GUIDELINES FOR
MAJOR HAZARD FACILITIES



G – COMMUNITY CONSULTATION

Queensland Government
Counter Disaster and Rescue Services
Department of Emergency Services

Produced by the Chemical Hazard and Emergency Management (CHEM) Unit

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Table of Contents

(i) Sections of the Act Relevant to this Guideline

Dangerous Goods Safety Management Act 2001

PART 4-MAJOR HAZARD FACILITIES

Division 3-Other obligations of occupiers of major hazard facilities

46 Occupier must consult and give information about safety measures

(1) The occupier of a major hazard facility must identify areas surrounding the facility in which there may be material harm caused if a major accident happens at the facility.

(2) The occupier—

(a) must consult with and inform persons in the areas, and owners of property situated in the areas, about the hazards at the major hazard facility and the safety measures that should be taken if a major accident happens at the facility; and

(b) must update the information as often as necessary to keep the persons and owners informed about the hazards and the way to respond to a major accident at the facility.

(3) For subsection (2)(a), the occupier must first consult and inform persons and owners about hazards and safety measures—

(a) for a facility classified as a major hazard facility within 12 months after the commencement of this section—within 16 months after classification; or

(b) for a facility classified as a major hazard facility more than 12 months after the commencement of this section—within 3 months after classification.

(4) If a major accident happens at the facility, the occupier must ensure persons and owners who may be affected by the accident are immediately warned of the danger and advised of the safety measures they should take.

(ii) Sections of the Regulation Relevant to this Guideline

Dangerous Goods Safety Management Regulation 2001

None specifically relevant.

1 Introduction

The objective of the Dangerous Goods Safety Management (DGSM) Act 2001 is to ensure the safety of people and prevent damage to property and the environment from hazardous materials. To achieve this objective, the Act has a number of obligations with which the occupier of a Major Hazard Facility (MHF) must comply. One of these obligations is to identify the consultation zone within which the occupier of a MHF must consult with people and property owners and inform them of the hazards at the MHF and the safety measures that should be taken if a major accident occurs.

This guideline is intended to provide some clarification of what needs to be addressed by the occupier of a MHF when consulting with the community and providing them with information as required by Section 46 of the DGSM Act.

1.1 Intentions of Community Consultation

Consultative channels between the community and MHF must be implemented to allow the provision of information by the MHF and the feed-back from the community. With the provision of information and the ability for the community to voice their opinions, the following benefits should be gained:

- raised community awareness of operations, potential major accidents and the associated safety measures;
- a heightened awareness by the MHF of community concerns;
- improved relations with the community; and
- increased trust between the community and the occupier.

The use of a good, professionally conducted campaign will help achieve this.

1.2 Timeframe

As required by Section 46 of the Act, the occupier is required to complete the community consultation process in accordance with the following dates:

- For a facility classified as a MHF before 7 May 2003, community consultation must be completed within 16 months after classification.
- For a facility classified as a MHF after 7 May 2003, community consultation must be completed within 3 months after classification.

This community consultation process must be clearly and concisely documented in the Safety Report (see ***Guidelines for Major Hazard Facilities, H – Safety Report***). The details should also be made available to the regulatory authority in a user-friendly format upon request.

1.3 Update

For the benefit of the community, it is imperative that the Community Consultation information be updated whenever there are changes in:

- the safety report, e.g. due to changes in the overall facility risk from a modification;
- hazards at the facility;
- emergency response to incidents at the facility or community safety measures; and
- adjacent land use or population around the facility.

To ensure that community awareness remains at an effective level, the occupier should consider redistributing information, irrespective of whether it has been updated, at two-yearly intervals.

1.4 The Purpose of this Guideline

This guideline gives an outline of the community consultation process and is not intended to be a comprehensive guide. The CHEM Unit publication ***Community Consultation and Communication Guidelines, 2001*** is available from the Department of Emergency Services and discusses the subject in greater detail, broaching particular subjects such as:

- the seven cardinal rules of risk communication;
- identifying stakeholders;
- community liaison officers;
- community consultation plans;
- community information kits;
- public meetings and open days; and
- accident action phases.

