

# CEDAR RAPIDS FIRE DEPARTMENT

## FIRE MARSHAL'S OFFICE

713 1<sup>st</sup> Avenue SE  
Cedar Rapids, IA 52401  
Phone: (319) 286-5263  
Fax: (319) 286-5250



### STEPS TO OBTAINING AND COMPLETING ANY PERMIT

Applications for permits shall be submitted to the Cedar Rapids Fire Marshal's Office. A permit applicant shall submit the following information at the time of application: completed permit application, site diagram, installation plans, MSDS sheets, equipment data sheets, and permit application fee. If it is deemed necessary, further information may be required by the Cedar Rapids Fire Marshal's Office before a permit application is accepted for review.

After a permit application has been accepted for review, the Cedar Rapids Fire Marshal's Office will take 7 to 10 days to review the application for compliance with the Cedar Rapids Fire Code (CRFC). Once it is determined that the application meets these requirements, a permit will be issued for installation. The installation shall be per approved plans, any changes to the approved plans shall be submitted in writing via a drawing and approved by the Cedar Rapids Fire Marshal's Office PRIOR to implementing the change.

Throughout the installation process, various inspections may be needed to ensure compliance with CRFC and permit application requirements. You must schedule these inspections with the Fire Marshal's Office a minimum of 48 hours in advance.

A final inspection and test of all safety features is required for all permitted installations. This inspection shall be conducted and approved by a Fire Inspector of the Cedar Rapids Fire Department before the operation will be released for use. If an operation is found to be in use without approval from the Cedar Rapids Fire Department, a citation may be issued.

If you need any further information or assistance, or have any questions, please call the Cedar Rapids Fire Marshal's Office at (319) 286-5166; ask for the person in charge of Permits.

Vance B. McKinnon III  
Fire Marshal  
Cedar Rapids Fire Department

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### Permit Application for the Installation of a Liquefied Petroleum Gas Tank; MAPP Gas; and associated Piping and Dispensers. {Does not include vehicle fueling, industrial or bulk plants.} (Permit LP)

Residential Installation of an LP Tank.

Industrial Installation of an LP Tank.

Name of installation site. \_\_\_\_\_

Address of installation site. \_\_\_\_\_

Date installation is to begin. \_\_\_\_\_

Read the following requirements and signify that you understand and agree to comply with the requirement by placing an "X" on the line next to the requirement. If you do not understand or do not agree to follow the requirement, do **NOT** place an "X" on the line. **This application shows only a portion of the law. All laws in force apply.**

| Applicant Use | Office Use Only | REQUIREMENTS  |
|---------------|-----------------|---|
|               |                 | <b>General</b>  |
|               |                 | This permit application applies to the installation or modification of outdoor LP gas systems. LP gas systems shall comply with the CRFC and NFPA 58. These systems include materials which are composed predominantly of the following hydrocarbons or mixtures of them: propane, propylene, butane (normal butane or isobutane) and butylenes. These shall include Methyl Acetylene and Propadiene [Mapp] gas. 6102.1 |
|               |                 | Contact the Fire Prevention Bureau for requirements of locating containers inside buildings.  |
| _____ 1.      | _____           | <b>Permit Conditions</b><br>A permit shall be obtained from the Cedar Rapids Fire Prevention Bureau prior to any work being conducted at the site. The permit is valid for 90 days at a cost of \$80.00 per system. Permits may be extended for an additional 90 days at a cost of \$20.00 per extension. CRFC 105.7.12.  |

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\_\_\_\_\_ 2. \_\_\_\_\_ **Application for Permit**  
The permit applicant shall provide a legible site diagram listing the site business name, address, tank(s), dispensers, and piping locations, distances from tank(s) to nearby streets, buildings, and property lines.

