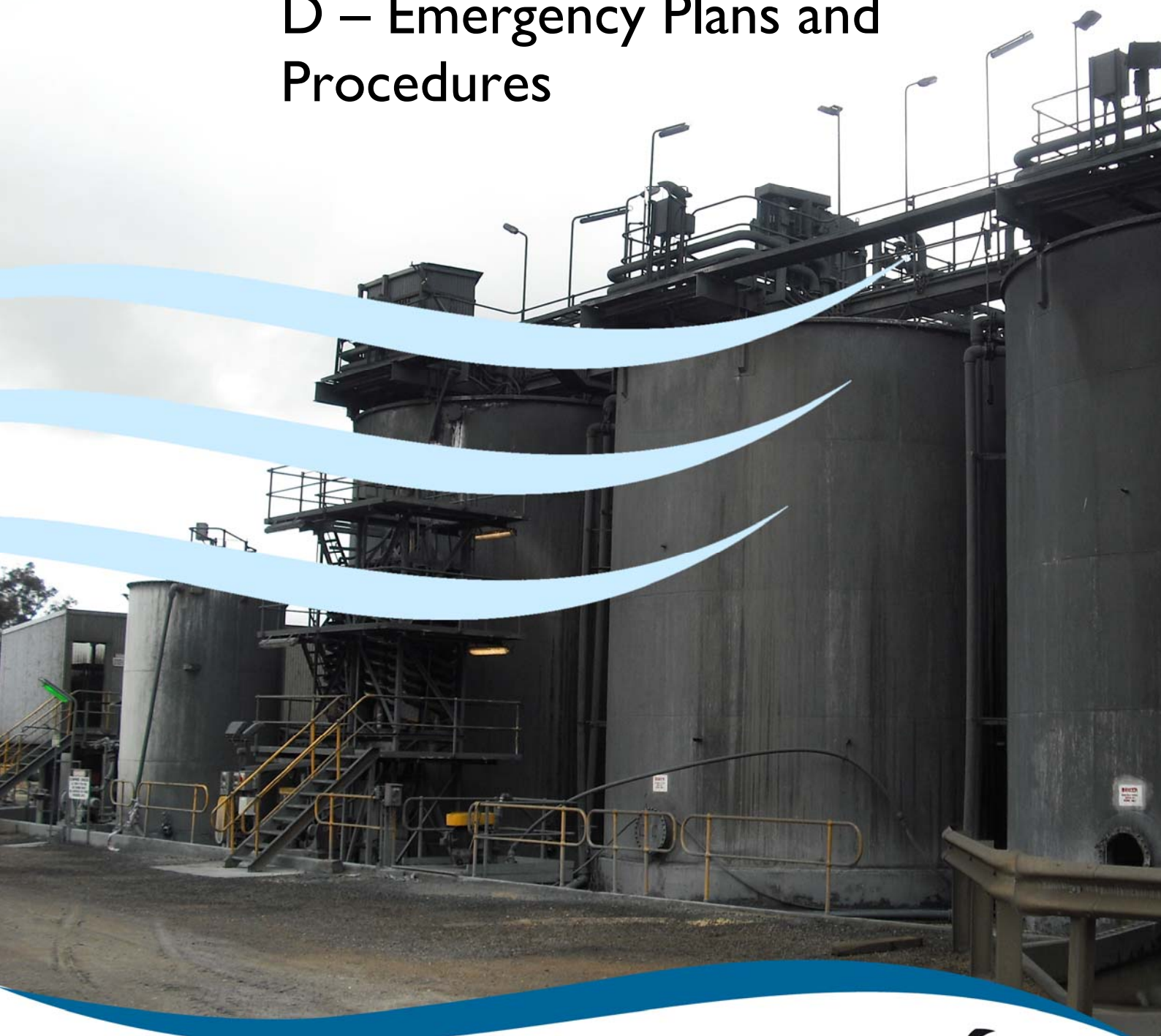


Guidelines for Major Hazard Facilities D – Emergency Plans and Procedures



Disclaimer

This information is for guidance only and is not to be taken as an expression of the law. It should be read in conjunction with the *Dangerous Substances (Safe Handling) Act 2005*, the *Dangerous Substances (Safe Handling) Regulation 2009* and any other relevant legislation. Copies of the legislation can be purchased from Print Applied Technology: call (03) 6233 3289 or free call 1800 030 940. It is also available on the Internet at www.thelaw.tas.gov.au

Acknowledgement

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I INTRODUCTION

This guideline provides advice about the preparation, implementation and testing of Emergency Plans and Procedures (EP&Ps) for Major Hazard Facilities (MHFs) as required under the *Dangerous Substances (Safe Handling) Act 2005* (the Act) and the *Dangerous Substances (Safe Handling) Regulations 2008* (the Regulations). It outlines the expectations of the Secretary as to the nature, and content of EP&Ps. This Guideline does not purport to be a definitive text on EP&Ps. The Secretary expects that an occupier would consult the references listed in Section 7, particularly the publication *Emergency Planning for Major Accidents – Control of Major Accident Hazards Regulation 1999 HSG 191* when developing and reviewing EP&Ps for a MHF.

