Safety management system for gas supply and cylinder distribution business

Generic SMS

Section 675A *Petroleum and Gas (Production and Safety) Act 2004*

Petroleum and Gas (Safety) Regulation 2018

This publication has been compiled by the Petroleum and Gas Inspectorate, Department of Natural Resources, Mines and Energy.

© State of Queensland, 2018

The Queensland Government supports and encourages the dissemination and exchange of its information. The copyright in this publication is licensed under a Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

Under this licence you are free, without having to seek our permission, to use this publication in accordance with the licence terms.



You must keep intact the copyright notice and attribute the State of Queensland as the source of the publication.

Note: Some content in this publication may have different licence terms as indicated.

For more information on this licence, visit https://creativecommons.org/licenses/by/4.0/.

The information contained herein is subject to change without notice. The Queensland Government shall not be liable for technical or other errors or omissions contained herein. The reader/user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using this information.

For further information on the content of this document please contact:

Petroleum and Gas Inspectorate, Department of Natural Resources, Mines and Energy   
275 George Street, Brisbane, Qld. 4000   
PO BOX 15216, CITY EAST, QLD 4002

Email: [gassafe@dnrme.qld.gov.au](mailto:gassafe@dnrme.qld.gov.au)   
Telephone: (+617) 3199 8027  
Fax: (+617) 3405 5346

Website: [www.business.qld.gov.au](https://www.business.qld.gov.au/industry/energy/gas)

# 

# Contents

[Purpose of this template 1](#_Toc520714102)

[Instructions for this template 2](#_Toc520714103)

[Safety management system for gas supply and cylinder distribution business 2](#_Toc520714104)

[Business type: 2](#_Toc520714105)

[Element 1: Description of the plant, its location and operations 3](#_Toc520714106)

[Element 2: Organisational safety policies 7](#_Toc520714107)

[Safety statement 7](#_Toc520714108)

[Elements 3 & 4: Organisational structure and safety responsibilities 8](#_Toc520714109)

[Element 5: Safety assessment 10](#_Toc520714110)

[Element 6: Interaction with other operating plant or contractors 14](#_Toc520714111)

[Elements 7 & 8: Training 15](#_Toc520714112)

[Element 9: Safety standards and operating procedures applied or to be applied, in each stage of the plant 16](#_Toc520714113)

[Element 10: Control systems including, for example, alarm systems, and emergency shutdown systems 17](#_Toc520714114)

[Element 11: Machinery and equipment relating to or that may affect the safety of the plant 18](#_Toc520714115)

[Inspections and audits 20](#_Toc520714116)

[Element 12: Emergency equipment, preparedness and procedures 21](#_Toc520714117)

[Elements 16 & 17: Record management including e.g. relevant approvals, certificates of compliance, incident and accident reporting 26](#_Toc520714118)

[Additional resources 27](#_Toc520714119)

[Sample training record 27](#_Toc520714120)

[Sample monthly inspection checklist 28](#_Toc520714121)

[Sample audit and inspection checklist 30](#_Toc520714122)

# Purpose of this template

The Petroleum and Gas Inspectorate (the Inspectorate) regulates petroleum and gas safety under the Petroleum and Gas (Production and Safety) Act 2004 (the Act).

Gas supply and cylinder distribution businesses in Queensland must comply with the requirements in the Act and subordinate legislation to ensure risks from their operations are managed. The Act allows certain gas supply and cylinder distribution businesses to use a generic SMS.

This generic Safety Management System (SMS) has been created to assist certain businesses to comply with their obligations.

The operator is the person who is responsible for the management and safe operation of the operating plant. If you are an operator of one of the following operating plants you can choose to adopt a generic SMS:

* a bulk fuel gas storage facility if the tanks storing the fuel gas at the facility have a total volume of less than 30t
* an LPG delivery network for non-automotive LPG if the combined water capacity of fuel gas containers in the network for non-automotive LPG is not more than 5000L and the network includes filling, with non-automotive LPG, a fuel gas container with a water capacity of more than 30L
* an LPG delivery network for non-automotive LPG if the combined water capacity of fuel gas containers in the network for non-automotive LPG is more than 5000L but not more than 12000L.

This document can be used as a generic SMS. Operators must identify hazards and assess the risks at their business then tailor the document to effectively manage those risks. Additional safety requirements are also prescribed under the Act including AS/NZS 1596:2014 The storage and handling of LPG (AS/NZS 1596). There are also obligations in the Work Health and Safety Act 2011 (the WHS Act), which regulates general safety, hazardous chemicals and major hazard facilities.

When completed, the generic SMS can provide an effective way of ensuring safety and health risks are managed.

# Instructions for this template

Entries shaded in grey indicate information is required to complete this part of the system.

Italic print in the grey shading provides an example of the information to include.

Instructional comments are included in grey text boxes. These can be deleted when instruction has been taken.

At the end of the template document is an Additional Resources section. These sample documents can be used for the purpose indicated however they do not form part of the SMS. These documents may be referenced in the records management section (Elements 16 & 17).

