



REPUBLIC OF TRINIDAD AND TOBAGO
Ministry of Energy and Energy Affairs
LPG Installation Inspection Checklist

This checklist is to be used as a guideline for the inspection of LPG installations. It outlines the minimum requirements for inspection. Additional requirements may be considered depending on the uniqueness of the installation.

1. Inspection Particulars

| | | | | | | |
|------------------------------------|--|-------------------------|----------------------------------|----------------|-------------------|------------------------------|
| Installation Owner: | | | | | | |
| Address: | | | | | | |
| Installation Contractor: | | | | | | |
| Inspection Date: | | | | | | |
| Last Inspection Date: | | | | | | |
| Inspection Officer/s: | | | | | | |
| Owner Representative/s: | | | | | | |
| Installer Representative/s: | | | | | | |
| Location of Tanks: | <input type="checkbox"/> AG <input type="checkbox"/> UG <input type="checkbox"/> Mounded <input type="checkbox"/> Roof <input type="checkbox"/> Cellar | | | | | |
| Storage Details: | | | | | | |
| Tank No. | Capacity: | Serial Number/s: | Manufacture Date: (mm/yy) | PRV CFM | Dimensions | Tank Type (DOT/ ASME) |
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| | | | | | | |
| Other Details: | | | | | | |
| | | | | | | |

Useful Information:
1 USG = 0.833 IG

2. Inspection Checklist

Tick as appropriate. A tick in the shaded region must be accompanied by a comment.

