



EMERGENCY MANAGEMENT PLAN

PAK'nSAVE TE RAPA

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1) INTRODUCTION

Foodstuffs fuel facility policy is to conduct its activities so as to protect the health and safety of its employees, owner operators, their staff and customers, and to minimize any environmental impact of its operations.

Our goals are simply stated – no accidents, no harm to people, and no damage to the environment.

Construction of this facility has been in accordance with procedures and materials outlined in the site specific Fuel Hazard Management Plan.

This handbook has been prepared to provide a basic ready reference for:

Emergency actions

- Recognition of the hazards involved in fuel facility operation
- Preventative safety and environmental care measures
- The safety training of fuel facility staff

The consistent application of these safety and loss control principles to the business can assist to minimize losses occurring from incidents involving injury to people and/ or damage to property and the environment.

The owner operator is responsible for safety at the fuel facility and to ensure that all staff are properly trained in the safety procedures associated with their work.

Failure of the owner operator or staff to comply with company, health and safety, and environmental regulations is a breach of the Retail Agency Agreement with BP and will also contravene the regulations of Government and local authorities.

2) FUEL MANAGEMENT

Fuel Delivery

The driver manually dips each tank before and after the fuel delivery. This action confirms sufficient space is available in each tank to receive a delivery.

Note: The driver must remain at the fill point while unloading the fuel for safety reasons.

- Ensure the driver leaves a copy of the delivery docket at site.
- The delivery docket is sent up to the office.
- The office enters the fuel delivery details into the Fuel Reconciliation System on the Task Back Office (B/O) computer.

Fuel Reconciliations

It is a requirement by law for each fuel facility to maintain an inventory control system (fuel reconciliation procedure) for the bulk storage of petrol and diesel. This identifies any differences between what we think we have in the tanks and what we actually have.

To complete reconciliation you will need to be familiar with the End of Day (EOD) procedure and where to locate the meters on each pump. This information is then transferred to the Daily Fuel Reconciliation application on the Task B/O computer. This system electronically reads the tank dips, and with the manually collected pump meter readings collected calculates the theoretical dip level to compare with the actual.

You must also be competent in manually dipping the tanks in case the Visy Tank gauging system is not working (See next section for procedure).

Given the importance of this procedure, if you are unclear on any issue please seek advice on how to proceed.

Manual Tank Dips

Frequency:

These are done weekly to check for water in the Tanks and to confirm the Visy tank gauging system is working.

Before dipping tanks, the following safety precautions must be observed:

- Wear a safety reflective vest and gloves
- Place orange cones on the driveway around the area of the dip tube as a warning to motorists
- Do not allow lighters, matches, radios or mobile phones to be used during this process
- If light is required, use an approved sealed torch to prevent the risk of igniting fuel vapours
- Do not dip tanks within two hours of receiving a fuel delivery, where possible.

Note: Report to the Owner Operator any sharp edges protruding from wires which may be attached to the top of a dipstick.

Procedure for Dipping the Tanks:

1. Note the disk colour of dip point:
 - Take note of the coloured disk next to the round metal dip tube cover.
 - The number on the disk indicates the tank number and the colour indicates the following product type:

➤

White	Unleaded 91
Red	Premium 95
Green	Diesel

2. Remove Cover and Cap:
 - Remove the metal cover and dip cap from the dip tube.
3. Check Seal:
 - Check that the rubber seal is in place inside the dip cap and that it is in good condition.
4. Remove Dipstick:
 - Remove the dipstick from the dip tube far enough to see the point where the stick becomes wet with product
 - Wipe this area of the dipstick dry with a clean dry cloth or paper towel.
5. Return Dipstick:
 - Return the dipstick to the dip tube with care, gently touching the bottom of the tank by holding the dipstick between the thumb and fingers.

Note: Do not drop the dipstick as it may result in inaccurate tank readings and could damage the tank.

6. Read Dips:
 - Quickly remove the dipstick and find the point where the stick becomes wet with product.
 - Read the level of fuel in the tank off the dipstick.
7. Wipe Dipstick and Repeat Steps 5 & 6
 - Wipe the dipstick and very slowly and gently lower it into the dip tube a second time.
 - Quickly remove the dipstick and find the point where the stick becomes wet with product.
 - Read the level of fuel in the tank off the dipstick.
8. Replace Dipstick:
 - Replace the dipstick carefully and secure the metal cover with seal in place.
9. Record Dips:
 - Take the lowest of the two dip readings and record it on Daily Fuel Site Readings form provided.
10. Repeat:
 - Repeat process until all tanks are dipped.

Pump Meter Readings

Frequency:

- Read the pump meters daily at the same time as the EOD is run in the Task POS computer (inside Fuel Shed). Record the Pump Meter readings on the form provided. The tank dips from the Visy tank gauging system, including the water levels should also be recorded.

Fuel Losses

Common Causes of Fuel Losses Include:

- evaporation
- incorrect calibration of pumps
- inaccurate records
- leakage from tanks, lines or pumps
- shortfalls in delivery
- water in storage tanks.

Staff Responsibilities:

- Ensure accuracy of daily dips.
- Ensure accuracy of meter readings.
- Ensure accuracy of information entered into the Fuel Rec application on the Task B/O computer.
- Accurately record any pump tests performed at site (pump tests done after pump repairs, pump meter calibration tests, or Weights & Measures compliance tests).
- Immediately report any variances or discrepancies to the Owner Operator

Water Testing in Fuel Tanks

Complete a manual water test of each fuel tank weekly. Record the results on the Daily Fuel Site Readings form.

Observe the following safety precautions:

- ✓ Wear a reflective vest and gloves.
- ✓ Place orange cones on the driveway as a warning to motorists.
- ✓ Do not allow lighters, matches, radios or mobile phones to be used during this process.
- ✓ If light is required, use an approved sealed torch to prevent the risk of igniting fuel vapours.
- ✓ Do not dip tanks within two hours of receiving a fuel delivery, where possible.

Note: Report to the Owner Operator any sharp edges protruding from wires which may be attached to the top of a dipstick.

1. Remove Cover and Cap:
 - Remove the metal cover and dip cap from the dip tube.
 - Check that the rubber seal is in place inside the dip cap, and that it is in good condition.

2. Remove Dipstick:
 - Remove the entire dipstick from the dip tube and wipe it clean with a dry clean cloth or paper towel.

3. Test for Water:
 - Apply green water finding paste to the bottom three centimetres of the dipstick.

4. Return Dipstick:
 - Return the dipstick to the dip tube touching the bottom of the tank gently.
 - Hold for 10 seconds.

5. Check for Water Contamination:
 - Completely remove the dipstick.
 - Check the base of dipstick for a change of colour in water finding paste (normally from brown to green/yellow).
 - Read the dipstick to estimate the amount of water in the tank.
 - Notify the Owner Operator immediately of any water contamination of the fuel.
 - Record the incident on the Incident Report form.