# 

# Safety management system for gas supply and cylinder distribution business

|  |  |
| --- | --- |
| Company |  |
| Address |  |
| Produced by |  |
| Approved by |  |
| Last reviewed |  |

## Business type:

|  |  |
| --- | --- |
|  | A bulk fuel gas storage facility if the tanks storing the fuel gas at the facility have a total volume of less than 30t |
|  | An LPG delivery network for non-automotive LPG if the Combined water capacity of fuel gas containers in the network for non-automotive LPG is not more than 5000L and the network includes filling, with non-automotive LPG, a fuel gas container with a water capacity of more than 30L |
|  | An LPG delivery network for non-automotive LPG if the combined water capacity of fuel gas containers in the network for non-automotive LPG is more than 5000L but not more than 12000L |

## Element 1: Description of the plant, its location and operations

Section 675(1)(a)

1.1 LPG storage on site

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Location | Nominal LPG capacity (kg) | Nominal water capacity (litres) | Maximum quantity on hand | Maximum on hand (kg) |
| Bulk storage |  |  |  |  |
| Cylinder stocks | 210 |  |  |  |
|  | 190 |  |  |  |
|  | 90 |  |  |  |
|  | 45 |  |  |  |
|  | 18 |  |  |  |
|  | 15 |  |  |  |
|  | 13.5 |  |  |  |
|  | 8.5 |  |  |  |
|  | 4 |  |  |  |
| Other |  |  |  |  |
| Total maximum LPG Cylinder storage on hand | | |  | |

1.2 LPG customers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Location | Nominal LPG capacity (kg) | Nominal water capacity (litres) | Maximum quantity delivered | Maximum delivered (kg) |
| Cylinder stocks | 210 |  |  |  |
|  | 190 |  |  |  |
|  | 90 |  |  |  |
|  | 45 |  |  |  |
|  | 18 |  |  |  |
|  | 15 |  |  |  |
|  | 13.5 |  |  |  |
|  | 8.5 |  |  |  |
|  | 4 |  |  |  |
| Other |  |  |  |  |
| Total maximum LPG at customer sites | | |  | |

1.3 Other dangerous goods stored on site

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Location | Item | Maximum quantity  on hand | Pack size | Unit | Total quantity  on hand |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

| Yes | No | Activity | Description |
| --- | --- | --- | --- |
|  |  | Filling by mass using scales | Pump filling cylinders from a larger container, using scales to determine correct measure or safe filling level (SFL) |
|  |  | Filling by pressure differential (decant method) | Filling cylinders from a larger container using the fixed ullage tube outlet to determine SFL |
|  |  | Storage | Methods of storing LPG on a site whether in a bulk vessel, or in cylinders |
|  |  | Transport | Transfer of cylinders by road to the sub dealer or consumer in an appropriate vehicle |
|  |  | Connection | Exchanging empty cylinders and replacing with full cylinders at customer premises including site safety check |
|  |  | Installations | Includes initial installation of any LPG cylinders, appliances and associated equipment |

1.4 On site LPG activities covered by this safety management system

Site layout

The site layout may be hand drawn and is to include where applicable:

|  |  |
| --- | --- |
| * The main entrance * The main building * Access gates * LPG storage area (including its capacity) * Scale or dimensions * The names of adjacent streets | * The emergency shutdown buttons * Location of emergency equipment including firefighting equipment * The position and nature of the occupancy on adjoining sites * The North point |

## Element 2: Organisational safety policies

Section 675(1)(b)

## Safety statement

In the conduct of LPG activities, safety of employees, customers and the community is the highest priority. To ensure this, the business will always:

* Comply with all statutory work health and safety requirements
* Continually monitor and review safety performance
* Ensure that staff are trained and competent to undertake tasks involved in their duties
* Consult with staff to identify means of reducing workplace risks
* Require staff and site visitors to comply with our safety directives
* Ensure no task or activity will be undertaken if safety is compromised

List separate polices relevant to safety. E.g. safety policy, drug and alcohol, rehabilitation, environmental and other policies specific to this site.

|  |  |
| --- | --- |
| 2.1 Policy name | Number / version |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# 

## Elements 3 & 4: Organisational structure and safety responsibilities

Sections 675(1)(c) & 675(1)(d)

Where the operation is run by an individual, the Executive Safety Manager is the operator and as the operator will be responsible for the obligations of the site safety manager. This may also occur for other small operations.

The requirements for having Site Safety Managers will vary from site to site and also from operation to operation. These should be determined as part of the risk assessment carried out under Element 5. Generally, a Site Safety Manager is appointed for any distinct site that forms part of an operating plant where people are regularly working. The Site Safety Manager carries the primary responsibility for safety at the site and must have the necessary skills and competencies to be aware of all the hazards and mitigating procedures of the jobs at hand. The Site Safety Manager would normally be the person responsible for day-to-day operations at the site. If a Site Safety Managers is not required, the operator as defined in section 673 is the Site Safety Manager.

