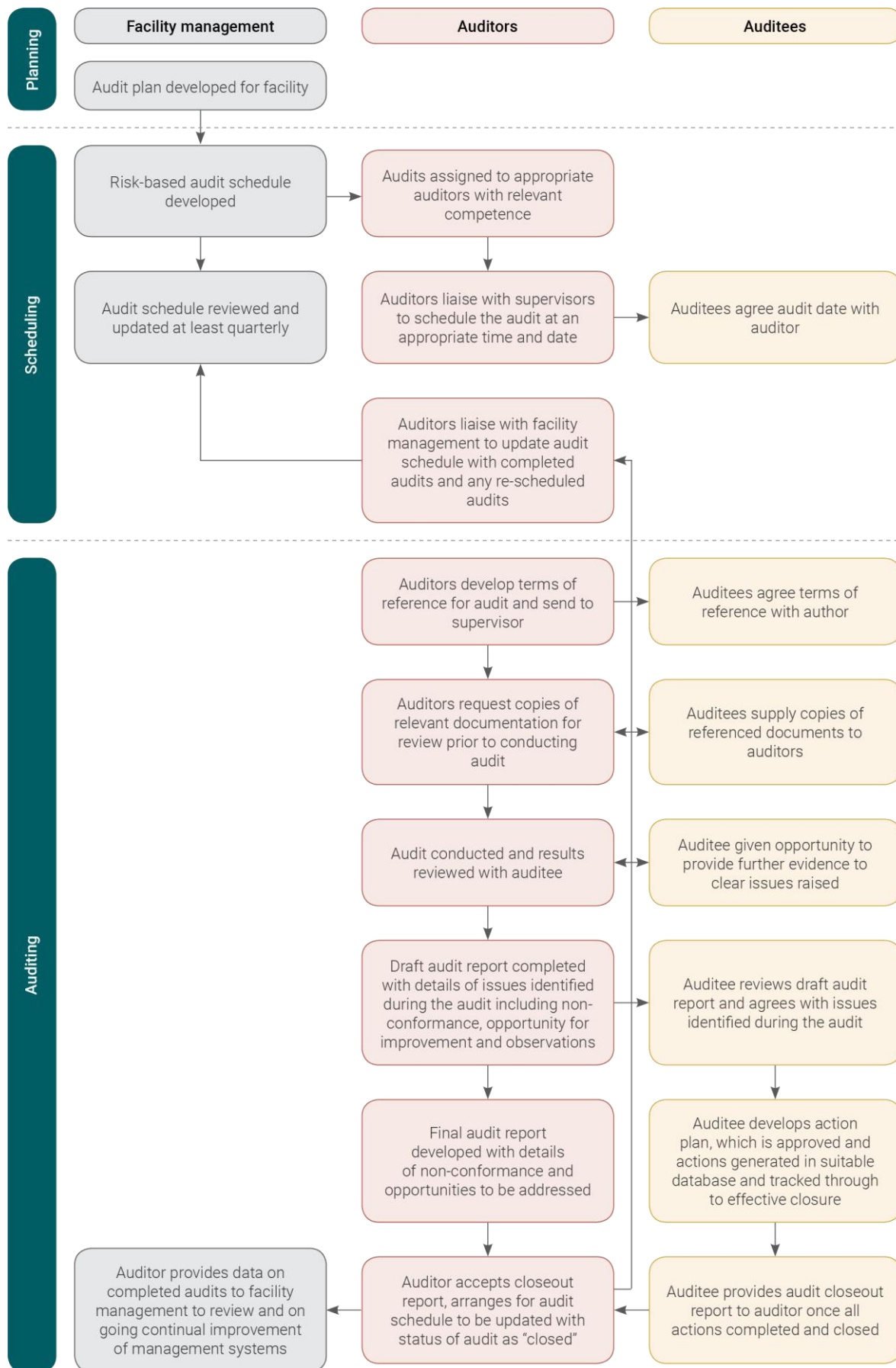
Planning

| Facility management | Auditors | Auditees |

Planning

Audit plan developed for facility

Scheduling

Risk-based audit schedule developed

Audits assigned to appropriate auditors with relevant competence

Audit schedule reviewed and updated at least quarterly

Auditors liaise with supervisors to schedule the audit at an appropriate time and date

Auditees agree audit date with auditor

Auditors liaise with facility management to update audit schedule with completed audits and any re-scheduled audits

Auditing

Auditors develop terms of reference for audit and send to supervisor

Auditees agree terms of reference with author

Auditors request copies of relevant documentation for review prior to conducting audit