6. Record Dips:
 - Record test results on the Daily Fuel Site Readings form.

Vehicle / Fuel Contamination

If a customer complains of fuel contamination (for example, water in fuel, vehicle running poorly) observe the procedures below:

- ***Do not admit liability.***
- Do not agree to pay any repair costs prior to an investigation being conducted.
- Request the customer complete a Customer Complaint form.

Note: Offer to complete the form on behalf of the customer, where there is a reluctance or inability by the customer to do so.

Do not leave the console unattended to view the vehicle.

- Advise the customer that the matter will be referred to our technical advisers (BP) for investigation and it can take up to five days for the investigation to be concluded.
- Advise the customer that the Owner Operator (or their representative) will make contact within 24 hours. Provide the customer with the Owner Operator's name and main supermarket phone number.
- If the customer's vehicle has broken down contact the Duty Manager to arrange for transport home for the customer.
- Ensure that the Foodstuffs Fuel Business Manager is immediately informed of the incident. The tanks require **URGENT** investigation to confirm whether the water came from the fuel system, and so prevent further vehicle damage, or leaks to the environment.

3) FACILITIES MAINTENANCE

What is Facilities Maintenance?

The servicing of equipment on a regular basis to maintain its efficiency and prevent breakdowns. In the event of a breakdown it provides one telephone number that will fix most problems quickly and efficiently. This telephone number is on the Emergency Contact list held in the Supermarket Service Desk.

How does the Facilities Maintenance Programme work at PnS/NW?

Foodstuffs enter into a contract with a help desk service provider familiar with your fuel station and the fuel industry in general.

This service provider is: **Fuel Quip**

A regular servicing schedule is provided as a form of preventative maintenance.

On receiving a telephone call regarding a breakdown, the service provider will contact an approved contractor who will then work towards fixing the problem.

Refer to the Health, Safety & Security & the Environment (HSSE) section for detail on contractor's safety while working on site.

Power Failure

If Power Fails:

1. The pumps on the forecourt will stop delivering fuel. There is a UPS (uninterrupted power supply) on the computer system. This allows the system to complete the interrupted transactions to complete in the banking system. .
2. Place cones out on the forecourt and if possible a notice on the front of the Kiosk advising all customers of the power failure.
3. Turn off pumps at main switchboard, and the Task POS computer.
4. Notify the Owner Operator or Duty Manager. Ask them to notify the power supply company.

Return of Power:

When power is restored, the Fuel Staff must:

1. Follow the Site Start-up procedure (NB the CRIP's will all need to be logged back on to the banking system).
2. Notify the Owner Operator or supermarket Duty Manager that the power is back on.
3. Ensure all lighting has returned to normal.
4. Remove the cones from the forecourt and sign from the front door and unlock.

4) CHECKLIST SUMMARY

The following tables indicate the responsibilities of staff members to ensure that the Fuel Station is operational and safe environment for both staff and our customers.

Manned Fuel Station (has a shop)

	Fuel Staff	Fuel Manager	Owner Operator
Morning Report	Complete	Review	
Monthly Report		Complete	Review

Unmanned Fuel Station (does not have a shop)

	Car park staff	Fuel Manager	Owner Operator
4 Hourly & Morning Report	Complete	Review	
Weekly Report		Complete	Review
Monthly Report		Complete	Review

The reports are shown in the Appendices. The person completing must note their responsibilities and sign or initial the form as appropriate. Completed forms are to be retained for review at a later date.

Completion of the Monthly Report is required under the HSNO Act.

A copy of the completed monthly reports must be given to the Owner Operator to review.

5) HEALTH, SAFETY & SECURITY & THE ENVIRONMENT (HSSE)

Safety and security on site are very important. Fuel stations have an environment that contains highly flammable and volatile substances. Security on site is extremely important as robberies and burglaries can occur. The safety and security of all personnel is paramount – acting responsibly is an important part of everyone's jobs.

The Health & Safety in Employment Act provides for the protection from harm, of employees at work. Both the employer and employees have responsibilities under this Act. Any person who fails to comply with the Act and whose actions or inaction cause serious harm could face:

- ❖ A fine of up to \$500,000
- ❖ Imprisonment up to two year's, or both.

Safety Training

Responsibility for Training

The Owner Operator is responsible for safety at the fuel station and for the adequate training of staff in all safety procedures associated with the conduct of their work.

Resources

This handbook is the management guide for fuel station operations. It covers background information and each section details the management and staff responsibilities. It also includes the detailed operational practices covered in the staff induction programme.

Training

On commencement of employment, all new staff that will have any interaction with the fuel site **MUST** undergo the Safety Induction course. A formal record of them satisfactorily completing this course must be kept on their employment record.

A copy of the booklet used in the Safety Induction Course is included in the documentation system.

In particular, ensure that all members of staff know:

- The location of the main switchboard, pump isolating switches and main power isolating switch
- How to switch off power to the pumps at the main switchboard, control console or emergency control station
- How to get help in the event of a fire, robbery or accident
- The location of the fire extinguishers and how to use them
- The location of the First Aid kit and what to do immediately someone is injured
- Location of the emergency phone numbers

In addition the Owner Operator must ensure that designated staff must:

- Teach all the necessary safety procedures to any employee who may be left in sole charge of the fuel station
- Arrange for staff to attend the first available, approved, fire fighting demonstration.
- Ensure that any new regulation or change affecting safety practices is recorded and implemented immediately

Staff Responsibilities

The Owner Operator must provide training and delegate, clearly and unambiguously, specific safety responsibilities to particular members of staff in areas such as:

- Regular Inspections
- Housekeeping
- Maintenance and equipment
- Cleaning up spills
- First Aid

Loss Control Reporting

Introduction

All incidents (i.e. Accidents resulting in injury, property damage or loss, or where injury, damage or loss *could* have occurred), must be reported to the Owner Operator

- Major severity incidents, IMMEDIATELY
- Medium severity incidents, within 24 hours
- Minor severity incidents, by the end of the next day

When you notify the Owner Operator, they or their representative will carry out an investigation of all major and medium severity incidents. The investigation must be completed within 10 working days of the incident occurring.

Details of any incident must be recorded on an Incident Report Form

Where the incident has resulted in a personal injury, a copy should be kept on site in the Accident Register.

In cases of fatal or serious injury occurring, it must be reported to the Occupational Safety and Health Unit (OSH), Department of Labour, as soon as possible, and a written report of the circumstances must be provided to OSH within seven days.

Reporting of incidents to statutory authorities, as required under legislation, is the responsibility of the Owner Operator. This includes OSH, Local Council and Dangerous Goods Inspectors where necessary (see Emergency Contacts List for relevant details).

