

GUIDE FOR MAJOR HAZARD FACILITIES

PREPARATION OF A SAFETY CASE

MARCH 2012

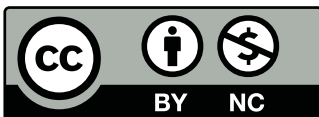


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1. INTRODUCTION

The purpose of this Guide is to help the operator of a MHF to prepare a safety case that is effective and meets the requirements of the Work Health and Safety Regulations (the WHS Regulations). The Guide explains the requirements and provides 'thinking points' that will help the MHF operator to prepare a useful, high-quality safety case. It includes a flowchart showing the development of the safety case and a checklist of the components required in the completed safety case. Separate sections in the guide give more detailed information about the various components and what information the safety case should contain.

The intended outcome is a safety case that meets regulatory requirements and demonstrates the adequacy of the measures being implemented to prevent major incidents and to minimise the consequences of any major incidents that do occur.

This Guide forms part of a set of guidance material for MHFs that includes information on:

- Notification and Determination
- Safety Assessment
- Safety Management Systems
- Developing a Safety Case Outline
- Safety Case: Demonstrating the Adequacy of Safety Management and Control Measures
- Providing Information to the Community
- Information, Training and Instruction for Workers and Other Persons at the Facility
- Emergency Plans.

WHAT IS A SAFETY CASE?

A safety case is a written presentation of technical, management and operational information about the hazards and risks that may lead to a major incident at a major hazard facility (MHF), and the control of those hazards and risks. In the safety case, the MHF operator provides justification for the measures the operator has taken or will take to ensure the safe operation of the MHF. By focusing attention on major incident prevention, the safety case can improve safety at the MHF. The safety case forms part of the MHF operator's application for an MHF licence.

The safety case must demonstrate the adequacy of measures the operator will implement to control risks associated with major incidents that may occur. The safety case must also demonstrate that the MHF's safety management system will control risks that could lead to – and arise from – a major incident.

The safety case should be prepared in accordance with the safety case outline that was prepared (or subsequently altered) by the MHF operator. For information about the requirements for a safety case outline, see the *Guide for Major Hazard Facilities: Developing a Safety Case Outline*. The safety case outline is in effect a project plan for the preparation of the safety case. While continuous reference to the safety case outline is recommended to ensure adherence to the plan, it should be appreciated that additional matters that need to be included in the safety case may be identified during the preparation of the safety case.

WHAT DO THE REGULATIONS REQUIRE?

The operator of a determined MHF must provide a completed safety case to the regulator within 24 months after determination of the MHF. Regulation 561 sets out the matters that must be included in the safety case. Additional matters that must be included in the safety case are set out in Schedule 18.

The regulator may require the operators of two or more MHFs to coordinate the preparation of their safety cases. The operator of a determined or licensed MHF must review and, as necessary, revise the safety case. Further details of the WHS Regulations are set out in Appendix A.

Relevant definitions are in Appendix B.

2. PURPOSE OF A SAFETY CASE

The MHF operator is responsible for eliminating the risk of a major incident or, if elimination is not reasonably practicable, minimising the risk from a major incident so far as is reasonably practicable. The MHF operator must ensure that adequate and documented systems are in place to prevent major incidents and near misses at the MHF, and to minimise the effects of major incidents that might occur at the MHF.

The safety case is an important way of providing assurance to the MHF operator, workers and regulatory authorities that the potential for major incidents at the MHF has been systematically assessed and that effective and appropriate controls are in place. The safety case is also a commitment by the MHF operator to the methods by which major incident risks are to be controlled.

The safety case should demonstrate that the documented control systems, procedures and processes are fit for purpose and that the MHF has reduced the level of risk so far as reasonably practicable (SFARP). Preparation of the safety case is not an end in itself. It should accurately reflect the level of safety and the state of safety management at the MHF.

The safety case should draw from safety-related studies and reports related to hazard identification, risk assessment, risk control, the safety management system (SMS) and emergency planning to demonstrate that the hazards and risks associated with major incidents are fully understood and that the control measures are adequate, maintained and monitored. The safety case must include sufficient detail to show that the MHF can be operated safely.

Further details are provided in the following sections of this Guide. The checklist in Appendix C lists the components that should be included in the safety case.

2.1 The role of the regulator

The responsibility to manage safety at the MHF lies with the MHF operator. However, the regulator needs to be satisfied that the operator has taken adequate measures to minimise the likelihood of major incidents and minimise the consequences of any major incident that may occur, so far as is reasonably practicable.

The regulator may encourage the MHF operator to challenge and review the assumptions that underpin the operator's risk minimisation strategy and to develop initiatives to further reduce that risk.

The regulator may conduct periodic reviews and site inspections to verify that the MHF operator is meeting the objectives and standards declared in the safety case. A key aspect of these reviews by the regulator will be to monitor the operator's adherence to the commitments made in the safety case.

3. SAFETY CASE FORMAT AND SUBMISSION

A separate document is required for each MHF. Two paper copies and one CD-ROM version of the safety case (or as required by the regulator) should be sent to the regulator at the regulator's address given in the notice of determination of the MHF unless otherwise notified in writing by the regulator.

The safety case should be structured in a clear and logical manner. Meeting the following practical recommendations in preparing the safety case will help readers to understand and refer to the document:

- All information in the safety case and any supporting documents should be legible. In particular, font sizes should be large enough, and diagrams and plans should be at an appropriate scale and of high enough resolution for details to be readable.
- The safety case should be set out in a clear and logical manner with headings, section numbers and a table of contents.
- Site-specific or industry-specific terminology and abbreviations should be explained, preferably in a separate glossary.
- Each page should include in the header or footer sufficient information to identify the MHF to which it applies, preferably the company or other name, the suburb or town, and the facility identification number assigned by the regulator (if any).
- Each page should include in the header or footer sufficient information to identify the document of which it forms part, including the date, version number, section number and page number (in the form 'page X of Y').
- The cover page should list the name and address of the MHF, the facility identification number assigned by the regulator (if any), the name, title and contact details for the person the regulator should contact if details in the safety case require clarification, and the date of preparation and version number of the safety case.
- Cross-referencing should be made to plans, maps, diagrams and other attachments to assist the reader's understanding.
- References to documents that are not attached to the safety case, such as safety assessments, HAZOP studies and the safety management system (SMS), should clearly identify the document by title and version or revision date.
- Where a matter addressed in the safety case is covered by the MHF's SMS, the relevant part of the SMS should be clearly specified in the safety case (Schedule 18, item 5.1). This is particularly relevant to the ongoing maintenance of the safety critical controls.

A safety case must be submitted to the regulator as part of the application for a MHF licence, which must be submitted within 24 months after the date on which the facility was determined to be a MHF.

The safety case must be reviewed and updated after any review of the safety assessment, emergency plan or SMS. In addition, the safety case for a licensed MHF must be reviewed at least once every five years. See Section 13 of this Guide for more information about requirements for the review of the safety case.

4. STEPS IN PREPARING THE SAFETY CASE

The flowchart at Figure 1 sets out the process for preparing a safety case for a typical chemical plant. Sections 6-14 of this Guide explain how to obtain the information required for the safety case and list what should be included in the safety case for each component. Appendix C provides a checklist of the components required in the completed safety case.

