

# **DPR**

## **DEPARTMENT OF PETROLEUM RESOURCES**

### **THE PROCEDURE AND CONDITIONS TO BE FULFILLED BEFORE THE GRANT OF APPROVAL AND LICENCE FOR THE CONSTRUCTION, MODIFICATION, RELOCATION OF A LIQUEFIED PETROLEUM GAS (LPG) FILLING PLANT AND AUTOGAS STATION**

#### **PETROLEUM REGULATION 1967**

**PROCEDURE AND CONDITIONS TO BE FULFILLED BEFORE THE APPROVAL, CONSTRUCTION, MODIFICATION, RELOCATION AND LICENCE OF A LIQUEFIED PETROLEUM GAS (LPG) PLANT AND AUTO GAS STATION.**

**SECTION I ABOVEGROUND LIQUEFIED STORAGE TANKS**

**1.0 APPLICATION PROCEDURE.**

In accordance with part IV section 87 sub-section (2) of the Petroleum Regulation of 1967, no Petroleum Gas Plant or Installation shall be constructed or modified without approval granted by the Director of Petroleum Resources. Contravening such regulation constitutes an offence and is subject to a fine or imprisonment or both. (See section 10.0 under offences).

Accordingly, all applications that fall, under the above classification shall be addressed to the Director of Petroleum Resources, 7 Kofo Abayomi Street, Victoria Island, Lagos or through the nearest field office, giving full details of the proposals. The following documents and design diagrams shall accompany the application.

**1.1 STATUTORY DOCUMENTS AND DESIGN DIAGRAMS.**

- (a) Three copies of the approved drawings showing the existing or proposed buildings on the site and the relevant distances to the roadways and adjoining properties, if any.
- (b) Three copies of Piping and Instrumentation Diagram (P&ID) of the gas filling plant and manufacturers' data sheet of the storage tanks with codes and standards adopted in the design.
- (c) A provisional approval letter and fire report by Chief Federal/State Fire officer or an officer authorized by him on his behalf, that he is satisfied with the proposed arrangement for the prevention of fire.
- (d) A letter from the appropriate Town Planning Authority, authorizing siting of the Liquefied Petroleum Gas filling plant at the proposed site. The Town Planning approval stamps on all design drawings are accepted.
- (e) Three copies of Memorandum and Articles of Association of the company and evidence that the company is duly incorporated by the Federal Ministry of Trade to deal in petroleum products.
- (f) Tax clearance certificate for the preceding three years of application or Tax exemption certificate for new company.

- (g) An application fee, as may be determined by DPR, in Bank draft or certified cheque made payable to "Federal Government of Nigeria-DPR Fee Account" is payable on submission of application.
- (h) Three copies of Codes, Standards and Specification adopted in the design of the tanks and ancillary equipment.
- (i) A copy of Safety, Health and Environment (SHE) proposal for the proposed plant and Environmental Impact Assessment report of the site.

## **2.0 PROCEDURES FOR GRANT OF APPROVAL TO CONSTRUCT (ATC) AN LPG PLANT.**

Prior to the grant of Approval To Construct a proposed LPG plant, it is mandatory that the applicant satisfies the following regulations:

### **2.1 The Review of Documents and Drawings.**

The documents and design drawings submitted will be reviewed in-line with the specifications. If the documents and drawings satisfactorily meet the statutory requirements, the site proposed for the plant will be inspected accordingly otherwise the applicant will be advised to rectify all the shortcomings observed in the application.

### **2.2 The Site Inspection Report.**

The site proposed for the plant will be inspected to determine the suitability of the location for the gas plant. The adjoining properties (if any) will be considered accordingly.

If the above listed requirements are met, the Director or Officer assigned by him will grant Approval To Construct (ATC) the LPG plant. The validity of the ATC shall be two years.