I.1 List of Acronyms

- AFARP – As far as reasonably practicable = ALARP
- DS – Dangerous Situation
- DSE – Dangerous Substances Emergency
- EP&Ps – Emergency Plans and Procedures
- LDSL – Large Dangerous Substances Location
- MHF – Major Hazard Facility
- NOHSC – National Occupational Health and Safety Council
- PMHF – Possible Major Hazard Facility
- SMS – Safety Management System
- SR – Safety Report
- SRA – Systematic Risk Assessment
- the Act – *Dangerous Substances (Safe Handling) Act 2005*
- the Regulations – *Dangerous Substances (Safe Handling) Regulations 2009*
- the Secretary – The Secretary of the Department of Justice
- WST – Workplace Standards Tasmania

1.2 Legislative Requirements

The Act requires an occupier of a MHF to put in place risk reduction measures to eliminate or if not practicable to eliminate, to minimise the risk posed by the MHF as far as is practicable, to people, property and the environment. The very nature of a MHF is such that complete elimination of its risk may not be practicable. Further, the consequences of a dangerous substances emergency may have a significant impact on people, property and the environment inside and outside the facility. Consequently an effective emergency plan is an essential risk reduction measure for a MHF and is required by Section 39 of the Act.

The Act defines “dangerous substances emergency” as an incident that exposes persons, property or the environment in the vicinity of the place where the incident occurs to an immediate risk of serious harm from one or more of the following:

- the escape, spillage or leakage of dangerous substances
- a fire or explosion involving dangerous substances
- a harmful reaction from dangerous substances
- the evolution of flammable, corrosive or toxic vapours from dangerous substances.

EP&Ps should be structured to address dangerous substances emergency scenarios which have been identified through the safety risk assessment (SRA) of the facility. Refer MHF Guideline C **Systematic Risk Assessment (SRA)**. As an essential risk reduction measure, EP&Ps must be part of the facility's **Safety Management System (SMS)**, refer MHF Guideline F.

In the event of a dangerous substances emergency, emergency plans and procedures must be implemented and followed to minimise the consequences of the emergency to people, property and the environment. A dangerous substances emergency and its consequences usually occur within a short time frame. To have a mitigating impact on the consequences of a dangerous substance emergency, EP&Ps must be implemented quickly and comprehensively. For this to occur, the EP&Ps must have been developed, documented and tested prior to the occurrence of a dangerous substances emergency.

EP&Ps need to co-ordinate the alarm, notification, response, management and rehabilitation requirements in the event of a dangerous substances emergency. EP&Ps must be capable of

dealing with the range of dangerous substances emergency scenarios identified in the SRA; however, detailed planning should concentrate on the more likely events.

EP&Ps must be well structured, succinct and:

- specific to the facility and to the major hazards identified in the SRA;
- the on-site and off-site emergency plans shall be complementary;
- contain maps that clearly identify the location, site, fire protection and drainage maps;
- contain a dangerous substances location map(s) and a dangerous substances manifest;
- be effective in addressing the consequences of a dangerous substances emergency both onsite and offsite;
- be integrated into the facility's SMS;
- be developed in conjunction with the relevant employees (which includes on-hired employees, contractors and sub-contractors) at the facility, emergency services such as the local fire brigade, police, local council and people located outside the facility who may be affected by the consequences of a dangerous substances emergency;
- be understood by employees and other potentially affected parties with this understanding validated;
- be subject to review, testing and update at appropriate intervals and circumstances which need to be validated; and
- include debriefing sessions for all involved following trials and real events.

2 Key Legislative Issues

2.1 Time Frames

In accordance to section 39 of the Act EP&Ps for a MHF must be established and documented:

- if a facility is classified as a MHF within 12 months after this section commences, within 8 months after it is so classified or
- if a facility classified as a MHF more than 12 months after this section commences, within 3 months after it is so classified.

2.2 Implementation

Section 45 of the Act requires an occupier of a MHF to take immediate action if a dangerous substances emergency occurs at the facility. Sections 40 and 43 of the Act requires the occupier to consult the following people during the establishment, maintenance and documenting of EP&Ps:

- emergency services such as the local fire brigade, police, ambulance, hospital, local council etc and the Secretary; and
- sections of the community which may be affected by a dangerous substances emergency. Information about the EP&Ps must be supplied and updates as often as necessary including how the community would be notified in the event of a dangerous substances emergency and what actions they should take; and
- consult with the council of the municipal area where the facility is/or will be located.

3 Emergency Plans and Procedures

3.1 General

A facility typically will develop plans and procedures to respond to a range of situations including:

- dangerous substances emergencies involving employees at the facility;
- loss of services e.g. electricity;
- fires;
- equipment failures; and
- spillage.

