



**Public Protection Cabinet  
Department of Housing, Buildings and Construction  
Division of Fire Prevention - Hazardous Materials Section  
101 Sea Hero Road, Suite 100  
Frankfort, Kentucky 40601-5405  
Telephone: (502) 573-1702 Fax: (502) 573-1695**

**PERMIT APPLICATION TO INSTALL  
COMPRESSED NATURAL GAS (CNG) FUELING FACILITIES**

**For Office Use Only**

**Permit No.:** \_\_\_\_\_  
**Amount Paid:** \_\_\_\_\_

**Approved By:** \_\_\_\_\_  
**Date Approved:** \_\_\_\_\_

**Installation Site**

**Tank & Equipment Owner**

\_\_\_\_\_  
NAME OF BUSINESS/COMPANY (D/B/A)

\_\_\_\_\_  
STREET ADDRESS

\_\_\_\_\_  
CITY STATE ZIP CODE

( )  
TELEPHONE NUMBER COUNTY

\_\_\_\_\_  
OWNER/OPERATOR/COMPANY NAME

\_\_\_\_\_  
STREET ADDRESS

\_\_\_\_\_  
CITY STATE ZIP CODE

( )  
TELEPHONE NUMBER COUNTY

**Installation Contractor**

**Natural Gas Supplier**

\_\_\_\_\_  
COMPANY NAME

\_\_\_\_\_  
STREET ADDRESS

\_\_\_\_\_  
CITY STATE ZIP CODE

( ) ( )  
TELEPHONE NUMBER FAX NUMBER

\_\_\_\_\_  
CONTACT PERSON EMAIL ADDRESS

\_\_\_\_\_  
COMPANY NAME

\_\_\_\_\_  
STREET ADDRESS

\_\_\_\_\_  
CITY STATE ZIP CODE

( ) ( )  
TELEPHONE NUMBER FAX NUMBER

**Installation Activities To Be Completed Under This Permit (check all that apply):**

New Site       Adding new tank(s) or piping at existing site       Other (Specify): \_\_\_\_\_

**Type of Facility:**  Re-Filling to Public     Use Soley for Private Motor Fueling     Government

*NOTE: Pre-fabricated Package is defined as components assembled and delivered to the site for final installation; may be delivered separately to the installation site. The packager must list these components as being part of the package in the certification letter. Field Fabricated is defined as system components not identified as part of a pre-fabricated package.*

Number of Compressors: \_\_\_\_\_ Total Square Cubic Feet (SCF): \_\_\_\_\_

Number of Storage Cylinders: \_\_\_\_\_ Total Square Cubic Feet (SCF) Capacity: \_\_\_\_\_

**Container Design:**

Part of pre-fabricated package:  DOT/TC     ASME    Field fabricated:  DOT/TC     ASME  
 Check appropriate box:  2,400 psig     3,000 psig     3,600 psig     4,500 psig     other \_\_\_\_\_ psig

Description	Manufacturer & Part Number	
	Part of Pre-fabricated Package	Field Fabricated
<b>Manually Operated Container/Shutoff Valve</b>		
<b>Backflow Check Valve</b>		
<b>Manual Shutoff Valve</b>		
<b>Pressure Relief Devices (DOT Cylinders)</b>		
<b>Pressure Relief Devices (ASME Containers)</b>		
<b>Closing Valve:</b> <input type="checkbox"/> Solenoid Valve <input type="checkbox"/> Pneumatic Valve		
<b>Compressor</b>		
<b>Pressure Regulators</b>		
<b>Pressure Relief Devices</b> <input type="checkbox"/> Compressor <input type="checkbox"/> Dryer		
<b>Pressure Gauges</b>		
<b>Self-Closing Valve:</b> <input type="checkbox"/> Solenoid Valve <input type="checkbox"/> Pneumatic Valve		
<b>Piping Fabrication</b>		
<b>Piping Installation:</b> Aboveground piping: <input type="checkbox"/> Carbon Steel <input type="checkbox"/> Stainless Steel Underground piping: <input type="checkbox"/> Carbon Steel <input type="checkbox"/> Stainless Steel <i>NOTE: Provide mil test report when applicable.</i>		
<b>Vent Pipe/Stack</b>		
<b>Flexible Connector</b>		
<b>Excess-Flow Check Valves</b>		
<b>Emergency Shutdown Devices (ESD)</b>		
<b>Control Circuits</b>		
<b>Temperature Corrected Fill Pressure</b>		
<b>Hose/Hose Connections</b>		
<b>Vehicle Fueling Connection/Device</b>		
<b>Breakaway Protection</b>		
<b>Quarter Turn Shutoff Valve</b>		