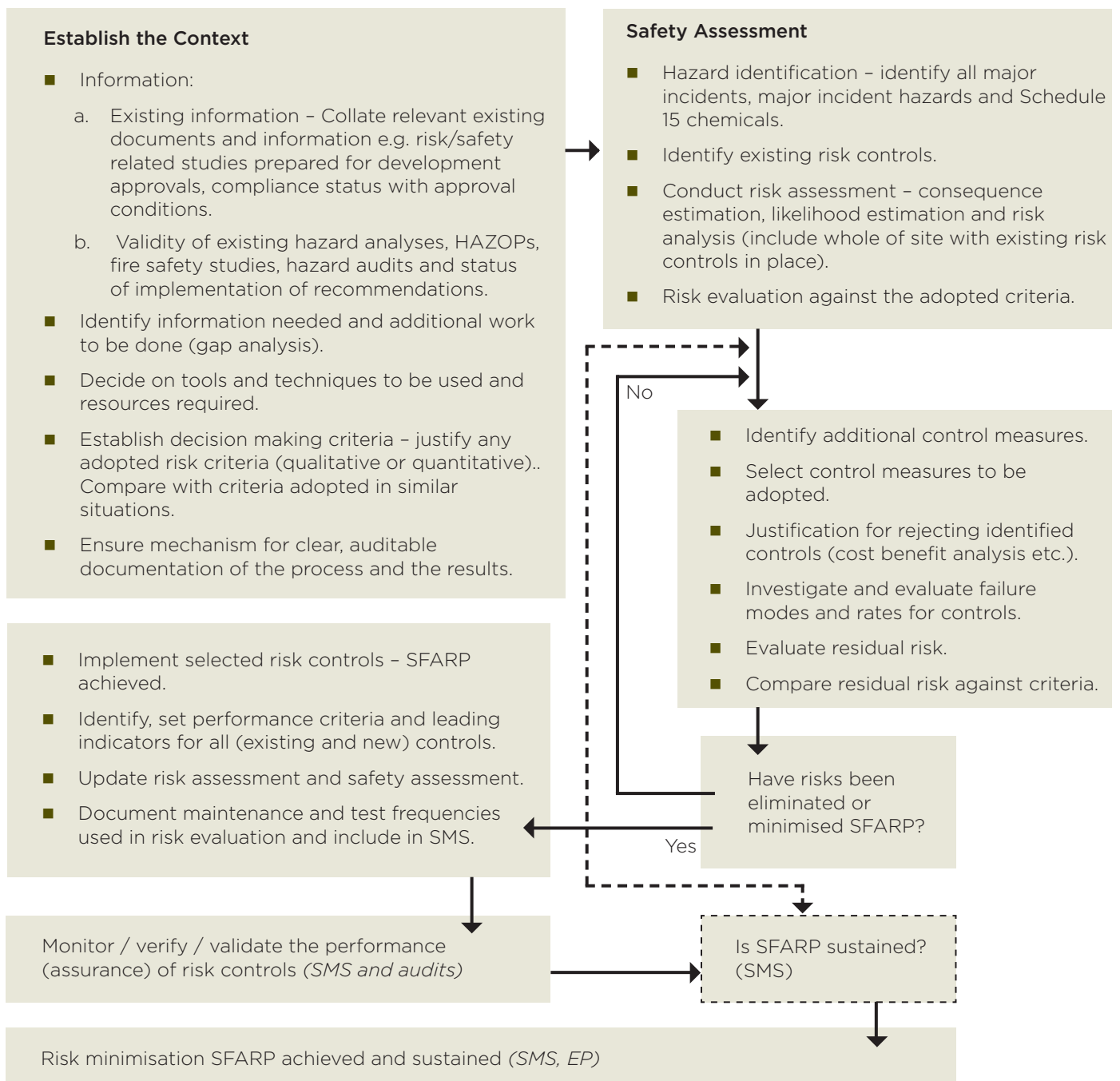


Figure 1: Flowchart for the development of a safety case

5. INFORMATION ABOUT THE MHF

The MHF operator must provide information about the facility and the operator.

5.1 Identification of the MHF and the MHF operator

This section must clearly identify the MHF to which it applies. It should include:

- the operator name – the company or other name that was provided when the facility notified the regulator under regulation 536 or the operator name on any subsequent notifications
- an Australian Business Number (ABN)
- the facility address – the physical address of the facility i.e. street, lot and DP numbers, street name, suburb and postcode
- any facility identification number that is assigned by the regulator.

This section may also include information about the operator, including the organisational structure, similar facilities in other States, Territories and countries, and information about the operator's experience and credentials for operating the facility. If the operator has a Major Incident Prevention Policy or related policy, this may also be included here.

5.2 The facility

This section should describe the MHF, including its location and the nature of the main products and activities at the MHF. It should also describe the nature and quantities of Schedule 15 chemicals and other hazardous chemicals that may be present and the chemical and physical processes involving these chemicals.

The information needs to be sufficient to allow the regulator to understand and evaluate the identification of major incidents and major incident hazards conducted under regulation 554 and the safety assessment conducted under regulation 555. The following information should be included:

- a brief description of the nature of the MHF and its operation, including a description of the main activities at the MHF, particularly those activities associated with Schedule 15 chemicals (Schedule 18, (1)(1.1))
- a description of the Schedule 15 chemicals and any other hazardous chemicals present or likely to be present at the MHF, including raw materials, process intermediates, processing aids and catalysts, final products and chemicals in storage. The information provided about each chemical should include:
 - their identification by name and by any other means necessary for a clear identification
 - the quantity present or likely to be present at the MHF
 - their physical, chemical and toxicological characteristics and any hazardous effects, both immediate and delayed
 - their physical and chemical behaviour under normal conditions of use or under foreseeable abnormal conditions (Schedule 18, (1)(1.2))

5. INFORMATION ABOUT THE MHF

- a description of the chemical and physical processes associated with any Schedule 15 chemicals, including:
 - the main units of plant used in those processes, process flow diagrams and descriptions of the processes, including process conditions (Schedule 18, (1)(1.3))
- a drawing of the general layout of the MHF, containing the location of the:
 - main process units
 - main storage areas
 - major incident hazards
 - major incident initiators (Schedule 18,(1.4)).

The major incident hazards and the major incident initiators will have been identified as part of the safety assessment process - see the Guide for MHFs - Safety assessment for more information.

- in relation to proposed changes at the major hazard facility, for which no new control measures are implemented:
 - a description of any proposed changes to the major hazard facility that would:
 - alter the production capacity or profile of the major hazard facility
 - involve the deletion, addition or modification of any processes
 - a statement as to how existing control measures and WHS management systems are capable of maintaining the safe operation of the major hazard facility
- scale plans of the MHF and its surrounding area showing:
 - the location of the MHF within the surrounding area
 - topographical information
 - surrounding land uses (that is, the land use zonings in the surrounding area, shown as a description of each zoning, such as 'residential', not just the zoning number)
 - activities in the surrounding area (that is, actual activities that occur in the surrounding areas, such as chemical processing, retail sales and sports)
 - areas surrounding the MHF where a major incident may cause substantial harm
 - the location of any identified external conditions (including other MHFs or other facilities that could affect the safety of the MHF) (Schedule 18,(2.1))
 - graphically presented demographic information for the local community, including surrounding land uses permitted by the local planning authority (Schedule 18, (2.2))
 - meteorological data relevant to the estimation of the effects of any major incident (Schedule 18, (2.3)).

