# Workplace Health and Safety Queensland



# A guide for service station operators

under the Work Health and Safety Act 2011



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# 1. Introduction

The *Work Health and Safety Act 2011* (the WHS Act) regulates the safe management of hazardous chemicals including flammable and combustible substances at Queensland workplaces. A person conducting a business or undertaking (PCBU) which uses, handles, stores or generates hazardous chemicals must comply with specific sections in chapter 3 and chapter 7.1 of the Work Health and Safety Regulation 2011 (the WHS Regulation).

Fuels found at service stations include commercial grades of petrol (e.g. unleaded, premium unleaded, ethanol blends), diesel and liquefied petroleum gas (LPG). These fuels are classified as hazardous chemicals under the WHS Regulation. Service station owners and operators have duties as a PCBU under the WHS Act and WHS Regulation in regard to the safe management of hazardous chemicals.

The service station industry adopts a range of business arrangements where different parties (i.e. duty holders) may be responsible for different parts of the business.

Responsibilities range from:

- the supply of liquid and gaseous fuel products
- fuel storage and dispensing systems (infrastructure and its maintenance and repair)
- the retail store
- the land ownership.

Service station owners and operators must note that under s.14 and s.15 of the Act, a duty cannot be transferred to another person, and that a person can have more than one duty (e.g. duty holder could be a PCBU and a supplier). Guidance provided here may be relevant to multiple duty-holders involved in a service station operation.

#### What is this guide about?

This guide has been developed to assist operators (i.e. PCBU) of fuel retail outlets, such as service stations, to meet their duties under the WHS Regulation. The guide focuses on hazardous chemical requirements for the fuel storage and handling issues typically associated with service stations. This guide will assist with inspection and auditing of service stations under the WHS Regulation.

It does not address environmental requirements which are regulated under the *Environmental Protection Act 1994*, nor does it address the wider range of hazards that might be associated with a multi-use site, such as workshops and other retail activities. Therefore, there will likely be site specific issues not addressed in this guide that the PCBU will need to address.

The WHS Regulation requires that the risk from hazardous chemicals be minimised as far as reasonably practicable. However, with some exceptions, the legislation does not prescribe how this is to be done. Practical guidance is available in the following technical resources:

- Managing Risks of Hazardous Chemicals in the Workplace Code of Practice 2013
- AS 1940: The storage and handling of flammable and combustible liquids
- AS 4897: The design, installation and operation of underground petroleum storage systems
- AS 4977: Petroleum products-Pipeline, road tanker compartment and underground tank identification
- AS 4976: The removal and disposal of underground petroleum storage tanks.

While compliance with these standards is not mandated by the legislation, they are valuable in providing good industry practice and known ways<sup>1</sup> to control the associated risks.

This guide is based on a combination of specific WHS Regulation requirements and relevant sections from Australian Standards where practical guidance is available.

<sup>&</sup>lt;sup>1</sup> Refer to Safe Work Australia's Interpretive Guideline for the meaning of 'reasonably practicable' under the Model Work Health and Safety Act available at <u>www.safeworkaustralia.gov.au</u>.

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A service station will typically store in excess of the prescribed manifest quantity of 2500 litres for commercial grades of petrol (based on a Flammable Liquid Category 2 GHS classification<sup>2</sup>), as well as quantities of combustible liquids (e.g. diesel) and LP gas for retail sale and refuelling of vehicles. Therefore, a service station is referred to as a manifest quantity workplace (MQW), requiring the workplace to:

- have a site manifest (includes a site plan with specific information to be included)
- notify<sup>3</sup> Workplace Health and Safety Queensland (WHSQ) of their location and quantities of hazardous chemicals
- provide to the Queensland Fire and Emergency Services (QFES)<sup>4</sup>, a copy of the workplace's emergency plan which addresses relevant chemical emergencies such as a large fuel spill, gas leak or fire.

<sup>&</sup>lt;sup>2</sup> Always confirm the product's hazardous chemical classification using the manufacturer's safety data sheet.

