

**Act 203**  
**Duty to Notify**  
**and LPG Licensing,**  
**NFPA 58, 2004 “LPG”**

Hotel Mead & Convention  
Center

Wisconsin Rapids

March 24th



# New Licensing Requirements

# Your Business may need a Liquefied Gas Supplier License August 1, 2009

Hand  
Out

## WHO, WHAT, WHEN, HOW & WHERE ?

- ❧ The new Wisconsin liquefied gas supplier regulations will go into effect on August 1, 2009. Anyone engaged in the filling and supplying of propane may need to review Chapter Comm 40, Gas Systems and the license requirement details in the Chapter Comm 5, Licenses, Certifications and Registrations code. The code section **Comm 5.73** indicates that either a “liquefied gas supplier” or a “liquefied gas supplier - restricted” license may be necessary. Hopefully, this notice will allow sufficient time for businesses to comply with the rule in advance of the actual deadline and provide guidance and understanding to those affected.

# Liquefied Gas Supplier License

👉 **WHO ..... is affected?**

👉 **Anyone who engages in the business of filling liquefied petroleum gas “LPG” containers with gas intended as fuel to be used directly from the container should obtain a license. When engaging in this activity one should obtain either the liquefied gas supplier or the liquefied gas supplier - restricted license. Most likely all existing bulk retail LPG distribution facilities, campsite facilities, hardware stores, outdoor appliance dealers, and LP gas grill supply centers that fill liquefied gas containers will need to obtain the license.**

# Liquefied Gas Supplier License

- Continued from previous slide
- License is **not required**:
- For filling containers with liquefied petroleum gas for the person's or entity's own use such as a storage warehouse with a fleet of LPG fork lift-trucks filled on site.
- For a business that fills containers that have a water capacity of less than 4 pounds.

# Liquefied Gas Supplier License

- ❖ **WHAT** ..... is the license and what are the requirements/qualifications?
- ❖ **Liquefied Gas Supplier License**: Comm 5.73(1) (a) for the person engaged in the business of filling containers with liquefied petroleum gas that is intended to be used directly from the containers as fuel.
- ❖ This license has a 2YR-Term/renewal, \$15.00-Initial application fee + 60.00 License fee / Total - \$75.00

# Liquefied Gas Supplier License

## 🍷 Liquefied Gas Supplier–Restricted License:

Comm 5.73(1) (b) the person who holds “restricted” license shall be limited to filling only department of transportation cylinders with liquefied petroleum gas.

🍷 This license has a 2YR-Term/renewal, \$15.00-Initial application fee + 40.00 License fee / Total - \$55.00

# Liquefied Gas Supplier License

❖ **WHEN .....** **are the new licensing rules effective?**

❖ Pursuant to 2007 Wisconsin Act 203: A liquefied gas supplier or liquefied gas supplier-restricted **license is required AUGUST 1, 2009**. About May 1, 2009, the Safety and Buildings Division Credential unit will be prepared to accept, process and issue the new liquefied gas supplier license(s).

❖ Although the license is not mandatory until August 1, 2009, most applicants should take advantage of this opportunity to submit early. Proof of responsibility w/application must be provided and The Certificate Holder is: DEPARTMENT OF COMMERCE, SAFETY & BUILDINGS, PO BOX 7082, MADISON, WI 53707-7082. (NOTE: the certificate holder information is usually located in the lower left hand corner on the certificate);

# Liquefied Gas Supplier License

- ❧ **HOW** ..... does one obtain the license? (Details are found on application) (See Handout)
- ❧ The application form will be available from the internet approximately May 1, 2009 at the following link:  
Application link: <http://www.commerce.wi.gov/SB/SB-DivCodesListing.html>
- ❧ Applicants should **complete the application, attach the correct fee and provide all necessary documentation** to prove requirements for the license are met. One may contact the Credential office at 608-261-8500 to request an application.

# Liquefied Gas Supplier License

❖ WHERE ..... are requirements?

❖ Applicable code language can be found in **Comm 5**, Licenses, Certifications and Registrations (specific **section 5.73**) and the **Comm 40**, Gas Systems code. Electronic copies are available from the following link: Codes on Internet:

<http://www.commerce.wi.gov/SB/SB-DivCodesListing.html>

Hand  
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# Liquefied Gas Supplier License

- Continued for previous page
- It is also important to realize that a special note was created in each of the specific credential section(s) listed below:
- **Comm 5.31(4)(c)** Dwelling contractors
- **Comm 5.70(4)** HVAC contractors
- **Comm 5.71(4)** HVAC qualifiers
- **Comm 5.73(4)(c)** Liquefied gas suppliers
- The note indicates utilizing the form SBD-9656-E (attached) to document responsibilities as required in Comm 5 and in accordance with s 101.16(4) (a) Stats.

Hand Out  
SBD-  
9656

# Propane Safety Act 203

# Propane Safety Act Requirements

## Who's Covered:

- Retailers who fill propane containers (4 lbs. water capacity and greater) for another person's use
  - » DOT Cylinders
  - » ASME pressure vessels
  - » RV filling stations

## Who's Excluded:

- Exchange cage operators without a fill station
- Businesses/Individuals that fill containers for their own use
- Business that offer propane contacts that are delivered by another supplier

# Propane Safety Act

1. A state minimum financial responsibility requirement
2. “Retail Supplier” licensing
3. Duty-to-warn/Reverse duty-to-warn
4. Diggers Hotline disclosure to users of propane gas systems

# Propane Safety Act

## Cylinder/RV Fillers

### Must:

1. Obtain a license (\$40) every two year term
2. Meet the \$500,000 per occurrence;  
\$1,000,000 annual aggregate minimum financial responsibility requirement



# Propane Safety Act

## Acceptable Financial Responsibility Instruments:

- Commercial general liability insurance
- Surety bond
- Irrevocable letter of credit

**Financial Responsibility Must:** Provide coverage for third-party bodily injury and property damage resulting from the release of a liquefied petroleum gas.

**60-day  
notice**

# Propane Safety Act

## Fillers of ASME and other containers

1. Obtain a license
2. Meet the \$1,000,000 per occurrence; \$2,000,000 annual aggregate minimum financial responsibility requirement
3. Provide, prior to 1<sup>st</sup> delivery, and then annually, a notice to customers of their obligation to call if there is or will be a planned interruption of service (**reverse-duty-to-warn**)



# Propane Safety Act

## Retail Supplier Notice to Customers with a propane gas system (Wis. Stats.101.16(4)(c))

### ❧ “Propane Gas System”

- ❧ One or more containers
- ❧ Total water capacity of 100 gallons or more
- ❧ All components to the point of connection to a device designed to consume the gas

### Elements of the notice:

- ❧ Supplier’s contact information
- ❧ Purpose of notice
- ❧ What a propane gas system is
- ❧ Reporting triggers
- ❧ A copy of the law

# Propane Safety Act

## Customer Duty-to-Warn (Wis. Stats 101.16(4)(b))

- ❧ Must notify supplier of interruptions of service
  - At least 7 days in advance for planned events
  - No later than 24 hours after an emergency
- ❧ Does not limit who can work on systems. However, NFPA 54 limits work to a “qualified agency.”
- ❧ Does not require a supplier to check the system for leaks. NFPA 54 requires the system to be checked



What is your company's policy for leak checks?

