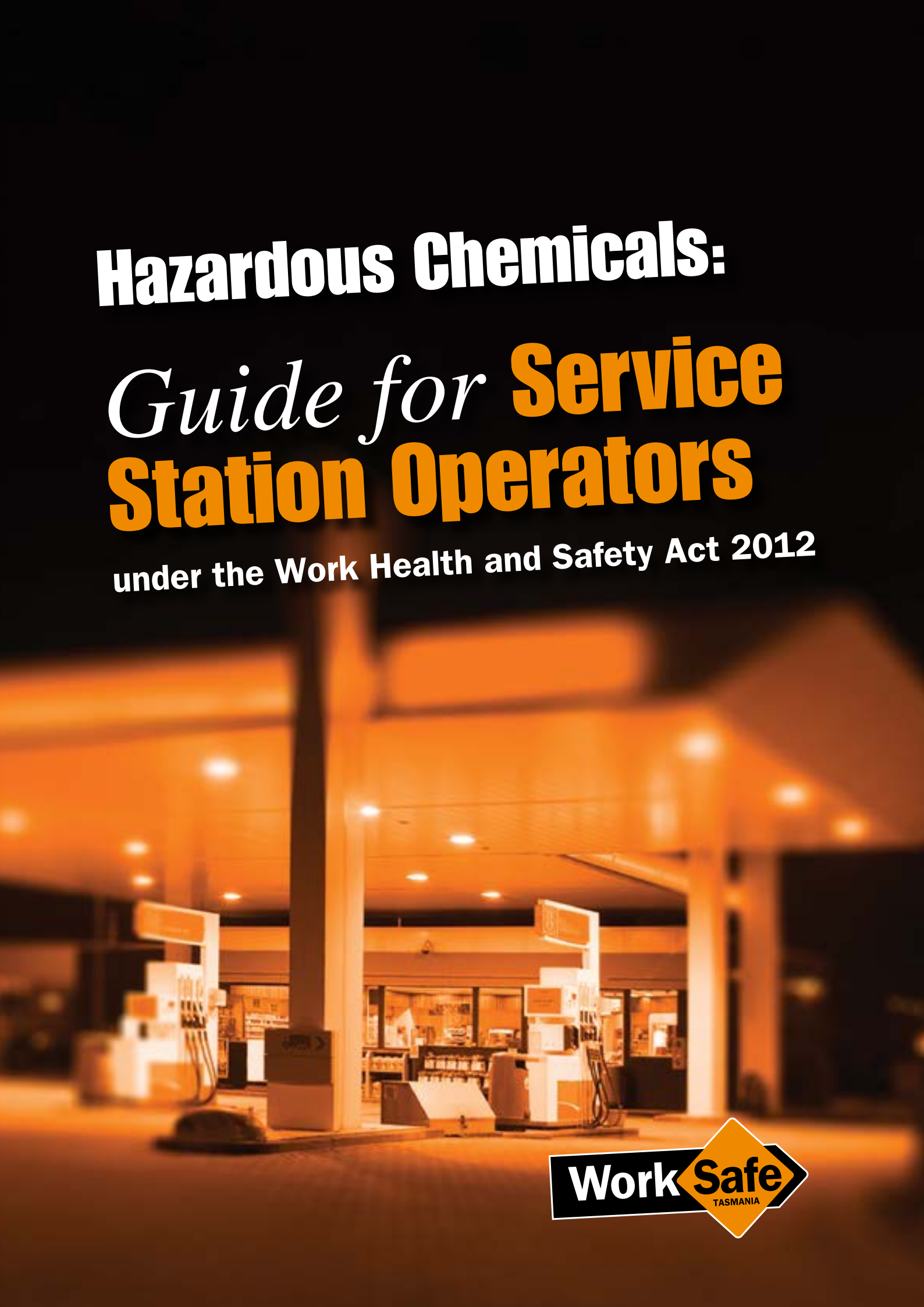
Hazardous Chemicals:

Guide for Service Station Operators

under the Work Health and Safety Act 2012



WorkSafe TASMANIA

Contents

1. What is this guide about?

This guide will help the person conducting a business or undertaking (PCBU) at a retail fuel outlet to meet their duties for storing, handling and using hazardous chemicals.

1.1 Laws

You should read this guide in conjunction with:

- the Work Health and Safety Act 2012 (the Act)
- the Work Health and Safety Regulations 2012 (the Regulations).

You can find these at the WorkSafe Tasmania website at www.worksafe.tas.gov.au by choosing the 'WHS laws' tab.