<sup>&</sup>lt;sup>3</sup> Under WHS Regulation s.348, a manifest quantity workplace must notify WHSQ of the types and quantities of hazardous chemicals and provide a copy of a Schedule 12 compliant manifest. This can be done using Form 73 available at <u>www.worksafe.qld.gov.au</u>.

<sup>&</sup>lt;sup>4</sup> Under the WHS Regulation s.361, a copy of the emergency plan must be provided to QFES for review. This can be done by emailing the plan to <u>gfes.EMPlanning@psba.qld.gov.au</u>.

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# 2. Information at the site boundary

A service station (which is an MQW) must have the following located at the main entrance (most used) to the site:

Manifest in a weatherproof container (s<sup>5</sup>.347)



The manifest and site plan must be kept in a place that is in agreement with QFES. QFES recommend that the manifest and site plan be kept in a red waterproof container kept as close as possible to the main entrance. While it is not mandatory to include the word HAZMAT, it is recommended as a useful inclusion.

Refer to QFES guidance on what to do about <u>storing</u> the manifest.

Information to be contained in the site manifest is listed in schedule 12 of the WHS Regulation. Such information is mandated to assist QFES manage an incident at the workplace.

The manifest must have the following:	A site plan that must include the following:
Name and address of workplace.	<ul> <li>Main entry and other entry and exit points</li> </ul>
Date manifest prepared.	to the site.
• 24/7 contact numbers of two persons.	<ul> <li>Location and identification of tanks and</li> </ul>
• For tanks – tank ID, Type: U/G or A/G and	package stores.
capacity (L).	Location of manifest, site drains, fuel and
• Proper shipping name (e.g. Petrol), UN	power isolation points.
Number, DG Class and Packing Group for	<ul> <li>Essential fire services and gas supply</li> </ul>
dangerous goods.	<ul> <li>nature of the occupancies of the adjacent</li> </ul>
• For diesel the words 'Combustible Liquid'.	sites.
• For package storage areas – ID Code and	Legend of symbols and codes used in the
largest quantity of each Class of DG likely to	plan.
be stored in the area.	<ul> <li>Identification of true north.</li> </ul>
Site plan.	Be to scale.

#### Outer warning placard (s.349)



For retail fuel outlets only, this outer warning placard is no longer required.

For non-retail sites, that is, fuel not-for-retail-sale such as a works depot or fuel distributor facility, the HAZCHEM outer warning placard is required at the entrance of the site if placard quantity is exceeded.

<sup>&</sup>lt;sup>5</sup> (s) Refers to the section in the WHS Regulation. For example, s.347 refers to section 347 in the WHS Regulation.

# 3. Maintaining the service station forecourt



Prevent damage to underground tanks and pipework (s.358) If the concrete is damaged, vehicles could damage buried tanks or pipework.

#### Impact protection (s.358)

Bollards, high curbing or other barriers with sufficient clearance to that being protected such as dispensers and vent pipes is required to protect them from impact damage.

#### Spill containment (s.357)

Spill containment systems (e.g. curbing, graded surfaces, inlets to underground interceptors) in place for the dispensing area on the concrete forecourt, must be maintained (should be undamaged). Older installations may not have incorporated such systems into their design and must rely on spill kits and emergency response actions that consider the direction of flow of any spilled liquids.

#### Fill and dip point markers for underground tanks (AS4977)





Underground tanks must have colour-coded fill and dip point markers according to the AS4977:



#### Fill point marker colors

- 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: Number on inner circle indicates tank number.

Fill/dip containment or spill containment boxes must be free of fuel. Any tank overfill should be cleaned up or drained into an underground tank. If fuel is present, it presents a fire risk and would indicate unacceptable tank filling procedures. If there is any water present, the seals could be faulty and may need replacing.

## Vent pipes (AS 1940)





Example vent cap designed to prevent ingress of rain water

Vent pipes should be located away from trafficable areas to avoid impacts. Wherever there is a risk of impact and damage they should be protected with suitable bollards or barriers. Curbing can provide protection from impact from slow moving vehicles provided vent pipes are set back and not in the direct line of traffic flow.

Vent pipes positioned against a wall should be secured to the wall and protected against damage when directly adjacent to a vehicle parking space or vehicle manoeuvring area.