3.1 Safety responsibilities under this safety management system

| Position / role at site | Name | Daytime telephone | After hours telephone | Safety obligations |
| --- | --- | --- | --- | --- |
| Site owner / Executive Safety Manager |  |  |  | Responsible for management and safe operation of the operating plant. |
| Operator |  |  |  | Ensures everyone who has an obligation under the safety management system complies with their obligations. |
| Site Safety Manager |  |  |  | The site safety manager for this site will ensure that:  (a) each person who enters the site is given an appropriate induction; and  (b) each person at the site complies with standard operating procedures, emergency response procedures and other measures assuring the safety of the site and the person; and  (c) each person working at the site performs their functions safely and follows standard operating procedures for the plant; and  (d) necessary first aid, safety and other like equipment that is appropriate for the likely hazards of the site is available for use; adequately maintained; reasonably available to anyone authorised to be on the site; and  (e) relevant staff are trained in first aid, emergency and other general safety procedures. |
| Training manager / Instructor |  |  |  |  |
| Employees |  |  |  |  |
|  |  |  |  |  |

## Element 5: Safety assessment

Section 675(1)(e)

### Identified risks and risk mitigation

The key hazards and risks associated with the operation of LPG cylinder filling, storage and distribution have been assessed and categorised in AS/NZS 1596. This SMS lists these risks together with risk management statements. Statement boxes are ticked to identify risk management relevant to this site.

5.1 Gas leak

|  |  |
| --- | --- |
| Risk | LPG is heavier than air and will ‘gravitate’ to the lowest point. Leaks can occur at storage vessels, fittings, valves, pipelines and appliances. If a gas leak finds an ignition source, it can ‘flash back’ to the leak point. |
|  | All in-service cylinders containing gas are maintained and tested within statutory guidelines and stamped accordingly. |
|  | Cylinders larger than **13.5kg nominal capacity containing LPG** are stored outside. |
|  | All cylinder storage areas have been laid out to ensure that they do not, in any way, impede or jeopardise the escape of people in the case of emergency. |
|  | Storage, handling and transport procedures incorporate activities (leak tests, site inspections) designed to identify gas leaks. |
|  | Decanting equipment contains fail-safe devices designed to minimise sudden increased changes in flow rates (excess flow valves). |
|  | All storage containers are fitted with pressure relief valves (PRV). These valves are at all times engaged with the vapour space. |
|  | Ventilation around gas storage areas has been assessed by the supplier in accordance with AS/NZS 1596. |
|  | Delivery personnel are trained and instructed to conduct leak tests on each cylinder they connect at a customer’s premises. |
|  | All delivery personnel are trained to report any changes to an installation which may result in non-conformances at customer installations. |
|  | Staff are trained in procedures to manage gas leaks. |

5.2 Fire and explosion

|  |  |
| --- | --- |
| Risk | Combustion may be caused by ignition of an uncontrolled gas leak. |
|  | All gas storage and cylinders are stored away from ignition sources. |
|  | Ignition sources are strictly controlled in proximity to LPG storage areas. |
|  | All cylinder storage areas have been laid out to ensure they do not in any way impede or jeopardise people during egress in case of emergency. |
|  | All storage containers are fitted with PRVs that will activate automatically to reduce internal pressure caused by fire. |
|  | This site has been designed to approved standards to minimise the effects from this type of event. |
|  | Staff have been trained in emergency management procedures. |
|  | Combustible material and rubbish is removed from gas storage areas regularly |

5.3 Cold burn injury

|  |  |
| --- | --- |
| Risk | Escaping LPG is extremely cold and can cause injury resulting in snap freezing of the affected area resulting in severe blistering and pain. |
|  | Staff are trained to wear appropriate Personal Protective Equipment (PPE) when handling LPG. |
|  | Staff are trained in how to treat a cold burn. |

5.4 Exposure

|  |  |
| --- | --- |
| Risk | LPG has the potential to displace oxygen, creating a breathing hazard. The risk of injury to rescuers should be considered before any attempt is made to remove persons from areas with high concentrations of gas or confined spaces. LPG contains an odorant designed to alert users to its presence in the atmosphere. |
|  | Staff are trained in emergency management procedures. |
|  | LPG is not sold to young persons or any persons where “sniffing” may be suspected. |

5.5 Impact with LPG storage vessels

|  |  |
| --- | --- |
| Risk | Leaks, fires or explosions can result from vehicle damage to gas storage vessels. |
|  | LPG is only stored in approved locations in accordance with AS/NZS 1596. |
|  | Bulk vessels are installed with approved collision protection in accordance with AS/NZS 1596. |
|  | Cylinders are stored in a protected area on flat, even ground or on an elevated platform to prevent collision. |