In addition, the following should be included where relevant:

- a brief description of the nature of storage and handling (such as warehouse, bulk, packaged, tankage, decanting, receiving, loading, transferring, processing and reacting), including a reference to the scaled map/s to show the area on the site where each activity occurs
- a description of the main raw materials and finished or end products of the MHF (a process flow diagram may be included to aid the description)
- diagrams and/or pictures of relevant sections or equipment in an appropriately larger scale.

5. INFORMATION ABOUT THE MHF

The layout plans of the MHF should show:

- the location and name of depots or storage areas included in any hazardous chemicals notification or licence application
- the location and quantities of Schedule 15 chemicals
- control rooms and offices
- emergency plant and equipment (e.g. fire water ring main and other fixed fire fighting equipment, emergency control centre)
- escape routes from the MHF
- emergency assembly areas. More than one assembly area may be needed where an incident could release toxic gases or smoke
- the proximity to:
 - protected places, public places (roads etc.), watercourses, drinking water catchment areas and agricultural land
 - neighbouring occupancies and land uses, including residential premises
 - sensitive land uses, such as hospitals, schools, retirement homes and day-care centres.

6. INFORMATION ON MANAGEMENT OF RISK

6.1 Hazard and Major Incident Identification

The safety case must include a summary of the identification of major incidents and major incident hazards conducted under regulation 554. It should also include a justification of the approach taken and methods used in conducting the major incident and major incident hazard identification process. The operator should be able to demonstrate that:

- appropriate steps have been taken to comprehensively identify all potential major incidents, for the complete range of expected and unexpected operating modes i.e. start-up, shutdown, commissioning, differing capacities, seasons and other expected variations
- they have had regard to any advice and recommendations given by any relevant authority
- worker participation has been appropriate and documented.

Each major incident that may potentially occur in the course of operation of the facility should be described in sufficient detail to assure the regulator that the operator understands:

- the nature of each major incident and major incident hazard
- the likelihood of each major incident hazard causing a major incident
- in the event of a major incident occurring, its potential magnitude and the severity of its potential health and safety consequences.

Representative major incidents may be presented if the operator can provide on request that all major incidents and major incident hazards have been identified.

6.2 Safety Assessment

The safety case must include a summary of the safety assessment conducted under regulation 555. The level of detail should be sufficient to demonstrate that the operator has a detailed understanding of all aspects of risks to health and safety associated with major incidents.

The safety case should demonstrate that:

- the degree of detail of the analysis is commensurate with the level of complexity of the MHF, the nature of the hazards and the possible consequences
- the process has used assessment methods that are suitable for the major incidents and major incident hazards
- the assessment process has been carried out by people with knowledge and skills that are appropriate to the nature of the plant and the operations being analysed
- appropriate methods were used to identify all possible risk control measures, those currently installed and those that are being considered, and to identify critical controls
- appropriate criteria were used to select or reject control measures
- there is a clear link between identified hazards, incident scenarios, and control and mitigation measures
- worker participation has been appropriate and documented.

Examples are to be provided in this part of the safety case, as available and relevant to the MHF, to show that the above criteria are met. These should be given for the incidents with greatest consequence and/or risk.

6. INFORMATION ON MANAGEMENT OF RISK

The examples should demonstrate, for each selected major incident:

- the links between identified hazards and major incidents and the control measures; that is, how the control measures in place or with agreed improvements will adequately control the risks that could lead to major incidents
- that a range of control measures has been considered
- that in selecting control measures, the hierarchy of controls has been followed and appropriate risk criteria have been used
- that there is an understanding of how each of the control measures will affect the risk levels
- clear reasons for the selection or rejection of particular control measures, in the context of the principle of reducing risk so far as is reasonably practicable
- that there is a coherent set of performance indicators for the selected control measures.

The safety case should include a clear statement of any risk criteria adopted by the operator and whether the criteria are for a single incident or cumulative whole-of-site risk. Any criteria should be justified as being appropriate for the nature of the activities at the facility. However, while criteria are a useful tool for risk screening and prioritisation, operators should note that the regulations require the risks to be reduced, so far as is reasonably practicable.

In the safety case, the MHF operator must state the current validity of the safety assessment and should explain how and when the safety assessment will be reviewed and maintained so that it will continue to accurately represent the risks arising from the MHF.

Operators of licensed MHFs must review the safety assessment in any case at least once every five years.

One of the circumstances that requires a review and revision of risk management is when a modification to the MHF is proposed. The term 'modification' is defined in regulation 534 (see also Appendix B). It refers to changes or proposed changes at the MHF that could:

- create a major incident that had not been previously identified
- significantly increase the likelihood of a major incident
- significantly increase the magnitude or severity of a major incident.

A change or proposed change is defined to include:

- the introduction of new plant, structures, processes, chemicals or other substances
- changes to existing plant, structures, processes, chemicals or other substances
- changes to the operation or the nature of the operation of the MHF
- changes to workers' safety roles
- changes to the SMS
- organisational change (including change in senior management).

In addition, the changes in both operator competency levels required and levels available should be addressed and approvals documented. Reference may be made to guides and publications on safety management systems for details.

Risk management must be carried out in consultation with workers. For more information about consultation requirements, see the *Guide for Major Hazard Facilities: Information, Training and Instruction for Workers and Other Persons at the Facility*.

The tools and techniques used for risk management should be appropriate for the particular facility. The MHF operator should be able to explain and justify their choice.

6.3 Control of Risk

Overall, the safety case must demonstrate that the implemented control measures are adequate to control risks associated with possible major incidents. The control measures should prevent or minimise the likelihood of a major incident occurring, or limit the consequences if the incident does occur.

6.4 Safety Information

The safety case should contain a detailed description of:

- the instrumentation and other equipment installed at the MHF and the processes and procedures in place that are the control measures to be implemented by the operator (Schedule 18, 3.1(a))
- the critical operating parameters for those control measures; for example the upper or lower performance limits of any equipment, process or procedure, compliance with which is necessary to avoid a major incident (Schedule 18, 3.1(b))
- key personnel and resources (internal and external) available to intervene in the event of any failure of a control measure, whether or not that failure results in a major incident (Schedule 18, 3.1(c))
- a summary of the emergency plan, including specific information about how the plan can be expected to limit the consequences of a major incident (Schedule 18, 3.1(d))
- the means of ensuring that at all times there is a command structure in place for the MHF that applies in the event of an emergency, and that this command structure has been communicated to workers throughout the MHF (Schedule 18, 3.1(e)).

The safety case should also contain detailed information about:

- the current performance of existing control measures
- the applicable performance standard, performance target and performance indicator as incorporated into the safety management system (SMS)
- the effectiveness of the control measures in eliminating the hazard or reducing risk
- how the effectiveness of the control measures will be maintained and monitored.

WHAT INFORMATION FROM THE RISK MANAGEMENT PROCESS SHOULD BE INCLUDED IN THE SAFETY CASE?

The safety case must include:

- a description of the steps taken to ensure that safety and reliability are incorporated into the design and construction of all aspects of the major hazard facility itself. This applies whether the operator is directly engaged in the design and construction or has engaged another person to carry out the design and construction (item 6, Schedule 18). These steps with respect to the ongoing maintenance of the facility integrity should be reflected in the SMS
- a summary of the documentation prepared under regulation 554, including a complete list of major incidents that could occur at the major hazard facility and a summary of the safety assessment conducted under regulation 555

6. INFORMATION ON MANAGEMENT OF RISK

- information in relation to any proposed changes at the MHF that could alter the risk profile of the MHF or would involve the deletion, addition or modification of any processes (Schedule 18, (1.5)). For each such proposed modification, the safety case must include an explanation of how existing control measures and WHS management systems are able to maintain the safe operation of the MHF or the additional control to be included to ensure and maintain safety.