Classification and Reporting of Incidents

A summary of Incident Classification and Reporting is shown below:

	Major	Medium	Minor	Comments
Fatality	X			At fuel station or caused by an act done at the fuel station (eg supply of incorrect product)
Injury	>24 hours in hospital	Customer medical treatment Staff LWI*	Customer not needing medical treatment Employees not away full shift	
Loss	>\$100,000	\$5,000 - \$100,000	<\$5,000	Fire Explosion Robbery Damage
Armed Hold Up		X		Successful Attempted
Spill	> 20 litres	Not applicable	< 20 litres	
Bad Publicity	X			Government Media Environmental Groups
Near Miss	X	X	X	Where what happened could have resulted in an incident
REPORTING				
Complete Incident Report form	X	X	X	
Owner Operator	Immediately	Within 24 hours	By the end of the next day	
OSH: Phone Written	As soon as possible within 7 days	As soon as possible within 7 days		
INVESTIGATION				
Owner Operator	Within 10 days	Within 10 days		

* LWI: Lost Workday Injury, where an employee is away for one shift

Reporting

The Owner Operator will identify the following information:

- Have the emergency services been contacted?
- When did the incident begin?
- Who is involved?
- The type of incident
- Is the incident ongoing?
- Are the news media involved?
- Are there any lives at risk?
- Have there been any injuries?
 - Name of person or persons
 - Address(es)
 - Relationship to the Supermarket / Foodstuffs; customer, employee, contractor
 - Part of body injured
 - Type of injury
- If a Supermarket or Foodstuffs employee is injured:
 - What is their occupation?
 - How long have they worked for the Supermarket or Foodstuffs
 - How long were they at work prior to the injury
- Who else has been notified?
- Why did the incident occur?
- Description of the incident.

Incident Reports

As soon as possible after the incident / accident, an Incident Report form must be completed and forwarded to the Owner Operator

Site Accident Register

Where a person's injury has resulted from an incident, a copy of the Incident Report Form must be kept in the Site Accident Register.

This is a vital statutory requirement.

Emergency Procedures

Emergency safety procedures are in place for the following:

- Serious or Fatal Injury
- Emergency First Aid
- Resuscitation
- Spills and Overflow
- Fire

All staff must be familiar with all emergency procedures. This information is contained in this document but is most readily found in the Emergency Flip Chart. A copy of this chart is held in the Supermarket Service desk, and the Fuel Shed.

Hazard Management

A **hazard** is defined as anything that may harm a person.

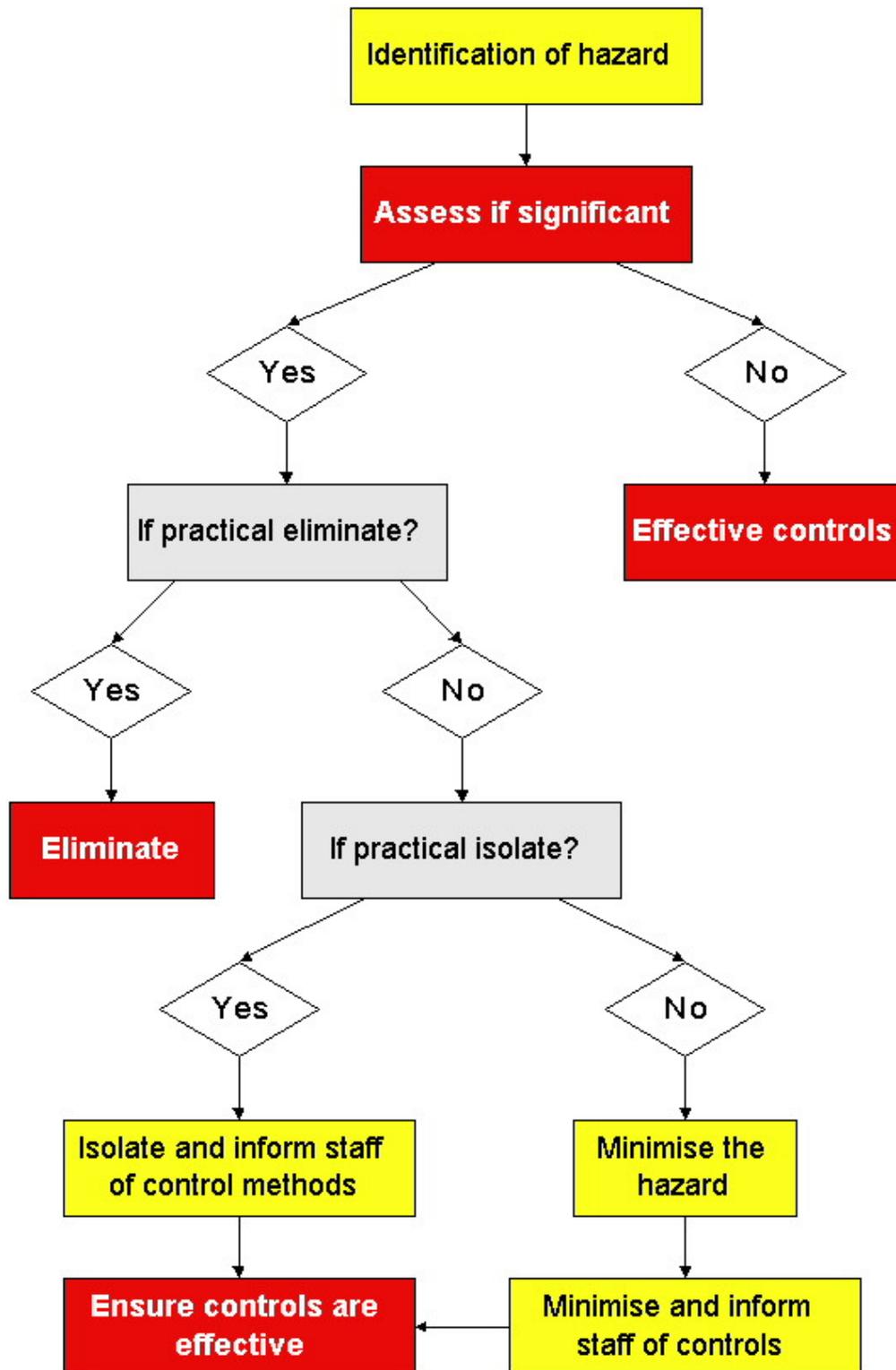
- It may be a *potential* or *actual* cause of harm.
- It may occur inside or outside a place of work
- It may be an activity, occurrence, arrangement, phenomenon, circumstance, process, event or situation.
- It may be a condition or practice with the potential for accidental loss.

Hazard identification is the process of identifying within a workplace situations where there is potential for harm to life and health.

Hazard Management involves identifying hazards in the workplace, assessing the risks to health and safety and implementing measures to control the risks.

Hazard management systems must be in place to protect the health and safety of staff. Employees must be given the opportunity to be involved in the development of these procedures – they are often in the best place to identify hazards and recommend controls.

