Enclosed are the draft minutes for the June 21-22, 2011 meeting in Huntsville, AL. Please bring any substantive incorrect items to my attention. The minutes will be posted on the NFPA 58 document information page under the “Next Edition” tab.

The next meeting of the committee will be the ROP meeting, tentatively scheduled for the week of January 16, 2012 in San Diego, CA.

If you have any questions or comments, please feel free to reach me at (617) 984-7501 or by e-mail at dbeach@nfpa.org. You can reach the LPG-AAA TC Chair Frank Mortimer at Frank.J.Mortimer@EMCins.com.
Technical Committee on Liquefied Petroleum Gas

Minutes

Embassy Suites
800 Monroe Street
Huntsville, AL 35801
June 21, 2011

Part I, Attendance:
Principal Members and Staff:
   Frank Mortimer, Chairman, EMC Insurance Company, IA
   Denise Beach, NFPA, MA
   David Burnell, New Hampshire Public Utilities Commission (Rep DOT), NH
   Ronald Czischke, Underwriters Laboratories Inc., IL
   Richard Hoffmann, Hoffmann & Feige, NY
   Stanley Kastanas, US Department of Transportation, MA
   John King, Federated Mutual Insurance Company, MN
   Glenn Mahnken, FM Global, MA
   Bill Mahre, Propane Technical Services, MN
   Samuel McTier, Propane Technologies LLC (Rep NPGA), IL
   David Meyer, Gas Training & Development LLC, MN
   Gerry Misel, Georgia Gas Distributors Inc. (Rep NPGA), GA
   James Osterhaus, Railroad Commission of Texas, TX
   David Stainbrook, Engineered Controls International Inc., NC
   James Stannard, Stannard & Company, NJ
   Bruce Swiecicki, National Propane Gas Association, IL
   Thomas Wilson, International Fire Marshals Association, FL
   William Young, Superior Energy Systems Ltd., OH

Alternates, Non-voting members, and guests:
   Rob Freeman, Freeman Gas & Electric Inc. (Rep NPGA), SC
   Greg McRae, Trinity Tank, TX
   Steven D. Ruffcorn, Standby Systems Inc., MN
   Russell T. Rupp, Suburban Propane Partners (Rep NPGA), FL
   Eric Smith, Nevada LP Gas Board, NV
   Bernardo Bohorquez, Saena de Colombia S.A., Colombia

Part II, Minutes:
1. The meeting was called to order at 8:30 a.m. Chairman Mortimer welcomed committee members and guests and thanked them for their service. The chairman reported to the group that the US Chemical Safety Board has issued a letter to NFPA President James Shannon indicating that the CSB recognizes the training temporary interim amendment (TIA) and has classified the CSB recommendation on the subject as “open-acceptable” pending publication of the requirements in the 2014 edition.
2. The committee members and guests introduced themselves.

3. The minutes of the ROC Meetings held in October 2009 in Des Moines, IA were accepted as written.

4. NFPA Staff reviewed the changes in membership that have occurred since the October 2009 meetings and provided a demonstration of the NFPA 58 document information page.

5. Old Business - In the minutes of the October 2009 meeting, NFPA Staff noted that both section 6.19, LP-Gas Systems in Buildings or on Building Roofs or Exterior Balconies, and Chapter 8 use terms that are not consistent with current building and life safety code terminology, such as “frequented by the public”, “partially occupied by the public”, and “occupied by the public”. The committee reviewed the use of these terms and determined that no action is needed at this time.

6. New Business
   
   A. The committee reviewed the staff notes for the next edition and created committee proposals as appropriate. (Attachment A)
   
   B. The committee reviewed and acted on several public proposals. Many proposals were postponed until the ROP meeting. (Attachment A)
   
   C. The committee reviewed the formal interpretation request submitted by Mr. Mahre and an informal interpretation request submitted by Mr. Kevin Streeter on a similar topic. The committee recognized the issues related to clarifying the definition for bulk plant and will continue to work on it for the 2014 edition.

7. The committee established the following task groups:
   
   A. Formal Interpretations Review. W. Young (chair); S. McTier; B. Meyer; B. Swiecicki.
   
   B. Pressure and leak testing of piping upstream of the final stage regulator. R. Freeman (chair); T. Wilson; B. Mahre; J. King D. Meyer.
   
   C. Bulk plant definitions and requirements. B. Mahre; R. Freeman; S. McTier; D. Meyer
   
   D. NFPA 52/58 joint task group on engine fuel systems. NFPA Staff reported that no volunteers had been identified from the NFPA 52 committee, but that several non-committee members had volunteered to participate.