## Installation Requirements

- Location of *CNG* compression, storage and dispensing shall be located and conducted in accordance with NFPA 1 and NFPA 52.
- Manually operated container/shutoff valve shall be listed or approved and shall be provided for each container.
- Fill line to storage container shall be equipped with a backflow check valve between the compressor and the storage container.
- Manual shutoff valve shall be listed or approved. Manually operated and installed in a manifold as close to a container or group of containers as practical. Manual shutoff valve shall be downstream of the backflow check valve.
- Pressure relief devices for DOT Cylinders shall be listed or approved. Arranged to discharge to a safe area so escaping gas will not impinge upon buildings, other equipment and areas occupied by the public.
- Pressure relief devices for ASME containers shall be listed or approved. Provided with one or more spring-loaded pressure relief valves set up to open in accordance with ASME code. Installed so any discharge will be in a vertical position and fitted with suitable raincaps.
- Closing valve shall be listed or approved. Each line between the gas storage and dispenser shall have a valve that will close when the power supply to the dispenser is cut off, or any emergency shutdown device (*ESD*) is activated.
- Container installation shall be installed aboveground on stable, non-combustible foundations or in vaults. In flooding areas, anchored to prevent floating. Protected to inhibit corrosion (painted). Protected from the flow or accumulation of flammable or combustible liquids under containers.
- Compressor shall be designed for the use with *CNG*. When operated unattended, *CNG* compression equipment shall be equipped with a high discharge and low suction pressure automatic shutdown control. Compressor shall incorporate an automatic condensate system.
- Pressure regulators shall be listed and approved. Inlet and each chamber shall be designed for its maximum service pressure with a pressure safety factor of at least 3. Pressure regulators shall be designed, installed or protected so operation will not be affected by the elements.
- Pressure relief devices – compressor shall be listed or approved and shall limit each stage pressure to the maximum allowable service pressure for the compression cylinder and piping. Pressure relief devices – dryer shall be listed or approved.
- Pressure gauges shall be listed or approved. If provided, shall be capable of reading at least 1.2 times the system design pressure. Installed to indicate compression discharge pressure, storage pressure and fuel supply container fill pressure.
- Self-closing valves shall be listed or approved and shall be provided on the inlet of the compressor that will shut down the gas supply.
- Piping shall be fabricated and tested in accordance with ANSI/ASME B31.3. Plastic pipe, tubing and fittings; galvanized pipe and fittings; aluminum pipe, tubing and fittings; pipe nipples for initial connection to a container; and copper alloy with copper content exceeding 70% shall not be allowed.
- Piping installation shall be run directly as practical with provision for expansion, contraction, jarring, vibration and setting. Aboveground piping shall be supported and protected against mechanical damage and corrosion. Underground piping shall be buried not less than 18 inches below the surface of the ground and protected against corrosion. Threaded pipe and fittings are not allowed underground. Manifolds connecting fuel containers shall be fabricated to minimize vibration and protected/shielded from unsecured objects. Male pipe threads shall have a jointing material impervious to the action of natural gas applied prior to assembly.
- Hose shall be limited to a vehicle fueling hose and an inlet connect to compression equipment.
- Vent pipe/stack shall be vented to a safe point of discharge.
- Flexible connector to provide flexibility where necessary in a pipeline, metallic hose not more than 36 inches in length, installed according to manufacturer's recommendations. The manufacturer's identification shall be retained in each section.
- Excess-flow check valves shall be listed or approved. Where used, the closing flow shall be less than the flow rating of the piping system that would result from a pipeline rupture.
- Emergency shutdown devices (*ESD*) shall be located at the dispensing area and at a location which is not less than 10 feet away from the dispensing area and which is along the means of egress. When activated, shall shut off the power supply and gas supply at a point before the compressor and at a point in the fixed piping between the storage container and the dispensing equipment. Devices shall be easily accessible and distinctly marked for easy recognition with a permanently affixed legible sign with letters not less than 3 inches high.
- In the event of a power failure or activation of an *ESD*, manual setting of system shall be required.
- *CNG* dispensing systems shall be equipped to automatically stop fuel flow when a fuel supply container reaches the temperature corrected fill pressure.
- Hose/hose connections shall be listed or approved. Hose and metallic hose shall be distinctly marked by the manufacturer, indicating the manufacturer's name or trademark, applicable service identified and design pressure.
- Connection complying with ANSI/AGA NGV 1, requirements for natural gas vehicles (NGV) refueling connection devices, requirements 1-90 shall be provided.
- Breakaway protection installed at every dispensing point and arranged to separate using a force not greater than 44 lbs. when applied in any horizontal direction.
- Quarter turn shutoff valve shall be listed or approved. Fast closing, "quarter turn" manual shutoff valve required upstream of the breakaway device, readily accessible to the person dispensing natural gas unless the self-closing valve located immediately upstream of the dispenser or the dispenser is equipped with a self-closing valve that closed each time the control arm is turned to the "OFF" position or *ESD* is activated.
- Compression, storage and dispensing equipment located outdoors shall be 20 feet from aboveground tanks containing flammable or combustible liquids and underground storage tank fill pipes.
- Compression, storage and dispensing equipment located indoors shall be limited to 10,000 square cubic feet (SCF). Permitted inside of buildings reserved exclusively for these purposes or in rooms within or attached to buildings used for other purposes. Deflagration (explosion) venting shall be provided in an exterior wall or roof in accordance with NFPA 68 (Guide for Venting or Deflagrations).
- A warning sign with the words "STOP MOTOR, NO SMOKING, NO CELL PHONES, FLAMMABLE GAS" shall be posted at dispensing station and compressor areas. Signage shall be visible and legible from each point of transfer. Letters shall not be less than 3 inches high.
- Minimum portable fire extinguisher having a rating of not less than 20 B:C at the dispensing area.
- System equipment shall be protected to minimize the possibilities of physical damage or vandalism.