The hazard management approach is shown in the flowchart below:



Hazard Zones

Fuel Facilities have some inherent danger, due to the nature of products and services they sell. Hazard zones, as specified in, Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 and AS/NZS 2430.3: 2004 are areas where:

- A work permit must be issued before Hot Work is carried out (see Work Permit section of this manual)
- Sources of ignition must not be present

Hazard Zones Forecourt

The flammable nature of the products sold on the forecourt means that the Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 and AS/NZS 2430.3: 2004 specify hazard zones relating to this area. Please ensure that you are familiar with the Hazard Zone plan of this site located in the front section of this document.

Storage of Flammable Liquids

The Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 and Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004 specify storage requirements for other flammable liquids, such as kerosene and solvents. Your fuel station complies with these regulations. If you intend to store any hazardous substances outside the system provided please check with Tony Nielson (0274 436 938), your Test Certifier and the Regulations for more information before proceeding.

The legal parameters for Petrol Hazard Zones are:

Petrol

4 meter radius around all dispensing units or 1 metre beyond the dispensing nozzle, whichever is greater

3 meter radius around all storage tank dip points

3 meter radius around all tank fill points

1.5 meter radius around all tank vents

Also note that hazard zones arising from other flammable liquids being stored on your site should be identified on a plan in a similar manner.

NOTE: FLAMMABLE VAPOURS MAY EXTEND BEYOND THESE SPECIFIED HAZARD ZONES. USE CAUTION WHEN ALLOWING ANY WORK TO BE PERFORMED.

Site Hazards

As part of the requirements of the Health and Safety in Employment Act 1992, it is necessary for every business to identify and control hazards.

Hazards can include:

- activities (serving petrol)
- arrangements (storage of shop goods)
- circumstances (slippery floors)
- events (carrying unstable loads)
- processes (such as unstacking goods from a conveyer onto pellets)
- and situations (pump layout).

Hazards may be:

- physical (noise, vibration, lighting temperature etc)
- chemical (liquids, fumes, vapours, solvents etc)
- biological (bacteria, allergens, insects)
- psycho-social (stress, fatigue, assault)
- ergonomic (inappropriate posture, repetitive movement, workstations etc).

To meet your responsibilities you need to:

- ✓ Provide and maintain a safe working environment for employees
- ✓ Systematically identify, assess and control hazards
- ✓ Take all practical steps to eliminate hazards
- ✓ If elimination is not practical or is incomplete, take all practical steps to isolate the hazard
- ✓ If it is not practical to eliminate or isolate the hazard completely, minimise the effects of the hazard in order to protect staff and others on the site. Monitor the hazard to ensure controls are effective.
- ✓ Develop emergency procedures
- ✓ Ensure employees are adequately trained and supervised
- ✓ Provide employees with information on hazards
- ✓ Record, report and investigate accidents & incidents
- ✓ Ensure the safety of contractors

Employees must take all practical steps to:

- Ensure their own safety
- Ensure any action or inaction while at work does not harm any other person

Common Site Hazards

Based on surveys and information available, the hazards listed on the Hazards List have been identified as common to most service station operations. A copy of this is in the Appendices.

Identification of Hazards

Use this Hazards List as a starting point to identify your own site hazards. Indicate whether the hazard exists on your site and whether you think that it is significant. An example of a significant hazard is checking radiator water. Foodstuffs have a policy that staff should not do this and have thereby eliminated the hazard.

Each week, the Incident Report forms should be checked see if any new hazards have been identified. These checks are also listed on the weekly reports. These should then be added to the Hazards List. Every 6 months, the Hazards List should be reviewed and updated.

Inform your staff about hazards on site. Keep a record of staff training in site procedures and any actions you have taken to ensure the safety of your staff and customers.

Hazard Control

Hazards in the workplace are controlled by a combination of:

- Engineering (substituting a less hazardous process, ventilation, machinery redesign etc)
- Work practices (education and training, labelling, storage, hygiene etc)
- Administrative controls (installation of warning systems, work scheduling to minimising exposure to hazardous materials etc)
- Personal protective equipment (safety shoes, hearing protectors, high visibility vests, gloves etc)

Safety Inspections

Purpose

Regular safety inspections and maintenance must be made by a designated staff member to ensure the safe operation of the fuel station and the identification of hazards to employees. For this reason the monthly report must be kept as evidence when audited by Foodstuffs or inspected by statutory authorities. This is proof that the appropriate checks are being made.

Format

The manager must implement frequencies, activities and responsibilities that best suit the method of operation for that site. Routines should be carried out conspicuously to make staff safety conscious.

Foodstuffs have put a programme of site inspections in place to help identify any potential hazards and maintenance requirements, before they can cause harm.

Site Evacuation & Emergency Preparedness

In the event of an emergency at a fuel station:

- Carry out the appropriate steps to deal with the emergency. These are detailed in the Site Emergency Plan/Emergency Flip Chart.
- Ensure that staff, visitors and customers are out of danger. All people on site should be aware of the emergency procedures and evacuation plan.

The site should carry out an emergency exercise on a regular basis, practicing the implementation of the evacuation procedure and emergency procedures. Your site should also have a Disaster Kit, located in the Services Shed.

Evacuation

Owner Operators must ensure that staff have appropriate training in the layout of the service station and managing an orderly evacuation quickly and effectively.

Assemble at the ASSEMBLY POINT if an evacuation is ordered
Do not re-enter the site until the ALL CLEAR is given
Co-operate fully with instructions from the emergency services and Civil Defence
Contact the Owner Operator or Duty Manager as soon as possible

All staff should be familiar with the role they must play in evacuating the fuel station. The evacuation procedures should be practiced by all staff and the Owner Operator on a regular basis. Fire exits, alarms and evacuation paths should be shown in the Site Emergency Plan.

Assembly Point

The Assembly Point for your site is where all people on site at the time of evacuation will assemble. The location of the assembly point should be:

- Recognisable
- Visible from the service station
- Clear of the service station and hazard zones.

When a site is being evacuated, all staff and customers should assemble at the designated Assembly Point.

All Clear Procedure

STAY OUT OF THE SITE UNTIL THE “ALL CLEAR” HAS BEEN GIVEN

When the reason for the evacuation has been controlled or ended, the designated staff member should take the responsibility of checking the site, in conjunction with emergency services, to ensure that it is safe for everyone to return.

- Inspect all areas of the site. Identify damage to be repaired and hazards caused by the damage
- Ensure the safety of all people on site will not be compromised. Cordon off any unsafe areas of the site
- If your site is “ALL CLEAR” notify the Owner Operator
- Confirm your “All CLEAR” designation with the Fire Service

If practical, re-open the site as soon as possible

Fire Precautions

Because fuels and ignition sources are always present, fire is the major hazard associated with service station operation.

By understanding the causes of fires and following the proven means of prevention, you can help maintain the excellent safety record achieved in the industry.

How Fires Start

Fires occur when a mixture of fuel and oxygen, in the correct proportions, comes into contact with a source of ignition.