Vents should be fitted with 'up-flow' type vent caps which prevent the ingress of rainwater as shown above.

Vent termination point must be located at least four metres above the ground and at least four metres laterally for flammable liquids and two metres laterally for combustible liquids from any building opening. This may include a window, door, air-conditioner or mechanical vent intake to reduce possibility of the entry of vapour.

#### Cathodic protection

At some service stations, cathodic protection may have been installed on underground storage tanks (UST) and piping (e.g. steel construction) to help protect against corrosion and maintain system integrity. According to AS1940, any buried tank must be provided with corrosion protection. This can be in the form of non-corrosive materials such as fibreglass or fibreglass coatings. For steel tanks, corrosion protection can be provided with protective coatings and wrappings or cathodic protection (CP) according to AS 2832.1 or AS 2832.2 for pipework and buried structures respectively. In some sites with bad corrosion history, both coatings and cathodic protection are used in conjunction to protect steel tanks and pipes.

There are two types of cathodic protection systems for UST facilities:

- sacrificial (galvanic) anodes
- impressed current systems.

Both types do exactly the same thing—deliver current to the steel tanks and piping that are in contact with the soil and/or water. In both cases it is necessary to conduct periodic inspections of the cathodic protection systems. Current must be provided continually to the tank system. Should the CP system be interrupted, the tanks will continue to corrode.

If a cathodic protection system has been installed, then it must be maintained in accordance with AS 2832 Cathodic Protection of Metals Part 1 - Pipes and Cables and Part 2 - Compact Buried Structures. The standard requires surveys to be carried out every 12 months for underground petrol or diesel tanks and every six months for buried LPG tanks. Survey reports should be available as well as design documentation for the cathodic protection system. It is also recommended that regular monitoring (at least every two months) of voltage and current should be maintained on impressed current systems.

The PCBU should be able to provide documentary records that the appropriate levels of monitoring, inspection and testing is being done on the CP system, the minimum requirement being the AS 2832 test criteria.

These systems are regulated by Part 13 of the Electrical Safety Regulation 2013, where all cathodic protection systems capable of delivering a current greater of 0.25A must be registered.

This would apply to all induced current cathodic protection systems and where there are a number of tanks connected together to sacrificial anodes.

These systems must be periodically tested and test results kept. Further information on cathodic protection requirements under the Electrical Safety Regulation 2013 is available at <u>worksafe.qld.gov.au/electricalsafety</u> or contact the Electrical Safety Office via 1300 362 128.

#### Controlling fire or explosion during tanker filling operations (s.355)

The PCBU must identify areas where an explosive gas atmosphere may exist from time to time to control ignition sources, such that a fire or explosion cannot occur. This requires the classification of hazardous areas by a suitably qualified person. Site plans detailing hazardous areas applicable to the service station such as those around tank fill and dip points and during tanker filling operations should be kept by the PCBU. Such site plans should be made available to workers and contractors that may need to perform construction, maintenance and repair work in or near a hazardous area.

Note: The tanker driver must comply with the Transport Operations (Road Use Management – Dangerous Goods) Regulation 2008 which stipulates specific distances for exclusion zones from the tanker's hose connection point.

The tanker vehicle should be parked wholly within the property during discharge process. The tanker driver should be in view of the discharge and fill points and able to stop all tank filling in an emergency situation and flexible hoses should not run under the tanker vehicle.

If the exclusion zone extends over the service station driveway or a fuel dispensing area, vehicles must be prohibited from entering that area. The service station may need to be shut down for the duration of the tank filling operation or the tank filling operation carried out outside of normal operating hours.

The tanker delivery driver and site operator must have a clear understanding of where the exclusion zone extends to and provide adequate barriers (e.g. witches hats) and warning signs for the duration that transfer hoses are connected.



#### Abandoned underground tanks (s.366 and s.367)

An underground fuel storage system (i.e., underground fuel tank) not in use must be removed, or if not reasonably practical to do so, then made safe. It may not be reasonably practical to remove due to significant pipe work associated with other tanks and services existing in the subsurface above the tank, or the tank's removal will impact on surrounding structures (e.g. adjacent in-service tanks).