# Propane Safety Act

## Underground Propane Facilities



The word “Propane” must be used in Diggers Hotline’s communications when describing the types of private transmission facilities not located by its members



Grants authority to require propane suppliers to:

- Provide customers an annual notice regarding non-private facilities
- Rule making is at the discretion of the agency

# Propane Safety Act

## Other Provisions:

- ❖ Retail suppliers can now transfer a new customer's remaining propane from a tank not under their ownership into a tank under the ownership of the customer or supplier.
- ❖ Public listing of licensed suppliers
- ❖ Creates a private cause of action for licensed suppliers against those who are not

# Propane Safety Act

## Private Cause of Action

- ❧ Option limited to fillers of ASME and other stationary containers
- ❧ Licensed suppliers can bring suit against unlicensed suppliers
- ❧ Monetary damages are \$2,000 per day, or the actual amount of damages, which ever is greater

# Propane Safety Act Overview

## Penalties

### **Licensing or financial responsibility violations**

#### Intentional

##### Cylinder/RV fillers

1<sup>st</sup>--\$200 to \$400 or  
30 to 60 days

2<sup>nd</sup>-- \$800- \$2,000 or  
30 to 60 days

#### Unintentional

##### Cylinder/RV fillers

1<sup>st</sup>--\$200 to \$400

2<sup>nd</sup>-- \$800- \$2,000

# Propane Safety

## Penalties

### **Licensing or financial responsibility violations**

#### **Intentional**

##### **ASME/stationary fillers**

1<sup>st</sup>--\$500 to \$1,000 or  
30 to 60 days

2<sup>nd</sup>-- \$2,000- \$5,000 or  
30 to 60 days

#### **unintentional**

##### **ASME/stationary fillers**

1<sup>st</sup>--\$500 to \$1,000

2<sup>nd</sup>-- \$2,000- \$5,000

# Propane Safety Act Overview

## **Effective dates:**

- **Supplier notice to customers to implement reverse duty-to-warn (October 1, 2008)**
- **Financial resp. & licensing (August 1, 2009)**
- **Diggers Hotline Communications (May 1, 2009)**

**NFPA-58 2004**

**LP GAS**

# NFPA 58, 2004 “LPG”

## Brief Introduction to Changes

- Adopted 2004 Edition from **previous** 1998 Edition
  - Comm 40.30, Adoption Effective **12-1-04**
- Totally Re-organized (Info similar / re-located)
  - Numbering changed from 1-1 to 1.1
  - Increase of Chapters from 13 to 15
  - Chapter Info Moved and Re-numbered
  - Increase & Change of Appendix A-J to Annex A-K

# Comm 40, Subchapter VI

## LPG Sections 40.40 - 40.48

- Comm 40.30(2) STANDARDS. The following standards are hereby incorporated by reference into this chapter, subject to the changes and additions specified in subchs. V to IX: (a) *Liquefied petroleum gas standards*. 2. National Fire Protection Association, 11 Tracy Drive, Avon, MA 02322–9908. Liquefied Petroleum Gas Code, **NFPA No. 58–2004**.
- **History:** Cr. Register, October, 1999, No. 526, eff. 11–1–99; CR 04–054: am (2), cr. (2) (d) and (e) Register November 2004 No. 587, **eff. 12–1–04**.

# Comm 40, Subchapter VI

## LPG Sections 40.50 - 40.53

- Comm 40.40 (1) APPLICATION. This subchapter applies to the storage, handling and use of liquefied petroleum gases in dwellings, public buildings and places of employment and to the transportation of liquefied petroleum gases by tank truck or tank trailer. (2) EXEMPTIONS. This subchapter does not apply to any of the following: (a) The transportation of liquefied petroleum gases by railroads engaged in interstate commerce or to equipment used by them. (b) Liquefied petroleum gas facilities owned and operated by utilities when the facilities are part of the distribution system for the utility and are subject to the provisions of ch. PSC 135.

# Comm 40, Subchapter VI

## LPG Sections 40.40 - 40.48

- 🐼 **Comm 40.42 Approval of proposed installations.** Department plan approval shall be obtained before commencing construction on any liquefied petroleum gas installation using containers of 2000 gallons or larger water capacity or where the aggregate water capacity will be 4000 gallons or larger. Plan examination information shall be submitted as specified in s. **Comm 40.10.**

# Comm 40, Subchapter VI

## LPG Sections 40.40 - 40.48 Change

\*\*\*Effective May 01, 2009

- ☛ Comm 40.43 **Certificate of installation.** SECTION 11. Comm 40.43 is repealed and recreated to read:

- ☛ **Comm 40.43 Certification of installation. (1)**

Every person, firm, association or corporation installing equipment using liquefied petroleum gas shall complete a certificate of installation form, SBD-9659-E R1-09.

- ☛ **Note:** A certificate of installation form (SBD 9656-E R1-09) may be downloaded from the Commerce webpage at:  
<http://www.commerce.state.wi.us/SB/SB-DivForms> or obtained through Document Sales P.O. Box 7840, Madison, Wisconsin 53707, (608-266-3358 information), (1-800-362-7253 or 608-264-9419 charge card orders) or  
[http://www.doa.state.wi.us/section\\_detail.asp?linkcatid=266&linkid=49&locid=2&name](http://www.doa.state.wi.us/section_detail.asp?linkcatid=266&linkid=49&locid=2&name).

# Comm 40, Subchapter VI

## LPG Sections 40.40 - 40.48 Change

\*\*\*Effective May 01, 2009

- ❧ (2) The certificate of installation form, SBD-9659, shall be completed at the time of installation and shall be provided to the owner of the equipment.
- ❧ (3) The certificate of installation form, SBD-9659, shall be submitted to the local fire department within 10 business days after completion of the installation, if the installation involved one of the following:
  - ❧ (a) A container with a water capacity of 2000 gallons or more.
  - ❧ (b) Containers with an aggregate water capacity of 4000 gallons or more.

# Gas System Brochure

\*Welded repair & alteration per Comm 41



Adopts Nat'l Board Inspection Code  
R-1, R-2 forms completed by Repair Co  
Register forms with National Board

\*GAS SYSTEM Piping fabrication & welding

Inspection prior to begin fabrication  
Materials, valves & fittings meet B31.3  
ASME welder documentation at site

- WPS– weld procedure specification
- PQR– procedure qualification record
- WPQ– welder performance qualification
- Welder's Continuity log



## PLAN SUBMITTAL / ASSISTANCE

To: Commerce – Safety & Buildings Division  
141 NW Barstow St, 4<sup>th</sup> Floor  
Waukesha, WI 53188

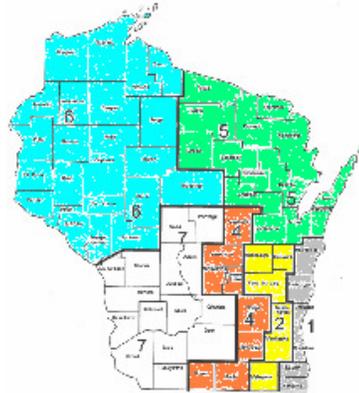


Contact: Mike Verhagen  
Telephone: 262-548-8617  
Fax: 262-548-8614

Email: [mverhagen@commerce.state.wi.us](mailto:mverhagen@commerce.state.wi.us)