Notwithstanding the above the occupier of a MHF must ensure that EP&Ps address the consequences of dangerous substances emergencies that are identified in the SRA. EP&Ps must address the consequences of each dangerous substances emergency as identified in the SRA and must take into account the dangerous substances emergency history both at the facility and within similar facilities.

Section 21 of the Act requires that the occupier of a MHF must ensure EP&Ps will contain and control a dangerous substances emergency occurring at the facility and minimise the effect of any emergency on persons, property and the environment.

Assumptions about dangerous substances emergencies used in developing EP&Ps should be included as an attachment to the EP&Ps. In describing consequences, the EP&Ps must indicate the area likely to be affected by each dangerous substances emergency. For dangerous substances emergencies which release gaseous toxic substances into the atmosphere, the plans must provide the following information for varying atmospheric conditions:

- the expected extent of areas subject to toxic substances;
- the concentrations of toxic substances in those areas expressed in a manner which indicates the severity of impact of the substances on people and the environment; and
- the expected change with time of the size of the affected area and concentrations of toxic substances within the affected area.

EP&Ps must include a map of the surrounding area showing features which may be affected by the consequences of a dangerous substances emergency. The maps should show details of residences, the built and natural environment, adjacent facilities containing quantities of dangerous substances and all other installations likely to be affected by a dangerous substances emergency.

3.2 Content, Manifest, Maps, MSDS & Emergency Contact List

3.2.1 Content

The content, organisation and format of EP&Ps are dictated in part by the nature of substances and complexity of a facility and its geographical situation. The EP&Ps must take into account all eventualities. Security of the facility must be considered. The effect of risks associated with physical factors, such as seismic events, subsidence, storm or wild weather events, need to be accounted for as well as systems failures or security breaches.

When a dangerous substances emergency occurs, facility employees and emergency services will use the EP&Ps to reduce the consequences of the dangerous substances emergency, and the speed of their response is critical to achieving that objective. The EP&Ps should be simple to read and understand with a content and format which promotes ease of comprehension and completeness of response but minimises the chances of confusion and indecision. It is critical that emergency plans and procedures be included in induction and training programs implemented by the facility.

EP&Ps will vary from facility to facility.

Guide Note 1 - Key Content Issues

The legislation requires that EP&Ps must include details of:

- The site and surrounding area up to a 1 kilometre radius;
- The site layout of the facility showing the location of resources and equipment available to deal with a dangerous substances emergency;
- A Manifest of the quantity, type and location of dangerous substances stored or handled at the facility;
- The potential dangerous substances emergencies which may occur at the facility;
- The organisational structure in place to deal with a dangerous substances emergency, including the roles and responsibilities of people holding positions mentioned in the structure and their contact details;
- Emergency telephone or other contact details of emergency services and other people who may assist in a dangerous substances emergency;
- The resources and equipment available to deal with a dangerous substances emergency;
- The procedures that must be followed if a dangerous substances emergency happens;
- Estimate of personnel numbers on-site at any given time;
- Communication and warning systems for on and off site;
- Site security during a dangerous substances emergency; and
- Assumptions made in developing EP&Ps.

3.2.2 Manifest

This information must be presented in such a manner that the relevant emergency services personnel can quickly and accurately determine the location of all major storages of dangerous substances as well as their types and quantity at the facility. Location of plant and storage facilities containing dangerous substances are most easily conveyed through a coloured scaled site plan. The nature of dangerous substances at the locations must be identified by their chemical names and, as a minimum, by their dangerous substances classes and packing groups. Quantities of substances should be stated in tonnes. This information duplicates some of the

information contained in the manifest for the facility but should be used to help develop information for use at a MHF before and during emergencies. This information will be useful for facility employees, emergency services such as the fire service, police, ambulance service etc and inspectors from the various government agencies which oversight the operation of the facility.

3.2.3 Maps (Location, Site, Fire Protection and Drainage)

You should prepare the following types of maps and place them in the map section of your emergency plan and procedures (see suggested layout in Section 6 of this guideline):

- location map;
- site map;
- fire protection map;
- drainage map; and
- dangerous substances location map and manifest.

Examples of fire protection maps are shown below. Large-scale maps may be kept in sealable tubes near the EP&P's.

The **location map** should preferably be part of a 1:25 000 Tasmap sheet with the site located centrally and highlighted. It must show:

- the roadway system;
- neighbours;
- water courses and connected water bodies;
- Airports;
- railways;
- wharf areas;
- fuel transfer pipelines (surface and underground); and
- bulk fuel depots, etc.

The **site map must** show:

- the boundaries of the site;
- adjacent street names;
- vehicle access in and around the site;
- location of Emergency Equipment (other than fire);
- all buildings, storage areas and major constructions with some form of identification; and
- the direction of true north.

For large or complex sites, separate **fire protection maps** for specific buildings or areas may be required.