2 The Community Consultation Process

Once the Systematic Risk Assessment (SRA) has been completed, the hazards at the facility will have been identified, the potential major accidents and in particular the major risk contributors will be known and the risk reduction measures including the emergency plans will be in place or in the process of being installed. This will enable the development of the community consultation process.

The community consultation process (see Figure 1) involves implementing consultative channels between the MHF and the community and supplying the following information:

- details concerning the nature of operations at the MHF;
- the major risk contributors at the facility and the associated hazards;
- the risk reduction measures in place to prevent or mitigate potential major accidents arising from the major risk contributors;
- the nature of the warning system in place that informs the community that a major accident has occurred, keeps them updated and notifies them that it is over;
- the safety measures the community may have to take in the event of a major accident; and
- any other relevant information (subject to commercial sensitivity) that the community may request or that may enhance their personal safety or the safety of their property.

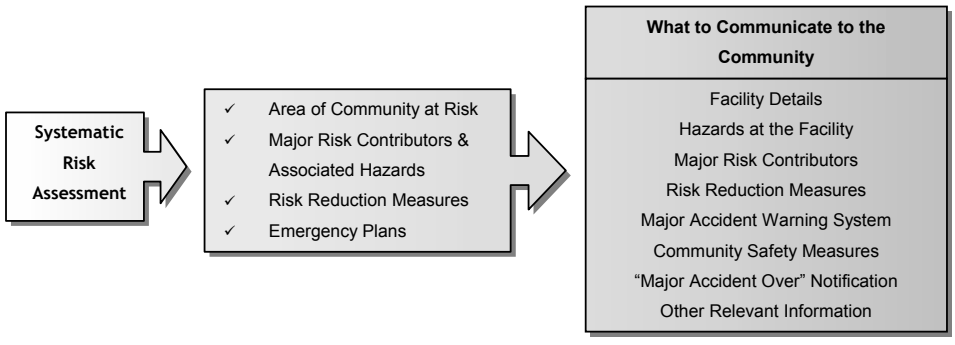


Figure 1. Community Consultation Process

3 Consultation Area

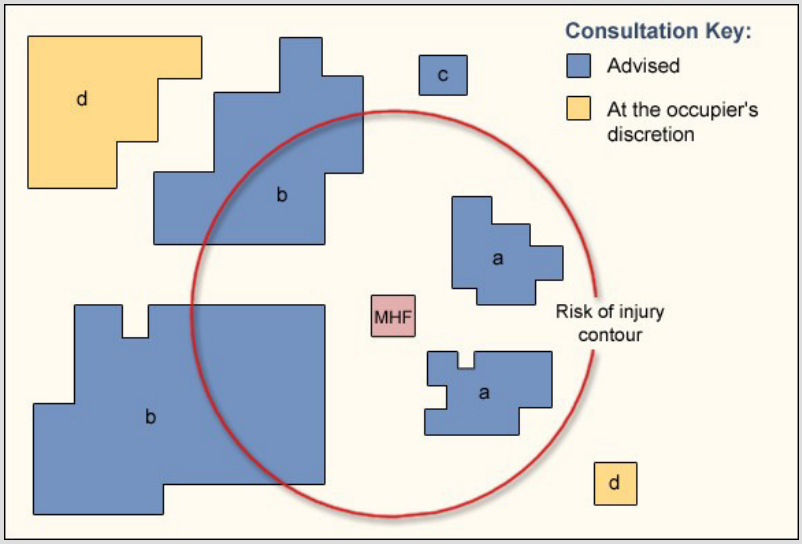
3.1 Area Identification

Through the completion of the SRA, an area outside the facility will have been identified where people, if present during a major accident, may be injured, property damaged and the environment harmed. With an appreciation for the likelihood of these events, those people and property at greatest risk should be identified. A contour of risk of injury will be identified around the facility, beyond which there is negligible likelihood of injury or property damage.