SBD-10790-P (R. 07/07)  
End Date – 05/09

## Inspection Districts



<b>District 1</b> David Homan 262-424-1471	<b>District 2</b> Terence Waldbillig 414-303-8575	<b>District 4</b> Jon Wolf 920-723-0032
<b>District 5</b> James Markiewicz 920-428-9423	<b>District 6</b> Duane Leetch 715-559-8817	<b>District 7</b> Dean Yourchuck 608-235-0607
<b>Waukesha Office</b> Michael Verhagen Plan Review 262-548-8617 Fax-548-8614	<b>Madison Office</b> Ulrich Merkle Supervisor 608-266-3037 Fax-267-9723	



## GAS SYSTEMS AND Anhydrous Ammonia (CNG - H<sub>2</sub> - LNG - LPG - NH<sub>3</sub>)

Safety & Building Division  
201 W Washington Avenue 4<sup>th</sup> Floor  
Madison WI 53703



The Department of Commerce does not discriminate on the basis of disability in the provision of services or in employment. If you need this printed material interpreted or in a different form, or if you need assistance in using this service, please contact us. Deaf, hearing or speech impaired callers may reach us through the Division's TDD # 608-264-8777.

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### Wisconsin Gas Systems - Certificate of Installation

LPG  CNG  LNG  Hydrogen

<b>Type of Use:</b>			
Residential <input type="checkbox"/>	Commercial <input type="checkbox"/>	Manufacturing or Processing <input type="checkbox"/>	Agriculture / Heat or drying <input type="checkbox"/> Construction/Temporary Site <input type="checkbox"/>
Owner/Operator Name		Installation Date	
Address of Installation (Street City State and Zip)			
Capacity: Dept of Transportation Cylinder - DOT		ASME Storage Tank /Container	
Cylinder No.	Size (lbs)	Tank - <input type="checkbox"/> Serial # <input type="checkbox"/> NB #	Size (gal)
Installing Company Name		Installer's Name (Print)	
Company Address (Street City State and Zip)		Company Telephone	

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04 (1) (m), Stats.]

I hereby confirm that the design, construction, location and installation of the equipment conform to the applicable rules of the Department, including Administrative Code Chapters Comm 23, 40(Gas Systems), 65 and 84.

Signature of Installer

SBD-9656-E (rev 01/09)

Copies to: 1. Site owner/operator 2. Fire Department when required 3. Installer

Note: Comm 40, Gas System requirements below

**Notice to Dwelling contractors, HVAC contractors and HVAC Qualifiers**

Comm 5.31(4) c, Comm 5.70(4) and Comm 5.71(4) Note: Section 101.16(4) (a), Stats., provides that: The person performing the work of installing equipment utilizing LPG gas for fuel purposes shall furnish the user of the equipment a statement, the form of which shall be prescribed by the department showing the design, construction, location and installation of the equipment conforms with the rules promulgated by the Department under this section.

**Liquefied Petroleum Gas - LPG**

Comm 40.43 Certificate of installation. Every person, firm, association or corporation installing equipment using liquefied petroleum gas shall complete a certificate of installation form. The certificate of installation form shall be completed at the time of installation, shall be kept at the liquefied petroleum gas installation and shall be available for review by an authorized representative of the department. For installations using containers of 2000 gallons or larger water capacity, a copy of the installation form shall also be submitted to the local fire department within 10 business days of the installation.

**Liquefied Natural Gas - LNG**

Comm 40.52 Certificate of installation. Every person, firm, association or corporation installing liquefied natural gas equipment shall complete a certificate of installation form. The form shall be completed at the time of installation, kept at the installation site and available for review by an authorized representative of the department. A copy of the form shall be submitted to the local fire department within 10 business days of the installation.

**Compressed Natural Gas - CNG**

Comm 40.62 Certificate of installation. Every person, firm, association or corporation installing compressed natural gas equipment shall complete a certificate of installation form. The form shall be completed at the time of installation, kept at the installation site and available for review by an authorized representative of the department. A copy of the form shall be submitted to the local fire department within 10 business days of the installation.

**Gaseous Hydrogen and Liquefied Hydrogen Systems**

Comm 40.72 and 40.82 Certificate of installation. Every person, firm, association or corporation installing gaseous or liquefied hydrogen equipment shall complete a certificate of installation form. The form shall be completed at the time of installation, kept at the installation site and available for review by an authorized representative of the department. A copy of the form shall be submitted to the local fire department within 10 business days of the installation.

# Certificate of Installation

## SBD-9656

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GAS SYSTEMS  
INSTALLATION APPLICATION

141 NW Barstow Street, 4<sup>th</sup> Floor  
Waukesha WI 53188  
262-548-8617 / fax-548-8614



- LIQUID PETROLEUM GAS (LPG) SYSTEM
- LIQUID HYDROGEN (H<sub>2</sub>) SYSTEMS
- COMPRESSED NATURAL GAS (CNG) SYSTEM
- LIQUID NATURAL GAS (LNG) SYSTEM
- GASEOUS HYDROGEN (H<sub>2</sub>) SYSTEMS
- ANHYDROUS AMMONIA (NH<sub>3</sub>) SYSTEM

**1 DIRECTIONS:** Personal information you may provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m)]  
For LPG and LNG Systems using containers of 2000 gallons (4000 aggregate) or larger water capacity, CNG and NH<sub>3</sub> systems of any size, submit one copy of this form and four sets of scaled plans including two copies of applicable specifications along with the required fees to the above address. Containers moved within Wisconsin must have a data report or a legible rubbing / copy of the container nameplate stamping. **NOTE:** Inspections may be conducted during or after installation by authorized representative(s). Use a 2<sup>nd</sup> form copy for more than four tanks are installed.

**2 SCOPE OF WORK / OWNER INFO:**  Key/card code operation  Self service fueling  Revision  
(Check all boxes that apply)  New installation  Alteration/addition to an approved existing site

Site Owner Name \_\_\_\_\_ Owner E-Mail \_\_\_\_\_ Site Owner Address \_\_\_\_\_ Site Owner City / State / Zip \_\_\_\_\_

**3 CONTAINER LOCATION** Business Installation Name \_\_\_\_\_ Business E-mail \_\_\_\_\_  
Business Installation Address \_\_\_\_\_  City  Village  Town \_\_\_\_\_ Zip Code \_\_\_\_\_ Business Telephone (\_\_\_\_) \_\_\_\_\_  
Name of Fire Dept providing Fire Protection \_\_\_\_\_ Fire Dept ID # \_\_\_\_\_ County of Installation \_\_\_\_\_ ~ Complete Date \_\_\_\_\_