The **fire protection maps** must show:

- the boundaries of the site;
- adjacent street names;
- fire main layout, isolating valves and main sizes;
- fire hydrants and monitor locations;
- hydrant booster connections;
- fire water storage tanks with capacity;
- sprinkler control rooms and sprinkler booster connections;
- fire indicator panel;
- fire extinguishers;
- access doors;
- assembly areas and evacuation routes;
- safety and combat equipment (breathing apparatus, absorbents, foams, neutralising agents, first aid equipment, etc.) and its location;
- the direction of true north,
- fire hoses; and
- fire doors

The **drainage map**, which is for use if there is a liquid spill or fire-water run-off, identifies where liquids are likely to go, and must show:

- the boundaries of the site;
- adjacent street names;
- height contours;
- drains and drain access points;
- traps, bunds, and sumps; and
- drainage isolation points

Dangerous Substances Location Map & Manifest.

The occupier must prepare a dangerous substances location map and a manifest of dangerous substances and include them in the EP&Ps.

The **dangerous substances location map** shows the location of all dangerous substances and bulk combustible liquids on site. For large or more complex sites, it may be necessary to develop maps for specific buildings or areas. The map must show:

- the classes of dangerous substances stored;
- areas where dangerous substances are manufactured or processed;
- dangerous substance isolation points
- the number and capacity of each bulk container of dangerous substances; and,

- maximum and average aggregate quantities of each packaged dangerous substance at each storage location.

The **dangerous substances manifest** must list all dangerous substances on the site.

3.3.4 Emergency Contact Lists

Emergency procedures must show the circumstances and methods whereby the various emergency services and other agencies or organisations that can assist in managing a dangerous substances emergency can be advised of an impending or actual dangerous substances emergency. Where it is possible that a dangerous substances emergency at a facility could sever normal phone systems to the MHF alternate methods of communication should be available.

An internal and external emergency contact list must be prepared and placed in this section. The list needs to show names, titles, fixed and mobile telephone numbers and facsimile numbers. Blank example pages are included in the suggested emergency plans and procedures document attached and occupiers can copy and use these documents.

The internal emergency contact list must contain contact details for any workers, who have responsibilities if there is an emergency at the site, including:

- managers;
- responsible officer;
- safety officer;
- radiation safety officer;
- fire wardens;
- chemists;
- environmental managers;
- operators of specialist equipment;
- site engineers; and
- persons authorised to sign purchase orders

The **external emergency contact list** is for people and organisations that are to be notified of an emergency, and include:

- the **emergency resource contact list** which details personnel;
- companies and organisations that hold equipment or materials that may be required in an emergency;

- the **adjoining sites emergency contact list**; and
- the **Government emergency contact list** (for assistance or incident notification).

Mandatory notifications of incidents to Government agencies are shown in the table below. Some incidents will cover more than one of the categories in the left-hand column; therefore more than one notification may be necessary.

For incidents involving.....	... notify...
Fire & dangerous substances	➤ Tasmania Fire Service
Potential harm to humans	➤ Public and Environmental Health Services, Department of Health and Human Services.
Pollution of land or water by dangerous substances	<ul style="list-style-type: none"> ➤ Environment Division, Department of Environment, Parks, Heritage and the Arts. ➤ local government
Drinking water contamination	<ul style="list-style-type: none"> ➤ local water authority ➤ local government ➤ Public and Environmental Health Services, Department of Health and Human Services.
Explosives, dangerous substances and Workplace Health and Safety	➤ Workplace Standards Tasmania, Department of Justice.
Pesticides & agricultural chemicals	➤ Food Safety, Department of Primary Industries and Water.
Radioactive materials	➤ Radiation Advice and Information, Department.

	of Health & Human Services.
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3.3.5 Material Safety Data Sheets

A Material Safety Data Sheet (MSDS) provide valuable specific information on emergency management, first aid and disposal of waste for the particular dangerous substance.

MSDS for each dangerous substance in the facility must be available with all EP&Ps.

The MSDS format must be in accordance with the National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)] and must be maintained as required by the *Workplace Health and Safety Act 1995*.

3.4 Emergency Procedures

The occupier must develop emergency procedures that cover the following:

- evacuation procedures;
- fire procedures; and
- dangerous substances emergency procedures.

These procedures must be based on an assessment of on-site risks, for example the Tasmania Fire Service can provide advice on fire and evacuation procedures, training, education and practice evacuations. A basic dangerous goods emergency procedure and generic emergency response guides for different types of dangerous goods are shown in Australian Standard SAA/SNZ HB76 *Dangerous goods - Initial emergency response guide* published by Standards Australia.

An industry may also decide to develop procedures for:

- internal and external alerting;
- incident assessment;
- emergencies involving specific hazardous materials;
- company emergency response teams;
- rescue;

- hazardous waste management;
- environmental protection;
- bomb threat;
- recording emergency actions;
- electrical isolation;
- media liaison;
- debriefing;
- emergency shut-down procedures;
- containment of dangerous substances and contaminated firewater released in an emergency
- communication methods on how a dangerous substances emergency will be communicated to facility employees, emergency services, any adjacent facilities and neighbours who may be affected;
- first aid arrangements including procedures for evacuation of injured people;
- decontamination following an emergency; and
- securing of non-affected areas of the facility.