Common sense may then be applied to identify the actual streets and neighbourhoods where the provision of information will be necessary (see Guide Note 1).

Guide Note 1 – Area of Consultation

The simplified diagram below shows a MHF surrounded by a number of neighbourhoods and a contour showing the area beyond which there is a negligible likelihood of injury. The involvement of these neighbourhoods in the community consultation process is explained in the table over the page.



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Guide Note 1 – Area of Consultation (cont.)

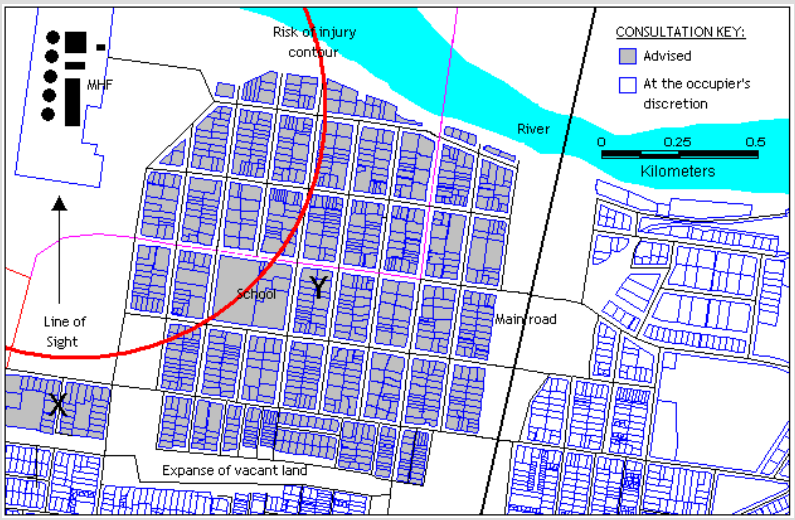
MHF's reasons for the inclusion or exclusion of neighbourhoods in the process:

Area	Consult	Reason
a	Yes	the whole neighbourhood is encompassed by the contour
b	Yes	some part of the neighbourhood is partially within the contour so the entire neighbourhood is consulted to provide consistency
c	Yes	although the neighbourhood is outside the contour, there is a direct line of sight to the facility which has promoted some interest in the MHF amongst the community
d	occupier's discretion	the neighbourhoods are outside the contour, divided from others by 'significant features' and have no direct MHF line of sight. There has been no interest shown by the community.

A neighbourhood may be identified as an area of the community separated from adjacent parts of the community by 'significant features', where significant features may be:

- main roads;
- railway tracks;
- waterways;
- hills, valleys, etc.;
- parklands;
- expanses of vacant land; or
- other features that may divide areas of the community.

Below is a more detailed example. Again, the MHF is shown, surrounded by the risk of injury contour and a number of neighbourhoods.



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Guide Note 1 – Area of Consultation (cont.)

Two neighbourhoods have been identified for consultation; X and Y. X because of the line of sight it has to the MHF and Y because it partially overlaps the risk of injury contour. In this example, the 'significant features' separating the community have also been identified; a main road and an expanse of vacant land.

The following injury risk criteria should be applied (taken from HIPAP 4, see Further Reading):

- For heat radiation:
  - Incident heat flux radiation at residential areas should not exceed 4.7 kW/m^2 at frequencies of more than 50 chances in a million per year.
- For explosion overpressure:
  - Incident explosion overpressure at residential areas should not exceed 7 kPa at frequencies of more than 50 in a million per year.
- For toxic gas/smoke/dust exposure:
  - Toxic concentrations in residential areas should not exceed a level which would be seriously injurious to sensitive members of the community following a relatively short period of exposure at a maximum frequency of 10 in a million per year.
  - Toxic concentrations in residential areas should not cause irritation to eyes or throat, coughing or other acute physiological responses in sensitive members of the community over a maximum frequency of 50 in a million per year.