4 TANK & APPURTENANCE SPECIFICATIONS	Tank 1		Tank 2		Tank 3		Tank 4	
	Yes	No	Yes	No	Yes	No	Yes	No
New Tank (Vessels must be registered with National Board)								
Used Tank(s) (Indicate WI and provide nameplate picture or rubbing)								
Manufacturer's Data Report Enclosed (new or out of state vessels)	Yes	No	Yes	No	Yes	No	Yes	No
National Board #								
Model, Serial or other #								
Location (U- Under Ground, A- Above Ground, I- Inside)								
MAWP or Working Pressure (PSIG)								
Water Capacity / Surface Area (Indicate gallons / sq. ft)								
Relief Valve (Indicate Manufacturer / Aggregate Capacity)								
Excess Flow Valve	Yes	No	Yes	No	Yes	No	Yes	No
Back Check Valve	Yes	No	Yes	No	Yes	No	Yes	No
Float Gauge	Yes	No	Yes	No	Yes	No	Yes	No
Outage Gauge	Yes	No	Yes	No	Yes	No	Yes	No
Rotary Gauge	Yes	No	Yes	No	Yes	No	Yes	No
Thermometer	Yes	No	Yes	No	Yes	No	Yes	No
Emergency Shutoff Valve	Yes	No	Yes	No	Yes	No	Yes	No
Piping Material Specifications (W-welded, T-threaded or B-both)								
Piping Hydrostatic Relief Valves	Yes	No	Yes	No	Yes	No	Yes	No
Corrosion Protection Provided	Yes	No	Yes	No	Yes	No	Yes	No

**5 FEES** (Per Comm 2) **MAKE CHECK PAYABLE TO:** Safety & Buildings Division

TANK(s) INSTALLATION	Plan Examination (per site) .....	\$300.00	.....	_____
REVISIONS OF APPROVED PLANS	Site Inspection .....	400.00	.....	_____
		160.00	.....	_____
			<b>TOTAL \$</b>	<input type="text"/>

NOTE: Comm 40.15 (2) Plan examination and up to 2 site inspections are included with the plan examination and inspection fees specified in s. Comm 2.43. If more than 2 inspections are required, then the inspection fees shall be determined in accordance with s. Comm 2.04.

**6 STATEMENT:** Application is made to the Department for conditional approval to install the above referenced system(s). Installation will be in accordance with the details described herein and attached plot plans, subject to the orders of the Department of Commerce. The installation will comply with the applicable provisions of Comm 40, 41 or 43 and all standards adopted by reference. A "certificate of installation" form shall be completed and made available for review by an authorized representative(s) and when required, a copy shall be forwarded to the local fire department within 10 business days of installation.

Phone (\_\_\_\_) \_\_\_\_\_ Print Applicant Name \_\_\_\_\_ E-mail \_\_\_\_\_  
Fax (\_\_\_\_) \_\_\_\_\_ Applicant Signature \_\_\_\_\_ Date \_\_\_\_\_

**7 RETURN PLANS TO:** (Please print or type)

Name	Company		
Street Address	City	State	Zip

SBD-6038 (R10/08)

# Gas Systems Installation Application

## SBD-6038

Submit scaled plans  
and application per  
Comm 40.10 (2) a

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commerce.wi.gov

SAFETY AND BUILDINGS DIVISION  
Gas and NH3 Systems  
141 NW Barstow Street, 4<sup>th</sup> Floor  
Waukesha Wisconsin 53188  
(202) 548-8017  
FAX 548-8014

December 1, 2004

TO: Potential Plan Designers for Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), Liquid Natural Gas (LNG), Anhydrous Ammonia (NH3) Tanks and Systems, Gaseous Hydrogen Systems (H2) and Liquefied Hydrogen Systems (H2)

FROM: Department of Commerce, Safety and Buildings Division

SUBJECT: PLAN SUBMITTAL PROCEDURES

Under Chapters Comm 40.10/LPG, LNG, CNG, and Hydrogen Systems and Chapter Comm 43.10/NH3 of the Wisconsin Administrative Codes, plans must be submitted with appropriate fees per Comm Chapter 2 for approval prior to commencing construction. Plans must be reviewed within 15 days of receipt or a 50% refund of the plan exam fee shall be made per section Chapter Comm 2.07(1). The electrical requirements, an integral part of most systems must comply with Chapter Comm 16 but are not addressed during this plan examination. Since this is an attempt to provide a "general" guideline for plan submittal in several areas, designers should reference all applicable code sections for details and requirements that may not be listed below. Therefore additional information may be requested for approval determination.

Plan submittal should include:

- 1. APPLICATION** LPG, LNG, CNG, Hydrogen Systems and NH3 tanks/systems: complete form SBD-6038
- 2. PLANS** Submit four (4) sets of scaled plans as required.  
Recommend scale minimum 1" = 20 feet. NOTE: For NH3 plans, plot plan showing land use within 2000 feet does not require minimum scale but should indicate land use within 2000 foot radius drawn on such drawing.
- 3. FEES** Enclose \$450.00 fee (Checks payable to Safety and Buildings Division)  
LPG, CNG, LNG and Hydrogen Systems: \$450.00 (Plan exam \$200.00 / site inspection 250.00 per Comm 2.43) NH3: \$450.00 (Plan exam and external site inspection per Comm 2.12)  
**Note:** If more than 2 inspections are required, the inspection fees shall be in accordance with s. Comm 2.04.
- 4. SPECIFICATIONS** Submit (2) copies of all applicable specifications  
Include materials, piping (welded or threaded), all valves, fittings, hoses, check/excess-flow valves, corrosion protection where applicable and etc
- 5. CALCULATIONS** Include size, capacity and surface area of each tank (calculate if not provided on nameplate or MDR info), and state the system design pressure
- 6. NAME & ADDRESS** Owner, Designer or Installer and Facility should be indicated on application

# Comm 40.10 PLAN SUBMITTAL PROCEDURES

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# Comm 40.10 PLAN SUBMITTAL PROCEDURES

Second  
Page

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7. **TANK SUPPORTS** Clearances, type of venting, pressure relief used with combined capacity on each container or tank, foundation design and support should be provided with plan drawings

8. **DISPENSERS** Location of emergency controls, location of dispensers and details of dispensing devices should be indicated on plans

In addition to the above, scaled plans should be clear, legible and permanent, include names of adjacent streets, alleys, railways and highways, indicate property and lot lines in all directions, show all buildings on property with type of construction, the layout of buildings, containers, loading and unloading docks and any body of water within 150 feet of the containers must be identified. Welded piping requires qualified welders and welding documentation.

Please send your complete plans and information to:

COMMERCE  
SAFETY AND BUILDINGS DIVISION  
141 NW BARSTOW STREET, 4<sup>th</sup> FLOOR  
WAUKESHA, WI 53188

Call 262-548-8617/FAX-548-8614 for further information or assistance.

NOTE 1: **Chapter Comm 40 Gas Systems** Effective December 1, 2005, LPG, LNG, CNG and Hydrogen Systems plans will be reviewed in accordance with Chapter Comm 40, which includes adoption of NFPA 58, 2004 edition.

NOTE 2: **Chapter Comm 43, Anhydrous Ammonia** Effective October 1, 2000 Anhydrous Ammonia plans will be reviewed in accordance with Chapter Comm 43, which includes adoption of ASME/ANSI K61.1 1999 edition.

NOTE 3: Visit our website for Comm 43 or any other code via the internet @ <http://www.commerce.wi.gov>, in Top 10 Box, scroll down and click "Building codes", scroll down to selected code chapter, click for view or print.