1.2 Codes of practice

You can find guidance for meeting your legal obligations in the Managing Risks of Hazardous Chemicals in the Workplace Code of Practice. You can find this at the WorkSafe Tasmania website at www.worksafe.tas.gov.au by searching for 'CP120'.

1.3 Australian Standards

You can also find practical guidance in the following Australian Standards:

- AS/NZS 1596: The storage and handling of LP Gas
- AS 1940: The storage and handling of flammable and combustible liquids
- AS 4897: The design, installation and operation of underground petroleum storage systems
- AS 4976: The removal and disposal of underground petroleum storage tanks
- AS 4977: Petroleum products–Pipeline, road tanker compartment and underground tank identification
- AS 60079.10.1: Explosive atmospheres–classification of areas

To purchase these, go to the SAI Global website at http://infostore.saiglobal.com and search for each standards' number.

1.4 Other requirements

This guide does not address environmental requirements regulated by the Environmental Management and Pollution Control Act, or the wider range of work health and safety hazards associated with multi-use sites including workshops, depots or other retail activities.

This guide was produced by staff from WorkSafe Tasmania.

We welcome your feedback on this guide: wst.licensing@justice.tas.gov.au

1.5 Acknowledgment

WorkSafe Tasmania acknowledges this guide is based on material from Workplace Health and Safety Queensland: www.deir.qld.gov.au/workplace

2. Maintenance

2.1 General housekeeping

You must ensure combustible materials — including wooden pallets, tyres, cardboard, plastic materials, weeds and fallen vegetation — do not build up in and around the workplace.

You must keep hazardous chemical areas clear of tall grass and vegetation that could add to a fire fuel load around dispensers, fill and dip points, vent pipes and termination points.

You should regularly check concrete areas over underground tanks and pipework for any vehicle traffic damage, to ensure surface areas remain intact.

2.2 Fill and dip points

You must ensure all fill and dip containment or spill containment boxes are free of fuel. Any fuel presents a fire risk and would indicate unacceptable tank filling procedures.

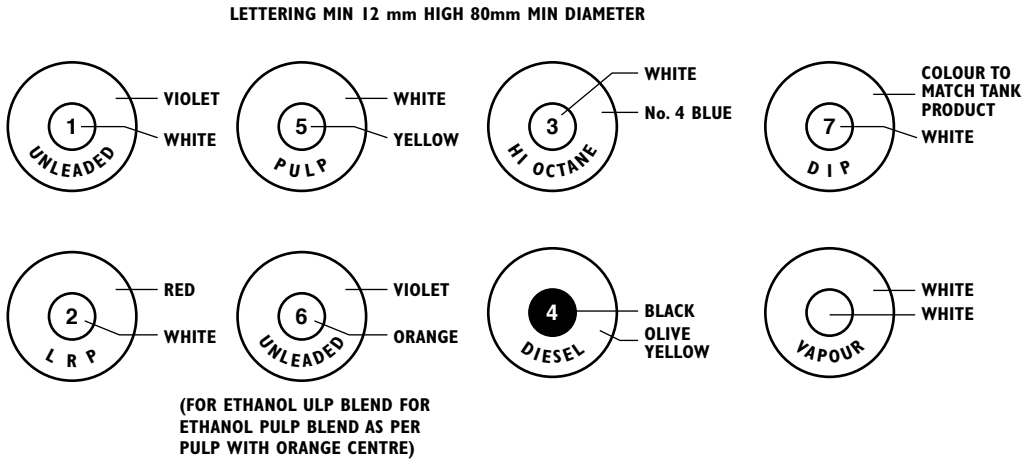
Clean up or drain any tank overfill into an underground tank.

If there is any water present, the seals could be faulty and may need replacing.

Example of coloured marking at remote fill box

AS 4977 specifies colour-coded fill and dip point markers for underground tanks as:

- Unleaded Petrol (ULP) – violet outer / white inner
- Premium Unleaded (PULP) – yellow outer / white inner
- Lead Replacement Petrol (LRP) – red outer / white inner
- High Octane Fuel – blue outer / white inner
- Diesel – olive outer / black inner
- Ethanol ULP blend – violet outer / orange inner
- Ethanol PULP blend – yellow outer / orange inner.



Note: The number on the inner circle indicates the tank number; the actual marker may differ in appearance but needs to conform to the description in the text.

2.3 Vent pipes

Vent pipes should be:

- located away from trafficable areas, to reduce the risk of impact damage
- fitted with 'up-flow' type vent caps, to prevent rainwater getting in.