3.2 Who to Consult

Those people or organisations that live, work or own property in the areas surrounding the facility, as identified above, should be consulted and provided with information (see Guide Note 2).

Early in the community consultation process, the occupier should also endeavor to contact local interest groups. This will enable the occupier to develop a mutually acceptable strategy for the provision of information and identify real concerns the community may harbour. Guide Note 3 identifies possible groups that could aid or contribute to the consultation process.

Working in tandem with other MHFs in the community has, in the past, proved to be a very effective way of addressing community consultation.

Guide Note 2 – Who to Consult

The following people may need to be consulted:

- local residents;
- elected government officers;
- operators of shopping centres and sporting venues;
- operators of caravan parks, hotels, motels, hostels, etc.;
- sensitive developments, e.g. schools, hospitals, aged person facilities, etc.;
- property owners, e.g. owners of boats moored locally, etc.; and
- media representatives.

Guide Note 3 – Interest Groups

When beginning the consultation process, the following groups could provide valuable input:

- local newspapers;
- local counter disaster committees;
- local neighbourhood watch groups;
- chambers of commerce;
- local volunteer groups; and
- local concern groups.

4 Provision of Information

4.1 General Requirements

The provision of information is essential to improve the community's understanding of the MHF's operation, satisfy their right to know and to enhance their emergency preparedness.

Any information supplied to the community should:

- keep the interest of the reader;
- use straightforward terms;
- avoid complicated technical expressions;
- explain any technical terms or acronyms where their use is considered necessary;
- be readily understood by a lay person;
- be in relevant languages; and
- cater to children, adults and people with disabilities.

There are a variety of ways to disseminate this information, a number of which are covered in the CHEM Unit's publication ***Community Consultation and Communication Guidelines, 2001***. This guideline discusses the content of that information.

4.2 Facility Description

The facility description should include details such as:

- the name of the occupier (and trading name if different);
- the address of the facility;
- the position and contact details of the person to whom community concerns should be directed; and

- a concise explanation of the activities undertaken at the facility (see Guide Note 4).

Guide Note 4 – Facility Activities

The description should be simple, i.e. avoid unnecessary complication, and cover storage, processing and on-site transportation. Simply naming the facility's primary activity e.g. refinery, is not sufficient. Every care should be taken to ensure that the description is easily understood by the average lay person.

4.3 Hazards at the Facility

A 'hazard' as defined by the DSGM Act is a thing or a situation with potential to cause harm to people, property or the environment. It is not necessary to detail every single hazard present at the facility, just those associated with the major risk contributors as explained in 4.4 (see Guide Note 5).

Guide Note 5 – Facility Hazards

The following information should be supplied to the community concerning the hazards associated with the major risk contributors:

- the common or generic names and the general dangerous goods classification of the substances;
- a description of their hazardous characteristics;
- their possible effects on people, both immediate and long term (taken from a source such as the material safety data sheet, MSDS);
- any information requested by the community;
- any other information considered of value e.g. colour, smell, etc; and
- the sources of the information cited.

4.4 Major Risk Contributors

Although a number of potential major accidents may have been identified for the facility during the SRA, it will be sufficient to describe only those that make a significant contribution to the overall facility risk, i.e. the major risk contributors (see ***Guidelines for Major Hazard Facilities, C – Systematic Risk Assessment***). The nature and scale of the consequences of a major accident should be described along with information concerning the potential effects on the population, both immediate and long term.

A simple explanation of the methods used to calculate the consequences should also accompany their description. It may also enhance the community's trust and the occupier's credibility if there is some discussion of the uncertainty involved in their calculation and how this uncertainty has been addressed.

It is recommended that the occupier supply information to the community concerning past incidents at the facility, particularly those that may have been detected by the community. An open, transparent and honest approach has proven to be effective in enhancing relations with the community in the past.