Auditees supply copies of referenced documents to auditors

Audit conducted and results reviewed with auditee

Auditee given opportunity to provide further evidence to clear issues raised

Draft audit report completed with details of issues identified during the audit including non-conformance, opportunity for improvement and observations

Auditee reviews draft audit report and agrees with issues identified during the audit

Final audit report developed with details of non-conformance and opportunities to be addressed

Auditee develops action plan, which is approved and actions generated in suitable database and tracked through to effective closure

Auditor provides data on completed audits to facility management to review and on going continual improvement of management systems

Auditor accepts closeout report, arranges for audit schedule to be updated with status of audit as "closed"

Auditee provides audit closeout report to auditor once all actions completed and closed

Figure 1   Planning, scheduling and conducting audits

2.2 Internal audits

Internal audits are conducted by members of the workforce against specific systems or activities on a facility and should be process-based, not just procedural. These should include audits against the various performance standards developed identifying the safety critical controls which ensure controls for major incidents are effective and maintain the risks at a level that has been reduced so far as reasonably practicable (SFARP).

The organisation should ensure that there are suitable audit protocols developed for each system, performance standard or activity that will be audited. This will provide the auditor with an understanding of the areas to be audited and allow for additional checks to be added as identified during the audit.

All completed audit protocol checklists must be legible and retained on file to support the audit findings and the audit report generated.

Department audits will include a review of internal audits conducted with the expectation that the audits are:

- factual and evidence-based and can withstand third party scrutiny

- aimed at verification and validation; that is, the audit not only checks compliance with the relevant safety case, it also checks that the safety case itself is correct

- not just procedural in scope, but also at safety case level to verify compliance with the relevant Act and Regulations

- interpreted across the entire operation in respect to the findings, not just at the local level

- aimed at detecting system issues, not just low-level compliance

- conducted by taking into account the key focus points communicated by the Department from time to time, for example:

  – leadership and accountability

  – compliance assurance with the accepted, in force safety documentation

  – asset management and change management, especially around aging assets.

2.2.1 Conducting an internal audit

The lead auditor should liaise with the relevant supervisor to schedule the internal audit at a time that is suitable to all those involved and provide the terms of reference for the areas to be audited.

An opening meeting should be held with the auditor, supervisor and any other members of the workforce who will be involved in the audit to discuss the terms of reference and clarify any issues raised in relation to the proposed audit.

The auditor should arrange to preview key documentation prior to the commencement of the audit to become familiar with the subject matter under review.

A closing meeting should be scheduled at the end of the audit to review the findings and discuss them with the relevant supervisor prior to completion of the draft audit report. This closing meeting enables the supervisor to clarify any issues raised and also possibly provide additional information that will clear some of the findings of the audit.

An audit report and action plan should then be prepared and finalised with management.

2.2.2 Action plan and closing out internal audits

An action plan should be generated as part of the final audit report and the identified actions entered into a database where they can be assigned to an appropriate member of the workforce, and a close out date set for the work to be completed.

The relevant supervisor monitors these actions to ensure that all are completed within the required time. A status report on the actions should be generated to show the progress of their completion. Once all actions have been completed and closed out, an audit close out report can be generated by the supervisor to verify completion of the audit.

This should be passed to the auditor who will then be able to close out the audit if they are satisfied that all corrective or preventive actions will fix the issues identified during the audit.

2.3   Department facility audits

Department inspectors will conduct their own facility audits against various areas of the safety report or against specific performance standards.

The licensee or operator will receive notification from the Department inspector who will arrange a suitable time for the audit to take place. The inspector will develop a terms of reference detailing the areas to be covered by the audit and, if necessary, request copies of relevant documentation to be reviewed prior to the commencement of the audit.

The final audit report, with details of the findings, will be developed by the inspector. This will be sent to the MHF operator who will be required to prepare a suitable action plan to address any non-conformances or opportunities for improvement, which will need to be returned to the inspector within a specified timeframe for their acceptance.

The Department has a range of options available for dealing with non-conformances identified during the course of an audit, including the issuance of remediation notices [s. 47].

2.4   Audits requested by the Chief Officer

The Chief Officer may direct the MHF operator to engage an approved auditor to conduct an audit into all or any of the following [s. 46]:

(a) the risk to people, property or the environment from dangerous goods on the site

(b) the safety of the whole or a part of the site, or any building, structure, plant, equipment or thing on the site, or of any activities on the site

(c) the adequacy and effectiveness of any safety management document relating to the site

(d) a dangerous goods incident or a dangerous situation on the site.

The direction from the Chief Officer must state the reasons for and the objectives of the audit and set a date on or before which the audit is conducted. The report is to be given to the Chief Officer.