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 WHSQ must be notified using *Form 72: Notification of an abandoned tank*.

All disused underground tanks should be dealt with in accordance with Australian Standard AS 4976.



Wherever possible the underground tank should be removed from site.

However, if decommissioning in-situ is undertaken (i.e. removal of residual liquid and vapours and filling with inert material) the vent pipe and other associated fittings must be removed.

Ensure records of decommissioning are kept and documents such as the emergency plan, manifest and relevant notifications are amended.

## Abandoned aboveground tanks (s.365)

All aboveground storage system not in use must be free of the hazardous chemicals and placard removed. If not free of the hazardous chemical (e.g. residual liquid and/or vapour), the storage and handling system must maintain the relevant labels for the system such as a tank placard.

#### Dispensers (s.363)



Hosepipes lying on the ground can be easily damaged by vehicles.

Evidence of leak shown at hose connection.



Note: No latching device allowed on petrol dispensing nozzle.

Placards (s.350) and safety signs (s.353)

• Warning placards (s.350)



Any **aboveground** LP gas tank (container with a water capacity greater than 500 litres) requires an information placard as shown.

The cylinders used for decanting are generally <500 litres water capacity and therefore do not require the placard, but must have the red flammable gas class label visible on it as part of the container labelling requirements.



An **aboveground** flammable liquid tank (container with a capacity greater than 500 litres) must have a placard. An example for petrol is shown on the left.

**Note:** Placards for underground tanks at service stations are not required (due to an exemption provided in s.350(3)(b)). Depots or other installations **that are not retail fuel outlets** require placards for underground tanks as no exemption applies.

# COMBUSTIBLE LIQUID

An aboveground diesel tank requires a combustible liquid placard.

• Safety signs (s.353)





**AS 1940 recommends a** prominent sign with the words '**Stop engine – No smoking**' to be located on or near to each dispenser.

The smoking prohibited sign may be used in lieu of the words 'no smoking'.

Other signs that highlight risks, or safety instructions should also be displayed at the site.

#### Spill containment and clean-up provisions (s.357)

Section 357 of the WHS Regulation provides specific duties for PCBUs regarding spill containment and recovery systems for hazardous chemicals (e.g. unleaded and diesel fuels). To summarise this duty as it applies to service stations, PCBUs must contain fuel leaks (including any resultant effluent) within their workplace so far as is reasonably practicable. For newly-constructed service stations, this is commonly achieved by the use of double-walled corrosion-resistant underground tanks fitted with automatic tank gauging (ATG) and double-walled corrosion-resistant pipelines connecting tanks to dispensers. Older installations (e.g. those installed before the 1990s) typically consist of singlewalled steel tanks with single-walled steel pipelines connecting tanks to dispensers.

Section 4.5 of AS4897: *The design, installation and operation of underground petroleum storage systems* provides known-ways for monitoring leaks in underground petroleum storage systems (UPSS) and the most common types in use today are Statistical inventory analysis (SIA) and ATG. Due to their age and reduced number of engineering controls, SIA is particularly important for older installations in order to identify any fuel leaks early and reduce the risk of a leak escaping a PCBU's boundaries. SIA may also be known as Statistical inventory reconciliation analysis (SIRA). Newer installations may also have additional leak monitoring systems such as tank pit and or ground water monitoring wells where located in environmentally sensitive areas.

All service station operators, including those with ATG, must have adequate oversight of their UPSS to ensure they are capable of identifying and responding to any leaks as soon as possible. To do this PCBUs should have:

- Inventory control reconciliation records (Appendix D of AS4897 provides an example procedure and calculation form which includes: tank dips, dispenser meter readings, fuel deliveries. removals and internal transfers).
- SIA or AIT records.
- Response procedures and equipment for investigating any discrepancies, suspected losses or water ingress (Appendix E of AS4897 provides an example discrepancy or loss investigation procedure).

AS4897 recommends that records of the above inventory controls shall be kept for at least two years. Inspection of these records is likely during an inspection, audit or incident investigation.