5.6 Vehicle accidents

|  |  |
| --- | --- |
| Risk | LPG transport vehicles involved in accidents can create a threat of leak, resulting in fire or explosion. |
|  | LPG tankers are inspected and maintained to minimise the likelihood of leaks. |
|  | Cylinder delivery vehicles adequately equipped to restrain cylinders during transport in accordance with the **National Transport Commission, Load Restraint Guide**. |
|  | All vehicles have a placard where required and comply with dangerous goods transport legislation and codes. |
|  | All delivery drivers are trained and assessed as competent. |
|  | Site visitors transporting cylinders are instructed in appropriate measures. |
|  | Staff will not load LPG into inappropriate vehicles, as set out in the **Distributor Manual**. |

5.7 Third party emergencies

|  |  |
| --- | --- |
| Risk | The site and staff may be affected by incidents occurring at neighbouring premises e.g. where there is a risk of fire spreading, smoke or toxic fumes blowing across the site. |
|  | LPG is only stored in approved locations. |
|  | Staff are trained in emergency management and evacuation procedures. |

5.8 Safety exercises

|  |  |
| --- | --- |
|  | Safety exercises are held annually to ensure staff is prepared for emergency situations. |
|  | Date of last safety exercise for staff……………………………… |

## Element 6: Interaction with other operating plant or contractors

Section 675(1)(f)

6.1 Interaction of safety management with other operating plant / contractors

|  |  |  |
| --- | --- | --- |
| Name of contractor / company | Relationship | How interaction is managed? |
| *e.g. XYZ company* | *e.g. product supplier* | *e.g. joint SMS bridging document* |
| *e.g. John Jackson* | *e.g. delivery contractor* | *e.g. service contract* |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Elements 7 & 8: Training

Sections 675(1)(g) and 675(1)(h)

A sample Training Record template is included in the Additional Resources section at the end of the template and may be used as the business’ safety training record. Element 17 requires information about the location of safety training records.

7.1 Record of instruction / training

|  |  |
| --- | --- |
|  | Agent and dealer training / instruction |
|  | Cylinder filling |
|  | Cylinder testing |
|  | Decanting |
|  | Cylinder installation |
|  | Cylinder transport |
|  | Driver training / instruction |
|  | Manual handling |

# 

## Element 9: Safety standards and operating procedures applied or to be applied, in each stage of the plant

Section 675(1)(i)

Standard operating procedures are maintained for decanting and filling procedures carried out on site. Current copies or extracts of the following documents are maintained where relevant.

9.1 Copies / extracts of documents maintained on site

|  |  |
| --- | --- |
|  | Gas supplier manual |
|  | Materials safety data sheet |
|  | Fire equipment / extinguisher maintenance records |
|  | Emergency procedure guide – transport, safety information sheet |
|  | *AS/NZS 1596 the storage and handling of LPG* |
|  | *AS 5601 Gas installations* |
|  | *AS 3814 Industrial and commercial gas-fired appliances* |
|  | *AS 2337.1 Gas cylinder test stations Gas cylinder test stations*  Part 1: General requirements inspection and tests – Gas cylinders for sites with Gas Cylinder Test Station status |
|  | *Petroleum and Gas (Production and Safety) Act 2004* and Petroleum and Gas (Production and Safety) Regulation 2004 |

## Element 10: Control systems including, for example, alarm systems, and emergency shutdown systems

Section 675(1)(j)

Control systems identified as relevant for safety training and instruction.

10.1 Relevant control systems

|  |  |
| --- | --- |
|  | *e.g. fire suppression system* |
|  | *e.g. emergency shutdown* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Element 11: Machinery and equipment relating to or that may affect the safety of the plant

Section 675(1)(k)

11.1 Ownership and maintenance responsibilities of machinery and equipment

|  |  |  |  |
| --- | --- | --- | --- |
| LPG storage and handling equipment installed on site | Owner | Person responsible for maintenance | Location of maintenance records |
| *e.g. Insert LPG storage and handling equipment name* | *Insert owners name* | *Insert name of person responsible for maintaining equipment* | *Insert name of place maintenance records can be located* |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

11.2 Safety equipment in use at site for the safety of staff, customers and the community

|  |  |  |
| --- | --- | --- |
| **Personal Protection Equipment** | |  |
|  | *(Insert types of PPE issued and used)* | |
| **Safety (Pressure) Relief Valves** | |  |
|  | Safety (pressure) relief valve caps | |
| **Fire extinguishers** | |  |
|  | Fire extinguishers | |
|  | Hose reel | |
|  | Water tap with permanently attached hose | |
| **Hazard signs** | |  |
|  | NO SMOKING -FLAMMABLE GAS on Bulk Storage Fence | |
|  | EMERGENCY INFORMATION PANEL on Bulk Storage Fence | |
|  | EMERGENCY PROCEDURES in Office | |
|  | WARNING NOTICE PROHIBITING SMOKING AND IGNITION SOURCES | |
|  | HAZCHEM NOTICES for a storage capacity of 500 litres or greater | |
|  | EMERGENCY PHONE NUMBERS on LP Gas vessel and at front gate of enclosure | |
|  | HAZMAT MANIFEST for a storage capacity of 5000 litres or greater | |
| **Other safety equipment used** | |  |
|  |  | |
|  |  | |

