Permit Requirements
LPG Tank Installation

Kern County Fire Department
Office of the Fire Marshal ~ Fire Prevention
2820 M St. ~ Bakersfield, CA 93301
Telephone (661) 391-3310 ~ Fax (661) 636-0466/67
Website: kerncountyfire.org
Email: fireprevention@kerncountyfire.org

Please include completed Application for Permit (KCFD 200) with submittal

Fee Amount: $215.00
Fee Code: 1.5.1
Note: Plus $35 fee for each additional tank over 1

The intent of this document is to aid in the construction permitting process including Change of Use/Occupancy for a LPG Tank Installation within commercial buildings or tenant spaces regarding what should be submitted for the Fire Marshal's Office review. Because every building differs, the applicant SHALL follow all of CFC CH 61 for any construction under review. Other Fire Department operational permits may be required.

1. Permits for Liquefied Petroleum Gas (LPG) Tank Installation shall be applied for at 2820 M St., Bakersfield, CA 93301.
2. Fee shall be submitted at time of application submittal. Make check payable to Kern County Fire Department. Visa and MasterCard accepted.
4. A permit is required for the installation of any LPG tank except when:
   a. The tank is to be located at a single-family residence and does not have the capability to dispense liquid LPG, or
   b. The tank is less than 125 gallon water capacity.
5. The permit shall be obtained prior to the installation of the tank.
6. An “Application for Permit” shall be completed and submitted to Fire Prevention. The applicant must also submit:
   Three (3) copies of site plan indicating (mechanical drawings only):
   a. The location of the tank,
   b. The size of the tank,
   c. Distance to property lines,
   d. Distance to structures,
   e. Distance to roadways,
   f. Distance to other tanks,
   g. Location of guard posts.
7. LPG distributors shall not fill an LP-Gas container for which a permit is required unless a permit for installation has been issued for that location by the Kern County Fire Department
8. Installers shall maintain a record of installations for which a permit is not required and have such record available for inspection by the Kern County Fire Department. Exception: Installation of gas-burning appliances and replacement of portable cylinders.
9. A permit from the State of California of Industrial Relations for a pressure vessel is required.
10. Hazardous Materials Disclosure Law and Public Right-to-Know mandate that you file or amend your business plan and contact the appropriate department. (Either Environmental Health Department for Business Plans, or Kern County Fire Department for Risk Management Prevention Plans)

11. LPG tanks shall be designed, fabricated, tested, and marked in accordance with the regulations of the U.S. Department of Transportation (DOT) or in accordance with approved, nationally recognized standards. (i.e., ASME, API-ASME specifications).

12. Tanks shall be located with respect to buildings, public ways or lines of adjoining property which may be built upon in accordance with the table below. Also, tanks shall not be located less than 50 feet from a railroad track (CCR Title 8). Note: See also distances between point of transfer and exposures.

<table>
<thead>
<tr>
<th>Distance Between Point of Transfer and Exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank water capacity per Container</td>
</tr>
<tr>
<td>125-2000 gal</td>
</tr>
<tr>
<td>Minimum Horizontal Distance</td>
</tr>
<tr>
<td>Buildings</td>
</tr>
<tr>
<td>Line of Adjoining Property</td>
</tr>
<tr>
<td>That can be built upon</td>
</tr>
<tr>
<td>Outdoor places of public assembly</td>
</tr>
<tr>
<td>Including schoolyards, athletic fields,</td>
</tr>
<tr>
<td>And playgrounds</td>
</tr>
<tr>
<td>Public ways including public streets,</td>
</tr>
<tr>
<td>highways, thoroughfares, and sidewalks</td>
</tr>
<tr>
<td>Vehicle fuel dispensers</td>
</tr>
</tbody>
</table>

13. Tanks of more than 2,000 gallons and all tanks installed at service stations shall be equipped with a pressure gauge. If the opening into the container for this gauge is larger than a No. 54 drill size, then an excess flow valve is required.

14. All containers filled on a volumetric basis shall have a fixed liquid level gauge. The percentage when full as indicated by this gauge shall be marked on the tank.

15. Affix “Flammable” and LPG, LP-Gas, propane or butane signs to the tank as needed. Affix “No Smoking within 15 Feet” signs.