(R12/04)

# Commerce Reminder Memo 12-2007

## Piping Retrofit Notice / NFPA 58-2004

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out

- ❧ Mailed to Bulk Storage Sites of Record
- ❧ Informed various State Gas Associations
- ❧ Made Gas System Installing Contractors aware
- ❧ Visit our Gas Systems Website @ <http://www.commerce.wi.gov/SB/SB-GasSystemsProgram.html>
- ❧ Scroll down Section 7.0 “2011 Piping Retrofit Info”

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

- NFPA 58, 5.7.7.2 ASME containers over 4000 gal (15.2 m<sup>3</sup>) water capacity shall be equipped in accordance with 5.7.7.2(A) through 5.7.7.2(G) and Table 5.7.7.3.

**“The clock is ticking on internal valve retrofits”**

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

❁ 5.7.7.2 (A) Vapor withdrawal openings shall be equipped with either of the following:

(1) A positive shutoff valve located as close to the container as practical in combination with an excess-flow valve installed in the container

(2) An internal valve

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

- ❧ 5.7.7.2 (B) Liquid withdrawal openings in new installations shall be equipped with an internal valve that is fitted for remote closure and automatic shutoff using thermal (fire) actuation where the thermal element is located within 5 ft (1.5 m) of the internal valve.

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

- 🐼 5.7.7.2 (C) Liquid withdrawal openings in **existing** installations where the container is equipped with an internal valve that is not fitted for remote closure and automatic shutoff using thermal (fire) actuation shall be equipped for remote & thermal closure by **7-1-03**.

**“The clock ticked past this deadline”**

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

- ❖ 5.7.7.2 (D) Liquid withdrawal openings in existing installations shall be equipped with either of the following by **July 1, 2011**:
  - (1) An internal valve that is fitted for remote closure and automatic shutoff using thermal (fire) actuation where the thermal element is located within 5 ft (1.5 m) of the internal valve
  - (2) An emergency shutoff valve that is installed in the line downstream as close as practical to a positive shutoff valve in combination with an excess flow valve installed in the container.

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

- ✿ 5.7.7.2 (E) Vapor inlet openings shall be equipped with either of the following:
  - (1) A positive shutoff valve that is located as close to the container as practical in combination with either a backflow check valve or excess-flow valve installed in the container
  - (2) An internal valve

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

- ❧ 5.7.7.2 (F) Liquid inlet openings in new installations shall be equipped with either of the following:
  - (1) An internal valve that is fitted for remote closure and automatic shutoff using thermal (fire) actuation where the thermal element is located within 5 ft (1-5 m) of the internal valve
  - (2) A positive shutoff valve that is located as close to the container as practical in combination with a backflow check valve that is designed for the intended application and is installed in the container

# 2011 Piping Retrofit

## Comm 40, NFPA 58-2004

- ❖ 5.7.7.2 (G) Liquid inlet openings in **existing** installations where the container is equipped with an internal valve that is not fitted for remote closure and automatic shutoff using thermal (fire) actuation shall be equipped for remote and thermal closure by 7-1-03.

**“The clock is ticking on internal valve retrofits”**

# Comm 40, NFPA 58-2004

## Important Additional Info

- ❖ 6.16.1 new and existing LPG installations for bulk and industrial storage plants must have written maintenance and operating procedures
- ❖ 6.23.3.2 modes of fire protection shall be specified in a written product release prevention and incident preparedness review unless an existing written Fire Safety Analysis for the site is available per 6.23.3.6

**The clock is ticking ..... Retrofit Now !**

# Comm 40, Subchapter VI

## LPG Sections 40.40 - 40.48

- **Comm 40.44 Design, construction, installation, operation and maintenance of liquefied petroleum gas facilities.**  
Liquefied petroleum gas facilities shall be designed, constructed, installed, operated and maintained as specified in the following standards as incorporated by reference in s. Comm 40.30: (1) AMERICAN PETROLEUM INSTITUTE. Design and Construction of Liquefied Petroleum Gas Installations, **API Standard 2510**. (2) NATIONAL FIRE PROTECTION ASSOCIATION. (a) National Fuel Gas Code, NFPA No. 54 as referenced in NFPA No. 58. (b) Liquefied Petroleum Gas Code, **NFPA No. 58**.

# Comm 40, Subchapter VI

## LPG Sections 40.40 - 40.48

### 👉 Comm 40.45 Amendments to NFPA standards.

This is a department rule in addition to the requirements of NFPA No. 58 section 4-~~2.2.1~~

(Note: 1998 ref error, **Correction ~ 7.2.2.1**):

Containers shall be filled only by the owner or upon the owner's authorization.

# Comm 40, Subchapter VI

## LPG Sections 40.40 - 40.48

- 👉 **Comm 40.48 Containers and pressure vessels.** Design and construction of, and repairs and alterations by welding to, liquefied petroleum gas containers and pressure vessels shall conform to the requirements of ch. Comm 41.

# Liquefied Petroleum Gas Update

NFPA 58, 2004

# NFPA 58, 2004 “LPG”

## Chapter 1, Administration

- 👉 1.1 Scope
- 👉 1.2 Purpose (reserved)\*
- 👉 1.3 Application\*
- 👉 1.4 Retroactivity\*
- 👉 1.5 Equivalency
- 👉 1.6 Units and Formula\*
- 👉 1.7 Enforcement\*

# NFPA 58, 2004 “LPG”

## Chapter 2, Reference Publications

- 2.1 General
- 2.2 NFPA Publications
- 2.3 Other Publications



# NFPA 58, 2004 “LPG”

## Chapter 3, Definitions

- 👉 3.1 General
- 👉 3.2 NFPA Official Definitions
- 👉 3.3 General Definitions



# NFPA 58, 2004 “LPG”

## Chapter 4, General Requirements

- ❖ 4.1 Acceptance of Equipment & Systems
- ❖ 4.2 LP Gas Ordorization
- ❖ 4.3 Notification of Installation
- ❖ 4.4 Qualifications of Personnel
- ❖ 4.5 Ammonia Contamination
- ❖ 4.6 Minimum Requirements

# NFPA 58, 2004 “LPG”

## Chapter 5, LP Gas Equipment and Appliances

- 👉 5.1 Scope
- 👉 5.2 Containers
- 👉 5.3 Reserved
- 👉 5.4 Reserved
- 👉 5.5 Reserved
- 👉 5.6 Reserved
- 👉 5.7 Container Appurtenances

# NFPA 58, 2004 “LPG”

## Chapter 5, LP Gas Equipment and Appliances

- 🐼 5.8 Piping (Including Hose) Fittings & Valves
- 🐼 5.9 Internal Valves (Reserved)
- 🐼 5.10 Valve & Other Container Valves
- 🐼 5.11 Hydrostatic Relief Valves
- 🐼 5.12 Reserved
- 🐼 5.13 Reserved
- 🐼 5.14 Reserved

# NFPA 58, 2004 “LPG”

## Chapter 5, LP Gas Equipment and Appliances

- 👉 5.15 Equipment
- 👉 5.16 Reserved
- 👉 5.17 Reserved
- 👉 5.18 Appliance
- 👉 5.19 Vaporizers, Tank Heaters, Vaporizing Burners and Gas-Air Mixers

# NFPA 58, 2004 “LPG”

## Chapter 6, Installation of LP Gas Systems

- 👉 6.1 Scope
- 👉 6.2 Location of Containers
- 👉 6.3 Container Separation Distances
- 👉 6.4 Other Container Location Requirements
- 👉 6.5 Location of Transfer Operations
- 👉 6.6 Installation of Containers