**Fee Schedule**

Installation plan review fee of \$100.00 for the first tank and \$50.00 for each additional tank is required for this specialized review. Piping system plan review fee is \$100.00 (piping system includes valves, fill pipes, vents, leak detection, spill and overflow prevention, cathodic protection or associated components.) **The required fee must accompany your application for permit.** Your check or money order should be made payable to the "Kentucky State Treasurer". The name and location of the project must be indicated on the check or money order.

**Material safety data sheets must accompany this application to include any item used that is not contained in a permit application identifying it as meeting all the NFPA 52 and NFPA 70 - National Electrical Code (NEC).**

I, the undersigned, do hereby agree that this installation shall comply with all applicable requirements of the "Standards of Safety" promulgated in 815 KAR 10:060 and all other applicable standards as required. All answers in this application are true and accurate to the best of my knowledge.

\_\_\_\_\_  
CONTRACTOR (SIGNATURE)

\_\_\_\_\_  
DATE

**For Official Use Only**  
**APPROVAL BY THE HAZARDOUS MATERIALS SECTION**

\_\_\_\_\_  
PROJECT NAME

\_\_\_\_\_  
IF THE NAME HAS CHANGED, WHAT WAS IT PREVIOUSLY CALLED

\_\_\_\_\_  
STREET ADDRESS

\_\_\_\_\_  
CITY

\_\_\_\_\_  
COUNTY

\_\_\_\_\_  
PERMIT NUMBER

This storage tank system was tested on \_\_\_\_\_ with satisfactory results.

This storage tank system was tested on \_\_\_\_\_ with satisfactory results. Pursuant to KRS 227.300 and 815 KAR 10:060 the above listed installation is found to have substantially complied with the Kentucky "Standards of Safety".

\_\_\_\_\_  
**Hazardous Materials Field Inspector**

\_\_\_\_\_  
**Badge #**

\_\_\_\_\_  
**Date**

**Comments:** \_\_\_\_\_

# Site Plan

*A site plan showing dimensions of the area proposed to be used for the tank and/or piping, distances to the nearest property lines and the location and construction of any buildings. Location of the point of transfer in relation to the container(s), buildings, public sidewalks, highways, streets, roads, aboveground and underground tanks storing flammable or combustible liquids/gases.*