Legend: Y – Yes N – No NA – Not Applicable

| | | Y | N | NA | Comments |
|---------------------------------|--|--------------------------|--------------------------|--------------------------|-------------------|
| A. Documents and Records | | | | | |
| 1. | Does the facility have a valid MEEA approval? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Expiry date:..... |
| 2. | Is there an Emergency Response Plan (ERP) which includes but not limited to the following: <ul style="list-style-type: none"> • Procedures to be followed in case of fire, such as sounding the alarm, notifying the Fire Service, evacuating personnel, and controlling and extinguishing the fire; • Contact numbers of Fire, Ambulance, Police, Manager/Owner, LPG Installation Contractor etc.; • Procedures and schedules for conducting drill; • Appointment and training of personnel to carry out assigned duties, including review at the time of initial assignment, as responsibilities or response actions change and whenever anticipated duties change; • Maintenance of fire protection equipment; • Procedures for shutting down or isolating equipment to reduce the release of liquid, including assigning personnel responsible for maintaining critical plant functions or shut down of plant processes; • Alternate measures for the safety of occupants while any fire protection equipment is shut down; • Plan showing evacuation route and muster area. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. | Is the ERP readily available? <i>Check last revision date.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4. | Are Standard Operating Procedures (SOPs) available which includes but not limited to the following: <ul style="list-style-type: none"> • Filling of tanks; • Maintenance of facility; • Start up and shut down of facility; • Maintenance of fire fighting and other equipment. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5. | Is a Material Safety Data Sheet (MSDS) for LPG readily available? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6. | Is there a copy of the isometric drawings of the LPG piping and water sprinkler systems and does it conforms to the 'as built' facility? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 7. | Is a site plan available? <i>Check conformance with the as-built facility.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 8. | Is the pressure test certificate for the piping system available? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 9. | Do tanks and piping not require re-pressure-testing? <i>Check: 10 yrs after manufacture date and every 5 yrs. thereafter for tanks. 10 yrs for piping and every 5 yrs thereafter.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 10. | Are the tanks specification sheets provided? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 11. | Is there a plot plan showing escape routes, muster point, fire protection equipment, etc. in relation to the storage? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 12. | Does the facility have a valid Fire Service Division approval? <i>Note: Valid for 2 yrs. from the issue date.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Issue date:..... |
| B. Location of Tanks | | | | | |
| 1. | Are tanks located outside of the building unless specifically allowed to be located inside the building? <i>Check to ensure building meets requirements if the latter.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. | Are tanks safely located with respect to important buildings, group of buildings, or line of adjoining property that can be built upon? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | | Y | N | NA | Comments |
|-----|--|--|--------------------------|--|--------------------------|-------------------------|
| | Capacity per Tank (USG) | Min Distance (feet) | | | | |
| | <125 | 0 | | | | |
| | 125 - 250 | 10 | | | | |
| | 251 - 500 | 10 | | | | |
| | 501 - 2000 | 25 | | | | |
| | <i>Note: (1) use the total capacity of the cylinders if the aggregate capacity of <125 gals cylinders exceeds 500 gals. (2) the separation distance for single AMSE Tanks of 501-2000 USG may be reduced to 10 ft if the tank is at least 25 ft from the LPG Tanks (>125 USG).</i> | | | | | |
| 3. | Are tanks safely spaced? | | | | | |
| | Capacity per Tank (USG) | Separation (feet) | | | | |
| | <125 | 0 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 125 - 250 | 0 | | | | |
| | 251 - 500 | 3 | | | | |
| | 501 - 2000 | 3 | | | | |
| 4. | Are adjacent installations comprising <125 gals cylinders with an aggregate capacity >500 gals each, separated by at least 25 ft. ? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5. | Is there a minimum separation distance of 20 ft. between the LPG tank (if >125 USG) and aboveground tanks (>660 USG) containing liquids with a flash point less than 200°F? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6. | Is there a minimum separation distance of 10 ft. between the LPG tanks and the centreline of diked areas containing flammable and combustible liquids? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 7. | Is there a minimum 10 ft setback distance of the discharge from the PRV, fixed max. liquid level gauge discharge and filling connection to exterior sources of ignition, openings into direct vent appliances and mechanical ventilation air intakes? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 8. | Is the horizontal separation distance of the tanks from building overhangs at least ½ the distances in B(2)? <i>Note: Only applicable if the overhang extends more than 5 ft from the building and/or is 50 ft or more above the PRV outlet.</i> | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 9. | For tanks installed under a building, is the space open to the atmosphere for more than 50%? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 10. | Where more than one row of tanks is installed, are the adjacent ends of tanks in each row separated by a minimum distance of 10 ft? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 11. | Is a 10 ft radius from the tanks kept free of loose or piled combustible materials and weeds and long dry grass? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 12. | Are the tanks not located within 6 ft of a vertical plane beneath overhead electric power lines (>660 V nominal)? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 13. | Is the area under the tanks graded to prevent the accumulation of flammable liquids with flash points below 200°F and water that can accelerate corrosion? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 14. | Are low lying drains within 10 ft of the tanks along which LPG can flow, covered and sealed? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 15. | Is the area around the tanks free of slope instability? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 16. | Is the minimum separation distance between the LPG tanks and oxygen and hydrogen cylinders observed? | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | LPG Tanks Aggregate Capacity USG | Separation from Oxygen Tanks Aggregate Capacity (ft) | | Separation from Hydrogen Tanks Aggregate Capacity (ft) | | |