# NFPA 58, 2004 “LPG”

## Chapter 6, Installation of LP Gas Systems

- 🔧 6.7 Installation of Container Appurtenances
- 🔧 6.8 Piping Systems
- 🔧 6.9 Internal Valves
- 🔧 6.10 Emergency Shut-off Valves
- 🔧 6.11 Hydrostatic Relief Valve Installation
- 🔧 6.12 Testing Piping Systems

# NFPA 58, 2004 “LPG”

## Chapter 6, Installation of LP Gas Systems

- ❧ 6.13 Installation in Area of Heavy Snowfall
- ❧ 6.14 Corrosion Protection
- ❧ 6.15 Equipment Installation
- ❧ 6.16 Bulk Plant and Industrial LP Gas Systems
- ❧ 6.17 LP Gas systems in Buildings or on Roofs or Exterior Balconies
- ❧ 6.18 Installation of Appliances

# NFPA 58, 2004 “LPG”

## Chapter 6, Installation of LP Gas Systems

- ❧ 6.19 Vaporizer Installation
- ❧ 6.20 Ignition Source Control
- ❧ 6.21 LP Gas on Vehicles(Other than Engine Fuel Systems)
- ❧ 6.22 Vehicle Fuel Dispenser and Dispensing Stations
- ❧ 6.23 Fire Protection
- ❧ 6.24 Alternate Provisions for installation of ASME Containers

# NFPA 58, 2004 “LPG”

## Chapter 7, LP-Gas Liquid Transfer

- 🍷 7.1 Scope
- 🍷 7.2 Operational Safety
- 🍷 7.3 Venting LP Gas to the Atmosphere
- 🍷 7.4 Quantity of LP Gas in Containers



# NFPA 58, 2004 “LPG”

## Chapter 8, Storage of Cylinders

### Awaiting Use Sale or Exchange

- 🌿 8.1 Scope
- 🌿 8.2 General Provisions
- 🌿 8.3 Storage within Buildings
- 🌿 8.4 Storage outside of Buildings
- 🌿 8.5 Fire Protection



# NFPA 58, 2004 “LPG”

## Chapter 9, Vehicular Transportation of LP-Gas

- ❧ 9.1 Scope
- ❧ 9.2 Electrical Requirements
- ❧ 9.3 Transportation in Portable Containers
- ❧ 9.4 Transportation in Cargo Tank Vehicles
- ❧ 9.5 Trailers, Semitrailers & Moveable Fuel Storage Tenders, Including Farm Carts
- ❧ 9.6 Transportation of Stationary Containers to & from the Point of Installation
- ❧ 9.7 Parking & Garaging Vehicles Used to Carry LPG

# NFPA 58, 2004 “LPG”

## Chapter 10, Building or Structures Housing LP-Gas Distribution Facilities

- 10.1 Scope
- 10.2 Separate Structures or Buildings
- 10.3 Attached Structures or Rooms within Structures

# NFPA 58, 2004 “LPG”

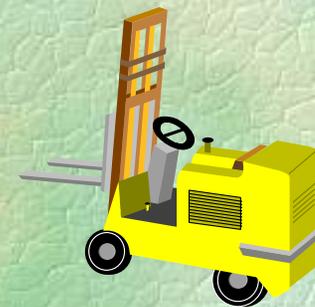
## Chapter 11, Engine Fuel Systems

- 👉 11.1 Scope
- 👉 11.2 Training
- 👉 11.3 Containers
- 👉 11.4 Containers Appurtenances
- 👉 11.5 Carburation Equipment

# NFPA 58, 2004 “LPG”

## Chapter 11, Engine Fuel Systems

- 🐜 11.6 Piping, Hose & Fittings
- 🐜 11.7 Installation of Containers and Container Appurtenances
- 🐜 11.8 Installation in the Interior of Vehicles
- 🐜 11.9 Pipe and Hose Installation
- 🐜 11.10 Equipment Installation



# NFPA 58, 2004 “LPG”

## Chapter 11, Engine Fuel Systems

- ❧ 11.11 Marking
- ❧ 11.12 Industrial (and Forklift) Trucks Powered by LP Gas
- ❧ 11.13 General Provisions for Vehicles Having Engines Mounted on Them (Including Floor Maintenance Machines)
- ❧ 11.14 Engine Installation Other Than on Vehicle
- ❧ 11.15 Garaging of Vehicles

# NFPA 58, 2004 “LPG”

## Chapter 12, Refrigerated Containers

- ❧ 12.1 Construction & Design of Refrigerated Containers
- ❧ 12.2 Marking on Refrigerated LP Gas Containers
- ❧ 12.3 Containers Installation
- ❧ 12.4 Refrigerated LPG Container Instruments & Controls
- ❧ 12.5 Refrigerated LPG Container Impoundment
- ❧ 12.6 Inspection & Testing of Refrigerated LPG Container & Systems
- ❧ 12.7 Container Siting
- ❧ 12.8 Relief Devices



# NFPA 58, 2004 “LPG”

## Chapter 13, Marine Shipping & Receiving

- 🍀 13.1 Scope
- 🍀 13.2 Piers
- 🍀 13.3 Pipelines
- 🍀 13.4 Inspections Prior to Transfer



# NFPA 58, 2004 “LPG”

## Chapter 14, Operations & Maintenance

🐾 14.1 Scope

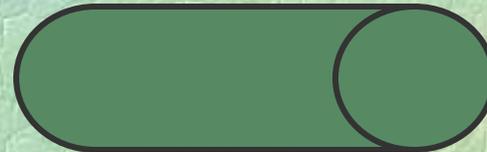
🐾 14.2 Operating Requirements

🐾 14.3 Maintenance

# NFPA 58, 2004 “LPG”

## Chapter 15, Pipe & Tubing Sizing Tables

### 🍷 15.1 Tables for Sizing Pipe & Tubing



# NFPA 58, 2004 “LPG”

## Annex A, Explanatory Material

- An \* after Section # indicates explanatory information in Annex A
- For example: “ 4.2.1\* ” see A.4.2.1

# NFPA 58, 2004 “LPG”

## Annex B, Properties of LP-Gases (Std & Metric)

- LPG Vapor Pressure @ 70 F = 145 PSIA
- LPG Vapor Pressure @ 100 F = 218 PSIA
- LPG Vapor Pressure @ 105 F = 233 PSIA ~218 PSIG
- LPG Boiling Pt = - 40 F @ 14.7 PSIA
- Wt per Gal of Liquid LPG @ 60 F = 4.2 #'s

### Absolute Pressure Equation

$$\text{PSIA} = \text{PSIG} + \text{atmospheric pressure (14.7)}$$

# NFPA 58, 2004 “LPG”

## Annex C, Design, Construction, and Re-qualification of DOT (ICC) Cylinders

“ ICC ” Interstate Commerce Commission

- Scope & Application - General Info
- Cylinder Specifications - Details
- Re-qualification & Re-testing Timetables
- Repair Guidelines