### **3.0 CONSTRUCTION PROCEDURE.**

The regulations and conditions governing the construction of Liquefied Petroleum Gas (LPG) filling plant are as follows:

- (a) Liquefied Petroleum Gas must be stored under pressure in vessels designed to withstand safely the vapor pressure at the maximum temperature. Construction of such vessels must be to an acceptable design code such as;
- (b) The Nigerian Standards Organization approved standard on pressure Vessels and Liquefied Petroleum Gas containers N1 S220/85.
- (c) The American Society of Mechanical Engineers (ASME) boiler and pressure for use in the chemical, petroleum and allied construction, test and certification.
- (d) The American Petroleum Institute standard 2510(2).
- (e) The British Standards (BS) 1500 PART 1, fusion welded pressure vessels for use in the chemical, petroleum and allied Industries pr BS15500 for new vessels design, construction, test and certification.
- (f) The installation/construction of piping, instruments and the plant must be carried out by an accredited DPR Company.
- (g) The materials used for the construction of the filling shed must be non-inflammable material.
- (h) The filling shed must be open-sided for good ventilation.

### **4.0 PROCEDURES FOR LICENSING A NEWLY COMPLETED LPG PLANT.**

#### **4.1 Pre-Licence Inspection**

On completion of construction works, the applicant shall notify the nearest DPR office and the following statutory/technical requirements shall be met or provided to facilitate pre-license inspection of the plant:

- (a) A completed application form for the grant of LPG licence.
- (b) Certification from Weight and Measures Division Federal Ministry of Commerce that the measuring equipment installed at the plant are calibrated satisfactorily.
- (c) Certification from Standards Organization of Nigeria (SON) that the gas tank meets specifications and is safe for the proposed purpose.

- (d) Final fire safety certification issued by Federal or State Fire Department.
- (e) Mechanical leak tester.
- (f) Gas detector.
- (h) Warning notices and Personnel Protective Wears for the Plant operators.
- (i) Gas tank and pipeline pressure test reports and certification. These facilities should be pressure tested by DPR accredited company and witnessed by Director's assigned officer.

#### **5.0 PROCEDURE FOR GRANT OF LPG OPERATING LICENCE**

- (a) When all the requirements listed in 4.0 above are satisfactorily met, DPR engineers will conduct pre-licence inspection of the plant and auxiliary equipment.
- (b) If the plant is built according to the approved diagrams and the engineers are satisfied with the safety arrangement of the plant, Management will consider the grant of LPG plant operating licence to the deserving company.
- (c) The LPG licence grant fee shall depend on storage capacity of the gas vessel installed at the plant.

All applicants are to note that failure to meet the above statutory and technical requirements or any other which may come into force during the construction of the plant, may lead to non-licensing of the plant for operation.

#### **6.0 PROCEDURE FOR RELOCATION OF EXISTING LPG PLANT TO A NEW SITE.**

If a company desires to relocate an existing and licensed LPG plant to a new site, the applicant must submit the following requirements:

- (a) The justification (reasons) for the proposed relocation of the plant to a, new site.

- (b) Three copies of revised and approved plant layout diagram showing the existing or proposed buildings on the site and relative distances to the roadways and adjoining properties if any.
- (c) Three copies of revised and approved Piping and Instrument Diagram of the gas filling plant.
- (d) Three copies of gas storage tank sectional diagram.
- (e) A letter from the appropriate Town Planning Authority, authorizing siting of the LPG filling plant at the proposed site.
- (f) A provisional approval letter or certificate signed by Chief Federal/State Fire Officer or an officer authorized by him in that behalf that he is satisfied with the proposed arrangement for the prevention of fire.

The conditions for the grant of Approval to Construct and operating licences for a new LPG plant shall be the same for relocated LPG plants.