8. Mr. Mahre reported on a truck design where propane tanks mounted on the rear of a vehicle were used to fire crude oil heaters also mounted on the truck chassis. The heaters were not provided with any means to shut off the flow of gas upon loss of pilot flame. The committee referred to section 6.23.7.4 of the 2011 edition that requires appliances mounted on vehicles to be equipped with shutoffs in accordance with 5.20.7.

9. Mr. Stainbrook reviewed a design with the committee that would place a pipe extension between an ASME storage tank and the required relief valves. The purpose of the extension is to provide adequate clearance for multiple sets of valves so that the relief valves can be replaced without taking the tank out of service. NFPA Staff reported that NFPA 58 is currently silent on the issue. Mr. Czischke reported that the use of an extension would violate the listing requirements of the PRV because it would present a restriction in the flow to the relief valve. Committee members also expressed concern regarding the potential for breakage of the pipe extension. The committee took no action on this issue.

10. The committee did not address ASME tank repair to original code of construction because the proposal submitted by Mr. McRae was not available at the time of the meeting.

11. The committee did not address maximum allowable working pressure of underground tanks because the proposal submitted by Mr. McRae was not available at the time of the meeting.
12. Other Items?
   A. Mr. Swiecicki requested that the committee review section 6.18.2.5. The committee created a committee proposal on the section to clarify the requirement.
   B. Mr. Bohorquez requested that the committee consider minimizing emissions in the transfer area, such as by utilizing a vapor return valve on the point of transfer to limit the interstitial space, an adapter on the end of the transfer hose or a back check in the vapor equalizing line. Committee members indicated they would consider the issue, but the committee took no action at this time.
   C. Mr. Kastanas requested that the committee consider development of annex material that includes jurisdictional 192 materials in an effort to resolve differences between NFPA 58, 59 and part 192. Committee members indicated willingness to participate in such an effort to collect all requirements in one location. Mr. Kastanas will pursue the concept internally at DOT and return feedback to the committee.

13. Date/Location of Next Meeting. The ROP meeting is tentatively scheduled for San Diego in the week of January 16, 2012

Attachment A:
Preliminary Report on Public and Committee Proposals
<table>
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<th>Log #6</th>
<th>Final Action:</th>
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| **(3.3.10 Bulk Plant)** | **Submitter:** Bill Mahre, Propane Technical Services  
**Recommendation:** Revise text to read as follows:  
**3.3.10 Bulk Plant.** A facility, with an aggregate water capacity of more than 4000 gallons (15.1 m³), where the primary function is to store LP-Gas prior to further distribution. LP-Gas is received by cargo tank vehicle, railroad tank car, or pipeline, and then distributed by portable container (package) delivery, or by cargo tank vehicle, or through gas piping.  
**Substantiation:** The striking out of ‘through gas piping’ is made in this definition and will appear in three additional sections titled as Sections 3.3.10.1; 3.3.10.2; and 3.3.10.3. |

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<th>Final Action:</th>
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| **(3.3.10.1 Commercial Bulk Plant (New) )** | **Submitter:** Bill Mahre, Propane Technical Services  
**Recommendation:** Add new text to read as follows:  
**3.3.10.1 Commercial Bulk Plant.** A facility with an aggregate water capacity of more than 4000 gallons (15.1 m³), where the primary function is to store LP-Gas prior to further distribution. LP-Gas is received by cargo tank vehicle, railroad tank car, or pipeline, and then distributed by liquid or vapor through gas piping.  
**Substantiation:** This new addition will properly identify the installation and use of this storage facility. |

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| **(3.3.10.2 Industrial Bulk Plant (New) )** | **Submitter:** Bill Mahre, Propane Technical Services  
**Recommendation:** Add new text to read as follows:  
**3.3.10.2 Industrial Bulk Plant.** A facility with an aggregate water capacity of more than 4000 gallons (15.1 m³), where the primary function is to store LP-Gas prior to further distribution. LP-Gas is received by cargo tank vehicle, railroad tank car, or pipeline, and then distributed by liquid or vapor through gas piping. This installation will provide LP-Gas to a natural gas utility for redistribution or LP-Gas directly into distribution piping system.  
**Substantiation:** This new addition will properly identify the installation and use of this storage facility. |

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<th>Log #9</th>
<th>Final Action:</th>
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| **(3.3.10.3 Agricultural Bulk Plant (New) )** | **Submitter:** Bill Mahre, Propane Technical Services  
**Recommendation:** Add new text to read as follows:  
**3.3.10.3 Agricultural Bulk Plant.** A facility with an aggregate water capacity of more than 4000 gallons (15.1 m³), where the primary function is to store LP-Gas prior to further distribution. LP-Gas is received by cargo tank vehicle, and then distributed by liquid or vapor through gas piping. This installation will provide LP-Gas distribution or LP-Gas distribution for agricultural purposes.  
**Substantiation:** This new addition will properly identify the installation and use of this storage facility. |
58- Log #CP1 Final Action: Accept
(3.3.69.6)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 3.3.69.6 Positive Shutoff Valve. A shutoff valve that, in the closed position, does not allow the flow of product in either direction.
[Renumber subsequent]
Substantiation: The committee added a definition for positive shutoff valve to clarify usage of the term in the document.
Committee Meeting Action: Accept