4.5 Risk Reduction Measures

With each of the major risk contributors described, there must be a description of the prevention and mitigation measures in place to manage the associated risk. Some explanation concerning how the risk is reduced through the application of these risk reduction measures should accompany their description (see Guide Note 6). It may also be appropriate to explain why certain measures were adopted compared to possibly more expensive or technically advanced alternatives.

Guide Note 6 – Risk Reduction Measures

The occupier should ensure that the average lay person can understand the descriptions and explanations provided. Where possible, it may be advantageous to use simplified diagrams or draw comparisons with everyday objects or systems.

4.6 Major Accident Warning System

Every MHF must have systems in place to immediately warn and keep informed the neighbouring community in the event of a major accident (see Guide Note 7). The method by which this will be done must be communicated to those expected to respond so that they may effectively do so, should an event ever occur. An effective warning system will:

- be distinctive so that the community recognise it quickly;
- immediately inform the community of a major accident and its nature;
- be adaptable to all foreseeable major accidents;
- keep the community informed of developments; and
- take all groups of the community into consideration.

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

Guide Note 7 – Warning System

The following information should be supplied to the community:

- details of the warning system, e.g.:
  - alarms/sirens,
  - telephonic notification,
  - event updates,
  - notification of the major accident being over, and
  - other relevant information;
- the TV channel or radio station frequency where further information may be obtained during an incident; and
- the drills planned to train the community in the recognition of sirens/alarms and the understanding of messages.

4.7 Community Safety Measures

Information concerning the actions the community need to take, or should not take, in the event of a major accident must be provided. Information may include where to shelter, any steps to take to reduce exposure to toxic substances, evacuation procedures, a request to keep telephone lines clear, encouragement to follow advice given by the emergency services and any other information that may be relevant (see Guide Note 8).

The advised community safety measures should take into account the known and likely ways in which people and organisations behave under major accident conditions. One particular aspect being that people will seek to know what has happened, i.e. there will be a huge demand on the occupier to supply information. Provisions should have been made for such foreseeable scenarios.

Guide Note 8 – Community Safety Measures

Where the community is instructed to perform specific tasks during a major accident, the occupier should inform the community of the preparations they will need to make. Examples could include:

Specific Task	Preparation
Shelter in place and seal all doors and windows.	Have sealing tape available of sufficient width to seal window and door seals.
Listen to radio station for further information on frequency XX.X MHz FM.	Have a radio and fresh batteries available.
Turn off household electricity supply.	Identify where to isolate the household electricity supply.

4.8 'Major Accident Over' Notification

The community must be informed of how they will be notified that a major accident is over and that it is safe for 'business' to return to normal. Again, the community needs to be informed of the TV channels or radio station frequencies that may be used. It may be necessary to prepare the community to listen for the emergency services who may also be providing updates concerning the incident.

4.9 Other Relevant Information

The community should be provided with information that relates directly to the off-site aspects of the emergency plan. There should be confirmation that emergency services have been involved in the development of the emergency plan as well as advice to co-operate with any instructions from the emergency services during an incident, as for some this may be the only information source available at the time. The involvement of emergency services in training exercises is also recommended.

Special provisions may be necessary for areas of commercial development, sporting/recreational facilities or sensitive developments. The occupier will have to deal with these on a case-specific basis. The inclusion of the emergency services in the process may enhance its overall effectiveness. The opportunity for this may be available while consulting with emergency services in the preparation of the emergency plans and procedures.

Any other information (subject to commercial sensitivity) the community requests or that may enhance the safety of the community in the event of a major accident should be included in the consultation process. Sources of further explanatory information may also be provided for the community's benefit.

It should be remembered that it is better to give too much information than too little.

5 Summary of Occupier's Requirements

The occupier may use the following as a checklist.