The permit applicant shall provide product information sheets regarding the listing and approvals of all major components of system being installed, i.e., tanks, piping, dispensers, etc. CRFC 105.7 & Section 6101

\_\_\_\_\_ 3. \_\_\_\_\_ **Compliance**  
The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the fire code official from requiring the correction of errors in the construction documents and other data. Any addition to or alteration of approved construction documents shall be approved in advance by the fire code official, as evidenced by the issuance of a new or amended permit. 105.3.6

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- 4. **Filling**  
Distributors shall not fill an LP-gas container for which a permit is required unless a permit for installation has been issued and the Cedar Rapids Fire Marshal's Office has approved the system for use. 6101.2
  
- 5. **Use in Basements**  
LP-gas containers shall not be used in a basement, pit or similar location where heavier-than-air gas might collect. LP-gas containers shall not be used in an above-grade under-floor space or basement unless such location is provided with an approved means of ventilation. 6103.2.1.1
  
- 6. **Container Installation**  
Liquefied petroleum gas equipment shall be installed in accordance with the *International Fuel Gas Code* and NFPA 58, except as otherwise provided in this chapter. An aboveground LP gas container, and any of its parts, shall not be located within 6 feet of a vertical plane beneath overhead electric power lines that are over 600 volts, nominal. NFPA 58 – 6.4.4.13  
Cylinders shall be installed only above ground and shall be set upon a firm foundation or be otherwise firmly secured. Flexibility shall be provided in the connecting piping. The requirements of NFPA 58 - 6.1 shall apply.
  
- 7. **Location of Equipment and Piping**  
Equipment and piping shall not be installed in locations where such equipment and piping is prohibited by the Cedar Rapids Mechanical Code. The Cedar Rapids Building and Mechanical Departments will be notified of any relevant installations. CRFC 6103.3
  
- 8. **Container Location**  
Containers shall be located with respect to buildings, public ways, and lines of adjoining property, which can be built on in accordance with Table 6104-A. CRFC 6104.3

**TABLE 6104-A Location of Containers**

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| Container Capacity<br>(Water Gallons) | Minimum Separation Between Containers and Buildings, Public Ways, or Lines of Adjoining Property that can be Built Upon |                               | Minimum Separation Between Containers (Feet) |
|---------------------------------------|---|-------------------------------|--|
|                                       | Mounded or Underground Containers (Feet)  | Aboveground Containers (feet) |  |
| Less Than 125 <sup>4</sup>            | 10  | 5 <sup>5</sup>                | None   |
| 125 to 250                            | 10  | 10                            | None   |
| 251 to 500                            | 10  | 10                            | 3  |
| 501 to 2,000                          | 10  | 25 <sup>5,6</sup>             | 3  |
| 2,001 to 30,000                       | 50  | 50                            | 5  |

4. At a consumer site, if the aggregate water capacity of a multi-container installation. Comprised of individual containers having a water capacity of less than 125 gallons, is 500 gallons or more, the minimum distance shall comply with the appropriate portion of table 6104-A, applying the aggregate capacity rather than the capacity per container. If more than one such installation is made, each installation shall be separated for other installations by at least 25 feet. Minimum distances between containers need not apply.

5. The following shall apply to aboveground containers installed alongside buildings:

1. Containers of less than a 125-gallon water capacity are allowed next to buildings they serve with in compliance with items 2,3, and 4.
2. DOT specification containers shall be located and installed so that the discharge from the container pressure-relief device is at least 3 feet horizontally from building openings below the level of such discharge and shall not be beneath buildings unless the space is well ventilated to the outside and is not enclosed for more than 50 percent of its perimeter. The discharge from container pressure-relief devices shall be located not less than 5 feet from exterior sources of ignition, openings into direct-vent appliances or mechanical ventilation air intakes.
3. ASME containers of less than a 125-gallon water capacity shall be located and installed such that the discharge from pressure-relief devices shall not terminate in or beneath buildings and shall be located at least 5 feet horizontally from building openings below the level of such discharge and not less than 5 feet from exterior sources of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes.
4. The filling connection and the vent from liquid level gauges on either DOT or ASME containers filled at the point of installation shall not be less than 10 feet from exterior sources of ignition, opening into direct-vent appliances, or mechanical ventilation air intakes.

6. This distance is allowed to be reduced to not less than 10 feet for a single container or 1,200-gallon water capacity or less, provided such container is at least 25 feet from other LP-gas containers of more than 125-gallon water capacity.

