

GUIDE FOR MAJOR HAZARD FACILITIES

PROVIDING INFORMATION
TO THE COMMUNITY

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safe work australia

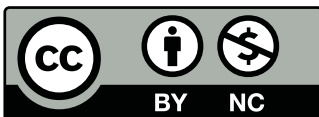


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1. INTRODUCTION

The objective of the Work Health and Safety (WHS) Regulations is to prevent major incidents occurring at major hazard facilities (MHFs) and to protect persons from the effects of such major incidents should one occur. Persons may be at the MHF or members of the local community around the MHF.

To help achieve this objective, the operator of a MHF must provide the local community (and the local authority in which the facility and surrounding area is located) with information about the MHF, its operations, how the community will be notified if a major incident occurs and what the community should do if a major incident occurs.

The purpose of this Guide is to help MHF operators comply with their obligations to provide the local community with information about their facility and the actions to take if a major incident occurs at the facility. It will assist MHF operators in:

- identifying the extent of the area surrounding their facility for which they must provide the community and local authority with information
- determining what information to provide to the local community and local authority
- determining who in particular to provide the information to.

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
- Preparation of a Safety Case
- Safety Case: Demonstrating the Adequacy of Safety Management and Control Measures
- Information, Training and Instruction for Workers and Others at the Facility
- Emergency Plans.

WHAT DO THE WHS REGULATIONS REQUIRE?

The operator of a licensed MHF must provide specific information to the local community. The operator must also take all reasonable steps to provide the local community with certain information as soon as practicable after a major incident occurs. Further details of the WHS Regulations are set out in Appendix A.

Relevant definitions are in Appendix B.

BENEFITS OF PROVIDING INFORMATION TO THE COMMUNITY

An informed community is in a better position to protect itself in the event of a major incident with off-site impact, thereby reducing the actual consequences of the major incident.

There are a number of other benefits in providing information to the community and local authority for the district in which the MHF is located. These include:

- an opportunity to provide correct information (or dispel misinformation) to the community about the MHF and its operations
- assurance to the community that their interests have been, and are being, taken into account
- a raised awareness of actions to be taken by the community if there is a major incident
- assurance to the community after a major incident that measures are being taken to prevent recurrence
- increased awareness by the MHF operator of community concerns
- improved relations and increased trust between the community, local authority and MHF operator.

Information sharing with the local authority will also assist the local authority in strategic and emergency planning. Ideally, consultation and information sharing between the facility and local authority should be a continuing process that starts at the planning stage (for new facilities or modifications to existing facilities) or the notification stage.

2. IDENTIFYING THE AFFECTED AREA

The MHF operator may have identified some information on the surrounding area in the original notification provided to the regulator under regulation 536. During the safety assessment, the area surrounding the MHF in which the health or safety of persons could potentially be adversely affected by a major incident will have been identified. The safety case expands on this to include topological information, demographic information and meteorological data (see Schedule 18). One of the purposes of the safety assessment required by regulation 555 is for the MHF to fully understand who may be affected by a major incident. All of those must be informed about what to do if a major incident occurs.

Some people who could be affected by a major incident may have specific needs that will need to be taken into account. Key factors may include:

- the time available to people to take appropriate action in the event of a major incident. If a fast response is required, relying on communication by emergency services may not give optimal results
- the ability of residents/people to respond. People with restricted mobility (e.g. nursing homes, hospitals and schools) need more notice and may need to pre-plan. Older style residences are often not suitable for shelter in place protection methods.

The extent of the area surrounding the MHF in which the health and safety of persons could potentially be adversely affected by a major incident occurring will also vary with each individual MHF, and will largely be dependent on the nature and quantity of Scheduled chemicals at the facility and the nature of the processes at the facility.

The following examples illustrate some of the relevant considerations in identifying the affected area:

EXAMPLE 1: WAREHOUSE

The operator of a warehouse in an industrial area storing over-threshold quantities of toxic and very toxic chemicals understood the major incident with off-site impact of concern was a fire. The primary threat was of exposure to toxic combustion products and entrained toxic materials “raining out” at the edge of the plume.