Where vent pipes are against a wall, they should be secured to the wall.

Protect vent pipes from the risk of impact damage (for example, from vehicles) with suitable bollards or barriers. You can also use curbing, provided the vent pipes are set back and not in the direct line of traffic flow.

Vent discharge points should be located at least 4 metres above the ground.

To reduce the possibility of nuisance vapour entering a building, you must locate the vent discharge point away from any opening (such as window, door, or air-conditioner/mechanical vent intake), at least:

- 4 metres laterally for flammable liquids
- 2 metres for combustible liquids.

Example of vent pipes secured to a wall

Example of vent cap designed to prevent entrance of rainwater

2.4 Dispensers

You must protect fuel dispensers from impact damage by using bollards, high curbing or other barriers with sufficient clearance.

Latching devices must not be used on the delivery nozzle where:

- a petrol or diesel dispenser has a value or quantity preset facility incorporated into its operation, or
- a petrol dispenser is customer operated.

Do not leave hose pipes lying on the ground, as they can be easily damaged by vehicles.

✗

Evidence of leak shown at hose connection

✓

A better option to reduce wear for longer hose lengths

2.5 Portable LP Gas cylinder exchange facilities

You must keep portable exchange cylinders in cages that are:

- labelled with any required placarding, notices or safety signage which is clearly visible and readily distinguishable from any advertising signs
- wherever possible, located away from traffic movements (otherwise, you should use barriers or bollards to reduce the risk of impact damage)
- sturdy and stable
- kept clear on at least two sides from any wall, solid display or other item that could restrict ventilation, to allow air to move freely through the cage
- locked if in a public area.

Section 4.6 and Appendix G of AS1596 provide requirements and recommendations for locating the cages that keep portable exchange LP Gas cylinders.

Separation distances for LP Gas cylinder exchange

>0.5m combustible material

>1.5m fuel dispensers

>1.5m pit or drains

>1.5m ignition source (horizontally)

>0.5m ignition source (vertically)

>1m from any opening or the hose reach of LP Gas decanting cylinder

>3m other dangerous goods tanks

>5m LP Gas tank(s)

3. Safety equipment and controls

3.1 Firefighting equipment

You must have at least two 9 kg ABE (powder-type) extinguishers for the fuel dispensing areas unless only combustible liquids are dispensed.

These extinguishers:

- are additional to any other extinguishers needed at your workplace
- must be kept readily available on the forecourt area during operating hours
- should be regularly maintained to ensure they will work properly (you must also keep written records of this maintenance).

You can protect extinguishers from vandalism or unauthorised access by a break-glass screen or an equivalent. This must be prominently marked with instructions for gaining access to the extinguisher.

✗ *Avoid obstructions in front of fire extinguishers*

✓ *Check the needle of the gauge is in the green region*

3.2 Containing and managing spills

You must have appropriate procedures and equipment to contain any spills and prevent them from leaving your workplace.

Clean-up equipment may include absorption, drain plugs or covers and labelled waste containers

Any single-walled aboveground tank (excluding LP Gas) must have a spill containment system which may include bunding; graded or sloping surfaces and sumps; drainage to a holding pit, tank or interceptor; or a combination of these.

The Managing Risks of Hazardous Chemicals in the Workplace Code of Practice states that bunding should be designed and constructed in accordance with AS 1940, which covers bunds and compounds for tanks.

3.3 Safety signs

For dispensing **flammable and combustible liquids**, AS 1940 recommends you have a prominent sign:

- saying 'STOP ENGINE–NO SMOKING'
- with letters at least 50 mm high
- located on or near to each dispenser.

You may use the 'smoking prohibited' symbol instead of the words 'no smoking'.

You may also add the words 'no flames, pilot lights or mobile phones'.

For dispensing **Autogas**, AS 1596 recommends you have a sign:

- with symbols at least 100 mm diameter for 'STOP ENGINE–NO SMOKING'
- displayed at the filling area, or adjacent to it and readable from the filling area.

Alternatively, you could have a prominent sign:

- saying 'STOP ENGINE–NO SMOKING'
- with red or dark letters at least 50 mm high on a white background .

You should also display vehicle filling instructions and LP Gas warning signs in a readily visible location on LP Gas dispensers.

Example of LP Gas filling instructions (not actual size)

Example of LP Gas filling warning sign (not actual size)

3.4 Controlling potential ignition sources

You should maintain the following minimum distances to prevent ignition sources encroaching into hazardous chemical areas:

- 4 metres around fuel dispensers
- 3 metres from fill and dip points
- 1.5 metres radius around the area below a vent termination pipe.