Fuels comprise any combustible solid, liquid or gas, such as:

- Petrol and petrol vapour
- LPG and LPG vapour
- Acetylene gas
- Materials such as paper and textiles
- Other petroleum products, such as diesel fuel, CNG, kerosene, oil, paints and solvents.

Oxygen is a major component (21% of the air or atmosphere present in all living and working situations).

Sources of Ignition include:

- The exposed flame of a lighted match, a welding torch, an incinerator, or a gas-operated refrigerator of a caravan
- The red heat of a lighted cigarette or open bar radiator
- The hot exhaust system of any engine
- A hot spark from a grinding wheel or a steel object striking concrete
- An electric spark from the operation of an electric switch (eg. The automatic switch of a refrigerator)
- An electric spark from a vehicle electrical system or an item of electrical equipment (eg. Electric drill)
- An electric spark (discharge) resulting from the build up of a static electricity charge on an insulated container or material.

The Basic Principles

In any situation removing any one of the following can eliminate the risk of fire or explosion:

- Fuel
- Oxygen, or
- Sources of ignition

The Basic Rules

As the presence of air cannot be eliminated in a fuel station environment, the risk of fire must be eliminated in a fuel station environment by keeping flammable material away from sources of ignition. To achieve this, the basic rules are:

- Do not allow children under the age of 15 to dispense petrol
- Take all necessary precautions to prevent spillage or overflow
- Do not operate pumps when -
 - Non-approved portable containers are presented for filling
 - Unsafe appliances are left operating in caravans or boots (eg refrigerators)
 - Persons remain seated on motor cycles
 - Mobile phones (in car & portable) are being used on the forecourt
- Ensure that customers are not smoking and engines, including turbos, are not running before filling commences. Staff must be courteous but insist – it is for everyone's protection.

- Know what to do in the event of an emergency.
- Store flammable products in closed containers away from the sources of ignition. The Hazardous Substances regulations specify the maximum quantities of dangerous products that can be stored and how these products are to be stored.
- Do not use containers of flammable products for supporting welding, grinding or other “hot” work.
- Do not “hot cut” any container which has previously held a flammable product
- Do not allow any smoking or naked flames near the storage or dispensing area of any flammable product.
- Do not allow “hot” work to be performed on a fuel or exhaust system while they are still on the vehicle.
- Do not allow rubbish, waste or litter to accumulate – remove regularly to approved containers
- Clean up spills of flammable products immediately they occur
- Do not place a rubbish bin directly beneath the console equipment
- Do not use petrol or low-flash-point solvents for cleaning purposes
- Ensure that all electrical equipment is well maintained in the immediate vicinity of the retail site.
- Do not allow open bar radiators to be used at a fuel station

PnS/NW Fuel Safety Features

The fuel station is built with safety in mind, both for staff and customers. A plan is located in the front of this document identifying the location of the safety equipment held on site. **Please be familiar with the location and use of these items.**

- **Visual** – the Supermarket Service Desk has a TV monitor displaying the each forecourt dispenser via CCTV camera’s located under the Canopy roof
- **Pumps** – the pump will only operate when the nozzle is removed from its bracket. This control also turns on the sub-pump located in the fuel tank that will pump the fuel through the nozzle. Replacing the nozzle turns the dispenser and the sub-pump in the tank off again. The nozzles have no clips. The customer must therefore stay in attendance during the filling operation.
- **Emergency Stop Button** – there are is an emergency stop button located on each canopy upright, one on the Emergency sign, and one located in the Supermarket Service Desk. These shut off the power to all of the dispensers and sub-pumps in the tank. It is the quickest way to stop any fuel being pumped on site.
- **Telephone** – a phone in the immediate vicinity of the console permits direct contact with Police, Ambulance and Fire Departments in the event of an emergency. The telephone numbers of these and other emergency providers are in the Emergency Procedures Flipchart held next to the POS.
- **Fire Extinguishers** – are located in the Emergency Procedures Sign on the forecourt and there presence should be checked for each day. Every staff member must be aware of their location and how to operate them.

- **Emergency Procedures Flipchart** – this must be held next to the POS and at the Supermarket Service Desk. It includes phone numbers and basic procedures for a range of dangerous situations.
- **Interceptor Shut-off valve** – The Oil/Water separator intercepts all petroleum products collected off the forecourt before it goes to stormwater. However in the event of a very large spill it will become overwhelmed. Therefore this valve is provided to close off the connection to the stormwater system. It's location is important to know.
- **Absorbent Material** – this is provided for use in the event of a minor spill and is located along side the Emergency Spill Kit. This is a Wheelie Bin and it contains absorbent granules, absorbent towels and snakes, gloves, goggles, etc to allow for a minor fuel spill to be cleaned up.
- **Flammable Area Safety Signs** – these are displayed prominently at the pumps.

Fire Fighting

Types of Fires

Fires are classified as follows:

- Class A** Fires involving combustible solids such as paper, textiles, wood, litter and rubbish
- Class B** Fires involving flammable liquids such as petrol, kerosene, lubricating and cooking oils
- Class C** Fires involving flammable gasses such as LPG, CNG and acetylene

Fires involving live electrical equipment are not given a separate class.

Each class of fire requires a particular fire fighting method or combination of methods to best extinguish it.

Basic Fire Fighting Methods

The basic methods of extinguishing fires are:

- Removing the fuel supply (starving)
- Excluding the oxygen (smothering)
- Removing the heat (cooling)
- Chemically inhibiting the flames

Removing the Fuel

In fires involving flammable liquids or gases, starving the fire from any further supply of fuel is essential and is achieved by:

- Switching off power to fuel pumps using the emergency switch on the console
- Turning the main electrical switch to “OFF”. Also ensuring the main electrical panel is clear by the space of at least one meter at all times.
- Closing the shut-off valves on gas cylinders
- Applying foam to spilled fuel

Remove all vehicles on the forecourt by manpower – do not start engines under any circumstances.

Excluding the Oxygen and Removing the Heat

Various extinguishing agents are used in fire fighting equipment, and a particular agent may act in more than one way:

Water: Acts mainly by cooling the fire and protecting the surrounding area by wetting it

Foam: Acts mainly as a blanket to exclude fuel vapour, but also exclude oxygen

Carbon dioxide: Provides a temporary blanket to exclude oxygen

Chemically Inhibiting the Flames

Powder and vapourising liquid agents extinguish flames by inhibiting the chemical reactions in the flames

Selection of an Extinguishing Agent

The selection of the appropriate extinguishing agent depends on the class and size of the fire; in some cases the use of an inappropriate agent may be dangerous:

- Electrically non-conductive agents – carbon dioxide, powder and vapourising liquid – can be used on all classes of fire.
- Electrically conductive agents – water and foam – must not be used on fires involving live electrical equipment
- Water must not be used on fires involving flammable liquids

In most cases, only the correct extinguisher is provided in each fire hazard area

Portable Fire Extinguishers

Regulations

Portable fire extinguishers must be provided and maintained in accordance with New Zealand Standard 4503 and the regulations of the local fire authority. In particular, ensure that:

- The number and location of extinguishers meets the requirements of the regulations and Foodstuffs standards
- All extinguishers are serviced regularly in accordance with NZS 4503 (ie. At 12 monthly intervals)
- The servicing tags (showing the test date) are attached to extinguishers to show that the extinguishers have been serviced
- Extinguishers are removed only for emergency use
- An authorised service contractor recharges extinguishers immediately after use.