The operator advised businesses within 100 m of the facility of the potential for a fire involving a toxic plume and provided them with information on how to shelter in place. People would be directed to shelter in place as required by the emergency services. In most cases they would see the plume and avoid exposure without direction. A copy of the information was also sent to the local library.

EXAMPLE 2: LPG STORAGE

The operator chose to define the surrounding area based on those who may be injured by a BLEVE of the largest tank (200t). BLEVEs occur when a vessel containing liquid above its atmospheric boiling point fails catastrophically. With the sudden drop in pressure, the liquid undergoes rapid transition to the vapour phase (i.e. boils), resulting in a pressure wave and flying debris propelled by the rapidly expanding vapour cloud. If the vapour cloud ignites, a fireball can occur. In the case of an LPG tank, a BLEVE may occur due to rapid heating, for example from flame impingement or a pool fire engulfing the tank.

The boundary was therefore calculated by modelling the consequence distance to injury by a BLEVE. They also used this information to determine their off-site evacuation point.

2. IDENTIFYING THE AFFECTED AREA

By the operator's calculations, a BLEVE can develop relatively quickly (within 10 mins). People in the affected zone would therefore need to be immediately alerted by the facility and take immediate steps to evacuate. There would be insufficient time for the emergency services to be notified and mobilised, and then have them assess the situation and communicate the emergency instructions.

The operator also decided to bi-annually letter drop all residences and businesses in this area, and consult the local council and emergency services. They also provided a copy of the information provided to the community to the local library.

EXAMPLE 3: LARGE MANUFACTURER

A large manufacturer storing Schedule 15 chemicals had identified that the maximum injury consequence zone was 150 m. They had a buffer of 200 m of land which they owned. Theoretically, there was no off-site potential for harm. The facility recognised, however, that any fire or visible emission from the plant caused concern in the immediate community. They therefore identified the "local community" for the purposes of the Regulations to be any dwelling or place within line of sight of the facility. They included the hazard information in their community engagement program and sent the required information to the library.

EXAMPLE 4: BULK CHLORINE STORAGE

A manufacturing process involving the storage of 50t of chlorine had been utilised at an industrial location for a number of years. Chlorine is toxic but can be easily detected and is irritating at very minor levels. Any off-site release would be in the form of a visible cloud travelling at wind speed. Higher wind speeds mean that the cloud moves and disperses more quickly. Lower wind speeds mean the cloud stays together but takes longer to migrate.

Effectively, it was predicted that anyone able to self-evacuate from a chlorine cloud would do so. Sensitive individuals and those whose mobility is restricted are at a more significant risk of an injurious dose.

The catastrophic failure of the tank could potentially cause a chlorine plume extending kilometres, causing discomfort and inconvenience to thousands of people. Actual injury would be restricted to those closer to the source and those who have restricted mobility. The risk of this occurring is very low.

The facility, in conjunction with the local area authorities and the emergency services, divided the surrounding area into zones. The zones are based on modelling using the emergency response guideline cut-offs and are managed as follows:

- Those within the zone closest to the facility were briefed on the hazard and are able to shelter in place for significant times. This zone is alerted by the facility whenever there is an on-site release that may leave the site.
- The next zone will be contacted by the emergency services if they are required to respond to an incident. Businesses and residences within this zone are the target of a considerable community liaison process involving letter drops and information sessions.
- The last zone will be contacted by emergency services if they are required to respond to an incident, but by this time they will be aware of the event from the media and other parties. They are unlikely to be injured. Emergency services, councils and support organisations (such as hospitals etc.) are provided with information on the facility and the potential hazard.

3. THE PROVISION OF INFORMATION TO THE COMMUNITY

The provision of information to the community is essential to enhance the community's emergency preparedness.

Any information that is provided to the community should be set out and expressed in a way that is can be easily understood by persons who are not familiar with the facility and its operations.

The information supplied should be:

- presented in a user-friendly way
- in plain English, avoiding technical terms
- in appropriate community languages
- reviewed and, as necessary, revised if a modification is made to the major hazard facility.