9. **Multiple Container Installation**

Multiple container installations with a total water storage capacity of more than 180,000 gallons (681 374 L) [150,000-gallon (567 811 L) LP-gas capacity] shall be subdivided into groups containing not more than 180,000 gallons (681 374 L) in each group. Such groups shall be separated by a distance of not less than 50 feet (15 240 mm), unless the containers are:

1. Mounded in an approved manner,
2. Protected with approved insulation on areas that are subject

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- to impingement of ignited gas from pipelines or other leakage,
- 3. Protected by firewalls of approved construction,
- 4. Protected by an approved system for application of water as specified in IFC Standard 6104, Table 6104.3, or
- 5. Protected by other approved means.

Where one of these forms of protection is provided, the separation shall not be less than 25 feet (7620 mm) between container groups. CRFC 6104.4

- \_\_\_\_\_ 10 \_\_\_\_\_ **Non-approved Equipment**  
LP Gas shall not be used for the purpose of operating devices or equipment unless such device or equipment is approved for use with LP-gas. CRFC 6105.1
  
- \_\_\_\_\_ 11 \_\_\_\_\_ **Clearance to Combustibles**  
Weeds, grass, brush, trash and other combustible materials shall be kept not less than 10 feet from LP-gas tanks or containers. CRFC 6107.3
  
- \_\_\_\_\_ 12 \_\_\_\_\_ **Protecting Containers From Vehicles**  
When exposed to probable vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be suitably protected in accordance with section 6107.4 CRFC 6107.4
  
- \_\_\_\_\_ 13 \_\_\_\_\_ **Separation from Flammable and Combustible Liquid Tanks**  
LP gas containers shall be separated from a flammable and combustible liquid storage tank by a minimum of 20 feet. LP Tanks shall be at least 10 feet from the wall of a dike containing flammable and combustible liquids. NFPA 58 - 6.4.4.4 & 6.4.4.6
  
- \_\_\_\_\_ 14 \_\_\_\_\_ **Separation from Hazardous Materials**  
The minimum separation between LP-Gas containers and oxygen or gaseous hydrogen containers shall be in accordance with Section 6.4.5 of NFPA 58 or 6.4.4.11
  
- \_\_\_\_\_ 15 \_\_\_\_\_ **Anchoring of Containers**  
Where necessary to prevent flotation due to possible high flood waters aboveground containers shall be securely anchored.
  
- \_\_\_\_\_ 16 \_\_\_\_\_  
No part of an aboveground LP-Gas container shall be located in the

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- \_\_\_\_\_ 17 \_\_\_\_\_ area 6 feet horizontally from a vertical plan beneath overhead electric power lines that are over 600 volts, nominal. NFPA 58 – 6.4.4.13
- \_\_\_\_\_ 17 \_\_\_\_\_ **Container Markings**  
LP-Gas containers shall be marked “PROPANE” in 3” high letters with a contrasting background. NFPA 58 – 5.2.8
- \_\_\_\_\_ 18 \_\_\_\_\_ **Permanently Out of Service**  
Containers to be placed permanently out of service shall be removed from the site. CRFC 6110.2
- \_\_\_\_\_ 19 \_\_\_\_\_ **Temporarily Out of Service**  
Containers whose normal use has been temporarily discontinued shall:
1. Be disconnected from appliance piping.
  2. Have container outlets, except relief valves, closed or plugged, and
  3. Be positioned with the relief valve in direct communication with container vapor space.
- CRFC 6110.1

### DISPENSERS - SKIP TO END IF THIS DOES NOT APPLY

- \_\_\_\_\_ 20 \_\_\_\_\_ **Containers to be filled or evacuated:** In the interest of safety, transfer of LP-Gas to and from a container shall be accomplished ONLY by qualified persons trained in proper handling and operating procedures meeting requirements of NFPA 58: 1-5 and in emergency response procedures. No other material other than LP-Gas shall be injected into the container. NFPA 58: 7.2.2.3
- \_\_\_\_\_ 21 \_\_\_\_\_ **Valve** outlets on cylinders of 108 lb water capacity (nominal 45 lb propane capacity) or less shall be equipped with an effective seal such as a plug, cap, listed quick-closing coupling, or a listed quick-connect coupling. This seal shall be in place whenever the cylinder is NOT connected for use. Non-refillable containers shall NOT be re-filled! NFPA 58 - 7.2.2.5
- \_\_\_\_\_ 22 \_\_\_\_\_ **Containers** shall be filled ONLY after determination that they comply with the design, fabrication, inspection, marking, and requalification provisions of NFPA 58 - 7.2.2.8
- \_\_\_\_\_ 23 \_\_\_\_\_ **Public Access to** areas where LP-Gas is stored and transferred shall be prohibited except where necessary for the conduct of normal business activities. **Internal Combustion Engines** within 15 foot of a point of transfer shall be shut down while such transfer operations are in progress.  
NFPA 58 – 7.2.3.2