#### **7.0 GAS STORAGE TANK DESIGN SPECIFICATIONS AND FITTINGS.**

- (a) All tanks for the storage of liquefied petroleum gas shall be designed for a working pressure corresponding to the vapour pressure and at the highest temperature that the tanks are likely to reach.
- (b) All storage tanks should be fitted with the pressure gauge and devices for measuring the liquid content and its temperature. The maximum quantity of LPG filled into any tank should be such that the maximum operating temperature it would occupy shall not be more than 95% of the capacity of the storage.
- (c) Excess flow valve should be fitted to prevent the loss of liquefied Petroleum gases from storage tanks, transport tanks and points where flexible hoses are used. .
- (d) Remote control hydraulically operated shut-off valves should be fitted to each storage tank.
- (e) Water sprinkler system should be provided on top of the gas vessel. Access ladder to the top of the gas storage should be provided for inspection and maintenance needs.

## 8.0 TANK LOCATION AND RECOMMENDATION OF SAFETY DISTANCES.

### 8.1 Location and Spacing.

The distances given in Table 1 below indicate the minimum approved distances from aboveground gas tanks and refer to the horizontal distances between the nearest point on the storage tank and as specified feature, e.g. an adjacent storage tank, building or boundary. The distances apply to both spherical and cylindrical tanks.

**TABLE 1**

Location and Spacing for high-pressure storage.

S/N	FACTOR	APPROVED SPACING
1.	.Between LPG high-pressure storage tanks	One quarter of the sum of the diameters of the two adjacent tanks
2	To class "A"	15 meters from the top of bound surrounding class "A" or "B" product tanks
3	To building containing flammable materials e.g. filling shed, storage building	15 meters

## 9.0 CYLINDER FILLING SHED, OPERATION AND STORAGE.

### 9.1 CYLINDER FILLING SHED.

- (a) Cylinders should be filled with LPG only in building designed for that purpose. Filling buildings should be open-sided. The filling of cylinder: should not be done in cellars of upper story of building.
- (b) Floor should be near ground level or raised to a minimum of 1 meter to vehicle platform height.

- (c) A fence of at least 2 meters high should be provided to enclose the filling and gas storage area if the filling is not carried out within a fenced area.
- (d) No duct or blow-off line should be directed into or discharged near sewer systems or drains used for other purposes.
- (e) Water drains from the filling area should be provided with effective seals.
- (f) Piping should be protected or painted in appropriate industrial colour.
- (g) Fire extinguisher in sufficient quantity should be provided at strategic places within the premises and the plant personnel should have easy access to the extinguisher.
- (h) Cylinders should not be stored in the cylinder filling area. An area within the plant should be designated for cylinders storage.
- (i) Adequate lighting should be provided to illuminate the working and the storage areas of the plant.

## **9.2 GAS FILLING OPERATION.**

- (a) Cylinders should be filled accurately and the quantity to be filled in any cylinder should not occupy more than 95% of the total capacity at a temperature not more than 65degrees centigrade.
- (b) The system should be designed in such a way as to minimize Liquefied petroleum gas escape when the connection to the cylinder valve is released.

## **9.3 PORTABLE GAS CYLINDERS.**

- (a) Portable gas cylinders should be designed, constructed and tested in, accordance with the approved Nigerian Standard Organization (SON) specification for LPG cylinders.

## **9.4 STORAGE OF LPG CYLINDER**

- (a) The layout of the gas cylinders should be such as to facilitate quick removal of the cylinders in case of emergency.
- (b) Cylinders should not be in proximity to corrosive or highly flammable substances.
- (c) Gas cylinders should be stored:
  - Only in a place with adequate ventilation and
  - At or above ground level, away from cellars, drains hollow etc where vapour might collect.
- (d) Gas cylinders should not be exposed to excessive heat.

- (e) Cylinders should be stacked in such a manner that they are all times accessible for inspection.

## **9.5 CYLINDER PRESSURE TEST STATION**

Cylinders pressure test station should be provided where the integrity of the cylinders will be tested as prescribed in the Standard Organization of Nigeria (SON) cylinder maintenance code.

The cylinders shall be pneumatically tested with air or LPG as the testing medium.

## **SECTION II: UNDERGROUND LIQUEFIED STORAGE TANKS**

### **1.0 APPLICATION**

The construction of underground LPG Plant shall apply in writing to the Director or through the Operations Controller of the DPR office nearest to your proposed location or site as stipulated in article 1.0 of aboveground LPG storage plant above.