# NFPA 58, 2004 “LPG”

## Annex D, Design of ASME-API Containers

### 🐼 Code Development Info

### 🐼 Design History Info

- 200 vs 250 MAWP
- FS = **5** <1949 vs. **4** ~‘49 to 98 vs. **3.5** > ‘98

### 🐼 Underground Container Info

# NFPA 58, 2004 “LPG”

## Annex E, Pressure Relief Devices

🐼 Recommendation for DOT-ASME Relief Devices

🐼 Vessel Surface Area & Capacity Equations

- $SA = OAL \times OD \times 3.1416$  (w/ Hemispherical Head)
- $SA = (OAL + .3 \times OD) \times OD \times 3.1416$  (Head not Hemi)
- Flow rate Cap. =  $53.632 \times A^{.82}$  (A= SA “sq ft” )

🐼 Testing recommendations



# NFPA 58, 2004 “LPG”

## Annex F, Liquid Volume Tables, Computations and Graphs



- ❧ Determination of Container Capacity
- ❧ Liquid Volume Correction Table vs. Temp
- ❧ Guide for Table Use
- ❧ Maximum Fill Computation / Equations
- ❧ Alternate Methods of Filling Containers
- ❧ Location of Fixed Max Liquid Level Gauge

# NFPA 58, 2004 “LPG”

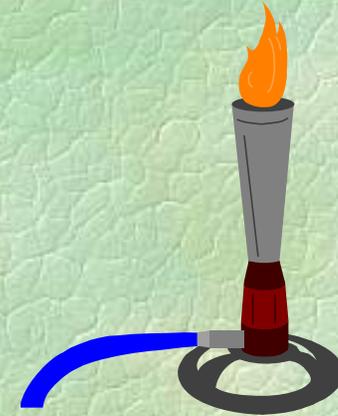
## Annex G, Wall Thickness Copper Tube

- Copper Water tube spec ... ASTM B 88
  - Type K, (thicker wall)
  - Type L, (thin wall)
- Smls Refrigeration tube spec .. ASTM B 280
  - “ACR” copper tubing

# NFPA 58, 2004 “LPG”

## Annex H, Procedure for Torch Fire and Hose Stream Testing of Thermal Insulating Systems for LP gas Containers

- Performance Standard
- Reference Test Standards
- Thermal Insulation Test
- Hose Stream Resistance Test



# NFPA 58, 2004 “LPG”

## Annex I, Container Spacing

- 👉 Figure I.1 (a) Residential DOT Cylinders
- 👉 Figure I.1 (b) Aboveground ASME
- 👉 Figure I.1 (c ) Underground ASME

Note: Each figure for illustrative purposes only, code shall govern

# NFPA 58, 2004 “LPG”

## Annex J, Sample Ordinance

- ❧ Sample wording is provided for adoption and use by a jurisdiction
- ❧ Fill in the blank type document

# NFPA 58, 2004 “LPG”

## Annex K, Informational References

- ❧ **NFPA (National Fire Protection Association)**
- ❧ **ANSI (American National Standard Institute)**
- ❧ **API (American Petroleum Institute)**
- ❧ **ASME (American Standard of Mechanical Engineers)**
- ❧ **NBIC 2004 (National Board Inspection Code, Repairs and Alternation of Vessels)**
- ❧ **Title 49 CFR (Code of Federal Regulation)**

# NEPA 54, 2002 National Fuel Gas Code

# NFPA 54, 2002 National Fuel Gas Code

The Dept. of Commerce, under Comm 61.05, adopts the use of 2006 International Building Code, International Energy Conservation Code, International Mechanical Code, International Fuel Gas Code, and the International Existing Building as amended by WI.

Amendments to the International Fuel Gas code are contained in Comm Chapter 65. Comm 65.0400 states, "Gas piping installation. Substitute the following wording for the requirements and exceptions in IFGC Chapter 4: All gas piping and gas piping installation shall comply with NFPA 54, National Fuel Gas Code."

## NFPA 54, 2002 National Fuel Gas Code

Note that per Comm 65.0800 Referenced standards, that NFPA 54-2002 is the specific standard adopted.

Additionally, DO NOT USE NFPA 54 FOR ANYTHING but gas piping and gas piping installations. Combustion air, venting, etc. which is also addressed in the standard may NOT be applied. The 2006 IFGC as amended by WI is required to be applied to these topics.

# IFGC Chapter 4 vs. NFPA 54

- ❖ IFGC Chapter 4 “Gas Piping” is Replaced with the National Fuel Gas Code NFPA 54-2002
- ❖ Settlement in recent lawsuit will soon require most, but not all, gas tubing installations to be bonded with #6 copper wire. Such action is being incorporated as part of various product listings, & will eventually be incorporated into NFPA 54 & NEC
- ❖ For additional information:
  - <http://WWW.CSSTsettlement.com>

# Maximum Design Operating Pressure

IFGC Ch. 4 / NFPA 54 -5.5.1

- Maximum design operating pressure inside bldgs may not exceed 5 psi unless 1 or more of the following conditions are met:
  - The piping system is welded. (Must a certified ASME WELDER)
  - The piping is located in a ventilated chase or otherwise enclosed for protection against accidental gas accumulation.

# Maximum Design Operating Pressure **IFGC Ch. 4 / NFPA 54 -5.5.1**

- The piping is located inside buildings or separate areas of bldgs used exclusively for one of the following:
  - Industrial processing or heating
  - Research
  - Warehousing
  - Boiler or mechanical equipment rooms
- The piping is a temporary installation for buildings under construction.

# Acceptable Metallic Pipe

IFGC Ch. 4 / NFPA 54 -5.6.1

- ❖ Black pipe (schedule 40)
- ❖ Copper & brass (ONLY if hydrogen sulfide content meets content limitations)
- ❖ Aluminum (ONLY if the proper ASTM test and alloys are used) --NEVER use in exterior locations or underground unless protected
- ❖ Cast iron may NOT be used

# Acceptable Metallic Tubing & Plastic Pipe

IFGC Ch. 4 / NFPA 54-5.6.3

- ❖ Steel tubing must meet ASTM A539 & A254
- ❖ Copper tubing must meet Type K ASTM B88 or B280-- (used **ONLY** if sulfur content is acceptable)
- ❖ Aluminum tubing must meet ASTM B210 or B241-- **NOT** for use in exterior locations or underground
- ❖ Corrugated stainless steel must meet ANSI/ AGA LC 1
- ❖ Plastic pipe-- **outside-underground (Both) ONLY--** must have marking ASTM D2513 and “GAS”

# Underground Piping Protection

IFGC Ch. 4 / NFPA 54-6.1.2.1.