| | | <400 ft ³ | >400 ft ³ | >20,000 ft ³ | <400 ft ³ | >400 ft ³ |
| | | <20,000 ft ³ | >20,000 ft ³ | >20,000 ft ³ | <20,000 ft ³ | >20,000 ft ³ |
| | ≤ 1200 | None | 20 ft | 25 ft | - | - |
| | >1200 | None | 20 ft | 50 ft | - | - |
| | ≤500 | - | - | - | None | 10 ft |
| | >500 | - | - | - | None | 25 ft |
| 17. | Does the location permit approach from at least two directions to aid fire fighting (emergency response) | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | Y | N | NA | Comments | | | | | | | | |
|---|--|--------------------------|--------------------------|--|------------------------------------|---|---|--|-----------------------------|--|--|--|--|
| C. Tanks Installation | | | | | | | | | | | | | |
| 1. | Are tanks not stacked one above the other? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 2. | Are tanks positioned such that the PRV is in direct communication with the vapour space of the tank? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 3. | Where possible, is adequate protection provided against vehicular collision? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 4. | Are tanks installed such that all operating appurtenances are accessible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 5. | Where flooding is possible, are tanks adequately secured to prevent flotation? <i>Check: anchored to foundation.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 6. | Are tanks protected against pilferage, where possible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 7. | Are tanks installed on a firm, level, non-flammable base? <i>Check for accumulation of water, cracks, corrosion, settlement and collapse. There must be no direct contact with the soil.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 8. | Are horizontal tanks : | | | <input type="checkbox"/> | | | | | | | | | |
| | a) longitudinal axes not pointing towards nearby occupied buildings, hazardous materials, etc. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | b) > 2000 gals provided with concrete or masonry foundation formed to fit the tanks contour, or saddles placed on a flatted top concrete foundation? <i>Note: if the latter, the tank bottom should be at maximum 6" above the concrete foundation.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | c) < 2000 gals provided with the supports and clearances below: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>Attached Support</th> <th>Height of tank bottom</th> </tr> </thead> <tbody> <tr> <td>Non fire-proofed steel on masonry or concrete foundation >12" above the ground</td> <td>2" – 12" above concrete foundation</td> </tr> <tr> <td>Non fire-proofed steel on paved surfaces or concrete pads within 4" of the ground</td> <td>24" max above paved surface or top of concrete pads</td> </tr> <tr> <td>Foundation or supports where deteriorating environmental conditions exist.</td> <td>24" max above paved surface</td> </tr> </tbody> </table> | Attached Support | Height of tank bottom | Non fire-proofed steel on masonry or concrete foundation >12" above the ground | 2" – 12" above concrete foundation | Non fire-proofed steel on paved surfaces or concrete pads within 4" of the ground | 24" max above paved surface or top of concrete pads | Foundation or supports where deteriorating environmental conditions exist. | 24" max above paved surface | | | | |
| Attached Support | Height of tank bottom | | | | | | | | | | | | |
| Non fire-proofed steel on masonry or concrete foundation >12" above the ground | 2" – 12" above concrete foundation | | | | | | | | | | | | |
| Non fire-proofed steel on paved surfaces or concrete pads within 4" of the ground | 24" max above paved surface or top of concrete pads | | | | | | | | | | | | |
| Foundation or supports where deteriorating environmental conditions exist. | 24" max above paved surface | | | | | | | | | | | | |
| | d) < 2000 gals, not installed with the bottom of the tank shell > 5 ft above the ground? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | e) parts that are in contact with the saddles or foundations or masonry, coated to minimise corrosion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | f) that have liquid interconnections installed such that the maximum permitted liquid filling level of each tank is at the same level? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | g) that are secured (bolted) to a foundation have allowances for free movement from expansion? <i>Note: expansion bolts may be used.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 9. | Are vertical tanks : | | | <input type="checkbox"/> | | | | | | | | | |
| | a) installed on reinforced concrete or structural steel supports with a fire resistance rating of at least 2 hrs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | b) that are used in liquid service not manifolded to horizontal tanks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | c) of different dimensions not manifolded together? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| 10. | If tanks are installed in an enclosure, is either: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | a) a gas detection and audible alarm system provided?, or <i>Check height of sensor from the ground.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |
| | b) the enclosure ventilated at the bottom? <i>Note: structures such as fire walls, fences, concrete barriers, etc. should be avoided. Walls should be ventilated at the bottom.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | |

| | | Y | N | NA | Comments |
|---------------------------|--|--------------------------|--------------------------|--------------------------|----------|
| D. Tanks Condition | | | | | |
| 1. | Are tanks free of field welding? <i>Note: Field welding is only permitted on non pressure parts such as saddle plates, supports, brackets, etc.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. | Are tanks painted with reflective paint? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. | Are the tanks free of fire damage, dents, cuts, digs, gouges, and corrosion? <i>Check: no bubbled paint, bulging and discoloured metal</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4. | Are the tanks paint or coatings in good condition? <i>Check: Rust free, no chipping or flaking, smooth and a clean finish</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5. | Are the name plates securely attached, or stamped information (if DOT tanks) legible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6. | Are all valves' lids, tops and covers properly installed? <i>Check: Rain and protective caps for fill valve, pressure relief valve etc.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 7. | Are the foot rings and collars intact, firmly attached and free of damage? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | Y | N | NA | Comments |
|---|---|--------------------------|--------------------------|--------------------------|----------|
| E. Tank Valves and Appurtenances | | | | | |
| 1. | Are pressure relief valves (PRVs): | | | | |
| | a) provided on each tank? <i>Check correct type and rating.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b) installed so that any gas released is vented away from the tanks upward and unobstructed to the open air? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | c) provided with rain caps or other means to minimize the possibility of the entrance of water or other extraneous matter into the relief device or any discharge piping. <i>Note: Provision must be made for drainage where the accumulation of water is anticipated. Also, the protector must not restrict operation of the PRV.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | d) not provided with shutoff valves at the inlet of the valves or at the outlet of the discharge piping (where installed)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | e) not manifolded? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | f) marked to show the start-to-leak pressure in psig, relieving capacity in SCFM air, and manufacturer's name. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. | Are PRVs discharge piping, where installed: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | a) supported and protected against physical damage? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b) metallic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | c) free of bends and smaller diameter piping of tubing? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. | Is a Fixed Maximum Liquid Level Gauge provided? <i>Mandatory for tanks designed to be filled on a volumetric basis. The percentage of the tank's capacity indicated by the gauge must be permanently stencilled next to the fill gauge or indicated on the name plate.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4. | Is a Variable Liquid Level Gauge provided? <i>Mandatory for tanks less than 4,000 US gal but greater than 124 US gal water capacity.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5. | Is an Actuated Liquid Withdrawal Excess-Flow Valve provided? <i>Mandatory for tanks of 125 US gal through 4000 US gal water. The actuated liquid withdrawal excess-flow valve must not be connected for continuous use unless the valve is recommended by the manufacturer for such service.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6. | Is a Pressure Gauge provided? <i>Mandatory for tanks of more than 2000 US gal water capacity. The maximum opening must be of No. 54 drill size between the tank and the pressure gauge or an excess-flow check valve installed.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | Y | N | NA | Comments | | | | | | | | | | | | |
|--|---|----------------------------|--------------------------|--------------------------|----------|------------------|----------------------------|-------------------|----------------------------|----------------------------|-------------------|------------------|----------------------------|--------------------------|--------------------------|--------------------------|--|
| F. Piping, Fittings, Hoses and Valves | | | | | | | | | | | | | | | | | |