Single-walled aboveground tanks (excluding LP gas) must have a secondary 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 <u>Managing Risks of Hazardous Chemicals in the</u> <u>Workplace Code of Practice 2013</u> states that bunding should be designed and constructed in accordance with AS 1940: The storage and handling of flammable and combustible liquids, which covers bunds and compounds for tanks.

The service station should have documented procedures on how to contain any spill or leak and have appropriate equipment to prevent it leaving the site. The required emergency response resources should be specified and readily available in the event of an incident. Resources and equipment may include spill absorption material, cleanup equipment, drain plugs or covers and labelled waste containers as illustrated below.



Service station fire incident

A fuel tanker was unloading petrol into underground tanks at a suburban service station when a fire started at the fill point. The fire spread to the tyres of the tanker and later to its rear fuel compartments. Two of the rear compartments ruptured during the fire. One of the ruptures created a large fireball (about 60 metres high and 20 metres in diameter) that extensively damaged the petrol station building and associated infrastructure.

The fire was caused by the ignition of a mixture of fuel vapour and air close to the underground tank fill box. The source of the fuel vapour was probably within the containment sump which may not have been drained back to a tank. A definitive ignition source could not be identified.

The accumulation of spilt fuel in the sump can create a hazard that would be constantly present in the fill box if the sump is not regularly checked and cleaned out. Operators should ensure all seals are intact and sumps checked to minimise fire risk.

Reference: *Incident Investigation report, Fuel tanker fire at Maddington 2009,* Department of Mines, Industry Regulation and Safety, Western Australia, available at <u>www.dmp.wa.gov.au</u>.





## Portable LPG cylinder exchange facilities

AS1596: The storage and handling of LP Gas provides requirements and recommendations for the location of cages in which portable exchange LP gas cylinders are kept. Refer to section 4.6 and Appendix G.

For a single cage of 22 litres (9 kilogram size) cylinders, the cage should:

- be sturdy and stable, and shall allow free air movement through it
- be located away from, or be protected from, significant trafficable areas
- be kept locked when located in public areas
- have a maximum aggregate capacity of cylinders of 2500 litres.

Cages shall be located outdoors clear on at least two sides from any wall, solid display or other item that could restrict air flow with minimum clearances as depicted below.



Every cylinder cage shall be provided with signs and notices that are clearly visible and readily distinguishable from any advertising signs attached to the cage. The red class label or 'diamond' for flammable gas (Division 2.1) and a warning notice should be prominently displayed on the front of the cage, reading:

#### FLAMMABLE GAS-NO SMOKING

Gas cages should be located in areas away from traffic movements to minimise risks of impact and damage. If location options are restricted or concerns about impact exist, consider the use of impact protection devices such as bollards and physical barriers.



## LPG tanks

Many, but not all service stations have an LP gas tank on site. When they do, the tanks are generally installed and owned by the gas supplier and sales managed by the operator. Such an installation introduces another duty holder to the site. The Act (s.14 and s.15) states that a duty cannot be transferred to another person, and that a person can have more than one duty (e.g. duty holder could be a person conducting a business and a supplier). Service station operators should clearly record in their business documentation (e.g. agreements and licenses) the duty holders associated with the site and what they are responsible for and have these formally acknowledged by each of the duty-holders. This should cover specific activities such as the on-going maintenance and repair of LPG tank installations and emergency response actions.

LPG tanks must have a plant design registration number (s.260) and an individual plant item registration (s.273) under the WHS Regulation. Further information is available at <a href="http://www.worksafe.qld.gov.au">www.worksafe.qld.gov.au</a>.

Guidance on the safe management of LPG is provided in the Australian Standard AS1596: The storage and handling of LP Gas. LPG tank installations are specifically regulated in Queensland under the Petroleum and Gas (Production and Safety) Act 2004, administered by the Petroleum and Gas Inspectorate within the Department of Natural Resources Mines and Energy. Further information is available at <u>www.dnrm.qld.gov.au</u>.