The safety case must include a summary of the SMS. The SMS summary should provide a general description of the MHF's SMS and provide more detailed information on the parts of the facility's SMS that are used to support control measures that prevent major incidents and/or minimise the consequences of any major incident that does occur. It should include sufficient information to demonstrate that an appropriate SMS is in place.

In particular, the SMS summary should address each heading in Schedule 17 of the Regulations.

The safety case must also include a detailed description of the performance standards and indicators that are required by Schedule 17, (7) of the Regulations to be part of the SMS.

The safety case must include a description of the parts of the SMS that relate to ensuring that the SMS continues to be effectively implemented and to the ongoing review and revision of the SMS.

7. THE SAFETY MANAGEMENT SYSTEM

7.1 Reporting and investigating incidents and near misses

The WHS Act requires a person conducting a business or undertaking, and any officer of a person conducting a business or undertaking, to ensure that there are appropriate processes in place for receiving and considering information regarding incidents, hazards and risks, and responding in a timely way to that information. Incident reporting and investigation is thus a key element of the performance monitoring component of an SMS.

The safety case should demonstrate that there are active mechanisms in place for:

- comprehensive recording and reporting of incidents and near misses
- defined roles and responsibilities for reporting, investigation and follow-up
- development and maintenance of skills in incident and near-miss investigation
- investigation of incidents and near misses
- worker consultation
- disseminating lessons learnt from incidents and near misses
- follow-up of actions and recommendations resulting from investigations of incidents and near misses.

This should include learning from relevant incidents at other facilities.

7.2 Major Incident History

The safety case must include a summary of the major incidents that have occurred at the major hazard facility over the previous five years.

Many facilities choose to include references to any recent incident in the industry, or any internal near miss incidents that have caused a significant review of risk under regulation 559. For example, most petrochemical storage facilities have revised risk management after the 2005 Buncefield incident and subsequent recommendations to industry.

8. SECURITY ARRANGEMENTS

The safety case must include a description of any arrangements made in relation to security of the major hazard facility.

It is recognised that individual jurisdictions may have local security legislation or individual security regimes in place, so operators of major hazard facilities should contact their relevant regulator for specific advice on what should be included here.

9. EMERGENCY PLANS

Requirements for the preparation, testing and implementation of emergency plans are included in Chapters 3, 7 and 9 and Schedule 16 of the Regulations. The purpose of emergency plans is to enable the MHF operator to provide a timely response and to minimise the consequences if a major incident occurs at the MHF. For further information the operator should consult the *Guide for Major Hazard Facilities: Emergency Plans*.

9.1 What should be included in the safety case?

The safety case must contain a summary of the emergency plan. This should include:

- specific information about how this plan can be expected to limit the consequences of a major incident
- a detailed description of the means of ensuring that there is always a command structure that applies in the event of an emergency, and that this command structure has been communicated to workers throughout the MHF.

The summary of the emergency plan should address each heading in Schedule 16 of the Regulations. It should also include supporting information such as:

- how specific emergency plans and procedures were developed, based on the major incident scenarios identified in the safety assessment
- a summary of the intended emergency response strategies and objectives to mitigate the incident scenarios
- a discussion of the systems in place to contain and control an emergency and to mitigate its impacts e.g. evacuation procedures, fire fighting systems, deluge systems, containment and drainage systems
- emergency response resources
- information provision to the local community after a major incident
- arrangements for training staff in emergency response, such as:
 - the emergency scenarios and evacuation procedures focussed on the use of emergency equipment
 - refresher courses
- exercises and drills carried out to test the emergency arrangements at all levels, including the MHF's interface with emergency services and the local community
- how the safety management system supports reviews of the emergency plans and updates.

10. CONSULTATION

Evidence that the MHF has consulted the relevant emergency response agencies, the appropriate standards and codes and that there is adequate emergency response equipment may include information such as:

- the codes and standards used to determine provision of fire water, hydrants and deluge systems
- training and competency profiles for emergency response personnel
- measures to prevent damage to the environment such as bunds, drainage systems, booms, skimmers and neutralising agents
- maintenance of emergency response equipment and supplies such as fire fighting equipment, personal protective equipment, foam and neutralising agents
- compatibility with equipment used by emergency services, where necessary.

10.1 Consultation with workers

Regulation 575 requires MHF operators to consult with workers in relation to a range of matters, including the preparation and review of the safety case.

WHAT SHOULD BE INCLUDED IN THE SAFETY CASE?

The safety case must include a description of the consultation with workers that took place under regulation 575 in relation to the preparation of the safety case. Ways of demonstrating effective consultation could include:

- lists of workers consulted and the basis on which they were selected
- records of attendance at risk management workshops
- dates of consultation meetings
- summaries of issues discussed, agreements reached and any unresolved issues.

10.2 Information from other stakeholders

Regulation 572 requires operators of licensed MHFs to provide certain information to the local authority and the local community. Two-way discussions with the local authority and the local community, in addition to the required provision of information, give MHF operators an opportunity to improve the quality of hazard identification and safety assessment at MHFs.

The safety case may include information about how the MHF operator provides information to the local community and the local authority as required by regulation 572.

The safety case may also describe any mechanisms for seeking information from the local council, the community and other stakeholders in relation to major incident prevention and control, and the results of any discussions.

11. DEMONSTRATING THAT RISK HAS BEEN MINIMISED SO FAR AS IS REASONABLY PRACTICABLE

The safety case must demonstrate the adequacy of measures the operator will implement to control risks associated with major incidents that may occur. The safety case should also demonstrate that the facility's SMS will ensure the continuing integrity of the control measures that minimise the risks of major incidents, and risks that could arise from a major incident. In this section of the safety case, the MHF operator should draw together the elements of the safety assessment and the safety case to summarise the overall facility approach and demonstrate that the MHF is at an acceptable level of risk.

In demonstrating that the level of risk at the MHF has been controlled so far as is reasonably practicable, the operator must show that all reasonably practicable risk controls are in place or that there is a process to put these controls in place in an acceptable timeframe. If certain controls identified in the safety assessment will not be implemented, reasoned argument must be presented to explain the decision. The discussion should describe the monitoring, auditing and corrective processes that will ensure existing systems continue to perform at the required standard.

The safety case should demonstrate that the operator has a clear picture of how major incidents could develop and has put in place a well-chosen set of appropriate control measures that are linked to meaningful performance measures and standards. The safety case should also demonstrate that these controls will be monitored and maintained effectively, and will be reflected in and supported by the SMS, consultation, training and education programs. The argument can then be sustained that the MHF is operating at a risk level that is as low as reasonably practicable.

The MHF operator should include information that:

- demonstrates that the overall risk of the facility has been controlled so far as is reasonably practicable
- shows that the controls are commensurate with the nature and scale of the hazards
- shows there are clear links between the risk controls identified through the safety assessment and the associated SMS, consultation and emergency plans
- shows that risks identified in the safety assessment are comprehensively managed by elements of the SMS
- provides evidence that risk controls have been adequately reviewed prior to implementation.