### **2.0 DOCUMENTS REQUIRED:**

The documents so required in the construction of underground LPG storage plant shall be as stated in article 1.1 subsections (a) to (j) of aboveground LPG storage plants.

### **3.0 PROCEDURE FOR SITE INSPECTION:**

On receipt and complete review of the said document as indicated above, a competent officer of the DPR shall be assigned to conduct a site inspection to ascertain the suitability of the site for the proposed project. The site shall be granted approval only when it meets the following parameters;

- a) It does not fall within any pipeline right of way
- b) The distance between the highway leading to and passing the proposed site is within the distance specified in the regulation.
- c) The distance between an existing LPG plants is in consonant with the distance specified in the Regulation.
- d) The distance of the proposed site from another property which may be built upon shall not be less than 50 feet.
- e) The drainages to constructed or existing ones shall not be channeled to a stream or water.
- f) The proposed site is not less than the distance specified in the regulation of public buildings, schools etc
- g) The proposed site shall not constitute a threat or hazard to the area.
- h) The proposed site is up and above two plots of 100 x 100meters.
- i) The proposed site is not sited under PHCN high tension wire.

### **4.0 PROCEDURE FOR GRANT OF APPROVAL TO CONSTRUCT:**

The grant of approval to construct shall be similar to that of Section 2.0 subsection 2.1 to 2.2 of the aboveground LPG storage plant.

### **5.0 PROCEDURE FOR THE CONSTRUCTION OF THE FACILITIES:**

- a) No tank or tanks shall be buried without DPR approval.
- b) All tanks to be buried should meet all the specifications of the manufacturer, ASTM, and other internationally approved codes

- c) The excavation of the pit for the LPG storage tank should permit allowance of not less than 70 centimeters below ground level when the tank has been set in its final position.
- d) The tank should be set in a chamber of waterproof concrete of not less than 23 centimeters thick and the top a water tight detachable or removable concrete slab with a manhole at the center.
- e) The manhole of every tank installation shall be raised above the level of the surrounding ground to prevent the ingress of surface water into it.
- f) All pipelines including ventilation pipes below ground level shall be protected against damage and corrosion to the satisfaction of the DPR.
- g) All individual tanks shall be provided with efficient electrical earth connections independent of pipe connections, having an electrical resistance value not exceeding 10 Ohms when measured by an earth resistance tester of the "Megger" or similar type.
- h) All fixed pipes shall be of metal or fiberglass coated and shall be in position where they may not be liable to damage.

#### 6.0 PROCEDURE FOR LICENSING A NEWLY COMPLETED LPG PLANT:

The licence procedure shall be the same as in article 4.0 subsection (4.1) (a) to (4.1) (i) of the aboveground LPG storage plant.

#### 7.0 PROCEDURE FOR THE GRANT OF OPERATING LPG LICENSE

It shall be the same as stipulated in section 5.0 subsection (a) to (c)

#### 8.0 OPERATIONS:

All LPG storage plants shall be licensed and manned by competent persons recognized and approved by the DPR at all times.

### **SECTION III: DOMESTIC LPG SUPPLY INSTALLATIONS**

The guidelines shall deal on domestic LPG supply installation where LPG is stored under pressure at ambient temperature in **fixed vessels larger than 75kg LPG capacity.**

#### **1.0 LPG Storage – Fixed Tanks**

The installation or construction of a liquefied petroleum gas storage tank, together with any associated pipe work connecting the system to a combustion appliance providing space or water heating, or cooking facilities should be designed, constructed and installed in accordance with the requirements set out in the Nigerian Liquefied Petroleum Gas Association if any or an internationally accepted code.

1.1 Every tank should be separated from a building, or fixed source of ignition, in order to;

- a) reduce the risk of fire spreading to the tank in the event of fire
- b) enable and/or maintain safe dispersal LP gas in event of venting or leaking.