If you have hot work permit policy and procedures at your workplace, then these may apply to equipment that can generate ignition sources, including hedge trimmers, power tools and mowers.

Example of minimum separation distance for dispenser from ignition source: 4 metres between fuel dispenser and freezers/ vending machines

3.5 Bulk transfer

When tanker operations to refill tanks are carried out at your workplace:

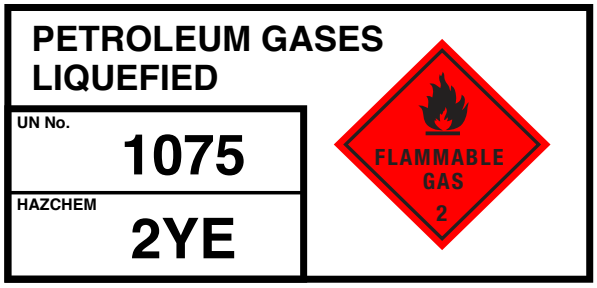
- there must be no source of ignition within a 4 metre hazard zone extending laterally from the tanker fill point
- the tanker vehicle should be parked wholly within your workplace so it can be driven away in a forward direction. If the site layout means this is not possible, it must be parked in such a way that it can be driven away with minimal manoeuvring
- the tanker driver should be in full view of the discharge and fill points, and be able to stop all tank filling in an emergency situation
- flexible hoses should not run under the tanker vehicle, and all reasonably practicable measures must be taken to prevent any vehicle driving over the hose assembly or striking its connections

Traffic control during bulk transfer

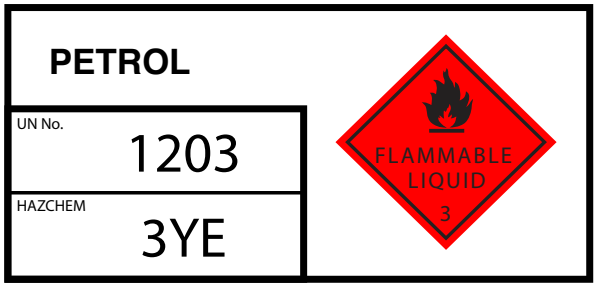
- the engine of the tanker vehicle must remain stopped unless the transfer involves using a pump or compressor driven by the vehicle's engine
- if LP Gas is being transferred, the engine of the vehicle and any internal combustion auxiliary engine on the vehicle must be stopped while hose connections are coupled or uncoupled.

4. Placarding

Any aboveground LP Gas tank (container with a water capacity greater than 500 litres) requires an information placard as shown above.LP Gas cylinders used for decanting are generally less than 500 litres water capacity and should be labelled as for a package store.



Any aboveground petrol tank (flammable liquid) with a capacity greater than 500 litres must have a placard a shown above.



Any aboveground diesel tank with a capacity greater than 500 litres must have a placard as show above.

Placards are not required for underground fuel tanks that are used to refuel a vehicle at retail service stations.

Depots or other installations that are not retail fuel outlets will require placards for underground tanks.

For more information about placarding, see the WorkSafe Tasmania guide 'Placarding for storage of hazardous chemicals'. Go to the WorkSafe Tasmania website at www.worksafe.tas.gov.au and search for 'GB024'.

5. Manifest Quantity Workplace (MQW)

5.1 Determining if you are a MQW

Your workplace will be a Manifest Quantity Workplace (MQW) if the quantities of hazardous chemicals present exceed any of the following quantities:

- 2,500 L for Flammable liquid category 2: for example, petrol fuel
- 100,000 L for Flammable liquid category 4: for example, diesel fuel
- 5,000 L for Flammable gases Category 1: for example, LP Gas.

It is very likely your workplace will be a MQW because of the hazardous chemicals that are typically stored at a retail service station.

You must calculate the quantities based on maximum capacity; that is, using tank capacity values rather than the safe fill level. Empty tanks must be included unless they are certified free of hazardous chemicals.

If you do not exceed any of the above quantities, you should check Schedule 12 of the Regulations to ensure no other 'manifest quantity' applies that will make your workplace an MQW.

5.2 Manifest

If your workplace is a MQW, you must keep and maintain a manifest that complies with Schedule 12 of the Regulations. An example of a manifest for a retail service station is included in Appendix 1 of this guide.