## Controlling potential ignition sources (s.355)

The PCBU must identify areas where an explosive gas atmosphere is expected to exist from time to time to control potential ignition sources such that a fire or explosion cannot occur. This requires the classification of hazardous areas by a suitably qualified person. Site plans detailing hazardous areas applicable to the service station (e.g. around petrol tank vent termination points, petrol dispensers, LPG cylinders and tanks) should be kept by the PCBU and made available to workers or contractors that may need to perform construction, maintenance and repair work in or near a hazardous area. Check for potential ignition sources encroaching into the hazardous area associated with the fuel systems. An example-hazardous area<sup>6</sup> is provided by AS/NZS 60079.10.1 (ZA 4.4) of 4 m (laterally) around petrol dispensers for excluding ignition sources.



Additional example-hazardous areas provided by AS/NZS 60079.10.1 (refer to ZA 4.4.2.5) for underground petrol tanks include 4 metres (laterally) around fill-pipe and dip-pipe openings and a 3D-radius of 1.5 metres around a vent-pipe outlet down to ground level.

<sup>&</sup>lt;sup>6</sup> Hazardous areas must be determined by a suitably qualified person who should assess the suitability of applying the example hazardous areas provided in AS/NZS60079.10.1 for the specific circumstances at that location.

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## Firefighting equipment (s.359)

The WHS Regulation requires appropriate fire protection and firefighting equipment for the types and quantities of hazardous chemicals at the workplace. AS1940 provides guidance for this situation in section 11 (Fire protection) for tank vehicle delivery locations and fuel dispensing locations. There should be at least two 9 kg ABE (powder type) extinguishers located near the dispensers or at least one extinguisher per dispensing bay.



Extinguishers must be easily accessible when dispenser is in use.

During operating hours when dispensing of fuel occurs, fire extinguishers must be available on the forecourt area and not solely kept inside the shop area.

They may be located in a box with break glass screen to prevent theft and damage by vandalism. Ensure fire extinguishers are maintained and access is not obstructed.

## Extinguisher maintenance (s.359)

Ensure extinguishers are fit for purpose and maintained. Dated records of maintenance are required by the WHS Regulation (s.359) for fire fighting equipment.





Check the needle of the gauge is in the green region

Check stamp or indentation on yellow maintenance tag indicating dates of servicing, typically required every six months for portable fire extinguishers.



AS1851 Routine service of fire protection systems and equipment provides information on routine maintenance of fire equipment such as fire extinguishers, hose reels and hydrants. Section 1.16 provides information on routine service records including logbooks, and in the case of tags and labels, hardcopy summary records.

Routine service records for fire hose reels and portable fire extinguishers consist of tags or labels along with a supporting hardcopy summary record which includes a register of the equipment on the premises, a statement of the service performed and details of missing or defective items. Other recorded information should include items such as date of service, name and signature of service person and date, name of service provider or company. For fire extinguishers, the date of manufacture or the date of the last pressure test should be provided. For fire hose reels, details of the flow test results for the most hydraulically disadvantaged hose reel should be included.

## General housekeeping (s.53)

There should be no accumulation of combustible materials such as wooden pallets, tyres, cardboard and plastic or fallen vegetation (e.g. leaves) in and around the site.

Ensure vegetation (e.g. tall grass or overhanging trees) is kept clear of storage and handling systems (LP gas tanks and cylinder cages, fill and dip points, vent pipes and dispensers). Ensure vent termination points aren't located within foliage of trees.

Eliminate the need to conduct on-going maintenance of vegetation by keeping it clear of storage and handling systems. Such maintenance requires use of portable ignition sources such as hedge trimmers and mowers which may be subject to the workplace's hot work permit policy and procedures.

# 4. Inside the shop

The quantity of hazardous chemicals stored in the shop area should not exceed 'minor storage' quantities (Table 2.1 AS 1940 ) and must be stored away from food items.

Minor storage quantities within a service station building should not exceed:

- 500 litres of Class 3 packing group I and II, e.g. petrol (all packages must be under 20 litres capacity and not opened)
- 1250 litres of Class 3 packing group III, e.g. kerosene
- 3000 litres of C1 and C2 (e.g. diesel and motor oil).

Any portable container used to decant flammable liquid must have a maximum capacity of 25 litres and comply with AS2906 – Fuel containers – portable: plastic and metal.