1.2 Tanks should be situated outdoors in a position that will not allow accumulation of vapour at ground level.

1.3 Ground features such as open drains, manholes, gullies and cellar hatches, within the separation distances in column A of the Table below should be sealed or trapped to prevent the passage of LPG vapour.

Separation distances for liquefied petroleum gas storage tanks

Maximum capacity (in tones)		Maximum separation distance for above ground tanks (in meters)		
Of any single tank	Of any group of tanks	From a building boundary or fixed source of ignition to the tank		Between tanks
		A No fire wall (1)	B With fire wall (1)	
0.25	0.8	2.5	0.3 [2]	1.0
1.1	3.5	3.0	1.5 [2]	1.0
4.0	12.5	7.5	4.0	1.0

## 2.0 LPG storage – cylinders

Where LPG storage installation consists of a set of cylinders, a way of meeting the standard would be for the installation to be in accordance with the Nigerian Liquefied Petroleum code if any or should be in accordance with an internationally accepted code.

2.1 The construction or installation of cylinders should be in form of two or more sets of paired cylinders connected to a manifold, with supply provided from one pair of cylinders at any one pair.

2.2 The installations should enable cylinders to stand upright, secured by straps or chains against a wall outside the building.

2.3 The cylinders should be positioned on a firm, level base such as concrete of at least 50mm thick or a paving slabs bedded on a mortar, and is located in a well-ventilated position at ground level, so that the cylinder valves will be:

- a) at least 1m horizontally and 300mm vertically from openings in the buildings or from the source such as flue terminal or tumble dryer vents;
- b) at least 2m horizontally from untrapped drains, unsealed gullies or cellar hatches unless an intervening wall not less than 250mm high is present
- c) cylinders should be readily available, reasonably protected from physical damage and is located where they do not obstruct exit routes from the building.

## SECTION IV: AUTOMOTIVE LPG (AUTOGAS) STATION

### 1.0 APPLICATION PROCEDURE

See Section I, Articles 1.0; 2.0; 3.0; 4.0 and 5.0 for guidance.

### 2.0 STORAGE VESSELS – LOCATION AND SPACING

Separation distances are intended to protect the LPG facilities from the radiation effects of fires involving other facilities as well as to minimize the risk

of escaping LPG being ignited before being dispersed or diluted. Storage vessels are normally installed above ground in the open air but they can be buried underground or mounded. They should never be installed in or on buildings or in open pits. Storage vessels, whether at ground level, underground or mounded, should be spaced and located in accordance with World LPG Association Guidelines or other international standards recognized by DPR.

The distance between an above ground LPG storage vessel and any part of the vehicle being filled is not less than 3 m. For buried LPG vessels this distance is from the LPG vessel valve assembly.

### **Separation Distances between various items of Plant**

The separation distances between items of plant (nearest point to nearest point) should not be less than those specified in Table 2.

### **Table 2 “Tables of Safety Distances”**

**Source: Turkish Standards TS 11939 - Liquefied petroleum gases (LPG) refueling station for automobiles- Safety rules.**

**Table 2 – Minimum Tank Safety Distance <sup>(1)</sup>**

<b>Tank Capacity <sup>(2)</sup> (m<sup>3</sup>)</b>	<b>Under Ground <sup>(3)</sup> Tanks (m)</b>	<b>Above Ground <sup>(4)</sup> Tanks (m)</b>	<b>Safety Distance Between Tanks (m)</b>
> 0.5	3	3	0
0.5 – 3.0	3	3	1
3.1 – 10.0	5	7.5	1
10.1 – 40.0	10	15	1.5

(1) Stations planned to construct next to highways have to consider with different rules and need to get the extra permission from the highway authorities for safety distance from station to highway.

(2) The capacity of tank measured by water (allowable maximum capacity 10m<sup>3</sup>)

(3) The safety distances related with underground tanks are measured starting from the safety valve.

(4) The safety distances related with above ground tanks are measured starting from the tank’s nearest tip surface to the related location.