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- \_\_\_\_\_ 24 \_\_\_\_\_ **Public Access** to areas where LP-Gas is stored and transferred shall be prohibited except where necessary for the conduct of normal business activities. **Internal Combustion Engines** within 15 foot of a point of transfer shall be shut down while such transfer operations are in progress.  
**Smoking, Open Flames, metal cutting or welding, portable electrical tools, and extension lights (or other sources of ignition)** shall not be permitted within 25 foot of a point of transfer while filling operations are in progress. NFPA 58 – 7.2.3.2
- \_\_\_\_\_ 25 \_\_\_\_\_ **Location of Transfer Operations:** If operations are after daylight hours, then lighting shall be provided to illuminate storage containers, containers being loaded, control valves, and other equipment. NFPA 58: 3-3.7
- \_\_\_\_\_ 26 \_\_\_\_\_ **An excess-flow check valve** complying with 2-3.3.3 (b) **OR an emergency shutoff valve** complying with 2-4.5.4 shall be installed in or on the dispenser at the point which the dispenser hose is connected to the liquid piping. A differential back pressure valve shall be considered as meeting this provision. NFPA 58 – 5.7.3.
- \_\_\_\_\_ 27 \_\_\_\_\_ **Protection against Trespassing and tampering shall be in accordance with 3-3.6.** NFPA 58: 3-9.3.6 Enclosure with a least a 6 ft high industrial type fence; At least two means of emergency access from the fenced enclosure; and a clearance of at least 3 ft shall be provided to allow emergency access to the required means of egress. (see exception) NFPA 58: 3-3.6
- \_\_\_\_\_ 28 \_\_\_\_\_ **All Dispensers** shall either be installed on a concrete foundation OR be part of a complete storage and dispensing unit mounted on a common base and installed in accordance with 3-2.4.2 (a) 4 and 2-2.5.2 (a) and (b).  
**Protection shall be provided against physical damage.** IFC 6107.4  
**A listed quick-acting shutoff valve shall be installed at the discharge end of the transfer hose.** NFPA 58 – 6.2
- \_\_\_\_\_ 29 \_\_\_\_\_ **EMERGENCY SHUTOFF:** A clearly identified and an easily accessible switch...shall be provided at a location NOT less than 20 ft or more than 100 ft from the dispensing device to shut off the power in the event of a fire, accident, or other emergency. The marking of the switch...shall be visible at the point of liquid transfer. NFPA 58 – 6.12, 6.12.12.2
- \_\_\_\_\_ 30 \_\_\_\_\_ **Water supplies (fire hydrants) and fire access roads (24 ft wide approved hard surface)** shall be provided to each propane tank and / or dispenser site. The adequacy of these requirements shall be determined by the Fire Department.

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|           | Manufacture of Tank | Size of Tank | Product to be Stored Within Tank | UL Listing Number | Iowa DNR Tank Registration # |
|-----------|---------------------|--------------|----------------------------------|-------------------|------------------------------|
| <b>#1</b> |                     |              |                                  |                   |                              |
| <b>#2</b> |                     |              |                                  |                   |                              |
| <b>#3</b> |                     |              |                                  |                   |                              |

Contractor to be used for installation.

\_\_\_\_\_

Contact Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Print: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**FOR OFFICE USE ONLY!**

**FOR INSPECTORS ONLY!** UPON FINAL INSPECTION – Check each item on the application. If the installation meets the requirement, mark approved in the shaded area next to the requirement. If the installation does not meet the requirement, write a violation notice for the deficiency.

Approved as completed as of the date:

Inspectors Name

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