| 1. | Are all aboveground piping metallic? <i>Piping may be schedule 40: wrought iron, brass, carbon or black steel. Cast steel and galvanised steel is not permitted. Also, polyethylene may be installed outdoors provided it is buried</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 2. | Are all piping adequately supported? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 3. | Are all piping protected against physical damage, where possible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 4. | Is the LPG piping conspicuously labelled and colour coded yellow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 5. | Is piping at pressures exceeding 20 psig (138 kPag) not piped into the building except for warehouses and industrial occupancies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 6. | Do piping joints comply with the following? <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Service</th> <th>Schedule 40</th> <th>Schedule 80</th> </tr> </thead> <tbody> <tr> <td>Liquid</td> <td>Welded or brazed</td> <td>Threaded, welded or brazed</td> </tr> <tr> <td>Vapour, ≤125 psig</td> <td>Threaded, welded or brazed</td> <td>Threaded, welded or brazed</td> </tr> <tr> <td>Vapour, ≥125 psig</td> <td>Welded or brazed</td> <td>Threaded, welded or brazed</td> </tr> </tbody> </table> | Service | Schedule 40 | Schedule 80 | Liquid | Welded or brazed | Threaded, welded or brazed | Vapour, ≤125 psig | Threaded, welded or brazed | Threaded, welded or brazed | Vapour, ≥125 psig | Welded or brazed | Threaded, welded or brazed | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Service | Schedule 40 | Schedule 80 | | | | | | | | | | | | | | | |
| Liquid | Welded or brazed | Threaded, welded or brazed | | | | | | | | | | | | | | | |
| Vapour, ≤125 psig | Threaded, welded or brazed | Threaded, welded or brazed | | | | | | | | | | | | | | | |
| Vapour, ≥125 psig | Welded or brazed | Threaded, welded or brazed | | | | | | | | | | | | | | | |
| 7. | Does the piping system, including the interconnection of tanks, compensate for expansion, contraction, jarring, vibration, and settling? <i>Flexible metallic connectors may be used. The use of nonmetallic pipe, tubing, or hose for permanently interconnecting Tanks is prohibited.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 8. | Where a network of piping exists, is the LPG piping provided with "LPG" and flow directional arrows, markers? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 9. | Are all emergency shut off valves labelled "EMERGENCY SHUT OFF", colour coded red and the 'on' and 'off' positions labelled? <i>Ensure valves are ¼ turn quick closing type and at least 5 ft from the floor.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 10. | Are underground metallic piping: | | | <input type="checkbox"/> | | | | | | | | | | | | | |
| | a) buried to a minimum depth of 12"? <i>this must be increased where the piping is under driveways, roads, walkways, etc..</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| | b) provided with corrosion protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| | c) route provided with markers / signs? <i>Marker tape may be buried with the piping for identification.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| | d) provided with dielectric fittings at the building to electrically isolate it from the aboveground portion of the fixed piping system that enters a building? <i>This must be installed aboveground and outdoors.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 11. | Are underground polyethylene or polyamide piping: | | | <input type="checkbox"/> | | | | | | | | | | | | | |
| | a) provided with a minimum of 12" of cover? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| | b) provided with a minimum of 18 in. of cover if external damage to the pipe is likely to result? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| | c) installed in conduit if a minimum of 12 in. of cover cannot be provided? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| | d) provided with an assembled anodeless riser at the aboveground termination end? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| | e) provided with an electrically continuous corrosion-resistant tracer wire (minimum AWG 14) or tape buried with the pipe to facilitate locating the pipe. <i>One end of the tracer wire must be brought aboveground at a building wall or riser. The tracer wire or tape must not be in direct contact with the pipe.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |
| 12. | Is a hydrostatic relief valve or device installed to provide pressure-relieving protection in each section of piping and hose in which liquid LPG can be isolated between shutoff | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | | | | |

| | | Y | N | NA | Comments |
|-----|---|--------------------------|--------------------------|--------------------------|----------|
| | valves? | | | | |
| 13. | Are flexible metallic connectors < 5 ft (1.5 m) in overall length when used with liquid or vapor piping on stationary Tanks of <2000 gal water capacity. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 14. | Are hoses and connections: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | a) used at pressures >5 psig designed for a pressure >350 psig? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b) short as practical, without kinking or straining the hose or causing it to be close enough to a burner to be damaged by heat? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | c) greater than 10 ft (3 m) in length shall be protected from damage? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | d) fabricated of materials that are resistant to the action of LPG both as liquid and vapour? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | e) continuously marked to provide at least the following information: <ul style="list-style-type: none"> • LP-GAS HOSE or LPG HOSE • Maximum working pressure • Manufacturers' name or coded designation • (4) Month or quarter and year of manufacture | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 15. | Are unused (open-ended) piping outlets capped or plugged? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

G. Regulators and Vents

| | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|--|
| 1. | Are regulators made of appropriate type material? <i>Non metallic materials are not permitted.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. | Are regulators installed according to manufacturer's specification? <i>Check direction of arrow at back?</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. | Are the first stage and high pressure regulators installed outside the building? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4. | Is the discharge outlet from regulators facing downward and protected to prevent the entry of water, insects, or other foreign materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5. | For regulators installed outside buildings, is the point of discharge: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | a) located >3 ft (1 m) horizontally away from any building or occupiable structure opening below the level of discharge, and not beneath or inside any building or occupiable structure unless this space is not enclosed for more than 50% of its perimeter? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b) >5 ft (1.5 m) in any direction away from any source of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6. | For regulators installed inside buildings: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | a) is the discharge directly vented with supported piping to the outside air? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b) is the vent line at least the same nominal pipe size as the regulator vent connection pipe size? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | c) where there is more than one regulator at a location, is each regulator provided with a separate vent to the outside? <i>Alternatively: the vent lines may be manifolded in accordance with accepted engineering practices to minimize back pressure in the event of high vent discharge.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | Y | N | NA | Comments |
|----|---|--------------------------|--------------------------|--------------------------|----------|
| | d) is the vent piping inside the building, metallic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | e) is the discharge outlet located >3 ft (1 m) horizontally away from any building opening below the level of such discharge? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | f) is the discharge outlet located > 5 ft (1.5 m) in any direction away from any source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | g) is the discharge outlet designed, installed, or protected from blockage so it will not be affected by the elements (rain, mud, or debris) or insects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 7. | Is a two-stage regulator system, an integral two-stage regulator, or a 2 psi regulator system installed on all piping systems that serve ½ psig (3.4 kPag) appliance systems? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| H. Equipment Installation | | | | | |
|---------------------------|--|--------------------------|--------------------------|--------------------------|--|
| Pump: | | | | | |
| | | | | <input type="checkbox"/> | |
| 1. | Is pump installed in accordance with the manufacturer's instructions? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. | Is pump rated for the electrical area classification? <i>Check nameplate.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. | Is the installation made so that the pump casing is not subjected to excessive strains transmitted to it by the suction and discharge piping. <i>Such protection may be accomplished by piping design, the use of flexible metallic connectors <36 in. in overall length, or by other means.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4. | Is the positive displacement pump provided with a pressure relief device that discharges either into a storage Tank or into the pumps inlet? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5. | Is a pump operating control or disconnect switch located near the pump? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6. | Are all rotating parts guarded? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Compressor: | | | | | |
| | | | | <input type="checkbox"/> | |
| 7. | Is the compressor installed in accordance with the manufacturer's instructions? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 8. | Is compressor rated for the electrical area classification? <i>Check nameplate.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 9. | Is the installation made so that the compressor casing is not subjected to excessive strains transmitted to it by the suction and discharge piping? <i>Such protection may be accomplished by piping design, the use of flexible metallic connectors <36 in. in overall length, or by other means.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 10. | Where the compressor is not equipped with an integral means to prevent the LPG liquid from entering the suction, is a liquid trap installed in the suction piping as close to the compressor as practical? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Strainer: | | | | | |
| | | | | <input type="checkbox"/> | |
| 11. | Is the strainer installed so that the strainer element can be removed without removing equipment or piping? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Meter: | | | | | |
| | | | | <input type="checkbox"/> | |
| 12. | Is the liquid or vapor meter installed in accordance with the manufacturers' instructions? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 13. | Is the liquid meter installed so that the meter housing is not subject to excessive strains from the connecting piping? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| | | Y | N | NA | Comments |
|-----|---|--------------------------|--------------------------|--------------------------|----------|
| | <i>If not provided in the piping design, the use of flexible connectors shall be permitted.</i> | | | | |
| 14. | Is the vapor meter installed so as to minimize the possibility of physical damage? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| I. Fire Protection System | | | | | |
|---------------------------|---|--------------------------|--------------------------|--------------------------|--|
| 1. | Are portable fire extinguishers available? Checks: Dry Chemical (BC rating) and minimum capacity of 18lbs (9.2 kg) or as recommended by the FSD. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. | Are the fire extinguishers readily available? <i>Should be less than 50 feet (15m) from the storage location.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. | Are the fire extinguishers in good condition? <i>Check: fully charged, condition of hoses, inspected monthly, free of corrosion, discharge passage not clogged, labels legible, etc.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 4. | Are the fire extinguishers: | | | | |
| | a) re-certified annually? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b) installed securely on hangers, or in the brackets supplied by the extinguisher manufacturer, or in a listed bracket approved for such purpose, or placed in cabinets or wall recesses? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | c) operating instructions located on the front of the extinguisher and are clearly visible? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | d) installed such that the top don't is <5 ft. above and the base >4 in. above the floor? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 5. | Is the LPG system protected with a water deluge system? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 6. | Does the water from the deluge system flow evenly over the entire LPG tanks? <i>Function test.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 7. | Can the system be activated a safe distance away from the storage location either manually, automatically or remotely? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 8. | Is the water supply to the deluge system continuous? <i>For a shared water supply, isolation valves to the LPG system must be locked open.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 9. | Is the manual activation valve conspicuously labelled? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 10. | Is the entire section of the fire water piping colour coded red? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 11. | Is the section of the fire water piping near the LPG tanks metallic? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

| J. Signs | | | | | |
|----------|---|--------------------------|--------------------------|--------------------------|--|
| 1. | Are the following signs displayed in a conspicuous location: Is a sign conspicuously displayed? | | | | |
| | a) LPG | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b) NO SMOKING | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | c) FLAMMABLE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| | d) 'NO PARKING WITHIN 3 METRES', where applicable. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 2. | Are tanks distinguishable from each other by numbering or lettering? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3. | Are tanks that contain unodorised LPG products marked "NOT ODORIZED"? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