- ✿ Requires  $\geq 18''$  of cover
- ✿  $\geq 12''$  is permitted if external damage to the pipe is not likely to result
- ✿ If 12'' or more cannot be maintained, the pipe must be installed with a conduit or bridged (shielded)

# Interior Gas Piping Support

IFGC Ch. 4 / NFPA 54-6.2.6.2

<b>Support of Piping</b>			
<b>Steel Pipe, Nominal Size of Pipe (Inches)</b>	<b>Spacing of Supports (Feet)</b>	<b>Nominal Size of Tubing (Inch O.D.)</b>	<b>Spacing of Supports (Feet)</b>
<b>1/2</b>	<b>6</b>	<b>1/2</b>	<b>4</b>
<b>3/4 or 1</b>	<b>8</b>	<b>5/8 or 3/4</b>	<b>6</b>
<b>≥1-1/4 or larger (horizontal)</b>	<b>10</b>	<b>7/8 or 1</b>	<b>8</b>
<b>≥1-1/4 or larger (vertical)</b>	<b>every floor level</b>		



No Support of Gas Line  
In conflict w/ NFPA 54

# Concealed Piping in Buildings

IFGC Ch. 4 / NFPA 54-6.3.2

- ❖ **May NOT install:** Unions, tubing fittings, running threads, right & left couplings, bushings, swing joints and compression couplings made by combinations of fittings. Also note “valves” are also not allowed per the Dept.
- ❖ **May install:** Elbow, tees, and couplings

# Tubing in Partitions

IFGC Ch. 4 / NFPA 54-6.3.4

- Tubing shall be permitted to be installed vertically & horizontally inside hollow walls or partitions without protection along its entire length provided:
  - A steel striking barrier  $\geq 0.0508$ " thick, (17 gauge metal) or similar is installed between the tubing and the finished wall and extends at least 4" beyond concealed penetrations of plates, fire stops, wall studs
  - The tubing is installed in single runs and is not rigidly secured

# Tubing in Partitions

IFGC Ch. 4 / NFPA 54-6.3.4 Fails 4" extension



# Gas Test Pressure

IFGC Ch. 4 / NFPA 54-7.1.4.2.

- ✿ Must be  $\geq$  1.5 times the proposed maximum working pressure, but not less the 3 psig irrespective of design pressure
- ✿ Test duration must be  $\geq$  1/2 hr for each 500 cu ft of pipe volume or fraction thereof
  - If the system is  $< 10$  cu ft, duration can be reduced to 10 min
  - If the system is  $> 24,000$  cu ft, duration is not required to exceed 24 hrs

# Equipment Shutoff Valves and Connections IFGC Ch. 4 / NFPA 54-8.5.4

- ❧ Gas equipment connected to a piping system must have an **ACCESSIBLE** manual shutoff valve with non-displaceable valve or a listed gas convenience outlet
- ❧ **MUST** be installed **within 6 ft** of the equipment it serves
- ❧ Valves shall be installed **upstream** of the connector



# Gas Equipment Shutoff Valve

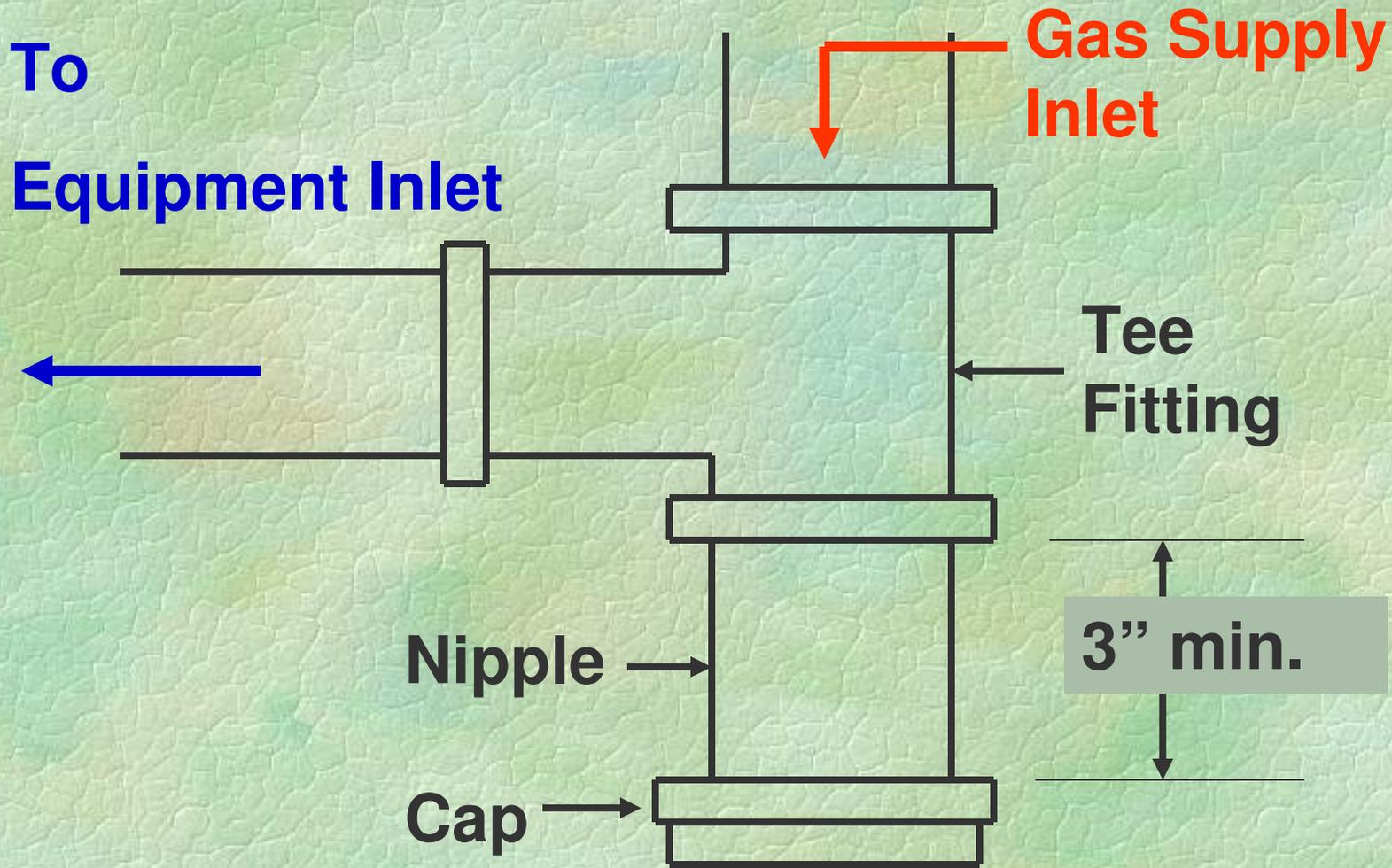
# Sediment Trap

IFGC Ch. 4 / NFPA 54-5.5.7

- ❧ Required if not part of equipment
- ❧ To be installed as close to the inlet of the equipment at the time of installation
- ❧ **NOT** required for illuminating appliances, ranges, clothes dryers, and outdoors grills

# Sediment Trap

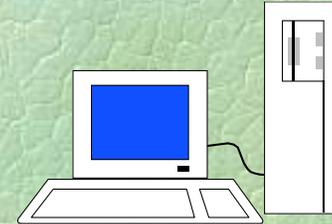
IFGC Ch. 4 / NFPA 54 5.5.7





# Sediment Trap on a Furnace

# Questions ?



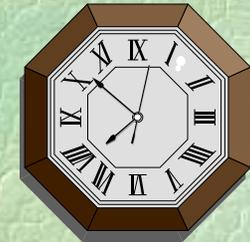
Try our Website @ [www.commerce.wi.gov](http://www.commerce.wi.gov)

Gas Systems Program

Department of Commerce

Safety & Buildings Division

**Act 203**  
**Duty to Notify**  
**and LPG Licensing,**  
**NFPA 58, 2004 “LPG”**



Department of Commerce  
Safety & Buildings Division - LPG Program

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