16. When subject to vehicle impact, install guard posts around tank.

17. Guard posts shall be:
   a. Constructed of Schedule 40 or 80 steel not less than 4 inches in diameter and concrete filled,
   b. The steel pipe must be a minimum of 6 feet long,
   c. Set not less than 3 feet deep in a concrete footing of not less than 15-inch diameter,
   d. Set with the top of the posts not less than 3 feet above ground,
   e. Spaced not more than 4 feet between posts on center, and
   f. Located not less than 5 feet from the tank

18. Steel supports for vertical tanks shall be protected against fire exposure with a material having a fire resistance rating of at least two hours. Continuous steel skirts having only one opening 18 inches or less in diameter need such fire protection applied only to the outside on the skirt.
19. Electrical equipment and wiring, if any, shall be permitted through the Kern County Department of Engineering and Survey Services (BID), 2700 “M” Street, Bakersfield, California.

**Piping, Tubing and Fittings, NFPA 58**

20. All pipe used for LPG shall be suitable for the pressures it will be subjected to and shall be either black steel, galvanized steel, brass, copper or polyethylene. Polyethylene piping is limited to use underground for LPG vapor service, not exceeding 30 psig.

**NFPA 5.9.3.1** Pipe shall be wrought iron or steel (black or galvanized), brass, copper, polyamide, or polyethylene and shall comply with the following:
- Wrought iron: ASME B36.10M, *Welded and Seamless Wrought Steel Pipe*
- Steel pipe: ASTM A 53, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless*  
- Polyamide and polyethylene pipe: ASTM D 2513, *Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing and Fittings*, and shall be recommended by the manufacturer for use with LP-Gas

**NFPA 5.9.3.2** Tubing shall be steel, stainless steel, brass, copper, polyamide, or polyethylene and shall comply with the following:
- (3) Copper tubing:  
  - (a) Type K or L: ASTM B 88, *Standard Specification for Seamless Copper Water Tube*  
  - (b) ASTM B 280, *Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service*  
- (4) Polyamide and polyethylene tubing: ASTM D 2513, *Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing and Fittings*, and shall be recommended by the manufacturer for use with LP-Gas  

21. Piping for underground shall be machine plastic wrapped steel pipe or approved P.E. pipe limited to 4 inches maximum diameter.

22. Any soldering or brazing filler material shall have a melting point exceeding 1000°F.

23. Valves and fittings used at pressures higher than container pressure, such as on the discharge of liquid transfer pumps, shall be suitable for a working pressure of at least 350 psig.

24. Hydrostatic relief valves required to relieve the hydrostatic pressure which might develop in sections of liquid piping between closed shut-off valves. The relief valve shall have pressure settings not less than 400 psig or more than 500 psig unless installed in systems designed to operate above 350 psig.
# TABLE 6104.3
LOCATION OF LP-GAS CONTAINERS

<table>
<thead>
<tr>
<th>CONTAINERS CAPACITY (water gallons)</th>
<th>Mounded or underground Containers&lt;sup&gt;a&lt;/sup&gt; (feet)</th>
<th>Aboveground Containers&lt;sup&gt;b&lt;/sup&gt; (feet)</th>
<th>MINIMUM SEPARATION BETWEEN CONTAINERS AND BUILDINGS, PUBLIC WAYS OR LOT LINES OF ADJOINING PROPERTY THAT CAN BE BUILT UPON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 125</td>
<td>10</td>
<td>5</td>
<td>None</td>
</tr>
<tr>
<td>125 to 250</td>
<td>10</td>
<td>10</td>
<td>None</td>
</tr>
<tr>
<td>251 to 500</td>
<td>10</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>501 to 2,000</td>
<td>10</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>2,001 to 30,000</td>
<td>50</td>
<td>50</td>
<td>5</td>
</tr>
<tr>
<td>30,001 to 70,000</td>
<td>50</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>70,001 to 90,000</td>
<td>50</td>
<td>100</td>
<td>(0.25 of sum of diameters of adjacent containers)</td>
</tr>
<tr>
<td>90,001 to 120,000</td>
<td>50</td>
<td>125</td>
<td></td>
</tr>
</tbody>
</table>

For SI: 1 foot = 304.8 mm, 1 gallon = 3785 L

Additional Requirements:

---

**Mailing Address:**
Kern County Fire Department
2820 M St.
Bakersfield, CA 93301
Attn: Fire Prevention