Where the implementation of a risk control measure of a major incident associated with the MHF has not been completed, or where the risks associated with some parts of the MHF have not been reduced so far as is reasonably practicable at the time of completing the safety case, the safety case should describe:

- how the implementation of risk controls is prioritised, including any assumptions
- how the time period for implementation and controlling the risk so far as is reasonably practicable is minimised and justified
- how the MHF will deal with the elevated risk levels in the interim. This should include for each risk or part of the MHF:
 - information that shows why the elevated level of risk is acceptable in the short term and addresses the likelihood and consequences of incidents occurring in the period before new risk controls are introduced (e.g. suspension of some parts of the operation or the use of specified temporary controls during this period)
 - an implementation plan for the introduction of appropriate controls, including the specification of these controls, timetables and resources for their introduction, including appropriate personnel
- the final date by which the control measure(s) will be implemented and risk reduced so far as reasonably practicable.

12. SAFETY ASSURANCE

The MHF operator should document, as part of the safety case, the nature of the MHF's ongoing review and verification mechanisms, the basis on which they are considered adequate to provide safety assurance and how that assurance will be communicated to the regulator. This can be related to the requirement for the safety case to include a detailed description of the performance standards and indicators that are required by Schedule 17, item 7 (Schedule 18, 4), as mentioned above in Section 11. The safety case should also include a description of the SMS section that deals with audits (Schedule 17, 8).

The safety case should include any additional information that is necessary to ensure all information contained in the safety case is accurate and up-to-date

13. REVIEW OF THE SAFETY CASE

The MHF operator must review and, if necessary, update the safety case after any review of the safety assessment, emergency plan or SMS that is required by regulations 559 or 569. Such a review is required if:

- a modification to the MHF is proposed
- a control measure implemented under regulation 556 or 566 does not minimise the relevant risk so far as is reasonably practicable
- a new major incident hazard is identified
- consultation under regulations 574 and 575 indicates a review is needed
- a health and safety representative reasonably requests the review
- or the regulator requires the review.

Operators of licensed MHFs must review the safety assessment in any case at least once every five years (regulation 570).

The operator must include the revised safety case as part of the application for licence renewal (regulation 596 (2)(b)).

14. SIGNED STATEMENT OF CERTIFICATION

The safety case should include a signed statement by which the MHF operator certifies that the matters listed under regulation 561(1) and (2) have been satisfactorily addressed, including that:

- the information in the safety case is accurate and up-to-date
- as a consequence of conducting the safety assessment, the operator has a detailed understanding of all aspects of risk to health and safety associated with major incidents that may occur
- the control measures to be implemented by the operator will eliminate or minimise, so far as is reasonably practicable, the risk of a major incident occurring
- in the event of a major incident occurring, the control measures will minimise, so far as is reasonably practicable, the magnitude and severity of its health and safety consequences
- all persons to be involved in the implementation of the SMS have the knowledge and skills necessary to enable them to undertake their role safely and competently.

If the MHF operator is a body corporate, the signed statement referred to above must be signed by the most senior executive officer of the body corporate who resides in the jurisdiction where the MHF is located.

APPENDIX A - WHS REGULATIONS

Regulation	Requirement
560	<p>Safety case must be provided</p> <p>The operator of a determined major hazard facility must provide the regulator with a completed safety case for the major hazard facility, that has been prepared in accordance with regulation 561, within 24 months after the facility was determined to be a major hazard facility.</p>
561	<p>Content</p> <ol style="list-style-type: none"> (1) The operator must prepare the safety case in accordance with the safety case outline prepared or altered under this Division. (2) A safety case must contain the following: <ol style="list-style-type: none"> (a) a summary of the identification conducted under regulation 554, including a list of all major incidents identified; (b) a summary of the safety assessment conducted under regulation 555; (c) a summary of the major hazard facility's emergency plan; (d) a summary of the major hazard facility's safety management system; (e) a description of any arrangements made in relation to the security of the major hazard facility; (f) a description of the consultation with workers that took place under regulation 575 in the preparation of the safety case; (g) the additional matters specified in Schedule 18. (3) The safety case must include any further information that is necessary to ensure that all information contained in the safety case is accurate and up to date. (4) A safety case must demonstrate: <ol style="list-style-type: none"> (a) that the major hazard facility's safety management system will, once implemented, control risks arising from major incidents and major incident hazards; and (b) the adequacy of the measures to be implemented by the operator to control risks associated with the occurrence and potential occurrence of major incidents. (5) The operator must include in the safety case a signed statement that: <ol style="list-style-type: none"> (a) the information provided under subregulations (1) and (2) is accurate and up to date; and (b) as a consequence of conducting the safety assessment, the operator has a detailed understanding of all aspects of risk to health and safety associated with major incidents that may occur; and

Regulation	Requirement
561	<ul style="list-style-type: none"> (c) the control measures to be implemented by the operator: <ul style="list-style-type: none"> (i) will eliminate the risk of a major incident occurring, so far as is reasonably practicable; and (ii) if it is not reasonably practicable to eliminate the risk of a major incident occurring—will minimise the risk so far as is reasonably practicable; and (iii) in the event of a major incident occurring—will minimise its magnitude and the severity of its health and safety consequences so far as is reasonably practicable; and (d) all persons to be involved in the implementation of the safety management system have the knowledge and skills necessary to enable them to carry out their role safely and competently. <p>(6) If the operator is a body corporate, the safety case must be signed by the most senior executive officer of the body corporate who resides in [this jurisdiction].</p>
562	<p>Co-ordination for multiple facilities</p> <ul style="list-style-type: none"> (1) The regulator may require the operators of 2 or more major hazard facilities to co-ordinate the preparation of the safety cases for their major hazard facilities if the regulator is satisfied on reasonable grounds that such co-ordination is necessary in the interests of the safe operation and effective safety management of any or all of those major hazard facilities. (2) If the regulator requires the co-ordinated preparation of safety cases, each operator must provide the other operators with information concerning any circumstances at the operator’s facility that could constitute a major incident hazard in relation to any of the other major hazard facilities. (3) In complying with this regulation, the operator is not required to disclose information that may expose the major hazard facility to a major incident hazard in relation to the security of the major hazard facility.
563	<p>Review</p> <p>The operator of a determined major hazard facility must review and as necessary revise the major hazard facility’s safety case after any review is conducted under regulation 559.</p> <p><i>Note: Regulation 569 sets out the circumstances in which the operator of a licensed major hazard facility must review and as necessary revise the following:</i></p> <ul style="list-style-type: none"> a. <i>The safety assessment for the facility</i> b. <i>The emergency plan</i> c. <i>The safety management system.</i>

Regulation	Requirement
<p>Schedule 18</p>	<p>Additional matters to be included in safety case for a major hazard facility</p> <p>Part 1 Facility description</p> <p>1 The facility</p> <p>1.1 A brief description of the nature of the facility and its operation, including a description of on-site activities and processes that involve or will involve Schedule 15 chemicals.</p> <p>1.2 A description of the Schedule 15 chemicals and any other hazardous chemicals present or likely to be present at the facility, including:</p> <ul style="list-style-type: none"> (a) their identification by name and by any other means necessary for a clear identification; and (b) the quantity present or likely to be present at the major hazard facility; and (c) their physical, chemical and toxicological characteristics, and any other hazardous characteristics, both immediate and delayed; and (d) their physical and chemical behaviour under normal conditions of use or under foreseeable abnormal conditions. <p>1.3 A description of the chemical and physical processes associated with any Schedule 15 chemicals present or likely to be present at the facility, including:</p> <ul style="list-style-type: none"> (a) the main units of plant used in those processes; and (b) a process flow drawing, or set of flow drawings, describing the processes. <p>1.4 A drawing of the major hazard facility's general layout, containing the location of:</p> <ul style="list-style-type: none"> (a) the main process units; and (b) the main storage areas; and (c) major incident hazards and major incident initiators. <p>1.5 In relation to proposed changes at the major hazard facility for which no new control measures are implemented:</p> <ul style="list-style-type: none"> (a) a description of any proposed changes to the major hazard facility that would: <ul style="list-style-type: none"> (i) alter the production capacity or profile of the major hazard facility; or (ii) involve the deletion, addition or modification of any processes; and (b) a statement as to how existing control measures and WHS management systems are capable of maintaining the safe operation of the major hazard facility. <p>2 The surrounding area</p> <p>2.1 A detailed scale plan of the facility and its surrounding area showing:</p> <ul style="list-style-type: none"> (a) the location of the facility within the surrounding area; and (b) topographical information; and