The manifest must include:

- the name of PCBU
- the address of your workplace
- the date the manifest was last amended/prepared
- business and after hours contact numbers for two people who can be contacted if there is a notifiable incident at the workplace
- details of hazardous chemicals in bulk storage and containers (including tanks)
- details of packaged hazardous chemicals (including LP Gas cylinders).

It must also incorporate a scale plan of your workplace that includes:

- the direction of true north
- the PID Number and GDA 94 coordinate location from www.thelist.tas.gov.au
- the main entrance and other places of entry
- hazardous chemical storage areas
- essential site services, including fire services and isolation points for fuel and power
- all drains on the site
- a legend of symbols and codes used in the plan
- the location of fire controls, including hose reels and extinguishers
- the nature of the occupancy of adjoining sites or premises
- where the manifest is kept.

You must keep and maintain the manifest in a place that you've agreed upon with Tasmania Fire Service (see 6.3 of this guide for further guidance).

You must update the manifest if:

- there is a change in the type or quantity of hazardous chemicals at your workplace
- there is a significant change in the information that has to be recorded in the manifest.

5.3 MQW notification

You must notify WorkSafe Tasmania if your workplace is an MQW.

You can do this by using the approved form 'Manifest Quantity Workplace' (Notification of an MQW). Go to the WorkSafe Tasmania website at workplacestandards.tas.gov.au and search for 'GF014'.

If you have notified WorkSafe that you are a Large Dangerous Substances Location under the previous dangerous substances legislation, then this is valid notification as an MQW.

Once you have notified WorkSafe, you do not need to do so again unless there is a significant change of risk (such as installing an additional tank) or decommissioning is undertaken.

If you have taken over a workplace, and the previous operator notified WorkSafe that the workplace is an MQW, you will need to make your own notification.

6. Information

6.1 Safety information

Keep this information at your workplace:

- a list of hazardous chemicals with their current safety data sheets
- site operating procedures — including proceedures for product tank filling and dipping; for tanker discharge; and for equipment inspection and maintenance
- a reconciled inventory records of fuel received and dispensed
- the emergency plan that deals with the range of emergency situations that may arise at the workplace, including fuel leaks and spills, and fires
- other relevant documents that demonstrate your workplace safety systems; for example, maintenance records, work permit systems, incident investigation procedures, and staff training records.

6.2 Staff training

Your workers should know your safe work procedures, such as:

- tank dipping procedure
- tanker bulk transfer procedure.

They should also know the procedures for dealing with incidents, such as:

- managing a fuel spill
- responding to an emergency.

Make sure your workers clearly understand their responsibilities and authority to manage safety in a public place. This includes knowing when fuel should not be dispensed, such as when:

- a vehicle engine is running
- someone is smoking in the forecourt
- someone under 16 years is attempting to operate a dispenser (this includes your own workers)
- someone is attempting to fill fuel into a non-compliant container (such as a food container)
- someone has wedged the fuel delivery nozzle open with a fuel cap or similar device
- someone is filling a portable fuel container inside the boot of vehicle or on the back of a ute.

6.3 Emergency preparedness for MQWs

If there is an emergency involving hazardous chemicals, you should have the following information readily available for emergency services:

- your compliant manifest (see 5.2 of this guide)
- safety data sheets for all hazardous chemicals at your workplace
- your emergency procedures.

Tasmania Fire Service recommends using a lockable weatherproof red cabinet to store this information:

- keyed as for a standard 003 alarm panel
- capable of storing A4 sized documents
- labelled 'EMERGENCY INFORMATION–HAZMAT' in white retro-reflective capital letters
- marked with diagonal retro-reflective stripping to increase visibility in low lighting or night-time conditions
- located immediately next to the Fire Indicator Panel if you have a Tasmania Fire Service-monitored fire alarm; otherwise, at the main entry point or an alternate location agreed upon by Tasmania Fire Service.

Example of emergency information cabinet

You must give a copy of your emergency plan to Tasmania Fire Service.

7. Decommissioning

7.1 Aboveground tanks

You must ensure that any aboveground storage system not in use is made free of hazardous chemicals, certified as such, and the placard is removed.

If it is not certified as free of hazardous chemicals, you must maintain the relevant placards and labels.

7.2 Underground tanks

You must ensure that any underground storage system not in use is removed.