58- Log #5 Final Action: Accept
(4.4)

Note: This Proposal originates from Tentative Interim Amendment 58-11-3 (TIA 1019) issued by the Standards Council on March 1, 2011.
Submitter: Bruce J. Swiecicki, National Propane Gas Association
Recommendation: Revise Section 4.4 to read as follows:

4.4* Qualification of Personnel. Persons who transfer liquid LP-Gas, who are employed to transport LP-Gas, or whose primary duties fall within the scope of this code shall be trained in proper handling procedures. Refresher training shall be provided at least every 3 years. The training shall be documented.

4.4.1 Persons whose duties fall within the scope of this code shall be provided with training that is consistent with the scope of their job activities and that includes proper handling and emergency response procedures.

4.4.2 Persons whose primary duties include transporting LP-Gas, transferring liquid LP-Gas into or out of stationary containers, or installing stationary systems shall complete training that includes the following components:
(1) Safe work practices
(2) The health and safety hazards of LP-Gas
(3) Emergency response procedures
(4) Supervised, on-the-job training
(5) An assessment of the person’s ability to perform the job duties assigned

4.4.3 Refresher training shall be provided at least every three years.
4.4.4 Initial and subsequent refresher training shall be documented.

Substantiation: This proposal is being submitted as a Tentative Interim Amendment (TIA) because of the direction that was provided in Standards Council (Decision D#10-19). The Standards Council indicated that it would be open to receiving a TIA that resolved the concerns of both the U.S. Chemical Safety Board (CSB) and the NFPA Technical Committee on Liquefied Petroleum Gases. Therefore, the emergency nature required to be demonstrated is a foregone conclusion.

The proposal is technically justified because it will provide specific direction on the major elements that a training program must contain. The major elements that are presented in the proposal are slight modifications to the text contained within Comment 58-49 (from the 2010 Annual Revision Cycle). The proposal specifies the required training elements for persons whose primary job functions are addressed in 4.4.2.

Committee Meeting Action: Accept
Submitter: James Everitt, Western Regional Fire Code Development Committee

Recommendation: Revise text to read as follows:

4.4* Qualification of Personnel. Persons who transfer liquid LP-Gas, who are employed to transport LP-Gas, or whose primary duties fall within the scope of this code shall be trained in proper handling, emergency, and safety procedures. Refresher training shall be provided at least every 3 years. The training shall be documented.

Substantiation: There is currently no language that requires personnel to know emergency and safety procedures.

Committee Meeting Action: Accept in Principle
Committee Statement: Refer to committee action on Log #5.
58- Log #1
(5.2.1.11, 6.6.6, A.6.6.6, and 14.3.1.4)

Final Action: Accept

Note: This Proposal originates from Tentative Interim Amendment 58-11-1 (TIA 986) issued by the Standards Council on August 5, 2010.

Submitter: Bruce J. Swiecicki, Richard Hoffmann, Hoffmann & Feige, National Propane Gas Association

Recommendation: 1. Revise text to read as follows:

5.2.1.11 ASME containers installed underground, partially underground, or as mounded installations shall incorporate provisions for cathodic protection and shall be coated with a material recommended for the service that is applied in accordance with the coating manufacturer's instructions.

6.6.6 Installation of Underground and Mounded Containers.

6.6.6.1* ASME container assemblies intended for underground installation, including interchangeable aboveground–underground container assemblies, shall be installed underground in accordance with 6.6.6.1(A) through 6.6.6.1(L).

(A through H unchanged.)

(I)* A corrosion protection system shall be installed on new installations of underground steel containers, unless technical justification is provided to and is approved by the authority having jurisdiction.