Staff Training

ALL members of staff must:

- Know the location of all extinguishers
- Understand the operating instructions for each type of extinguisher and know the class(es) of fire for which each is used
- Attend regular “hands on” practice in the use of extinguishers
- The Fuel Facility has 2 x 9 kg dry powder fire extinguishers located within the emergency procedures sign.

The Owner Operator is responsible for arranging this

Which extinguisher to use

The following chart lists the fire extinguishers appropriate for the different classes of fires.

- Ensure that you understand and know how to use the chart
- Do not use water or foam extinguishers on any fire where electrical equipment is alive or is suspected of being alive
- Ensure that you know how to operate the extinguisher before using it.

You may use any extinguisher on a person on fire, provided that the contents are not discharged into the face at close range.

Types of Extinguisher:

Extinguishing Agent	Description	How it works
Water	Cheap; available; stops reignition; effective on solid combustible materials; conducts electricity; safe to use on people	Cools material, so stopping release of vapours
Foam	Fluid mixture of water, chemical and air bubbles; forms frothy blanket; conducts electricity; safe to use on people	Cools, excludes air and stops release of vapours
Carbon Dioxide	Inert gas which is heavier than air; cools objects rapidly; electrically non-conductive	Excludes air; provides some cooling but not as much as water or foam
BCF (Vapourising Liquid)	Liquids that vapourise rapidly; vapours slightly heavier than air; forms toxic gasses when used on fire; electrically non-conductive. NOTE: Being phased out and cannot be charged when used	Chemical reaction which stops flame continuing
Dry Powder	Chemical powder; does not cool, electrically non-conductive; safe to use on people.	Chemical reaction which stops flame continuing
Fire Blanket	Fibreglass or woollen blanket; can be used on people; some danger of reignition if removed too soon.	Excludes air

Fire Emergency Procedures and Checklist

ALL members of staff must know and understand what to do if a fire occurs. Refer to the Emergency Procedures Flipchart.

In all cases, prime consideration must be given to the immediate safety of customers and staff, and the containment of the fire.

If help is available, delegate responsibilities to form a competent fire fighting team.

Clothing on Fire

Use a fire extinguisher, or hose the person down, or extinguish the flames by wrapping a blanket (or similar large, non-synthetic article) around the person. Lay the person on the ground and apply correct first aid. If clothing has been splashed with petrol and ignited, a dry powder extinguisher is the most effective method of putting out the flames. A water hose can then be used to extinguish any smoldering cloth and cool any burnt skin.

Under-Bonnet Fire

- Ensure that all passengers are out of the vehicle before tackling the fire
- Turn all pumps/ dispensers off
- If possible, push the vehicle off the forecourt and clear of the petrol pumps and dispensers.
- Release the bonnet lever, but **DO NOT OPEN THE BONNET**
- Use a dry powder extinguisher and direct the powder under the bonnet
- Alternatively, a hose can be used to douse flames with water

Safe Handling of Petrol

This section of the handbook covers the handling of all grades of unleaded petrol and two stroke fuels.

Hazards

The hazards involved with the handling of petrol are:

- Fire
- Toxicity

Petrol is produced for use as a fuel in internal combustion engines and, when used in this manner, is a safe and reliable product. The use of petrol for other purposes exposes the user to the above hazards.

Do not use petrol:

- As a fuel for heating appliances, lamps or for starting fires in incinerators
- For cleaning floors, benches, equipment or motor parts
- For washing dirt, grease or other material from the skin.

Fire

Fire is a major hazard associated with the handling of petrol. When petrol is dispensed into vehicles or containers, or when spillage occurs, petrol vapour is released and mixes with air.

A mixture of petrol vapour and air can be ignited if the petrol vapour volume is between 1.5% and 7.5% of the mixture (less than 1.5% is too lean to ignite, more than 7.5% is too rich to ignite)

On every occasion that petrol is dispensed in contact with the air, the critical vapour: air ratio for ignition occurs as the vapour disperses in the air. This is why smoking and the use of any naked flame is prohibited in areas where petrol is handled.

When petroleum products (petrol, ADF, Kerosene, etc) are pumped through a hose or poured from a container, static electricity is generated. If the hose or container is not properly earthed, the static electricity can generate a spark, which can ignite the vapours.

This is why only metal containers (or special plastic containers which comply with the requirements of The Dangerous Goods Act 1974 and its associated regulations, and have been stamped with a "LAB") should be used. They should always be placed on the ground when being filled so that any static charge produced can drain away to earth.

Petrol vapour is heavier than air and can drift and settle into low-lying areas or drains where an ignitable mixture may be maintained for long periods.

When dispensing petrol, the following precautions are essential:

- Remove any possible source of ignition from the dispensing area
- Select an area that minimises the chance of petrol vapour drifting and settling into any low-lying areas.
- Only fill approved metal or plastic containers that are in good condition and have a tight filling cap.
- Keep them on the ground when filling.
- DO NOT fill glass or non-approved plastic containers.

Toxicity

If not handled correctly, all petroleum products present health hazards. These hazards, and their effects on health, are listed in the Material Safety Data Sheets, which have been supplied by BP. These are located in the Fuel Compliance Dossier held at the main reception.

Therefore, when handling petrol:

- Do not allow petrol to come into contact with any part of the body. Petroleum products irritate the skin and can cause dermatitis. If contact occurs, wash the affected area with soap and water.
- Do not wear clothing which has become contaminated with petrol
- Do not inhale petrol vapours. Inhalation of petrol vapour can cause dizziness and headaches. If vapours are allowed to concentrate, such as in a confined space with poor ventilation, they may cause unconsciousness
- Do not use the mouth to siphon petrol because of the risks of inhaling the vapour or swallowing liquid petrol. The entry of petrol (vapour or liquid) into the lungs damages the lung tissue – the resultant formation of fluid in the lungs can cause death.