Regulation	Requirement
<p>Schedule 18</p>	<ul style="list-style-type: none"> (c) land use, occupancy and activities in the surrounding area and any other closely located major hazard facilities and hazardous chemical storage sites; and (d) the location of any identified external conditions (including other major hazard facilities or other facilities that could affect the safety of the major hazard facility). <p>2.2 Graphically presented demographic information for the local community, including surrounding land uses permitted by the local authority.</p> <p>2.3 Meteorological data relevant to the estimation of the effects of any major incident.</p> <p>Part 2 Safety information</p> <p>3 Control measures to limit the consequences of major incidents</p> <p>3.1 A detailed description of:</p> <ul style="list-style-type: none"> (a) the instrumentation and other equipment installed in the facility and the processes and procedures in place that are the control measures to be implemented by the operator; and (b) the critical operating parameters for those control measures; and (c) key personnel and resources (internal and external) available to intervene in the event of any failure of a control measure, whether or not that failure results in a major incident; and (d) a summary of the emergency plan, including specific information about how the plan can be expected to limit the consequences of a major incident; and (e) the means of ensuring that there is at all times in place a command structure for the major hazard facility that applies in the event of an emergency, and that this command structure has been communicated to workers throughout the major hazard facility. <p>3.2 In item 3.1:</p> <p>critical operating parameters means the upper or lower performance limits of any equipment, process or procedure, compliance with which is necessary to avoid a major incident.</p> <p>failure of a control measure means:</p> <ul style="list-style-type: none"> (a) if the control measure is a positive action or event—the non-occurrence or the defective occurrence of that action or event; or (b) if the control measure consists of a limitation on an operational activity, process or procedure—the breach of that limitation. <p>4 Performance monitoring</p> <p>A detailed description of the performance standards and performance indicators required by item 7 of Schedule 17 to be included in the safety management system.</p>

Regulation	Requirement
<p>Schedule 18</p>	<p>5 Safety management system</p> <p>5.1 At all points in the safety case where the matter addressed is covered by the safety management system, a clear reference to the relevant part of the documented safety management system.</p> <p>5.2 A description of those parts of the documented safety management system that address the ongoing effective implementation and ongoing review and revision of the safety management system.</p> <p>6 Safety and reliability of facility structures and plant</p> <p>A description of the steps taken to ensure that safety and reliability are incorporated into the design and construction of all aspects of the major hazard facility itself, whether the operator is directly engaged in the design and construction or has engaged another person to carry out the design and construction.</p> <p>7 Major incident history</p> <p>A summary of the major incidents that have occurred at the major hazard facility over the previous 5 years.</p>
<p>570</p>	<p>Safety case—review</p> <p>The operator of a licensed major hazard facility must review and as necessary revise the safety case after any review is conducted under regulation 569.</p>

APPENDIX B - DEFINITIONS

Control measure, in relation to risk to health and safety, means a measure to eliminate or minimise the risk.

Determined major hazard facility means a facility that has been determined under regulation 541 or 542 to be a major hazard facility.

Facility means a workplace at which Schedule 15 chemicals are present or likely to be present.

Failure of a control measure means:

- if the risk control measure is a positive action or event: the non-occurrence or the defective occurrence of that action or event
- if the risk control consists of a limitation on an operational activity, process or procedure: the breach of that limitation.

HIPAPs are the *Hazardous Industry Planning Advisory Papers* published by the NSW Department of Planning & Infrastructure. See Appendix D of this guide for a list of HIPAPs.

Incident is any undesired event, including major incidents and near misses. The regulations do not use the term 'near miss' but incorporate the concept by reference to 'potential occurrence of major incidents'. See regulations 558(3)(a) and 561(4)(b), which relate to the SMS and the safety case.

Licensed major hazard facility means a major hazard facility that is licensed under Part 9.7.

Local authority, in relation to a facility, means the local authority for the local authority area in which the facility and the surrounding area are located.

Local community, in relation to a major hazard facility, means the community in the surrounding area.

Major hazard facility means a facility:

- at which Schedule 15 chemicals are present or likely to be present in a quantity that exceeds their threshold quantity
- that is determined by the regulator under Part 9.2 to be a major hazard facility.

Major hazard facility licence means a licence granted to a major hazard facility under Part 9.7 of the Regulations.

Major incident at a major hazard facility is an occurrence that:

- results from an uncontrolled event at the major hazard facility involving, or potentially involving, Schedule 15 chemicals
- exposes a person to a serious risk to health or safety emanating from an immediate or imminent exposure to the occurrence.

An **occurrence** includes any of the following:

- escape, spillage or leakage
- implosion, explosion or fire.

Major incident hazard means a hazard that could cause, or contribute to causing, a major incident.

MIHAPs are the *Major Industrial Hazards Planning Advisory Papers* published by the NSW Department of Planning & Infrastructure. See Appendix D of this guide for a list of MIHAPs.

Modification, in relation to an MHF facility, is a reference to a change or proposed change at the major hazard facility that has or would have the effect of:

- creating a major incident hazard that has not previously been identified
- significantly increasing the likelihood of a major incident occurring
- in relation to a major incident that may occur, significantly increasing:
 - its magnitude
 - the severity of its health and safety consequences.

A **change or proposed change** at a major hazard facility means a change or proposed change of any kind, including:

- a change to any plant, structure, process, chemical or other substance used in a process, including the introduction of new plant, a new structure, a new process or a new chemical
- a change to the quantity of Schedule 15 chemicals present or likely to be present at the major hazard facility
- a change to the operation, or the nature of the operation, of the major hazard facility
- a change in the workers' safety role
- a change to the major hazard facility's safety management system
- an organisational change at the major hazard facility, including a change in its senior management.

Near miss is any accident that, but for mitigating effects, actions or systems, could have escalated into a major incident. The regulations do not use the term 'near miss' but incorporate the concept by reference to 'potential occurrence of major incidents'. See regulations 558(2)(a) and 561(4)(b), which relate to the SMS and the safety case.

Operator

- in relation to a facility, means the person conducting the business or undertaking of operating the facility, who has:
 - management or control of the facility
 - the power to direct that the whole facility be shut down
- in relation to a proposed facility, means
 - the operator of a proposed facility that is an existing workplace
 - the person who is to be the operator of a proposed facility that is being designed or constructed.

Pipe work means a pipe or assembly of pipes, pipe fittings, valves and pipe accessories used to convey a hazardous chemical.