The portable container should be embossed or marked with the following words and information:

- manufacturers name and year of manufacture
- nominal capacity with a mark indicating that level
- Warning: Fuel only vapor may cause flash fire'
- 'Keep out of reach of children'
- first aid information.
- Every dispenser should be clearly visible from the console/counter or on video to the control console operator and have direct access to emergency isolation/shutdown controls.



Example of emergency fuel shut off switch located at the control console.

A telephone must also be located at the control console with the emergency contact telephone numbers prominently displayed.

 Unmanned or unsupervised self-service systems shall include a readily accessible emergency stop along with a notice giving instructions on how to operate the device in the event of a major spill or fire. When activated, the emergency stop shall shut off the dispenser pump and transmit an alarm to a person or organisation capable of responding. Further information is available in AS1940 Section 7 (Fuel dispensing).

## What should service station staff know?

Service station staff should know the procedures to deal with a forecourt leak or spill, as well as:

- emergency procedures and evacuation points
- tank dipping procedure
- tanker discharge procedures for the site
- where the written procedures such as the site emergency plan is kept
- under what circumstances a console operator should not allow fuel to be dispensed, such as when:
  - a vehicle engine is running (s.355)
  - a person is smoking in the forecourt (s.355)
  - a person under 16 years is attempting to operate a dispenser (s.336)
  - a person is attempting to fill a food container with fuel
  - a person is attempting to fill fuel into a non-compliant container (s.337, s.363)
  - a fuel delivery nozzle is wedged open by customer with a fuel cap or similar device (s.363)
  - a person is filling a container with flammable liquid inside a vehicle, in the boot or if on the back of a ute (s.363).

The console operator must have a clear understanding of their responsibilities and authority to manage safety in a public place.



#### Information the PCBU should keep on site or have available for an inspector

The following items should be available on site:

- A receipt to confirm notification of a MQW has been made as required by s.348. When a
  notification has been lodged complete with a copy of the Schedule 12 compliant manifest and
  site plan, a receipt letter should be available from WHSQ. Notification history can be checked
  directly via <u>hicb@oir.qld.gov.au</u> or by contacting 3874 7579.
- A register of all hazardous chemicals (s.346).
- Safety data sheets (SDS) for the hazardous chemicals at the workplace (s.346).
- Site operating procedures (s.39).
- Product tank filling and dipping procedures (s.39).
- Equipment inspection and maintenance procedures (s.39).
- A documented emergency plan to deal with the range of emergency situations that may arise at the workplace such as liquid and gaseous fuel leaks and spills, and fires (s.43). It is a requirement to submit a copy of the site emergency plan document in PDF format to QFRS (s.361). Refer to www.qfes.qld.gov.au/planning for further information.
- Reconciled inventory records of fuel received and dispensed (s.39).
- Other relevant documents which demonstrate the safety systems at the workplace including:
  - the roles and responsibilities of staff
  - staff training and retraining records
  - equipment inspection and maintenance records
  - firefighting equipment inspection records
  - fuel system equipment testing records
  - work permit system
  - incident reporting
  - investigation procedures and records
  - a system to review and update documents.

## 5. Further information

#### Australian Standards

Contact SAI Global on 131 242 or visit <u>https://infostore.saiglobal.com</u> to purchase AS1940 or other Australian Standards.

#### Consultants and industry associations

For consultants specialising in fuel systems, refer to the Australasian Convenience and Petroleum Marketers Association (ACAPMA) at <u>www.acapma.com.au</u> or contact 1300 160 270. ACAPMA provide a public listing of contractors who have become a recognised contractor under their National Petroleum Recognition Scheme. Services identified include site design, fuel tank and pump installation, maintenance, and removal.

WHSQ maintain a voluntary list of consultants specialising in hazardous chemical safety management as a contact service. Refer to 'industry consultants for hazardous chemicals' at <u>www.worksafe.qld.gov.au</u>.

The Australasian Institute of Dangerous Goods Consultants provides a contact list at <u>www.aidgc.org.au</u>.

Manufacturers, suppliers and local distributors of fuel products may be able to provide technical assistance regarding their products, including the provision of safety data sheets.