**Table 3 “Tables of Safety Distances”**

Table 3 - Minimum Safety Distances at the LPG Fueling Station <sup>(1)</sup>

	Under Ground LPG Tank	Above Ground LPG Tank	LPG Dispenser	Fuel Dispenser	Fuel <sup>(2)</sup> Tank	Building	Highway	Public Buildings <sup>(3)</sup>	Neighboring Land
Under Ground LPG Tank	Table 2	Table 2	5	5	5	Table 2	Table 2	40	Table 2
Above Ground LPG Tank	Table 2	Table 2	7.5	7.5	7.5	Table 2	Table 2	50	Table 2
LPG Dispenser	5	7.5		6	5	5	5	50	5
Fuel Dispenser	5	7.5	6						
Building	Table 2	Table 2	5						
Highway	Table 2	Table 2	5						
Public Buildings	40	50	50						

1. There are no need for any security distances between tank and pumping units
2. These distances are not carried out between the horizontal distances of LPG tanks which have Water capacity 0.5 m<sup>3</sup> or less and fuel tanks which have water capacity 2.5 m<sup>3</sup> and less.
3. Public Buildings such as hospital, school, park, train, metro (sub-way) stations, mosques, churches, etc.

### 3.0 DESIGN AND INSTALLATION

#### 3.1 General Design

The design of vessels, vessel fittings, pumps, dispensing systems, hoses, filling nozzles and adaptors and breakaway/pull-away systems should be designed for efficient and safe operations in line with applicable codes and standards.

### **3.2 Installation**

The installation and commissioning of the system should only be undertaken by competent personnel, and in accordance with manufacturer's instructions. Written procedures should be drawn up for installation and/or commissioning. Mineral Oils Safety Regulations (MOSR), 1997 should be observed in these installations, particularly the taking of all the necessary measures to reduce risk as much as reasonably practicable, including the replacement of the hazardous by the non-hazardous or by the less hazardous.

#### **3.2.1. Storage Vessels**

See section III, Article 1.0

#### **3.2.2 Pumps**

Pumps, other than submersible types, should be adequately secured to a concrete foundation or bolted to a structural steel vessel support. Where the drive unit is not integral with the pump, attention should be given to ensure correct alignment, and all moving parts, belts, etc., should be suitably guarded.

#### **3.2.3 Dispensing Equipment**

Dispensing equipment should be securely fixed to avoid strain on connections under normal working conditions. On a petrol forecourt site such valves should be immediately upstream of the shear valve or excess flow valve protecting the meter.

#### **3.2.4 Pipework and Valves**

Pipework should be run as directly as is practicable from one point to another and with as few restrictions such as elbows, bends etc., as conditions will permit. The location of underground pipework should be recorded and indicated by appropriate means. It is essential that the piping system is clean prior to commissioning.

#### **3.2.5 Wiring and Cables**

Wiring and cables that may be exposed to a flammable atmosphere must be suitably enclosed where appropriate. The installation should comply with MSA EN 60079-14:2003 and BS 7671:2001, or their equivalent European Standards.

#### **3.2.6 Earthing and Bonding**

The installation should have electrical continuity and be effectively connected to earth and bonded to comply with the requirements of the Institute of Petroleum's Model Code of Safe Practice, Part 1, Electrical and BS 7671:2001 or equivalent European standard.

#### **3.2.7 Electrostatic Hazard Precautions**

An effective earthing point and/or bonding connection on the storage vessel should be provided for discharging static electricity from bulk delivery tankers, prior to commencing each delivery of LPG to the main storage.

#### **3.2.8 Master Switches**

In addition to the site main isolator controlling the electrical installation, a separate isolation switch should be provided to isolate the supply to the LPG installation. This should be so positioned as to be readily visible and within easy reach for quick operation in cases of emergency.