Australian Standard AS 3745 : *Emergency control organization and procedures for buildings* by Standards Australia details information on:

- the emergency planning committee;
- the establishment of an emergency control organisation;
- emergency planning;
- training, education and practice evacuations;
- fire procedures; and
- bomb threats.

3.5 Organisational Structure

An organisational structure appropriate for emergency management is essential if mitigation efforts are to be successful. The structure should be laid down in clear terms yet be flexible enough to enable the structure to change to meet the circumstances at the time. The responsibilities and authorities of all key positions in the structure should be simply and unambiguously defined.

The organisational arrangements must be such that the absence of key people through illness, injury, annual leave etc does not cause the organisational structure to fail. If people occupying key positions in the emergency management structure have to travel to the facility in the event of an out of hours dangerous substances emergency then the plans should allow for this.

Organisational arrangements should take into account unusual situations such as a large increase in people at the facility, e.g. visitors for an event or contractors for a major shutdown. Alternatively contingency plans to supplement the EP&Ps may be drawn up on a situation by situation basis.

The organisational arrangements for unmanned facilities, facilities that are not continuously manned and facilities with varying manning levels at different times must take these factors into account. For facilities which are unmanned for any period of time the EP&Ps must contain the names and contact details of responsible staff who are to be contacted in the event of an emergency at the facility.

The organisational arrangements should address the liaison function between the facility, emergency services and other external agencies or organisations which may be involved in the mitigation of a dangerous substances emergency.

3.6 Resources and Equipment

EP&Ps must allow for first response to the dangerous substances emergency by trained facility personnel and equipment. The numbers of personnel and types and quantities of equipment at the facility must be adequate to commence rapid containment of the consequences of the dangerous substances emergency pending arrival of the emergency services. It is suggested that a Resources and Equipment Manifest be compiled and available in the EP&Ps.

This information should be presented in the EP&Ps in such a manner that the responding emergency service(s) can quickly and accurately determine the location of equipment which could be used to reduce the consequences of a dangerous substances emergency. Locations are most easily conveyed through coloured scaled site plans. The plans should indicate the location of:

- command and communication centres including backup centres;

- control rooms;
- assembly areas and evacuation routes;
- areas where shelter is provided from toxic gases;
- fire water hydrants, monitors and auxiliary sources of water for fire fighting;
- isolation points for services;
- relevant analytical equipment;
- specialised personal protective equipment;
- spill clean up or containment equipment;
- specialised equipment including decontamination equipment and chemicals; and
- isolation points for dangerous substances.

Where the facility is located in an area remote from relevant emergency services, EP&Ps must take account of that fact and ensure the personnel and responding emergency services know how to access these remote locations in the quickest possible way. Personnel numbers, equipment and consumables at the facility must be adequate to limit the consequences without assistance from emergency services.

Management of a dangerous substances emergency may require that the concentrations of pollutants and/or toxic substances be determined. Where the nature of dangerous substances or the consequences of a dangerous substances emergency at a facility indicate that sampling, analysing and monitoring on-site and off-site is necessary, (see Guide Note 2) the EP&Ps must indicate the location of relevant equipment and the contact details for the personnel that will carry out this work.

Guide Note 2 - Substance Analysis

Examples of analyses which may need to be carried out when mitigating the consequences of a dangerous substances emergency:

- flammable/combustible gases in confined spaces and the atmosphere;
- oxygen in confined spaces;
- toxic gases such as chlorine and ammonia in the atmosphere; and
- toxic materials in firewater runoff.

4 Consultation and Information Sharing

Section 40 and 43 of the Act requires the occupier to consult with the following groups in the development of EP&Ps:

- emergency services such as Tasmania Fire Service, Tasmania Police, Tasmanian Ambulance Service and the State Emergency Service; and
- relevant employees of the facility; and
- people and owners of property situated in the area external to the facility which may be impacted by a dangerous substance emergency at the facility; and
- the Council of the municipal area in which the MHF is located.

4.1 Emergency Services

In the context of this Guideline and as outlined above emergency services in the main comprise the Tasmania Fire Service, Tasmanian Ambulance Service, Tasmania Police and the State Emergency Service.

The emergency services have legal responsibilities to discharge should an emergency situation arise. Further they have a range of powers which enables them to respond to, manage and mitigate the consequences of a dangerous substances emergency. Their involvement in the formulation of EP&Ps is vital if the EP&Ps are to be effective. The involvement of some or all emergency services in emergency exercises at the facility ensures that that EP&Ps are effective in combating the consequences of a dangerous substances emergency.