## Inspections and audits

Inspections and audits are carried out to ensure compliance with minimum safety standards in accordance with current codes of practice and regulations. These audits are carried out by different parties depending on the type of audit and the frequency. The audit frequency agreed with the LPG Product Supplier is dependent on the size and complexity of the operation and the following frequency and responsibility has been agreed for this site:

11.3 Frequency of inspections and audits for site

|  |  |  |  |
| --- | --- | --- | --- |
| Inspection / audit | Responsible party | Frequency | Name of report |
| *Weekly Internal* | *Agent/Distributor* | *Weekly* |  |
| *Weekly Internal* | *Site Safety Manager* | *Weekly* |  |
| *Monthly Internal* | *Agent/Distributor* | *Monthly* |  |
| *Monthly Internal* | *Site Safety Manager* | *Monthly* |  |
| *Other internal Audit (Appendix 4)* | *Product Supplier* | *Written agreement* |  |
| *External Audit* | *Product Supplier* | *Written agreement* |  |

## Element 12: Emergency equipment, preparedness and procedures

Section 675(1)(l)

A sample Monthly inspection checklist template is included in the Additional Resources section at the end of the template and may be used as the business’ safety training record. Element 17 requires information about the location of inspection records.

An audit may be carried out by an independent representative from the LPG product supplier. This audit seeks to ascertain compliance with the safety management system or other certification endorsements (Quality/Environment/HSE etc.) and will be carried out at a frequency determined by the complexity of the site and its activities but also the level of compliance being achieved.

Audits may also be carried out by Petroleum and Gas Inspectors from the Department of Natural Resources and Mines

12.1 Emergency response responsibilities

| Task | Responsible person | Duties | |
| --- | --- | --- | --- |
| Evacuate premises  (e.g. Fire Warden) |  | Ensure that all staff and visitors leave the premises  Assemble all persons at nominated assembly point  Account for all staff and visitors | |
| Contact Emergency Services |  | Telephone emergency services on 000  Telephone supplier emergency switchboard  Telephone | |
| Contact neighbours |  | Contact adjoining premises | Telephone |
| A |  |
| B |  |
| C |  |
| D |  |
| E |  |
| Contact Department |  |  | |
| First aid officer |  | Implement first aid as nominated in the supplier training documents and contact emergency services | |
| Trainer |  | Ensure induction training is complete and current | |
|  |  |  | |
|  |  |  | |
|  |  |  | |
|  |  |  | |
|  |  |  | |

| **Person** | **Role** | **Telephone** | **Emergency mobile** |
| --- | --- | --- | --- |
| Emergency Services | Respond to all gas emergencies |  |  |
| LPG supplier: emergency | Provide expert advice |  |  |
| LPG supplier: local contact | Local advice |  |  |
| Department of Natural Resources, Mines and Energy – Petroleum and Gas Inspectorate | Regulatory authority for prescribed incidents – [refer to section 10 of the Petroleum and Gas (Safety) Regulation](https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/P/PetrolmGasR04.pdf#G3.1105445) | Southern Regional Office  3330 4241 | 1300 910 933 |
| Northern Regional Office  4936 0188 |
| Local tanker operator |  |  |  |
| Volunteer fire fighting |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

12.2 Emergency telephone numbers

The following procedures are considered minimum requirements for emergency procedures. These can be added to take into account site conditions.