Rules for Safe Handling

Filling Vehicle Fuel Tanks (Full Service Pump)

- The attendant and customers must not attempt to use a faulty pump, hose or nozzle.
- Ensure that riders of motorcycles, or similar conveyances, dismount before filling commences.
- Before removing the tank filler cap, ensure that:
 - All vehicle lights are switched off
 - The engine is turned off

- Any auxiliary internal combustion engine on the vehicle (eg: cement mixer) is turned off
- Any gas operated refrigerator (in a caravan, boat or camper) is turned off
- There is no smoking in the area
- Check that the hose is safe and remove any kinks before stretching it
- Keep the nozzle in firm contact with the filler pipe during the whole operation
- Remain in constant attendance if the nozzle does not have an automatic shut off. (Automatic nozzles may be left unattended while the attendant checks oil levels, batteries, radiator and other items on the vehicle)

Filling Vehicle Fuel Tanks (Self-Serve Pump)

The operator has remote control over all pumps from the fuel shop. Fuel staff may shut off any pump or all pumps by pressing the appropriate button on the console.

The forecourt must be kept free of obstructions

- Keep all warning signs visible to customers
- Keep all fire extinguishers visible and accessible to staff
- Keep all pumps visible from security cameras

Pumps are to be activated only as and when required

- Switch off any pump where the engine of a vehicle or an auxiliary engine (eg. Cement mixer) is running
- Switch off any pump where customers are smoking, or are possession of a lighted match, lighter, cigarette, pipe or cigar.
- Switch off any pump where the customer has jammed a tank fill cap in the nozzle

Filling Containers

Static electricity is produced when flammable liquids are pumped through the nozzle of a petrol pump. This collects on the surface of the liquid in the container. If the container is made of a material that conducts electricity then the greater to build up of static electricity. If the static electricity cannot dissipate as the container is filled it can build up to the point of producing a spark that can ignite the fuel vapours.

Many plastics are easily attacked by flammable liquids and become brittle and crack allowing fuel to escape. The heavy plastics used in approved containers prevent puncturing and splitting if they are placed under pressure or squashed. They will also withstand the internal pressure of expanding vapour if left in the sun.

The following rules apply to containers:

- Only approved containers are to be filled. The use of non-approved plastic, glass or breakable containers is illegal. Approved plastic containers are marked as "LAB" and comply with the Dangerous Goods Act 1974 and it's associated regulations.
- Containers must be placed on the ground during filling and must be removed from any vehicle, caravan, trailer, boats or ancillary conveyance before filling.
- The filling must take place away from any possible source of ignition – smoking must not be allowed
- The pump nozzle must be kept in contact with the metal part of the container spout during the whole operation
- Law prohibits the filling of 205 litre drums on the forecourt. (The splash filling causes a static electricity hazard.)

Filling Storage Tanks (Tanker Delivery)

Tanker drivers are trained in the handling of petroleum products, but need the following assistance in making deliveries.

When the site is open – delivery during business hours:

- Provide standing room for the tanker at the required discharge location. If necessary, remove parked vehicles or obstructions and ensure that the tanker does not obstruct the traffic on the forecourt.
- Ensure that the area around the storage vents is free from any source of ignition
- Dip the tanks to ensure that the proposed delivery of product can be accommodated within the “Safe Filling Level” marked on the dipstick.
- Remove the dip cap
- To avoid damage to a dipstick (or to the tank bottom), do not drop the dipstick to the bottom of the tank or leave it lying outside the tank
- Ensure that the tanker hose is connected to the required tank before discharge commences
- During discharge, watch for overflow at vents and pumps. Take appropriate action if overflow occurs (see Tanker Discharge Spills and Overflows)
- After delivery, dip the tank to verify correct discharge
- Replace the dip and filler cap and ensure that the filler cap is correctly tightened to prevent entry of water
- Ensure that the dip and fill are correctly tagged and / or coloured for product identification and lock the cap
- Replace and secure the cover lid
- Assist the driver in manoeuvring his vehicle when leaving the site
- Advise Owner Operator of any unsafe actions by a tanker driver

Spillage and Overflow

On Clothing or Body

Contamination of clothing or skin must be attended to immediately. Petrol is not only toxic and an irritant; its vapour has a narcotic effect which may affect a driver. It may also be ignited inside the vehicle.

- **If petrol has been swallowed, call an ambulance immediately.** Do not induce vomiting as this is dangerous and may cause death. Water may be given.
- **Petrol in the eyes** – wash the eye for 10-15 minutes with plenty of fresh water, blinking as often as possible. Seek medical help if pain or redness persists.
- Do not allow a customer to enter a vehicle or to drive away with contaminated clothing or skin.
- If necessary, stop filling operations and switch off all pumps. Self-serve operators must advise other customers of the incident and request their co-operation.
- Remove the affected person from the filling area to a location free from any possible source of ignition. Do not allow any smoking by the affected person or anyone else in the vicinity.

- Clean up any spillage on the forecourt or customer's vehicle with absorbent material before moving the affected vehicle.
- When safe to do so, advise customers and resume normal filling operations.
- If the contamination is minor, slowly remove the affected items of clothing and hang the clothing in the open air until free of vapour. Wash any affected skin with soap and water.
- If the clothing is saturated, use a hose, sponge or shower to thoroughly wet all items before removing clothing to prevent possible ignition from static electricity. Wash skin with soap and water.
- If the skin is burst or blistered, hold the affected area under cold running water. Seek medical attention.
- Warn the owner of the contaminated clothing to thoroughly air all items before placing the clothing in a washing machine or drier.
- Notify the Owner Operator and complete an Incident Report form. If any injuries occurred, keep a copy of the Incident Report Form for the Site Accident Register.

Spills and Overflows (less than 20 litres)

If a spillage occurs from a back flow, overflow during the filling of a vehicle tank or container or portable container attend to it IMMEDIATELY.

- Isolate the area of the spill using the safety cones. If it is adjacent to a dispenser turn off the power to that dispenser.
- Advise customers of spillage and request that no vehicle engine be started within the spill area until clean up has been completed and notice given. Do not allow any smoking.
- Cover the entire area with the absorbent material stored in the Emergency spill kit. Keep customers away from the area and sweep up and store the contaminated material, seal it in a suitable container and store in a secure area.
- Contaminated material should be disposed according to local regulations; eg. To an approved landfill site or removed by a licensed contractor. Contact your local waste contractor and local council for more information.
- Wash spill area gently with water and allow to dry.
- When clean-up is complete and the area is safe, advise customers, thank them for their co-operation and resume filling operations
- Notify the Owner Operator and complete an Incident Report Form.

Spills and Overflows (more than 20 litres)

These spillages or overflows may result from incidents such as pump hose rupture, burst pipelines following collision with a pump or over filling on a product delivery. What action to take, and in what sequence, must be assessed according to:

- The volume and location of product spilled
- The number of trained helpers available

Where the spill results in liquid pooling or flowing over a wide area the Fire Brigade, Police and Dangerous Goods Authority **MUST BE** alerted. If more than one person is in attendance, allocate responsibilities to form an emergency task team.