Emergency services likely to be involved in response to a dangerous substances emergency at the facility need relevant information to enable them to pre-plan their response, based on the types of events that are possible. It is not enough for emergency services simply to respond to an initial alert; they must also plan for an escalation of events, in order to provide the appropriate level of resources and management for the maximum potential consequences. For pre-planning purposes the following matters may need agreement between the occupier and the emergency services:

- Types of equipment and materials to be used on-site. For maximum effect equipment and materials at the facility should be compatible with the equipment/materials brought to site by the emergency services. This compatibility should also extend to issues such as water

supply pressures, for example mobile pump performance versus ring-main design pressure. Consultation with the water supply authority may also be needed in this respect.

- Reporting structures and authorities. To prevent confusion at a dangerous substances emergency organisational responsibilities and authorities must be agreed for cases when site and emergency services personnel are working together to combat an emergency. This must include processes for hand-over of responsibilities and roles upon arrival of the emergency services.
- Expectations. There should be cross-checking of the expectations of the occupier regarding the emergency services performance, and vice versa. This should include issues such as response time, numbers of available emergency personnel, their level of competency, etc.

4.2 Relevant Employees

The legislation defines 'employees' to include personnel who are engaged at the facility as on-hired employees and contractors and it is a statutory obligation that the occupiers provide information, induction and training. EP&Ps must be prepared in consultation with relevant employees. Methods of involving relevant employees at the facility in the formulation of EP&Ps must be developed and then implemented. The methods of involving relevant employees in the formulation and implementation of EP&Ps and the outcomes of those consultations should be recorded.

4.3 Community

The SRA for a facility will identify any area outside the facility which may be affected by a dangerous substances emergency. Section 43 of the Act requires the occupier to consult with people and owners of property situated in this area in the development of EP&Ps. The Act also requires the occupier to inform the people and owners of property situated in this potential impact area of the following:

- the dangerous substances at the facility; and
- the safety measures which they should take if a dangerous substances emergency occurs at the facility.

This information must be updated as often as necessary, circulated and explained to ensure the people and owners are always fully informed about these matters.

If a dangerous substances emergency happens at the facility, the occupier must ensure people and owners who may be affected by the emergency are immediately warned of the dangers and advised of the safety measures they should take. The method by which this is done and the circumstances and manner in which it is initiated must be included in the EP&Ps.

Guidelines for Major Hazard Facilities G - Community Consultation provides guidance on the community consultation process.

4.4 Mutual Assistance

Consultation must be held with any facilities in the general area to establish, if practicable, a mutual aid group to assist members of the group to collaboratively deal with a dangerous substances emergency. EP&Ps should involve adjacent facilities if those facilities can supply assistance to the MHF in mitigating dangerous substances emergencies.

4.5 Availability of Emergency Plans and Procedures

Copies of the EP&Ps should be placed in a number of locations within the facility so that irrespective of the location and type of dangerous substances emergency a copy of the EP&Ps will always be available for use. Copies should be readily available for study by all people at the facility. Copies must be made available to emergency services and the Secretary if requested. Processes must be in place to ensure that at all times all copies are up to date.

5 Other Obligations

5.1 Response

In the event of a dangerous substances emergency arising at a facility it is the responsibility of the occupier of a MHF to:

- take immediate action to assess and control any risk associated with the emergency;
- relocate people at the facility who are not involved in managing and mitigating the emergency to a safe locality; and
- ensure that people at the facility engaged in managing and mitigating the consequences of the emergency are not exposed to unacceptably high levels of risk.

5.2 Education and Training

Under Section 20 and 41 of the Act the occupier must ensure that all persons on-site have appropriate training in the implementation of the emergency plans and shall include:

- (a) the practices and control procedures for dangerous substances emergency prevention;
- (b) emergency procedures to be followed in the event of a dangerous substances emergency.

The occupier must establish and maintain the standards of competency of persons at the facility.

5.3 Practices and Drills

As a minimum, the occupier should carry out annual exercises and drills which establish and maintain the readiness of the facility's overall response to a dangerous substances emergency. Exercises and drills for elements of the overall EP&P should be conducted more frequently. The exercises must be designed to:

- test the adequacy of the EP&Ps and in so doing identify those sections which can be improved;
- confirm that the interface with emergency services, including communications, operates effectively and efficiently;
- test the organisational arrangements to manage a dangerous substances emergency;
- provide training opportunities for facility employees, other people at the facility (contractors and visitors) and emergency services personnel;
- test communications with and the response from the community in the area that may be affected by a dangerous substances emergency; and

- test the adequacy of equipment at the facility to signal a dangerous substances emergency and mitigate its consequences.

Training in EP&Ps, drills and exercises must be recorded in sufficient detail to allow subsequent compliance auditing by the Secretary or a person nominated by the Secretary.

It is important that when facilities are running EP&Ps training, drills and exercises they should not be repetitive, and consideration should be given to different scenarios that may occur within a MHF.

5.4 Update and Review

EP&Ps must be regularly updated to ensure that all information contained in the EP&Ps is current. For example the names and contact details of people who fulfil defined roles in EP&Ps should be kept current. As a further example a change in the organisational structure to manage a dangerous substances emergency should be reflected in all copies of EP&Ps including those distributed outside the facility to agencies such as emergency services.