## **4.0 FIRE PROTECTION AND SECURITY**

#### **4.1 Fire Protection**

The possibility of a major fire outbreak, leading to direct flame impingement on the storage vessel, can be minimized by sound engineering, plant design and layout. Of similar importance are good operating practices and the proper instruction and training of personnel on both routine operations and on action to be taken in emergency.

##### **4.1.2 Portable Extinguishers**

At least two dry powder extinguishers less than 9kg each and suitable for LPG fires with a test fire rating of at least 21A and 183B as defined in MSA EN 3-7:2004 should be readily available at strategic locations to deal with fires adjacent to the meter/vehicle being filled.

##### **4.1.3 Water Reservoir**

Stations storing LPG for Autogas should have a clean water reservoir of minimum size 108 m<sup>3</sup>.

##### **4.1.4 Security**

Adequate steps should be taken to prevent the unauthorised interference with vessels and ancillary equipment such as lockable covers. When the site is closed the equipment should be protected from unauthorised interference or operation by isolation of electrical supplies, locking nozzles and locking of cabinet doors of ancillary equipment.

##### **4.1.5 Warning Notices**

All notices shall be conspicuous and easily understood by those to whom they are directed.

Where possible they should conform to EN 92/58 - Safety Signs and Colours, or equivalent, and where relevant, to the Work Place (Provisions of MOSR, 1997)

##### **4.1.6 Dispensing Control Device**

A notice of the form below should be displayed.

**LIQUEFIED PETROLEUM GAS**  
**HIGHLY FLAMMABLE**  
**SWITCH OFF ENGINE**  
**APPLY HANDBRAKE**  
**NO SMOKING - NO NAKED FLAMES**  
**SWITCH OFF MOBILE PHONES**

Pictorial representation may be used.

**Master Switch Notice:** A notice of the form below should be displayed.

**LPG PUMP - SWITCH OFF HERE**

##### **4.1.7 Emergency Telephone Number**

An emergency telephone number for summary assistance should be displayed at sites accessible to the public in a position where it can be seen even if the site is closed.

#### **5.0 Commissioning**

Storage vessels, other equipments and pipings should be commissioned after installation in accordance with manufacturer's instructions, including a leak test of the vessel and its fittings.

#### **6.0 Operations**

Written procedures should be established for relevant personnel to understand their roles for normal operation and closing (out of hours) of the

refuelling facilities, and for the reception of road tanker deliveries.

### **6.1 Training of Personnel**

Training is vital both to help prevent incidents and to minimise the consequences should an incident occur. Employees who may be called upon to use the filling equipment must have adequate training in its proper use, and the action required in the event of mal-function or to deal with an emergency.

The training may take many forms, including the giving of instructions (verbal or written) and formal training courses.

All training should be recorded

### **6.2 Action in an Emergency other than fire**

In the case of a substantial spillage or a leak of LPG, isolate the electric supply to all fuel dispensers, stop the flow of LPG if possible, call the nearest Fire Department, keep personnel and members of the public away from the area in which the vapour is spreading, alert neighbours to the danger, especially if there are nearby cellars or basements in which vapour could collect, if necessary call the police so that they may re-route traffic and advise the Department and other appropriate authorities of the incident.

## **7.0 INSPECTION & MAINTENANCE**

The installation shall have to conform to any legal inspection and maintenance regulations pertaining to the conditions of its license.

It is required of the user to ensure that a *Written Scheme of Periodic Examination* is drawn up by a competent person. The user shall ensure that the system is properly maintained so as to prevent danger.

When used at point of sale, meters need to be maintained to ensure dispensing liquid LPG within the tolerances specified in DPR guidelines.

### **7.1 Survey and Maintenance**

Surveys and maintenance should be carried out in accordance with a documented programme to the suppliers' recommendations and/or based on The Mineral Oils (Safety) Regulations 1997

## **SECTION V: OFFENCES**

**A person or corporate entity who contravenes any of the provisions of these regulations is guilty of an offence and is liable to appropriate sanctions, and in case of a continuing offence, to a further stringent penalty in accordance with provisions of Petroleum Act 1969.**