For the purpose of this requirement, the Chief Officer may approve a person as an auditor provided the Chief Officer is satisfied that the person has the required qualifications and experience and is independent of the site where the audit is to be conducted.

Upon completion of the audit, the report should include, as per the Department facility audits, details of any areas that show non-compliance along with identified opportunities for improvement and proposed corrective actions, which can be used by the licensee or operator to generate a corrective action plan. Satisfactory completion and close out of these corrective or preventive actions should then form the basis of continual improvement of the safety management system for the facility.

As with Department facility audits, upon completion of the audit, the report should include details of any non-compliance areas and opportunities for improvement and have proposed corrective actions which can be utilised by the licensee or operator to generate a corrective action plan.

2.5   External audits

External or third party audits may be required when:

• the Chief Officer requests an audit as outlined in section 2.4

• there is a certified management system in place that needs to be audited by a certifying body

• the organisation has been contracted by a third party to operate the facility on their behalf and they are required to confirm that work is being completed, and procedures and processes adhered to, as contracted.

Any external or third party audits should be conducted by a suitably qualified auditor and have a clearly defined scope and terms of reference.

3   Reviews

MHF operators should have a process in place for management reviews to be conducted. These reviews should be scheduled at regular intervals to enable senior management to receive information regarding various key aspects of the facility, which are critical to the safe levels of operation, maintaining risks at SFARP and meeting the objectives set by management from time to time.

The reviews should be conducted in a meeting environment with a prepared agenda and minutes documenting the areas covered, any actions generated and any new objectives set by management for continual improvement of the management systems.

The agenda for the meeting should include:

- review of the previous minutes and any actions generated to verify that these have been completed and closed out

- review of key performance indicators (KPIs) and positive performance indicators (PPIs) and whether or not these have met the objectives and targets previously set

- review of any significant accidents or dangerous occurrences that have happened during the period under review and whether they have been effectively closed out

- any lessons learnt or safety alerts which could be relevant to the operations of the facility and had been issued during the period under review

- any external issues that may impact the operations of the facility; for example, changes to legislative requirements, or standards to which the organisation is required to comply

- any internal issues that may impact operations of the facility, for example roll out of new systems or processes

- identification of any new objectives for improvement of the management systems.

A copy of the minutes from the meeting should be retained through records management, and any actions raised against any of these items should be generated within a suitable database and monitored through to effective closure. These completed actions should then be listed for verification of effectiveness at the next review meeting.

4   Continual improvement

The legislation requires procedures to be in place for using the information obtained from ongoing monitoring to improve safety at a facility.

MHF operators should therefore have a suitable procedure and process in place to be able to track and document all areas and actions that will result in an improvement to their management system. This should encompass the results from audits and reviews as well as corrective or preventive actions arising from root cause analysis of incident investigations and other relevant areas within the safety management system.

Details of the data that has been supplied to show continual improvements from the sources identified should be included in the management reviews.

External contributions to continual improvement may also be derived from:

- findings and actions arising from the Department audits

- review of internal and external audit findings by Department inspectors

- key focus points identified by the Department from time to time and communicated to licensees and operators for their attention

- liaison meetings with Department inspectors where any of the above may be discussed and further improvements suggested.