Emergency procedures must be reviewed:

- after an exercise;
- after an incident which caused the EP&Ps to be activated;
- after a dangerous substances emergency;
- prior to a modification which significantly alters the risk associated with the facility;
- after a significant change in the built or natural environment neighbouring the facility; and
- at intervals not exceeding 5 years.

The extent of the review would depend on the seriousness of the deficiencies revealed by the exercise, incident or dangerous substances emergency or the extent of the change within or outside the facility. This review should include a re-examination of the high level strategy on which the emergency plan is based and should incorporate consultation with all persons (employees and others) at the facility or location, emergency services, neighbours and the community. Changes to procedures should be made promptly and include necessary consultation and training.

This ensures that at all times the EP&Ps are up to date and, when activated, remain an effective risk reduction measure.

5.5 Debriefs

Debriefs are essential and should occur both on and off-site following an exercise or emergency.

Debriefs are critical to optimising the lessons learned, and subsequently improving or strengthening arrangements and relationships. Fortunately emergencies and exercises are relatively rare events, and this means that all available opportunities should be used to review and improve performances.

It should be a standard practice to conduct debriefs after every exercise or emergency and to review the debrief findings or minutes as soon as possible (the report with recommendations may take a little more time).

The local authority will be responsible for conducting an off-site debrief following a dangerous substances emergency or following an exercise for a dangerous substances emergency in which they were involved.

The occupier must also conduct a debrief to identify shortfalls in their management systems and determine aspects of their systems that require updating as a result.

6 Community/Off-site Debrief

6.1 When and Who?

Responsibilities for conducting community debriefs need to be clearly identified and communicated so that relevant managers and staff know what is required of them. Debriefs should be conducted efficiently, effectively and in a timely manner.

The number of debriefs and who should attend will normally be dependent on the size, nature and impact of the exercise or emergency and care needs to be exercised to ensure that no one is inadvertently not invited.

6.2 How?

Important points for conducting community debriefs include:

- Debriefs should be conducted in a timely manner after the exercise/emergency, and this timing should demonstrate due consideration for any losses that may have resulted
- Arranging an independent facilitator (fresh 'eyes')
- Conducting debriefs in accordance with an agreed and published agenda
- Acknowledge the input of all contributing organisations and individuals
- Identifying the 'facts' e.g. the basic sequence of events, what plans, sub-plans or procedures were applied, with a specific emphasis on safety in the operation or exercise
- Clarifying where conflict, unnecessary overlaps and gaps occurred and if these are likely to have resulted from what is documented in plans and or training, forms / templates etc
- If possible, identify the debrief participants views on how to resolve these 'gaps' (noting that these will be considered in developing the exercise report and recommendations, but may not be totally accepted)
- Include an 'exercise management' session involving a brief discussion on the way the exercise was managed, relevancy and value of scenario to the organisation etc
- Providing light refreshments.
- Organising and running more formal debriefs as these have similar requirements to any large meeting or mini-conference.

6.3 Recording Debrief Findings

Debrief findings must be recorded and reported. Findings should be accompanied by a recommendation for how to share the lessons learned and who to share them with e.g. with Local Council staff, emergency management partners and the community.

6.4 Equipment

Equipment used to limit the consequences of a dangerous substances emergency must be fit for purpose, available at appropriate locations and accessible. Equipment should be adequately maintained and tested at intervals to ensure that it can, at all times, operate at design conditions. Examples of such equipment are personal protective equipment, fire water pumps, emergency tenders, communications systems (both on and off-site) and portable pumps used to recover product spills. Test results should be recorded.

Alarm systems used to signal emergency conditions and emergency protective equipment such as self contained breathing apparatus must be inspected, tested and maintained at regular intervals so that they are, at all times, fit for use.

6.5 Indicators of Effectiveness

Indicators of effectiveness must be established for EP&Ps and performance criteria for those indicators determined and published. Performance against criteria should be measured during drills and exercises. Where performance falls short of these criteria prompt action must be taken to lift performance.

An occupier must choose performance criteria which are appropriate to the facility and its location. Examples of performance criteria are:

- time taken from recognition of a dangerous substances emergency to advising emergency services;
- time taken for all on-site personnel to clear the affected area and to arrive at their nominated assembly points and to be announced accounted for;
- time taken for people with defined roles in the emergency to advise that their area is clear;

- number of employees, contractors and visitors who fail to follow emergency procedures including those procedures addressing assembly and reporting;
- time taken for the facilities emergency resources and equipment to be ready for use.

7 Summary of Occupier's Requirements

The occupier may use the following checklists and sample document for their facility's EP&Ps.

Under the legislation the obligations of an occupier of a MHF are as follows:

Tick

- EP&Ps are complete and implemented by the date required under the Act.