Present or likely to be present is a reference to the quantity of hazardous chemicals that would meet the maximum capacity of the facility, including:

- the maximum capacity of process vessels and interconnecting pipe systems that contain the hazardous chemicals
- the maximum capacity of storage tanks and vessels used for the hazardous chemicals
- the maximum capacity of other storage areas at the facility that could contain the hazardous chemicals
- the maximum capacity of pipe work outside process areas to contain the hazardous chemicals
- the maximum quantity of hazardous chemicals that would, in the event of failure, escape into the facility from pipe work that is situated off the premises but is connected to the facility
- the maximum quantity of hazardous chemicals loaded into or onto, or unloaded from, vehicles, trailers, rolling stock and ships that are from time to time present at the facility in the course of the facility's operations.

Note: Schedule 15 chemicals present or likely to be present in the tailings dam of a mine are not to be considered in determining whether a mine is a facility or a major hazard facility

Proposed facility means:

- an existing workplace that is to become a facility due to the introduction of Schedule 15 chemicals
- a facility that is being designed or constructed.

Proposed major hazard facility means:

- an existing facility or other workplace that is to become a major hazard facility due to the introduction of Schedule 15 chemicals or the addition of further Schedule 15 chemicals
- a major hazard facility that is being designed or constructed.

Risk assessment involves considering what could happen if someone is exposed to a hazard and the likelihood of it happening.

Risk control means taking action to eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimising the risks so far as is reasonably practicable.

Risk management in this guide means the processes of:

- identification of major incidents and major incident hazards
- safety assessment, including:
 - risk analysis (likelihood and consequences)
 - risk evaluation against risk criteria
- risk control (risk treatment)
- review and revision of the:
 - safety assessment
 - emergency plan
 - safety management system.

Safety assessment is the process by which the operator of a major hazard facility systematically and comprehensively investigates and analyses all aspects of risks to health and safety associated with all major incidents that could occur in the course of the operation of the major hazard facility.

Safety management system as set out in the Regulations (558 and 568) and Schedule 17 means the comprehensive integrated system for managing all aspects of risk control in relation to the possible occurrence of major incidents at a major hazard facility and is used by the operator as the primary means of ensuring safe operation of the MHF.

Schedule 15 chemical means a hazardous chemical that:

- is specified in Schedule 15, table 15.1 of the WHS Regulations
- belongs to a class, type or category of hazardous chemicals specified in Schedule 15, table 15.2 of the Regulations.

Threshold quantity, in relation to a Schedule 15 chemical, means:

- the threshold quantity of a specific hazardous chemical as determined under clause 3 of Schedule 15
- the aggregate threshold quantity of 2 or more hazardous chemicals as determined under clause 4 of Schedule 15 (regulation 5).

APPENDIX C - SAFETY CASE CHECKLIST

A completed copy of this checklist should be submitted with the safety case (SC).

To complete this checklist, use the third column to list the part of the MHF safety case (e.g. section numbers) that provide the required information. Only record Yes or No in column 3 for issues such as page numbering that apply to the SC as a whole. Items with a reference to the regulations are mandatory requirements, while other items are recommended as good practice.

A	General (including facility identification)	Location in safety case e.g. section/ subsection
1.	Does the SC identify the MHF to which it applies?	
2.	Are the contact details of the contact person for the SC included and correct?	
3.	Is the company name, suburb, safety case date and facility reference number (provided by the regulator) on all documents?	
4.	Have two hard copies of the SC been provided?	
5.	Are all documents in the SC included in the CD ROM to be supplied with the hard copies?	
6.	Are the pages numbered page X of Y?	
7.	Is there a table of contents?	
8.	Are all maps, plans etc cross-referenced to the relevant section/ subsection?	
9.	Are all documents clearly legible, including plans and maps?	
10.	Are documents dated and do they include version numbers?	
11.	Are acronyms and abbreviations explained?	
12.	Are the printed documents exactly the same as the documents saved on the CD ROM (i.e. no additional highlighting, marks etc)?	
13.	In the SC where a matter is covered by the MHF's safety management system (SMS), is there a clear and complete reference to the relevant part of the SMS? (Schedule 18, 5.1)	

APPENDIX C - SAFETY CASE CHECKLIST

B	Schedule 15 chemicals and other hazardous chemicals	Location in safety case e.g. section/subsection
14.	Does the SC include a description of the Schedule 15 chemicals and any other hazardous chemicals present or likely to be present at the MHF, including: (Schedule 18, 1.2)	
	<ul style="list-style-type: none"> ■ their identification by name and by any other means necessary for a clear identification? 	
	<ul style="list-style-type: none"> ■ the quantity present or likely to be present at the major hazard facility? 	
	<ul style="list-style-type: none"> ■ their physical characteristics? 	
	<ul style="list-style-type: none"> ■ chemical characteristics? 	
	<ul style="list-style-type: none"> ■ toxicological characteristics? 	
	<ul style="list-style-type: none"> ■ hazardous effects both immediate and delayed? 	
	<ul style="list-style-type: none"> ■ their physical and chemical behaviour under normal conditions of use or under foreseeable abnormal conditions? 	

C	Facility description	Location in safety case e.g. section/subsection
15.	Does the SC include a description of the nature of the MHF and its operation? (Schedule 18, 1.1)	
16.	Does the SC include a description of the main activities at the MHF that involve or will involve Schedule 15 chemicals? (Schedule 18, 1.1)	
17.	Does the SC include a description of the chemical and physical processes associated with any Schedule 15 chemicals, including: (Schedule 18, 1.3)	
	<ul style="list-style-type: none"> ■ the main units of process equipment used in those processes? 	
	<ul style="list-style-type: none"> ■ a process flow diagram, or set of flow diagrams, describing the processes? 	

D	Plans/maps of the MHF	Location in safety case e.g. section/subsection
18.	Does the SC contain a plan of the general layout of the MHF, including the location of: (Schedule 18, 1.4)	
	<ul style="list-style-type: none"> ■ the main process units? 	
	<ul style="list-style-type: none"> ■ the main storage areas? 	

APPENDIX C - SAFETY CASE CHECKLIST

E	Surrounding area	Location in safety case e.g. section/ subsection
19.	Does the safety case contain a scale plan of the MHF and its surrounding area showing: (Schedule 18, 2.1)	
	<ul style="list-style-type: none"> ■ the location of the MHF within the surrounding area? 	
	<ul style="list-style-type: none"> ■ topographical information? 	
	<ul style="list-style-type: none"> ■ land uses and activities in the surrounding area? 	
	<ul style="list-style-type: none"> ■ the location of any identified external conditions (including other MHFs or other facilities that could affect the safety of the MHF)? 	
19A.	Does the SC include graphically presented demographic information for the local community, including surrounding land uses permitted by the local planning authority?	
19B.	Does the SC include meteorological data relevant to the estimation of the effects of any major incident?	
20.	Does the SC include a summary of the identification conducted under Regulation 554 to identify all major incidents and all major incident hazards for the MHF (including those related to security) (Regulation 561(2)(a))?	

