

Kerbside fuel dispensing

Kerbside dispensing continues to service some local communities around the state and presents a unique risk profile which must be safely managed.

Kerbside dispensing services consist of one or two fuel dispensers (i.e. bowser) and relatively small underground tanks (typically <10,000L) often located under the footpath area.



Figure 1: A typical kerbside fuel dispenser.

The operation of a kerbside bowser must comply with the *Work Health and Safety (WHS) Act 2011* including the hazardous chemical requirements in Part 7.1 of the *Work Health and Safety Regulation 2011*. The associated risks with the storage and handling of fuel must be minimised as far as reasonably practicable.

Risks of kerbside fuel dispensing

The risk from the continued operation of a kerbside fuel dispenser includes:

- spills when filling underground tanks and fuel dispensing to customers
- impact and damage to dispensers
- uncontrolled ignition sources (e.g. smoking by non-customers) associated with a public area during fuel dispensing and underground tank filling
- traffic volume using the road
- speed of vehicles on adjacent roadway
- pedestrian movements on the footpath
- fuel delivery frequency and time
- age and condition of the underground fuel tanks.

It is recognised that older kerbside fuel dispensers do not achieve current best practices in the fuel retailing industry. However, ensuring risk control measures are implemented and maintained can reduce the associated risks as far as reasonably practicable.

Risk control measures - general

Some of the engineering and isolation controls that are recommended for modern service stations are not feasible for kerbside dispensing. In order to manage the risk as far as is reasonably practicable, additional control measures are required depending on the specific circumstances.

Kerbside fuel dispensing operators should:

- protect fuel dispensers from impact by vehicles by installing independent bollards or crash barriers for the dispenser facing the roadway

- prevent unauthorised access by providing lockable dispensers
- define exclusion zones for potential ignition sources based on a minimum distance of four metres around the dispenser, and three metres around a tank fill point, dip point and vent pipe
- clearly identify an exclusion zone using demarcation lines and safety signs such as 'No Smoking' and 'No Ignition Sources', which are clearly visible from normal approaches to the exclusion zone



Figure 2 and 3: Demarcation lines and safety signs can help communicate requirements to people approaching the refueling area.

- provide full-service refueling and prevent self-filling by customers (fuel dispensing activities must be conducted by trained staff who can control the area)
- prevent the public from entering an exclusion zone or stop the dispensing operation in the event of an ignition source in the area
- keep the designated exclusion zone free of combustible matter such as paper and cardboard and litter bins.



Figure 4: Emergency fuel pump stop button must be readily accessible.

Risk control measures – refilling storage tanks

For hazards relating to filling an underground storage tank by a road tanker, kerbside fuel dispensing operators should:

- restrict fuel delivery to periods where the public are unlikely to visit the premises (e.g. outside normal operating hours)
- set up temporary bollards and safety signs to isolate the area (safety cones or similar devices placed on the roadway between tanker and traffic may be used to define the unloading area and to help ensure separation distances are achieved)
- provide supervision of the filling area to prevent anyone from introducing ignition



Figure 5: Safety sign

- sources in the exclusion area during filling operations
- maintain a tight seal on the fill and dip point covers to prevent entry of extraneous matter
- develop and document safe work procedures and clearly define emergency actions, and ensure appropriate resources and equipment (e.g. fire extinguisher, spill clean-up kit, non-combustible drain plug) are readily available in an emergency
- provide training to responsible people covering safe work procedures and emergency actions and document this activity (training content, who and when).

Mandatory control measures - all service stations

The operator of a kerbside fuel dispenser must provide the following items that apply to all service stations:

- a manifest box containing the site's manifest and site plan
- a register with the safety data sheet (SDS) for each fuel product
- an emergency plan to deal with fire, spills and evacuation
- safety signs and instructions
- firefighting equipment
- spill kit
- daily tank dips and stock reconciliation to monitor for leaks
- hazardous work permit system for any maintenance or repair involving hot work to be conducted in and around the exclusion area
- equipment testing and maintenance records
- notify Workplace Health and Safety Queensland (WHSQ) as a manifest quantity workplace (>2,500L petrol).



Figure 6 and 7: A manifest box and spills clean up kit are part of the emergency response system when an incident occurs.

Provided the above controls are maintained at the site, the risks of kerbside fuel dispensing can be minimised as far as is reasonably practicable.

Consultants and industry associations

For consultants specialising in flammable and combustible liquid storage and handling systems contact information can be found through relevant industry associations and groups such as:

- Australian Convenience and Petroleum Marketers Association (ACAPMA) available at www.acapma.com.au. ACAPMA provide a public listing of contractors who have voluntarily 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 www.worksafe.qld.gov.au.
- The Australasian Institute of Dangerous Goods Consultants provides a contact list at www.aidgc.org.au.

Fuel suppliers and local distributors may be able to provide technical assistance regarding their products, including the provision of SDS.

Further information

Existing kerbside fuel dispensers may be subject to local laws. Please refer to the relevant local authority for further information.

The continued operation of kerbside fuel dispensing on a state-controlled road may require approval from the Department of Transport and Main Roads.

In the event of a risk of environmental harm, kerbside fuel dispensing operators should contact the local authority regarding duties under the environmental legislation.

For more information about work health and safety legislation and hazardous chemicals safety visit www.worksafe.qld.gov.au or call 1300 362 128.

Enquiries relating to this guide may be directed to the Hazardous Industries and Chemicals Branch at hicb@oir.qld.gov.au.