12.3 Emergency procedures

|  |  |
| --- | --- |
| **Minor gas leak –** a brief summary of emergency procedures to be initiated | |
| 1 | Safely close all valves of storage containers and bulk vessels. |
| 2 | No smoking. No naked lights. |
| 3 | No engine to be started. |
| 4 | Keep bystanders away and upwind of gas leak. |
| **Major gas leak –** a brief summary of emergency procedures to be initiated | |
| 1 | Safely close all valves of storage containers and bulk vessels. |
| 2 | No smoking. |
| 3 | No naked lights. |
| 4 | No engine to be started. |
| 5 | Keep bystanders away and upwind of gas leak. |
| 6 | Telephone Emergency Services on 000. |
| 7 | Where appropriate, contact LPG supplier. |
| **Fire and explosion –** a brief summary of emergency procedures to be initiated | |
| 1 | Telephone Emergency Services on 000. |
| 2 | If applicable, contact your immediate supervisor / manager. |
| 3 | Telephone LPG supplier. |
| 4 | If safe to do so, close all storage vessel valves. |
| 5 | Keep bystanders away. |
| 6 | Isolate power at main switchboard, subject to Site Safety Manager’s / Operator’s approval. |
| DO NOT | Attempt to extinguish the flame where releasing gas has ignited UNLESS an isolation valve can be readily turned off to stop the gas flow. |
| DO NOT | Take action to extinguish a fire without confirming it is small enough to be safely put out by extinguishers or fire hoses and you are appropriately trained. |
| DO | Initiate an immediate full evacuation of all personnel, actuate all Emergency Stop devices, contact Emergency Services should there be a risk of jet flames impinging on other cylinders or tanks to cause a boiling liquid expanding vapour explosion. Cylinders or tanks impacted by fire may often be accompanied by loud noise or whistling. This is the vapour rushing through the safety relief valves as it relieves the excessive internal pressure. |
| **Cold burn injury –** a brief summary of emergency procedures to be initiated | |
| 1 | Telephone Emergency Services on 000 and advise the medical professionals that the injury is a freeze burn. |
| 2 | Bathe the affected area with large quantities of water (preferably warm) for at least 15 minutes. |
| 3 | If possible, remove any clothing splashed with LPG that is not adhering to the skin. |
| 4 | Place injured person in a warm area and gradually rewarm the affected areas to normal body temperature. Note: If the affected area re-warms too rapidly, further damage may be caused to the tissue. Do not apply direct heat or cold such as heat lamps, hot water, or ice to affected parts. |
| **Exposure –** a brief summary of emergency procedures to be initiated | |
| DO NOT | Attempt to remove persons from areas of high concentration of gas before consideration is given to the risk of injury to rescuers. |
| DO | Give oxygen if you are trained or under the supervision of a trained person. |
|  |  |
|  |  |
| **Vehicle impact with LPG storage vessels –** a brief summary of emergency procedures to be initiated | |
| 1 | Telephone emergency services on 000. |
| 2 | If applicable, contact your immediate Supervisor / Manager. |
| 3 | Telephone LPG supplier on emergency response numbers in table 12.2. |
| 4 | If safe to do so, close all storage vessel valves. |
| 5 | Keep bystanders away. |
| 6 | Isolate power at main switchboard, subject to Site Safety Manager’s / Operator’s approval. |
| 7 | Follow firefighting instructions where safe to do so. |
| **Vehicle accidents –** a brief summary of emergency procedures to be initiated  NOTE: LPG transport vehicles involved in accidents will be dealt with in accordance with the Emergency Procedure Guide – Transport | |
| 1 | Arranging alternative transport. |
| 2 | Dealing with other parties involved in the incident. |
| 3 | Cleaning up the site if there is an oil spillage. |
| 4 | Liaising with the LPG supply company. |
| 5 | Liaising with local police and advising relevant authorities. |
| **Third party emergency –** a brief summary of emergency procedures to be initiated | |
| 1  While the prime responsibility will rest with the neighbouring site owner, some actions or assistance may be required depending on the character of activities on neighbouring sites e.g. cooling cylinders with water hoses. |  |
| 2 |  |
| 3 |  |

## Elements 16 & 17: Record management including e.g. relevant approvals, certificates of compliance, incident and accident reporting

Sections 675 (1)(q) & 675(1)(r)

All documents, information and data critical to safety and health are properly managed and as required by the Act, they are available for inspection.

|  |  |  |
| --- | --- | --- |
| 17.1 Document title | Version | Location of record |
| **Approvals** | | |
|  |  |  |
|  |  |  |
| **Compliance certificates** | | |
|  |  |  |
|  |  |  |
| **Licenses** | | |
|  |  |  |
|  |  |  |
| **Training records (elements 7 & 8)** | | |
|  |  |  |
| **Compliance directions** | | |
|  |  |  |
| **Safety meetings** | | |
|  |  |  |
| **Maintenance records (element 11)** | | |
|  |  |  |
|  |  |  |
| **Interaction with other safety management systems (element 6)** | | |
|  |  |  |
| **Audit / inspection reports (element 11)** | | |
|  |  |  |
| **Incident and accident reports (element 16)** | | |
|  |  |  |
|  |  |  |

# Additional resources

## Sample training record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Record of training / instruction | | | | |
| **Procedure** |  | | | |
| **Training organisation** |  | | | |
| **Name of trainer** |  | | | |
| **Staff member** | **Date** | **Signatures:** | | |
| **Staff member** | **Trainer** | **Operator / Safety Site Manager** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## Sample monthly inspection checklist

|  |  |  |  |
| --- | --- | --- | --- |
| Person completing check | Position at site | Month | Date |
| *Insert name* | Insert position | Insert month | Insert date |

| Equipment / System | Pass | Fail | Action required | By whom | Date | Done |
| --- | --- | --- | --- | --- | --- | --- |
| All emergency equipment tested and working correctly |  |  |  |  |  |  |
| Fire extinguisher charged and within test date |  |  |  |  |  |  |
| Fire hose reel operating (if installed) |  |  |  |  |  |  |
| Decant gun fill thread connection and "O" ring not worn |  |  |  |  |  |  |
| Storage tank (if any) relief valve caps in position |  |  |  |  |  |  |
| All LPG hoses inspected for obvious damage (nicks, cuts or abrasions) |  |  |  |  |  |  |
| Inspect yard / roads damage and potholes |  |  |  |  |  |  |
| Timber edgings on the dock are not damaged |  |  |  |  |  |  |
| Safety access / escape routes clear and accessible  (especially those to the cylinder area / docks) |  |  |  |  |  |  |
| Is all applicable personnel protective equipment (PPE) available and in good condition? |  |  |  |  |  |  |
| Check first-aid kit and replace any missing items |  |  |  |  |  |  |
| Is the grass length and weed growth excessive? |  |  |  |  |  |  |
| Site Emergency Plan reviewed for accuracy and currency |  |  |  |  |  |  |
| Have all Daily / Weekly Check Sheets for the site's fork lift truck been completed and filed correctly If applicable? |  |  |  |  |  |  |
| Additional checks, as required | | | | | | |
| Were there any maintenance requests (emergency or otherwise) during the previous month (apart from questions on the Weekly Check Sheet)? Record the details on this sheet |  |  |  |  |  |  |