- Activate an Emergency Stop button to stop any more fuel from being pumped.
- Evacuate all persons from the fuel station
- Call the Fire Brigade
- Close off the blue valve on the Interceptor. See the Emergency Equipment Location plan for the location of the valve.
- Do not allow any engines to be started. If necessary, use manpower to remove vehicles from the forecourt.
- Eliminate all possible sources of ignition
- Attempt to contain spillage using absorbent material and prevent it from entering drains
- Advise the Owner Operator about the incident
- Give any assistance to customers, Fire Brigade officials and police as may be required for safety and clean up
- Complete an Incident Report form.

Tanker Discharge Spills and Overflows

The tanker driver is responsible for organising and carrying out emergency procedures and cleaning up as he / she sees fit. However, the Owner Operator must provide any assistance that may be requested and ensure that the driver has:

- Closed all valves on the vehicle tank
- Isolated the area and contained the spilt product.

Overfilling of the storage tanks may cause petrol to leak from a pump. Usually this leakage can be seen overflowing from the nozzle holster. In such instances:

- ✓ Switch off power to the pump and act as for forecourt spillage (see pervious page)
- ✓ Remove the pump cover panels and inspect internally
- ✓ If petrol has accumulated inside the pump, clean up any external spillage, call the Facilities Maintenance contractor for service and take appropriate safety precautions.
- ✓ If the pump is dry internally, clean up any external spillage, replace the cover panels and return the pump to service.

Absorbent Material

Stocks of absorbent materials must be held on site in case of a spillage of petroleum products. Check your stock held in the Emergency Spill Kit.

- Absorbent material (Kitty Litter is a good substitute)
- Absorbent socks/Towels

Once used, absorbent material can be disposed of at an approved landfill site. However the local council and waste contractor should be contacted to determine what is appropriate for your area.

Work Permits & Contractor's Safety Manual

In the oil industry, hazards exist because of the nature of the products handled. The purpose of a Contractor's Safety Manual is to specify conditions under which construction, maintenance and repair work can be carried out safely. The purpose of a Work Permit is to specify conditions for certain high-risk activities.

Routine Work

Before any work commences, the Owner Operator must designate a fuel staff member to be aware of the proposed work and be satisfied with the procedures applied.

Contractors must notify the fuel staff of their arrival on site and advise them of the maintenance work to be completed.

Contractor's Safety Manual

All contractors must complete a Contractor's Safety Manual form prior to the commencement of work. A new form must be completed at the commencement of a new job. Contractors must also advise the designated fuel staff of their progress for safety reasons.

A Contractor's Safety Manual form covers:

- What the job is
- Where the job is
- What precautions to be taken
- Any additional precautions advised by site staff
- Signatures confirming the conditions and precautions stated on the form.
- Record of the start time of the job

The types of work covered by the Contractor's Safety Manual form are:

- Cold work
- Routine tasks where there is no possibility of introducing an ignition source into a restricted or hazardous zone
- Some hot work activities not requiring a Gas Free Certificate

It also states certain safety requirements that must be fulfilled by the contractor in carrying out the work.

If the task extends into the next shift, all applicable forms must be renewed (ie. All parties re-sign) at the commencement of the new shift. This procedure also applies if the work area has been left unattended for a period of more than two hours.

Fuel staff must print and sign their name on the Contractor's Safety Manual form to confirm:

- knowledge of the work to be completed
- that they have witnessed the contractor's signatures on the form
- agreement with the time spent on site
- agree to the completion of the job
- acknowledge that Incident report forms have been completed for any incidents occurring.

Completion of Work

The Contractor's Safety Manual form is to be signed by both parties once the work has been satisfactorily completed (declaration #3). Any incidents must be recorded on an Incident Report form and attached.

Copies of the Contractor's Safety Manual form and Incident Report forms are to be retained by the site and the contractor.

Work Permits

Work permits are required for the following activities:

- Entry into a confined space
- Hot work
- Excavations more than 1.5 metres deep
- Concrete cutting, grinding etc in Hazardous Zone.

The Facilities Maintenance Contractor responsible for organising any Work Permits and will do this after considering:

- The area
- The work to be done
- The equipment to be used

They must discuss this with the Owner Operator. The Facilities Maintenance Contractor will also check that contractors are aware of the Safe Work Conditions

The contractor must ensure that the permit conditions are understood, and then sign the permit to indicate acceptance. All personnel working under permit control must also be aware of the conditions and abide by them.

The Owner Operator or a delegated staff member must ensure that the permit conditions are understood, and then sign to indicate acceptance. The Owner Operator is responsible for site safety and must stop work if the permit conditions are contravened. If it becomes necessary to stop the work, the Owner Operator and Facilities Maintenance Contractor must be advised immediately.

The contractor must also complete the Contractor's Safety Manual form, which details whether or not a Work Permit is required.

Hot Work

Hot work requires a separate Gas Free Certificate to be issued before the Hot Work Permit is issued. The Facilities Maintenance Contractor issues the Hot Work Permit and the Gas Free Certificate.

The Facilities Maintenance Contractor, contractor and Owner Operator each receive a copy of the Hot Work Permit.

The Hot Work Permit and Gas Free Certificate must be re-validated before each shift. The Owner Operator must confirm that work can continue with safely and the conditions of the permit continue to be observed. The re-validation must be recorded on the back of the copies held by the contractor and Owner Operator.

Completion

When the task has been satisfactorily completed, the contractor signs “Work Completed” section of the permit, and the Owner Operator signs the “Work Accepted” section. The contractor’s copy of the work permit is returned to the Owner Operator once the work has been accepted.

6) GEOTECHNICAL AND ENVIRONMENTAL ASSESMENT

The OSH code of practice requires that the site locality and its environmental risk be established to determine if there are any affects on the environment

Zone identification

This assessment is based on the OSH code of practice and follows an onsite inspection of the site and surrounding terrain. A site file inspection will be required prior to lodgment of the building consent application to establish that there are no geotechnical issues to be resolved with regard to the site geology.

Identify Environmental Risks (from section 10.1 OSH Code of Practice)

The degree of environmental risk associated with an installation shall be evaluated with regard to the following parameters:

The environmental sensitivity classification of the area in which the site is located;

The permeability of the soil around and under the Underground Petroleum Storage System (UPSS); and

The ability of the underground environment to transport hydrocarbons

Environmentally Sensitive Zones

- Zone A **Highly sensitive areas** are areas where there is a high risk that any leakage from a UPSS will contaminate an aquifer, which is used or has been identified for future use as a source of supply for a reticulated potable water system. Secondary containment shall be installed in all Zone A areas.
- Zone B **Moderately Sensitive Areas** are areas that are within 100 meters (or such greater distance that the Authority shows is needed) of any pumping station drawing potable water from an underground source or of areas such as inland waterways and wetlands where any leakage from a UPSS will have a medium or long term adverse effect on that environment, as determined in consultation with the appropriate authority.
- Zone C **Other Areas of Lesser Sensitivity** where any leakage from a UPSS is unlikely to pose a significant threat to human life or the environment