 shows examples of the processes that can feed into continual improvement of the safety management systems.
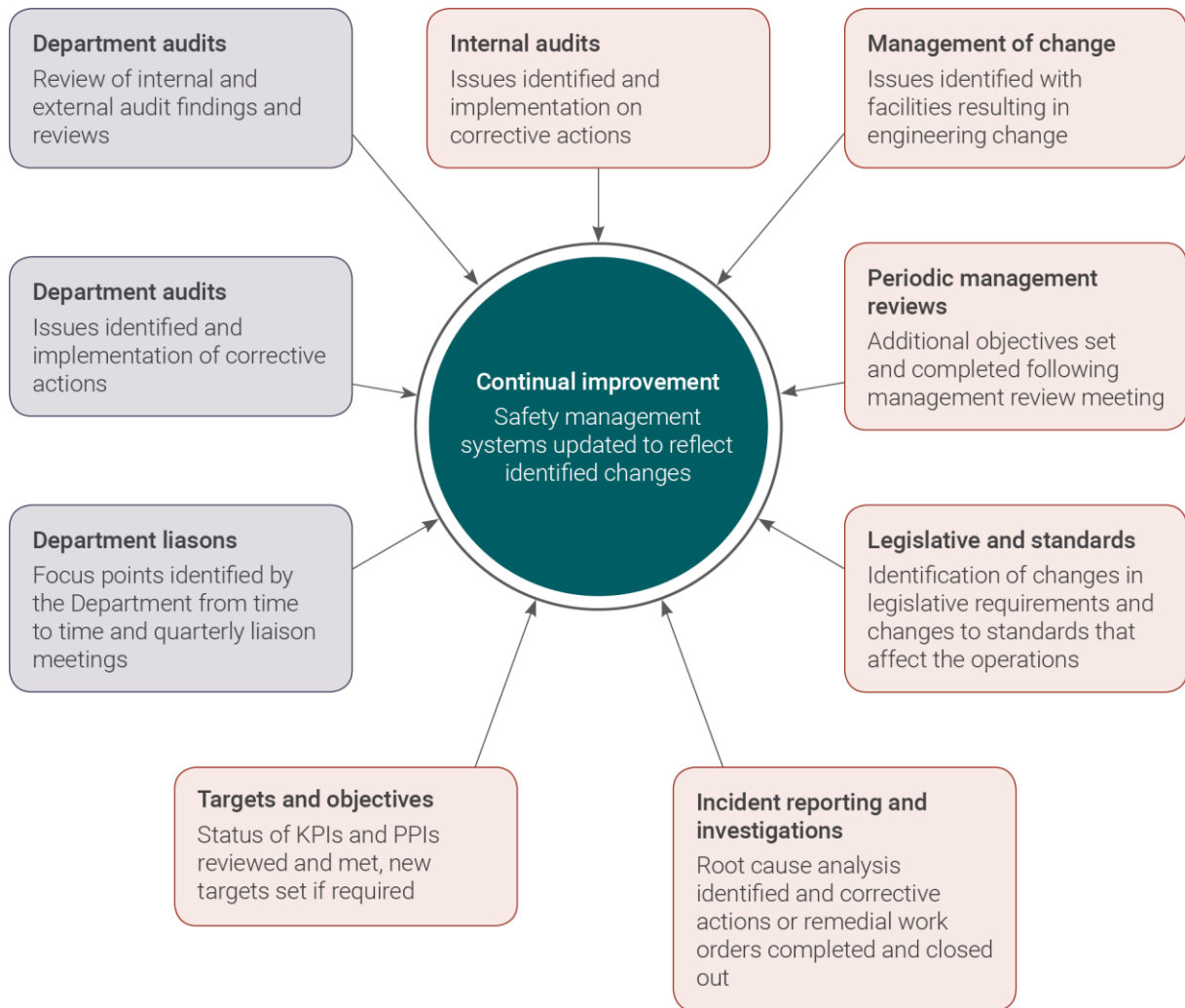
Figure 2   Example of continual improvement processes

Appendix 1   Legislative provisions

Dangerous Goods Safety Act 2004

Part 2 – General duties as to dangerous goods

s. 8   Duty to minimise risk from dangerous goods

s. 9   Duty to report certain situations

Division 4 – Audits of dangerous goods sites

s. 46   Audit may be directed by Chief Officer

Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007

r. 23   Risk assessment, operator of major hazard facility to prepare

r. 27   Safety report, approval of by Chief Officer

Appendix 2 References and acknowledgements

Development of this Guide has used:

- AS/NZS ISO 9001 *Quality management systems – Requirements*
- AS/NZS ISO 19011 *Guidelines for auditing management systems*
- AS IEC 61511 *Functional safety – Safety instrumented systems for the process industry sector*
- AS/NZS ISO 31000 *Risk management – Guidelines*

Appendix 3 Glossary of terms

Auditor. A person who has the relevant qualifications and experience to perform audits as defined in Clause 7 of AS/NZS ISO 19011:2014 and is independent from the area being audited.

KPI. Key performance indicator.

Lead auditor. A suitably qualified auditor designated to manage an audit with the appropriate level of experience and competence as defined in Clause 7 of AS/NZS ISO 19011:2014.

MHF. Major hazard facility.

PPI. Positive performance indicator.

Safety report. This document covers all safety management systems, plans and other safety related documents referred to in WA legislation.

SFARP. So far as reasonably practicable.

SMS. Safety management system.

Appendix 4 Further information

Other guides available:

- *ALARP demonstration*
- *Bridging documents and simultaneous operations (SIMOPS)*
- *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 – guide*
- *Emergency planning*
- *Hazard identification*
- *Involvement of members of the workforce*
- *Major accident events, control measures and performance standards*
- *Management of change*
- *Providing information to the community*
- *Records management including document control*
- *Reporting dangerous goods incidents – guideline*
- *Risk assessment and management including operational risk assessments*