The occupier should consider the following in the community consultation process:

5.1 General Requirements

Tick Box

- Should keep the interest of the reader. ☐
- Use straightforward terms. ☐
- Avoid complicated technical expressions. ☐
- Explain acronyms and technical terminology. ☐
- Be in relevant languages. ☐
- Cater to children, adults and people with disabilities. ☐

5.2 Facility Description

- The name of the occupier (and trading name if different). ☐
- The address of the facility. ☐
- The position and contact details of the person to whom community concerns should be directed. ☐
- Provide a concise explanation of the activities undertaken at the facility. ☐

5.3 Hazards at the Facility

- The common or generic names and the general dangerous goods classification of the substances. ☐

- Their hazardous characteristics. ☐
- The possible effects on people, long and short term. ☐
- Include information requested by the community. ☐
- Include any other relevant information concerning the hazards. ☐
- Describe the sources of information cited. ☐

5.4 Major Risk Contributors

- A description of the major risk contributors. ☐
- The nature and scale of major accident consequences. ☐
- The potential effects on the population, long and short term in the event of a major accident. ☐
- The methods used to calculate the consequences. ☐
- The uncertainty associated with the consequences and how this has been addressed. ☐
- Past incidents that may have been detected by the community. ☐

5.5 Risk Reduction Measures

- The risk reduction measures associated with the major risk contributors. ☐
- How the risk reduction measures are effective at reducing the overall facility risk. ☐

5.6 Major Accident Warning System

- The nature of the facility's major accident warning system. ☐

- How the community will remain informed during an incident. ☐

- Drills planned to train the community. ☐

5.7 Community Safety Measures

- Actions the community should or should not take during a major accident. ☐

- Preparations the community may need to make prior to a major accident. ☐

5.8 'Major Accident Over' Notification

- Details of how the community will be notified that a major accident is over. ☐

5.9 Other Relevant Information

- Information that directly relates to off-site aspects of the emergency plan. ☐

- Confirmation that emergency services have been involved in the preparation of the emergency plan and the running of training exercises. ☐

- Information requested by the community. ☐

- Any additional information that may enhance the safety of the community. ☐

- Sources of further information if appropriate. ☐

6 Further Reading

This section is not intended to be an exhaustive list of references but simply a list of useful reference texts concerning community consultation.

CHEM Unit
Community Consultation and Communication Guidelines, 2001
Available at: http://www.emergency.qld.gov.au/chem

Chemical Hazards and Emergency Management (CHEM) Unit, Queensland Department of Emergency Services and Australian and New Zealand Hazardous Industry Planning Taskforce
Emergency Planning - Guidelines for Hazardous Industry, 1998
ISBN 0-7242-9310-8

Chemical Hazards and Emergency Management (CHEM) Unit and Queensland Fire Service Department of Emergency Services
Emergency Plans - Guidelines for Major Hazard Facilities, 1996
ISBN 0-7242-7190-2

Chemical Hazards and Emergency Management (CHEM) Unit
Easy Read Guide to the DGSM Act 2001
Available at: http://www.emergency.qld.gov.au/chem

New South Wales Department of Urban Affairs and Planning
Hazardous Industry Planning Advisory Paper No. 4 (HIPAP No. 4), 1997
Risk Criteria for Land Use Safety Planning
Department of Urban Affairs and Planning, Sydney
ISBN 0 7305 7130 0

National Occupational Health and Safety Commission

National Code of Practice for the Control of Major Hazard Facilities

[NOHSC:2016(1996)]

Australian Government Publishing Service Canberra

ISBN 0 644 45926 3

Available at:

www.nohsc.gov.au/OHSInformation/NOHSCPublications/fulltext/toc/01497-01.htm

National Occupational Health and Safety Commission

National Standard for the Control of Major Hazard Facilities

[NOHSC:1014(1996)]

Australian Government Publishing Service Canberra

ISBN 0 644 45926 3

Available at:

www.nohsc.gov.au/OHSInformation/NOHSCPublications/fulltext/toc/01397-01.htm