However, it may not reasonably practicable to remove it if:

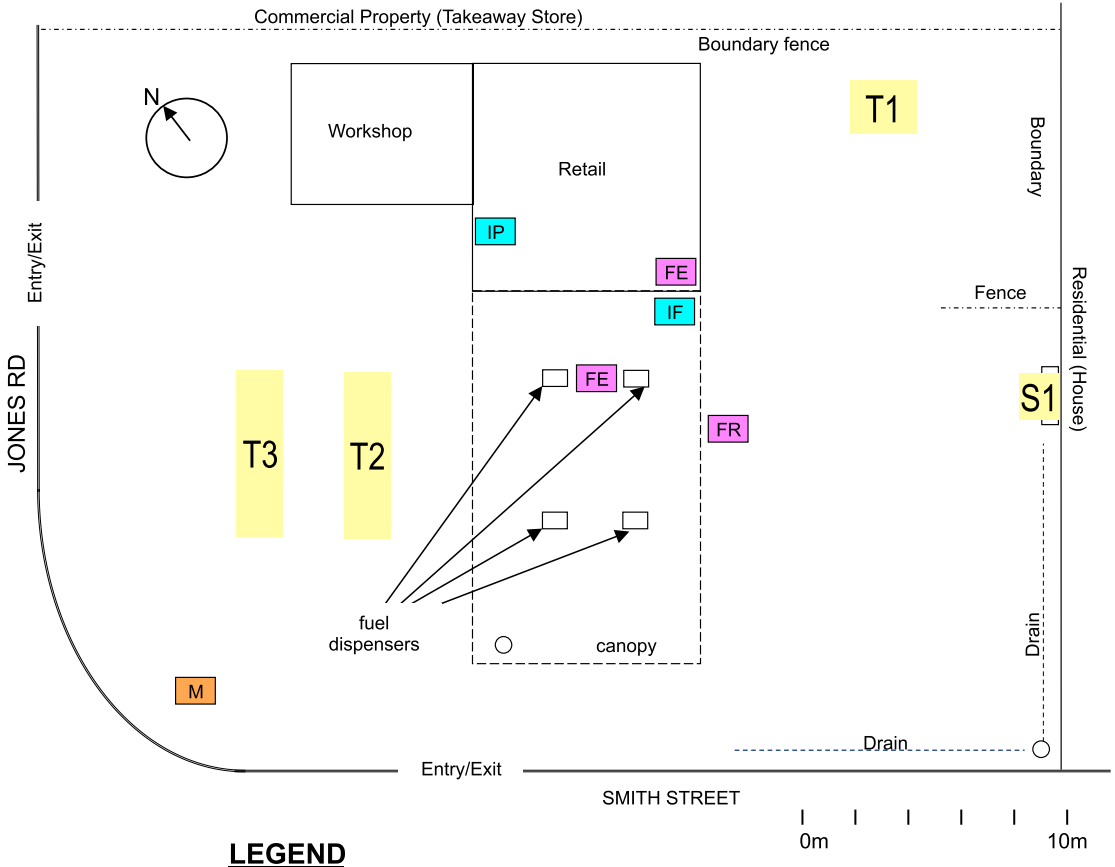
- there is significant pipe work associated with other tanks and services in the subsurface above the tank
- removal will impact on any surrounding structures, such as the foundations or walls of adjacent buildings, and other tanks.

In these instances, the tank must be made safe.

If an underground or mounded tank used to store flammable and combustible liquids has not been used for two years, it must be considered abandoned, and you must notify WorkSafe Tasmania.

Any disused underground tanks should be dealt according to AS 4976.

SCHEDULE 12 MANIFEST



EMERGENCY CONTACTS

Name	Position	Contact No
Mark Smith	Owner	B/H 03 6222 5421 A/H 0419 122 222
Ken Jones	Manager	B/H 03 6221 2102 A/H 0410 120 000

HAZARDOUS CHEMICALS (BULK)

Tank Id No	Proper Shipping Name	Class	Sub Risks	UN No.	PG	Capacity
T1	LP Gas	2.1	n/a	1075	n/a	8,000 L vertical tank 6.4 m diameter
T2	Diesel	C1 Combustible Liquid	n/a	n/a	n/a	20, 500 L underground tank
T3	Petrol	3	n/a	1203	II	22, 000 L underground tank

HAZARDOUS CHEMICALS (PACKAGED)

Store Id No	Class	Sub Risks	UN No.	PG	Largest quantity
S1	2.1	n/a	1075	n/a	500 L

PCBU Super Servo Centre

Address 181 Smith Street, Bothwell, Tasmania 7030

PID 6574121

GDA94 MGA 55 500627 E 530768 N

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Tasmanian Government

WorkSafe TASMANIA

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