Guide

Emergency response plan preparation

RD2-1 GDb

Introduction

Use this guide when you are preparing an emergency response plan (ERP) for a site with hazardous substances, to make sure you include all the details that are critical for Fire and Emergency New Zealand.

For more details about ERPs and using this guide, see Emergency response plans on our website.

Your emergency response plan matters to us

We use the details in your ERP when we plan for operations on your site. The larger and more complex your site is, and the more hazardous substances it uses or stores, the more thorough your ERP needs to be.

- An ERP must meet all the relevant requirements of the regulations. This guide only talks about the details *we* need – your ERP probably needs other details as well.
- We *do not* 'approve' or 'accept' your completed ERP. Our role is limited to reviewing your plan and giving you any feedback.

Contents

Information we need when we arrive

If we are called to an emergency at your site, the first crew that arrives needs to know the following details, so they can assess the situation and decide how to deal with it:

- What has happened?
- Where exactly is the incident located?
- Has the site been evacuated, and is everyone is safe and accounted for?
- What is the current situation, and what are the immediate hazards?
- What actions have already been taken to respond to the incident – by those on site or elsewhere?

Your plan should cover who will be our initial contact person, for example:

- A specific person at the site will be assigned to meet us, give us the information we need, be our initial liaison person, and give us access.
- If no-one will be there, you have given us up-to-date names and numbers for an emergency contact.

Details for all emergency response plans

When we review an ERP for any site with hazardous substances, we look for and consider the details below.

General use of site

- General nature of the business, and activities undertaken at the site, in enough detail so we can tell at a glance what we might be dealing with – for example:
  - filling and distributing compressed gas cylinders
  - manufacturing and storing commercial paints
  - electroplating and galvanising plant
  - bulk storage of fuels
- The organisation, and the individuals responsible for operating the site
- Normal hours and days the site is occupied and operational – for example, '24/7'
- Numbers of people normally on site at different times
- If the site does not operate 24/7:
  - current after-hours contacts (names and numbers)
  - how long the after-hours contact will take to mobilise
  - how long the key incident management personnel will take to get to the site
  - how a firefighting crew can gain access, if no-one is there.

Exemptions

- For any exemptions you have applied for, or have been issued by WorkSafe, under the Health and Safety at Work (Hazardous Substances) Regulations 2017:
  - The details of the exemptions
  - Any impact the exemption has on the design and level of fire protection.

Site layout

- Site plan, with enough detail so fire crews can find the main facilities, hazards, and critical features of the site
- Location of utilities and isolation points for gas, electricity, water (including supplies for firefighting), stormwater, trade waste, sewage and similar
- Access points for emergency response – main and alternatives
- Any areas that we can only reach from neighbouring sites
- Space for each type of response vehicle to enter and turn, depending on alarm level – for example "aerial appliance is too big for ready access through the southern gate"
- Containment or discharge on site for run-off – how much and for how long, based on likely firefighting water volumes
- Any adjacent waterways that might need protecting.
- Wider plan showing all neighbouring sites that an incident on your premises could affect.

Critical risks

- List of hazardous substances on site – classes and quantities, safety data sheets (SDS) and where the first fire crew can quickly find this information
- Any other critical information for fire crews – for example:
  - flammable gases (such as propane and butane) that have not been odourised
  - flammable liquids (such as methanol and acetone) that are miscible with water
  - substances that could ignite or react on contact with water.

Emergency scenarios

- Main emergency scenarios identified (hazardous substances and other triggers)
- Anticipated time for first response to arrive, and second, third etc. and time to assess the situation and initiate response actions i.e. the effective reaction time, which will be longer.
- Scenarios for stages the incident could be at, when fire crews arrive – how quickly an incident could develop
- Standard emergency response actions for personnel on site – for example, evacuation, muster locations, and so on.