3.1 Who to provide information to

The 'local community' are the people whose health and safety could be affected by a major incident. As an example, the following people may need to be provided with information:

- local residents
- operators of shopping centres, retail outlets and sporting venues
- operators of caravan parks, hotels, motels and hostels
- operators of docks, mooring facilities, yachting marinas etc.
- sensitive and vulnerable developments such as childcare facilities, schools, hospitals, aged-care facilities, detention centres and correctional centres
- the community or public library in the local area surrounding the facility.

The local area authority (such as a local council) must be given the general information for the local community.

The operator of a major hazard facility who receives a written request from a person who, on reasonable grounds, believes that the occurrence of a major incident at the facility may adversely affect his or her health or safety, must also provide that person with a copy of the information provided to the local community.

3.2 Information for local community – general

The operator must provide the following general information to the local community and the local authority for the local authority area in which the facility and surrounding area are located:

- the name and location of the major hazard facility. This should include such detail as the name of the occupier (and trading name if different), the street address of the facility and the nearest intersection
- the name, position and contact details of a contact person from whom information about the facility may be obtained. Ideally this should be the person to whom community concerns may be directed and should also include a 24 hour emergency contact number

3. THE PROVISION OF INFORMATION TO THE COMMUNITY

- a general description of the major hazard facility's operations. This should be an explanation, in straightforward terms, of the activities undertaken at the major hazard facility. The description may or may not include details of the hazardous materials used or produced on the site, depending on whether or not these details are considered to be security-sensitive information. The description should be simple, avoid unnecessary complication, and cover storage, processing and on-site movement of materials
- the means by which the local community will be notified of a major incident occurring. Consistent with the emergency plan, the operator should provide the community with information on:
 - how they will be informed e.g. initial off-site warning systems
 - the role of the emergency services
 - the arrangements for the testing of warning systems
 - how to recognise the early signs of a major incident in case a timely warning is not given
 - how they will know the major incident is over.

There should also be communication systems in place to ensure that the community is provided with information during the course of an incident. It may be helpful to provide details of the television channels or radio station frequencies where information concerning the incident will be broadcast.

- the actions, as specified in the emergency plan for the major hazard facility, that members of the local community should take if a major incident occurs. Information on the actions the community should or should not take in the event of a major incident must be provided. The information should include where to shelter, the steps to take to reduce exposure to hazardous materials, evacuation procedures and encouragement to follow the advice given by the emergency services. Such information should also include advice on telephone use in the event that lines need to be kept clear for emergency use
- a summary of the safety case for the major hazard facility. The information provided here should consist of a high-level description of the hazards present and the potential impacts/types of incidents that could occur at the major hazard facility relative to those hazards. Although a number of potential major incidents may have been identified for the major hazard facility during the risk assessment process, only those that make a significant contribution to the overall facility risk (major risk contributors) need be described.

The nature and scale of the consequences of a major incident should be described along with information concerning the potential effects on the population, both immediate and delayed.

As the safety case must include a summary of the emergency plan for the facility, consideration should also be given to including an overview or outline of the major hazard facility's emergency plan in the information provided here.

The information should be provided in plain English, avoiding technical terms where possible and include explanations for those that are used.

The information provided should also consider the special provisions that may be required for certain groups within the community such as schools, hospitals and aged-care facilities.

The WHS Regulations state that the operator need not release information which would increase the exposure of the MHF as a target for terrorist activity or sabotage.

3.3 Information for local community – major incident

As soon as practicable after a major incident has occurred, the operator of the major hazard facility must take all reasonable steps to provide the local community, the local authority and any government department or agency with a regulatory role in relation to major hazard facilities with information about the major incident, including:

- A general description of the major incident. This may include the nature of the incident (fire, explosion etc.), details of the hazardous chemicals involved and the likely consequences and impacts
- a description of the actions the operator has taken and proposes to take to prevent any recurrence of the major incident or the occurrence of a similar major incident
- the recommended actions that the local authority and members of the local community should take to eliminate or minimise risks to health and safety.

