



Safe Farm Fuel Storage

Introduction

This bulletin helps farmers and fuel delivery drivers check storage facilities are of a suitable standard. Industry guidelines outlining the standard for fuel storage facilities are being developed and will be available from fuel companies or OSH.

The majority of farms have some form of bulk fuel storage facility. The fuel is either petrol (dangerous good Class 3A), or diesel (class 3C) and is usually stored in above-ground tanks.

Farmers are required to provide a safe place of work under the Health and Safety in Employment Act 1992 and the Dangerous Goods Act 1974. This includes ensuring safe fuel storage facilities.

Structural Safety Risks

Recently there have been a number of serious incidents where above-ground fuel tanks have collapsed without warning. It appears that a large number of farm fuel storage facilities have passed their safe working life and need to be assessed for future safe use.

Approval of three-legged tanks was cancelled in 1996. Existing three-legged tanks are being phased out when they are assessed as unsafe.

Hazards Associated with Flammable Liquids

Petrol vapour is heavier than air and can travel a long way from the fuel source. There should be no ignition sources within 15 metres of the storage tanks. Ignition sources include naked flame, smoking, electrical appliances, static electricity, running engines and sparks from tools. Diesel is not as volatile and the required isolation distance is 8 metres.

The distance is extremely important when the tank is either being filled or fuel is being removed.

Health Risks

Petrol contains a high amount of aromatic hydrocarbons that can be smelt in petrol vapours. Inhaling these vapours should be avoided. The effects of these toxic vapours are dizziness and nausea, similar to intoxication from alcohol.

Anyone suffering from the effects of petrol vapours should avoid activities such as driving a car or operating machinery.

Avoid skin contact with fuel as this can allow absorption into the body that may cause rashes/dermatitis. If you do have skin contact, wash with soap. Long-term exposure is linked to permanent damage of the nervous system and an increased susceptibility to leukaemia.

Emergency Procedures

Procedures need to be established to deal with emergency situations such as spillage, leak or fire.

Training and Supervision

People involved in handling and storing fuel need to be adequately trained or supervised to ensure they are fully aware of hazards, precautions and emergency procedures.

Dangerous Goods Licensing Fees Regulations

A licence is required to store dangerous goods unless the following exemptions are met:

- The farm is 4 hectares or larger.
- Above-ground petrol tanks are no bigger than 2000 litres and above-ground diesel tanks are no bigger than 5000 litres.
- Tanks must be 20 metres from any protected work, i.e. dwellings or buildings and 6 metres from other dangerous goods.



- Tanks must be compounded or located so spillage does not endanger buildings or the environment.

If these requirements are not met, contact your local authority dangerous goods inspector to apply for a Dangerous Goods Storage Licence.

Resource Management Act

This bulletin focuses on health and safety. The Resource Management Act also applies to farm fuel storage. Your local authority can provide information on the requirements of the Act.

Checklist for Safe Fuel Storage

Use the checklist to assess the safety standard of your fuel storage facility before you order your next fuel delivery.

For further advice on safe fuel storage and handling methods, contact OSH, your fuel company or your local authority dangerous goods inspector.

Structural Safety	Yes	No	Comments
Is the tank supporting structure sound and stable? <i>Consider corrosion, buckling or bent legs, or bracing</i>	<input type="radio"/>	<input type="radio"/>	_____
Is the tank support on a solid, level foundation? <i>Consider stability when ladder is used 'Levelling wedges' have been known to fail</i>	<input type="radio"/>	<input type="radio"/>	_____
Are fixed ladders in sound condition and secure? <i>Consider corroded, bent or damaged rungs</i>	<input type="radio"/>	<input type="radio"/>	_____
Is the storage tank of sound construction? <i>Consider corrosion, leaks, seals</i>	<input type="radio"/>	<input type="radio"/>	_____
Are fittings, pumps, hose, free of leaks, and undamaged?	<input type="radio"/>	<input type="radio"/>	_____
Hazards Associated With Flammable Liquids			
Are ignition sources 15 metres away from fuel storage? <i>Ignition sources include naked flame, smoking, electrical appliances, running engines, sparks from tools, static electricity</i>	<input type="radio"/>	<input type="radio"/>	_____
Are chemicals and fertilisers stored away from fuel?	<input type="radio"/>	<input type="radio"/>	_____
Access to Fuel Storage Facility			
Is there safe access to fuel the fuel storage facility? <i>Consider: housekeeping, tripping hazards, vegetation, ground surface, other machinery, weight and size of tanker in respect of road access, bridges, overhead wires, work area</i>	<input type="radio"/>	<input type="radio"/>	_____
Health Risks			
Are handling methods designed to avoid inhalation or absorption of fuel?	<input type="radio"/>	<input type="radio"/>	_____
Emergency Procedures			
Have emergencies procedures been established and is equipment available to deal with an emergency?	<input type="radio"/>	<input type="radio"/>	_____
Training and Supervision			
Is there adequate knowledge of the hazards that exist, precautions to be taken, and emergency procedures?	<input type="radio"/>	<input type="radio"/>	_____
Exemption From Licence for Farm Fuel Storage			
Is your farm 4 hectares or larger?	<input type="radio"/>	<input type="radio"/>	_____
Is storage within quantity limits?	<input type="radio"/>	<input type="radio"/>	_____
Are storage facilities 20 metres from protected work?	<input type="radio"/>	<input type="radio"/>	_____
Is storage compounded or located so spillage does not endanger buildings or environment?	<input type="radio"/>	<input type="radio"/>	_____
Do you need a Dangerous Goods Storage Licence?	<input type="radio"/>	<input type="radio"/>	_____