Fire protection and emergency facilities on site

- How calls to Fire and Emergency are triggered – for example, 111 call, monitored alarm
- Fixed fire, leak or spill detection systems in place:
  - How each system is activated – manually or automatically
  - What actions each system triggers
- Alarms for specific types of incident, such as a toxic gas alarm versus a fire alarm
- Location and type of any portable firefighting and rescue equipment available on site, including fire extinguishers, BA equipment, spill containment and clean-up equipment
- Location of hazardous substance information:
  - on site for first response teams to access
  - at any other location(s)
- Location of alarm panel(s) and how fire crews can access them in each main emergency scenario.
- Emergency response capability of your own emergency teams, and what actions they will take, for example:
  - Appropriate spill response equipment on site (such as neutralisers, absorbents etc.), and decontamination capability
  - Portable gas detection equipment, what situations it is intended for, and whether any personnel on site are trained to use it
  - Personal protective equipment (PPE) available (such as BA, ammonia suits, etc.) and whether any personnel on site are trained to use it.

Disposal and clean-up

Arrangements for cleaning up and disposing of hazardous substances once the situation is made safe.

Note: Fire and Emergency is not responsible for cleaning up and disposing of hazardous substances.

Details that major hazard facilities may need

When we review an ERP for a major hazard facility or similar site, we also check for all the following details *that are relevant* to the site.

Planning and testing

- Sufficient information for us to pre-plan 'hot', 'warm' and 'cold' zones for incident response in different scenarios
- Testing arrangements for the plan, including any exercises that:
  - involve Fire and Emergency staff
  - give us the chance to get familiar with the site and with using your equipment.

Specific hazards on site

- Any specific chemical processes that can create further hazards – for example:
  - chemical reactions
  - heating or cooling systems for tanks or vessels that could be running, or could fail
  - utilities like refrigeration, heating oils and other heating or cooling media, boilers, LPG storage and so on
- Any specific flammable hazards in particular parts of the site where we can't use standard equipment – for example, in an incident involving a flammable spill in an area where:
  - we can't use non-intrinsically safe (I/S) communications equipment
  - our vehicles can't access
  - our firefighting equipment could ignite the spill.

Emergency scenarios

- Formal safety assessment that identifies and models the main spill/release and fire scenarios, including models of any heat radiation or flammable/toxic gas plumes
  Note: This information is key to our tactical plans.
- Appropriate wind strength and direction data, and risk contours.

Notifying others who may be affected

- Arrangements to notify neighbouring businesses or other parties that an emergency at the site could affect – for example:
  - relevant agencies for a site that's adjacent to a state highway, railway line, school or other public facility
  - the local airport for a site under the flight path
  - neighbouring sites with significant concentrations of people e.g. apartments, retail sites, warehouses
- What you will tell them to do in an emergency, and whether this aligns with any actions we might take (such as closing off access or evacuating adjacent areas).

Emergency response facilities on site

- Active firefighting systems on site – e.g. sprinklers, deluges, monitors, tank and vessel cooling, and so on – their presence, location, and details including:
  - water storage, pumps, capacity etc.
  - whether fire pumps can run without the main power supply
  - capacity and maximum running time
  - connection details (to confirm our equipment is compatible)
- Any mutual assistance arrangements that an incident may trigger e.g. common water supplies, industry firefighting equipment, foam etc. – and arrangements for deploying that equipment
- Any systems for automatic shutdown, isolation or venting:
  - Details of the systems
  - How they are activated
  - Presence and location of any emergency vents from pressure vessels or tanks that could discharge vapour or liquid unexpectedly
- Any fixed foam application systems or mobile foam equipment on the site
  - Location, capacity, type and volume of foam
  - Details confirming it is suitable for its intended purpose e.g. alcohol-resistance compared to standard foams
  - How it is operated
- How we can safely access connection points or locations to operate the equipment in the likely fire or spill scenarios – for example, we shouldn't need to enter bunded areas or be exposed to excessive heat radiation from a fire.

Your emergency capability

- The response capability of your own emergency teams, and what actions they will take (see details above). If there is an industry brigade:
  - How many firefighters
  - Their training
  - Their availability
- Any emergency control centre that will be established – at the site or elsewhere:
  - Location
  - How it's mobilised
  - How we'll communicate with it

Note: We expect MHFs to have more of their own emergency capability than other sites.

Document information

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Date	Brief description of amendment
June 2018	This initial version was created to support site operators who are developing their emergency response plans.