A full explanation and account of the major incident may only be possible after an exhaustive enquiry. This delay may not satisfy the local community or injured parties. There may also be legal implications to any disclosure. Despite these challenges, it is a shared interest to learn from the major incident in order to prevent recurrence and build community capacity and resilience.

Reasonable steps must be taken to provide the local community and local authority with information. Facilities may choose to release information on the facts of the situation as the event unfolds, and provide community updates as the investigation proceeds. It may be advisable to seek professional advice on how to manage public relations while still complying with the Regulations.

4. HOW TO COMMUNICATE

The methods of communicating with stakeholders will vary with the reasons for the communication.

4.1 Pre-incident communication

Pre-incident communication may include the distribution of information via letterbox drops, websites, public meetings and planned media campaigns.

Written documents to which people can refer should be considered. The production and distribution of an information kit, printed shelter-in-place card, fridge magnet or facility information fact sheet may be particularly useful.

4.2 Emergency communication

People who may be affected by the major incident must as soon as practicable be warned of the danger and advised of the safety measures they should take.

A facility's warning siren is not enough to keep the community informed of a major incident. The responding emergency services may decide to issue widespread public warnings via the media, including radio stations and television channels. As well as using radio or television for communication, personal notification by telephone or door-to-door visiting is also effective. This will also usually be done by the responding authority, however it does require some detailed planning to systematically divide the threatened area into sections and to issue warnings, starting with the highest risk zone and proceeding to the lower risk zones.

APPENDIX A – WHS REGULATIONS

Regulation	Requirement
572	<p>Information for local community—general</p> <p>(1) The operator of a licensed major hazard facility must ensure the provision of the following information to the local community and the local authority:</p> <ul style="list-style-type: none"> (a) the name and location of the major hazard facility; (b) the name, position and contact details of a contact person from whom information may be obtained; (c) a general description of the major hazard facility's operations; (d) the means by which the local community will be notified of a major incident occurring; (e) the actions, as specified in the major hazard facility's emergency plan, that members of the local community should take if a major incident occurs; (f) a summary of the safety case for the major hazard facility. <p>(2) The operator must ensure that the information provided under subregulation (1) is:</p> <ul style="list-style-type: none"> (a) set out and expressed in a way that is readily accessible and understandable to persons who are not familiar with the major hazard facility and its operations; and (b) reviewed and as necessary revised if a modification is made to the major hazard facility; and (c) sent in writing to any community or public library serving the local community. <p>(3) In complying with subregulation (1), 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.</p> <p>(4) The operator of a licensed major hazard facility who receives a written request from a person who reasonably believes that the occurrence of a major incident at the major hazard facility may adversely affect his or her health or safety must provide that person with a copy of the information provided to the local community under this regulation.</p>
573	<p>Information for local community—major incident</p> <p>(1) As soon as practicable after a major incident occurs, the operator of the major hazard facility must take all reasonable steps to provide the persons specified in subregulation (2) with information about the major incident, including:</p> <ul style="list-style-type: none"> (a) a general description of the major incident; and (b) a description of the actions the operator has taken and proposes to take to prevent any recurrence of the major incident or the occurrence of a similar major incident; and

Regulation	Requirement
<p>573 (Continued)</p>	<ul style="list-style-type: none"> (c) recommended actions that the local authority and members of the local community should take to eliminate or minimise risks to health and safety. (2) The persons to whom information about a major incident must be given are: <ul style="list-style-type: none"> (a) the local community, if a member of the local community was affected by the major incident; and (b) the local authority; and (c) any government department or agency with a regulatory role in relation to major hazard facilities.

APPENDIX B – DEFINITIONS

BLEVE is an acronym for Boiling Liquid Expanding Vapour Explosion.

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

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

Major hazard facility (MHF) 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 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.

Modification, in relation to a major hazard 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.

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.

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.

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.

Surrounding area, in relation to a facility, means the area surrounding the facility in which the health and safety of persons could potentially be adversely affected by a major incident occurring.

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 two or more hazardous chemicals as determined under clause 4 of Schedule 15 (regulation 5).