- EP&Ps meet the objectives contained in the Act, namely:
 - to contain and control a dangerous substances emergency happening at the facility or location; and
 - to minimise the effect of the emergency on people property and the environment.

- EP&Ps contain the following information:
 - details of the dangerous substances at the facility;
 - details of the dangerous substances emergency which could arise as a consequence of the dangerous substances at the facility;
 - the organisational structure in place to deal with a dangerous substances emergency;
 - the resources and equipment available to deal with a dangerous substances emergency;
 - the procedures that must be followed if a dangerous substances emergency occurs;
 - the site layout of the facility or location showing where:
 - (i) dangerous substances are stored or handled at the facility, and
 - (ii) the resources and equipment available to deal with a dangerous substances emergency are located at the facility; and
 - emergency telephone no. or other contact details of emergency services and other people who may assist in a dangerous substances emergency.

- The occupier must provide current information about the hazards at the facility and the actions which should be taken if a dangerous substances emergency occurs to the following people:
 - Relevant employees of the facility;
 - people and owners of property situated in the area external to the facility which may be impacted by a dangerous substances emergency at the facility; and
 - emergency services.
- Facility personnel should be capable of implementing the EP&Ps efficiently and effectively.
- The EP&Ps should have been tested at least annually through drills and exercises.
- Copies of the EP&Ps should be made available to:
 - all facility personnel;
 - those sections of the emergency services which will need to use them in the event of a major accident; and
 - the Secretary
- The EP&Ps directly address the dangerous substances emergency scenarios established in the SRA.

8 Additional Information

The guidelines, additional information or clarification of any of the issues raised in the guidelines can be obtained by contacting Workplace Standards Tasmania, Department of Justice, at any of the following addresses:

Postal: PO Box 56, ROSNY PARK, TAS 7018
Tel: 1300 366 322 (within Tasmania)
(03) 6233 7657 (outside Tasmania)
Fax: (03) 6233 8338
E-mail: wstinfo@justice.tas.gov.au
Web: www.wst.tas.gov.au

Copies of the *Dangerous Substances (Safe Handling) Act 2005* and *Dangerous Substances (Safe Handling) Regulations 2098* can be obtained from Print Applied Technology P/L at any of the following addresses:

Postal: PO Box 307, HOBART, TAS 7001
Street: 33 Innovation Drive, Technopark
DOWSING POINT, TAS 7010
Tel: (03) 6233 3360
Fax: (03) 6233 5346
Web: www.thelaw.tas.gov.au

Copies of the National Standard for the Control of Major Hazard Facilities [NOHSC:1014(2002)], National Code of Practice for the Control of Major Hazard Facilities [NOHSC:2016(1996)], National Standard for the Storage and Handling of Workplace Dangerous Goods [NOHSC:1015(2001)] and National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC:2017(2001)] can be obtained from Safe Work Australia, at any of the following addresses:

Postal: GPO Box 9880, CANBERRA, ACT 2601
Tel: (02) 6121 5317
Fax: (02) 6121 9284
Web: www.safeworkaustralia.gov.au

Copies of Australian Standards AS 3745 : Emergency Control Organisations and Procedures for Buildings, Structures and Workplaces, AS/NZS 3931 : Risk Analysis of Technological Systems – Application Guide, AS/NZS 4360 : Risk Management, AS/NZS 4581 : Management System Integration – Guidance to Business, Government and Community Organisations, AS/NZS 4801 : Occupational Health and Safety Management Systems – Specification with Guidance for Use HB76 : Dangerous Goods – Initial Emergency Response Guide and HB221 : Business Continuity Management can be obtained from SAI GLOBAL at any of the following addresses:

Tel: 131 242
Fax: 1300 654 949
Web: www.saiglobal.com/shop

The Health and Safety Executive (United Kingdom) has an excellent reference library to assist with Emergency Planning for Major Accidents and Preparing Safety Reports for its Control of Major Accident Hazard Regulations 1999 (COMAH) and can be accessed by its website: www.hse.gov.uk/comah/

The Hazardous Industries and Chemicals Branch of the Department of Employment and Industrial Relations, Queensland, has an excellent reference library to assist Major Hazard Facilities in respect to safety risk assessment, safety management systems, emergency plans and procedures etc and can be accessed by its website: www.deir.qld.gov.au

Likewise WorkSafe Victoria has an excellent reference library to assist with Major Hazard Facilities matters and can be accessed by its website: www.workcover.vic.gov.au

ISO/PAS 22399 : Societal Security – Guideline for Incident Preparedness and Operational Continuity Management published by the Business Continuity Institute is an excellent resource on how to deal with emergency planning can be accessed from its website: www.thebci.org.au

“Loss Prevention In The Process Industries” by Frank P. Lees, “What Went Wrong? Case Histories of Process Plant Disasters” and “Learning from Accidents in History” by Trevor Kletz are excellent resource material and can be located on the web.



Tasmania

Explore the possibilities

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PO Box 56 Rosny Park TAS 7018
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