F	Risk management	Location in safety case e.g. section/ subsection
21.	Does the SC contain a summary of the documentation prepared under the provisions of regulation 554,***	
***	Does the SC include a summary of the safety assessment conducted under Regulation 555?***	
22.	Does the SC contain a list of major incidents that could occur at the MHF? (Regulation 561(2)(a))	
23.	Does the SC include a summary of all major incidents that occurred at the MHF over the past five years? (Schedule 18, 7)	
24.	Does the SC describe the instrumentation and other equipment installed in the MHF and the processes and procedures in place that are the control measures to be implemented by the operator for preventing or limiting the consequences of a major incident? (Schedule 18, 3.1(a))	
25.	Does the SC include a detailed description of the critical operating parameters for those control measures? (Schedule 18, 3.1(b))	
26.	Does the SC report on the functioning, maintenance and performance of critical controls?	
27.	Does the SC include a summary of any arrangements made for the security of the MHF? (Regulation 561(2)(e))	

APPENDIX C - SAFETY CASE CHECKLIST

28.	Does the SC include a summary of the precautions taken to control unauthorised access of persons? (Schedule 18, 6)	
29.	Does the SC include a summary of the means of controlling authorised entry of persons? (Schedule 18, 6)	
***	Does the SC include the following information in relation to each proposed change at the MHF for which no new control measures are implemented, and which would alter the production capacity or profile of the MHF, or would involve the deletion, addition or modification of any processes (Schedule 18, 1.5): a statement that explains how existing control measures and WHS management systems are able to maintain the safe operation of the MHF.	

G	Organisation and safety management system	Location in safety case e.g. section/ subsection
30.	Does the SC include a summary of the SMS used at the MHF to prevent and mitigate a major incident? (Regulation 561(2)(d))	
31.	Does the SC clearly identify the SMS i.e. name, version number, year etc.?	
32.	Does the SC describe the key personnel (internal and external) available to intervene in the event of any failure of a control measure, whether or not that failure results in a major incident? (Schedule 18, 3.1(c))	
33.	Does the SC describe the key resources (internal and external) available to intervene in the event of any failure of a control measure, whether or not that failure results in a major incident? (Schedule 18, 3.1(c))	
34.	Does the SC include a summary of the emergency plan, including specific information about how this plan can be expected to limit the consequences of a major incident? (Regulation 561(2)(d))	
35.	Does the SC include a detailed description of the means of ensuring that there is at all times in place a command structure for the MHF that applies in the event of an emergency, and that this command structure has been communicated throughout the MHF? (Schedule 18, 3.1(e))	
36.	Does the SC describe the steps taken to ensure that safety and reliability are incorporated into the design and construction of all aspects of the MHF itself, whether the operator is directly engaged in the design and construction or has engaged another person to carry out the design and construction? (Schedule 18, 7)	
37.	Does the SC include the performance standards to be achieved by the operator of the MHF (Schedule 18, 4) in relation to all aspects of the SMS? (Schedule 17, 7.1(a) & (b))	
38.	Does the SC include a description of steps to be taken to continually improve the SMS? (Schedule 17, 7.1(a))	
39.	Does the SC include a description of how the performance standards are to be met? (Schedule 17, 7.2)	

APPENDIX C - SAFETY CASE CHECKLIST

G	Organisation and safety management system	Location in safety case e.g. section/ subsection
40.	Does the SC include a description of the performance indicators for the effectiveness of the implemented control measures? (Schedule 17, 7.3)	
41.	Does the SC include a summary of how the performance standards for the SMS will be measured and reported?	
42.	Does the SC include a summary explaining the arrangements in the SMS that ensure:	
	<ul style="list-style-type: none"> ■ the safe operation of the MHF during normal operations (including maintenance work) and when significant deviations occur that could lead to a major incident? 	
	<ul style="list-style-type: none"> ■ that the means of operation at the MHF are properly operated and maintained, and that new or altered facilities are safely designed and constructed? 	
43.	Does the SC report on how the operator of the MHF is adhering to the performance standards set by the SMS?	
44.	Does the SC describe the system of auditing that is used to verify the adequacy of the SMS?	
45.	Does the SC describe the system of auditing that is used to verify the continued use of the SMS?	
46.	Does the SC report on any changes made to the SMS in response to any deficiencies identified in the adequacy of the SMS?	
47.	Does the SC include a description of those parts of the documented SMS that address the maintenance of the SMS (that is, its ongoing effective implementation and its ongoing review and revision)? (Schedule 18, 5.2)	
48.	Does the SC include a summary of the systems for reporting and investigating major incidents and near misses? (B3.4(f))	
49.	Does the SC demonstrate that MHFs will, once implemented, control risks arising from major incidents and major incident hazards? (Regulation 561(4)(a))	
50.	Does the SC demonstrate that the measures to be implemented to control risks are adequate to control risks associated with the possible occurrence of major incidents? (Regulation 561(4)(b))	

H	Safety case certification	Location in safety case e.g. section/ subsection
51.	Has the operator certified the SC with a signed statement covering all items in regulation 561(5)(a)-(d)?	
52.	If the operator is a body corporate, has the SC been signed by the most senior executive officer of the body corporate usually present in the state or territory where the MHF is located? (Regulation 561(6))	

APPENDIX D - FURTHER INFORMATION

This section is not an exhaustive list of references but simply a list of additional information regarding safety cases for MHFs. Note that some of these references have been written specifically for different regulatory regimes, but have some similarities to the requirements under the WHS Regulations.

A guide to the control of major incident hazards regulations 1999

UK Health and Safety Executive ISBN 0 7176 1604 5 www.hse.gov.uk/comah/

A qualitative model to evaluate the risk potential of major hazardous industrial plants

Suarez A. and Kirchsteiger C. 1998
EUR 18128 EN

Guidance for major hazard facilities: J-safety report

Queensland Department of Justice and Attorney General November 2008

Guidance note: safety report content and level of detail

National Offshore Petroleum Safety Authority (NOPSA) Revision 1, June 2009

Guidance on the preparation of a safety report (Seveso II)

Joint Research Center European Commission ISBN 92 828 1451 3
<http://mahbsrv.jrc.it/GuidanceDocs-SafetyReport.html>

Guidelines for integrated risk assessment and management in large industrial areas

International Atomic Energy Agency, Vienna 1998
IAEA-TECDOC-994 www.iaea.org/index.html

Guidelines for quantitative risk assessment 'Purple Book'

TNO, The Hague First Edition, 1999
CPR 18E

Guidelines on a major incident prevention policy and safety management system, as required by council directive 96/82/EC (Seveso II)

European Commission, Italy 1998
EUR 18123
<http://mahbsrv.jrc.it/GuidanceDocs-SafetyManagementSystems.html>

Hazardous industry planning advisory papers (HIPAPs)

No.1 – Emergency Planning (HIPAP 1)

No.2 – Fire Safety Study Guidelines (HIPAP 2)

No.3 – Risk Assessment (HIPAP 3)

No.4 – Risk Criteria for Land Use Safety Planning (HIPAP 4)

No.5 – Hazard Audit Guidelines (HIPAP 5)

No.6 – Hazard Analysis (HIPAP 6)

No.7 – Construction Safety (HIPAP 7)

No.8 – HAZOP Guidelines (HIPAP 8)

No.9 – Safety Management (HIPAP 9)

NSW Department of Planning & Infrastructure www.planning.nsw.gov.au

Major hazard control: A practical manual

International Labour Organisation, Geneva 1993
Third impression (with corrections) ISBN: 92-2-106432-8

Major industrial hazards advisory papers (MIHAPs) (Drafts)

These documents provide relevant technical information but do not reflect legislative requirements in the WHS Regulations.

No. 1 – Safety Assurance

No. 3 – Hazard Identification, Risk Assessment and Risk Control

No. 6 – Training and Education

No. 9 – Incident Reporting and Investigation

NSW Department of Planning & Infrastructure www.planning.nsw.gov.au
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