## Sample audit and inspection checklist

Procedures, manuals, responsibilities

| No. | Item | Pass | Fail | Comments or instructions |
| --- | --- | --- | --- | --- |
| 1 | Does the Site have a Safety Management System (SMS) |  |  |  |
| 2 | Where is your supplier distributor / agent manual? |  |  |  |
| 3 | Where is your supplier cylinder filler and tester training manual? |  |  |  |
| 4 | Where is your supplier forklift refilling manual? |  |  |  |
| 5 | Where is your supplier decanting manual? |  |  |  |
| 6 | Where is the supplier Safety Alert Notices manual? |  |  |  |
| 7 | Where is the supplier Safety Information Notices manual? |  |  |  |
| 8 | How do you receive Safety Alert Information? |  |  | (show copies) |
| 9 | Where is your copy of AS/NZS HB 76 OR (AS 1678.0.0.001 1994 & AS 1678.2.1.001 2003 ) (If transporting cylinders) |  |  |  |
| 10 | Where is your office copy of AS/NZS 1596 (current issue) code? |  |  |  |
| 11 | Where is your office copy of AS 5601  (AGA 601)? (if installations are done) |  |  |  |
| 12 | Is a log of staff training records available? |  |  |  |
| 13 | Who is trained and responsible for First-Aid on site? |  |  |  |
| 14 | Is a First Aid cabinet available? |  |  |  |
| 15 | Is the "First Aid Injuries" booklet in the First Aid cabinet? |  |  |  |
| 16 | Who is responsible for security on site? |  |  |  |
| 17 | Who is responsible for maintenance  (non-technical) on the site? |  |  |  |
| 18 | Is the fire equipment in test? |  |  |  |
| 19 | Is security adequate? |  |  | (fencing) |
| 20 | Is site vegetation control on LP Gas equipment and under tanks done? |  |  |  |
| 21 | Is the cylinder fill scales (if any) maintenance done? |  |  |  |
| 22 | Is there a copy of last year’s audit available? |  |  |  |
| 23 | Have last year’s identified non-technical points been actioned? |  |  |  |
| 24 | Have last year’s identified technical points been actioned? |  |  |  |
| 25 | Is a Site Emergency Plan available? |  |  |  |
| 26 | Are all staff correctly identified and the plan up-to-date? |  |  | [Auditor to check] |
| 27 | Have copies been given to staff with responsibilities? |  |  |  |
| 28 | Have copies been given to local authorities? |  |  |  |
| 29 | Have all your cylinder fillers been trained and certified? |  |  |  |
| 30 | Does the site display any manual handling areas of concern? |  |  |  |
| 31 | Have decant customers received training? |  |  | [Auditor to view training records] |
| 32 | Is the emergency telephone number available? |  |  |  |
| 33 | Is the supplier's emergency telephone number available? |  |  |  |

Standard site equipment – Tank (s)

| No. | Item | Pass | Fail | Comments or instructions |
| --- | --- | --- | --- | --- |
| 34 | Is LP Gas tank (if any) clearly identified? |  |  |  |
| 35 | Is tank painting in good condition? |  |  |  |
| 36 | Are manufacturer’s information plates on main storage legible? |  |  |  |
| 37 | Are gauges on vessel (s) in good condition? |  |  |  |
| 38 | Are the relief valves fitted with rain caps? |  |  |  |
| 39 | Are there relief valves stacks on tanks over 8kl capacity 2m high? |  |  |  |
| 40 | Are ladders, steps and platforms on main storage adequate and comply with AS1657? |  |  |  |
| 41 | Are all drain valves horizontal and plugged? |  |  |  |
| 42 | Do all other vessel outlets incorporate  auto-shut off? |  |  |  |
| 43 | Do all the shut-off valves work correctly? (view) |  |  |  |
| 44 | Are vessel supports cracked, subsided or frames corroded? |  |  |  |
| 45 | Are the vessels > 8 kl earthed? |  |  |  |
| 46 | Vessel level in each vessel? |  |  |  |
| 47 | Is there excess vegetation under vessel(s)? |  |  |  |
| 48 | Are vessel(s) protected from impact? |  |  |  |
| 49 | Are there any impinging flanges under vessel(s)? |  |  |  |
| 50 | Are vessel(s) clear of rubbish and storage of other items? |  |  |  |

Standard site equipment – Pipe work

| No. | Item | Pass | Fail | Comments or instructions |
| --- | --- | --- | --- | --- |
| 51 | Is piping adequately supported? |  |  |  |
| 52 | Is there corrosion visible on pipes at supports? |  |  |  |
| 53 | Is piping in good condition and adequately painted? |  |  |  |
| 54 | Is piping correctly identified (colour, markers, direction of flow)? |  |  |  |
| 55 | Do all valves > 25mm have ferrous handles? |  |  |  |
| 56 | Do all shut-off valves have position indicators? |  |  |  |
| 57 | Are HRVs installed between each pair of liquid shut off valves and fitted with dust caps? |  |  |  |

Cylinder storage platform

| No. | Item | Pass | Fail | Comments or instructions |
| --- | --- | --- | --- | --- |
| 58 | Is a lb-to-kg conversion chart available on the cylinder dock? |  |  |  |
| 59 | Are cylinder decanting instructions displayed? |  |  |  |
| 60 | Is a public warning sign displayed at cylinder storage dock? |  |  |  |
| 61 | "Full Cylinder" and "Empty Cylinder" signs on dock |  |  |  |
| 62 | Are full / empty cylinders correctly separated? |  |  |  |
| 63 | Is the cylinder storage area housekeeping good? |  |  |  |
| 64 | Is cylinder fill illumination (if used during dark ours) adequate? |  |  |  |
| 65 | Are adequate means of escape being maintained? |  |  | (2 routes, each 1m wide) |
| 66 | Is ventilation adequate? |  |  |  |
| 67 | No ignition sources (i.e. mobile phones, lights, security systems) < 10m and NO SMOKING signs displayed? |  |  |  |
| 68 | Is safety personal protective equipment (PPE) available and obviously being used (goggles and gloves used not new)? |  |  |  |
| 69 | Are cylinder fillers wearing long trousers and long sleeved shirts? |  |  |  |
| 70 | Does the dock have a high level vent pipe? |  |  |  |
| 71 | Filling connections not worn. O-rings OK etc.? |  |  |  |
| 72 | Leak detection equipment (soapy water) on dock and being used? |  |  |  |
| 73 | If the site is an approved "Cylinder Test Station", is a certificate displayed? |  |  |  |
| 74 | Are there nominated cylinder storage areas? |  |  | (Full, empty, condemned) |
| 75 | Are condemned cylinders stored in an acceptable location? |  |  |  |
| 76 | Are small cylinders (such as 9kg and smaller) filled at waist height? |  |  |  |
| 77 | Is floor condition of platform damaged or excessively worn? |  |  |  |
| 78 | Is there a face / eye wash unit adjacent to the Decant fill point? |  |  |  |

Site peripheral

| No. | Item | Pass | Fail | Comments or instructions |
| --- | --- | --- | --- | --- |
| 79 | Are site fences to correct height and in good condition? |  |  |  |
| 80 | Is the 24 hour supplier emergency telephone number displayed on the front gate? |  |  |  |
| 81 | Is supplier sign clearly visible from the front gate? |  |  |  |
| 82 | Are warning signs visible on all site fences? |  |  |  |
| 83 | Is there a box and manifest to local rules at the front entrance? |  |  |  |
| 84 | Are there "No entry to public" type signs on site? |  |  |  |
| 85 | Are there speed limit signs on site? |  |  |  |

General condition of site

| No. | Item | Pass | Fail | Comments or instructions |
| --- | --- | --- | --- | --- |
| 86 | Is Fire Warden sign clearly displayed in plant and office? |  |  |  |
| 87 | Are fire extinguishers clearly signed in plant and office? |  |  |  |
| 88 | Is the site approved by DNRM (if located near residential area) |  |  |  |
| 89 | Is there an intruder detection system around site? |  |  |  |
| 90 | Is there an intruder detection system in office? |  |  |  |
| 91 | Can cylinder truck be driven / towed straight out of the gate without reversing? |  |  |  |
| 92 | Is excess vegetation noticed in yard? |  |  |  |
| 93 | Is there any overhead wiring passing over hazardous area? |  |  |  |

Specific site equipment (where applicable) - Decant

| No. | Item | Pass | Fail | Comments or instructions |
| --- | --- | --- | --- | --- |
| 94 | Are Decanting Notices clearly displayed? |  |  |  |
| 95 | Are decanting cylinders located and installed in compliance with AS/NZS 1596? |  |  |  |
| 96 | Is the spring loaded dead man’s nozzle valve being defeated? |  |  |  |
| Auditor. *(Name and signature):* | | | | **Date**. |

# Contact the Petroleum and Gas Inspectorate

Email: [gassafe@dnrme.qld.gov.au](mailto:gassafe@dnrme.qld.gov.au)

Telephone: (+617) 3199 8027 | Fax: (+617) 3405 5346

Web: [www.business.qld.gov.au](http://www.business.qld.gov.au)