The corrosion protection system shall include:

1. A container coating complying with 5.2.1.11
2. A cathodic protection system that consists of a sacrificial anode(s) or an impressed current anode
3. A means to test the performance of the cathodic protection system

(J)* Cathodic protection systems installed in accordance with (I) above shall be monitored by testing and the results documented. Confirming tests shall be described by one of the following:

1. Producing a voltage of -0.85 volts or more negative, with reference to a saturated copper-copper sulfate half cell
2. Producing a voltage of -0.78 volts or more negative, with reference to a saturated KCl calomel half cell
3. Producing a voltage of -0.80 volts or more negative, with reference to a silver-silver chloride half cell

(K)* Sacrificial anodes installed in accordance with (I) above shall be tested in accordance with the following schedule:

1. Upon installation of the cathodic protection system, unless prohibited by climactic conditions, in which case testing shall be done within 180 days after the installation of the system.
2. For continued verification of the effectiveness of the system, 12 to 18 months after the initial test.
3. Upon successful verification testing and in consideration of previous test results, periodic follow-up testing shall be performed at intervals not to exceed 36 months.
4. Systems failing a test shall be repaired as soon as practical unless climactic conditions prohibit this action, in which case the repair shall be made not more than 180 days thereafter. The testing schedule shall be restarted as required in (1) and (2) above and the results shall comply with 6.6.6.1(J).
5. Documentation of the results of the two most recent tests shall be retained.

(L)* Where an impressed current cathodic protection system is installed, it shall be inspected and tested in accordance with the following schedule:

1. All sources of impressed current shall be inspected and tested at intervals not exceeding two months.
2. All impressed current cathodic protection installations shall be inspected and tested annually.

(M) Prior to burial, the container shall be visually examined for damage to the coating. Damaged areas shall be repaired with a coating recommended for underground service and compatible with the existing coating.

(Remaining paragraphs are renumbered.)

6.6.6.2 Partially underground, unmounded ASME containers shall be installed as follows:

1. The portion of the container below the surface of the ground, and for a vertical distance of at least 3 in. (75 mm) above that surface, shall comply with the corrosion protection requirements of 6.6.6.1(I) through (M). The aboveground portion of the container shall comply with 6.6.1.4.

(Remainder unchanged.)

6.6.6.3 Mounded containers shall be installed as follows:
2. Revise A.6.6.6.1(l) to read as follows:

A.6.6.6.1(l) Installing cathodic corrosion protection systems on new installations will help assure the integrity of underground storage systems. Technical reports or other data can be presented to the authority having jurisdiction in support of waiving the requirement for a cathodic protection system.

For information on the proper sizing and installation of corrosion protection systems for containers and piping systems, see the following:

(1) National Association of Corrosion Engineers Standard SP0169, Standard Practice, Control of External Corrosion on Underground or Submerged Metallic Piping Systems.

(2) National Association of Corrosion Engineers Standard RP0285, Standard Recommended Practice, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.

(3) API Publication 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems, 3rd ed. 96(R2002).

For information on complete cathodic protection systems installed on containers at the factory, see the following:

(1) Underwriters Laboratories Inc., UL 1746, External Corrosion Protection Systems for Steel Underground Storage Tanks.


Corrosion protection systems include not only the anode system, but also the coating on the container and a means to test the performance of the system. All elements contribute to the overall performance of the system and are needed in order to provide the most comprehensive protection to the container.

The sacrificial galvanic anode system protects the container from corrosion by generating a low voltage electrical current which protects the container while the anode deteriorates over time. While Impressed Current Systems can also be used, those systems are typically used on containers larger than 2,000 gallon (WC), and are not found on typical residential or commercial ASME underground container installations.

It is important that, when a cathodic protection system is designed, there is a clear understanding of the limits of the surface area and materials being protected. Electrical isolation of the container from metallic piping may be necessary using a dielectric fitting or another component designed for that purpose. For example, the cathodic system that protects a steel tank that is not electrically isolated from the attached metallic piping system will be forced to provide protection for the connected piping system as well. Therefore, the sacrificial anode will have to be sized to protect both the container and the piping. Additionally, if the piping is of a different material (such as copper) from the container, further complications could result and it is possible that the steel may corrode even though a sacrificial anode is connected to the container.

A.6.6.6.1(J) Once the monitoring tests required by 6.6.6.1(K) have been performed, the results can be compared to the criteria listed in this paragraph. The system is functioning properly if it develops -0.85V or greater negative voltage when tested with a copper/copper sulfate reference electrode.

The use of a copper-copper/sulfate half cell to confirm that the cathodic protection system is functioning properly is anticipated to be the most common method of testing sacrificial anode systems on propane containers. Other standard reference half cells can be substituted for the saturated copper-copper sulfate half cell. In addition to the standard reference half cells, other means of testing cathodic systems can be employed and they are explained in more detail in Title 49 of the Code of Federal Regulations, Part 192, Appendix D.

A.6.6.6.1(K) The installation of a cathodic protection system on an underground container introduces a need to periodically verify that the system is functioning properly and protecting the container from corrosion. Sacrificial anode systems are anticipated to be the most frequently installed systems for propane underground storage containers. The testing program required for sacrificial anode systems is consistent with nationally recognized practices [see A.6.6.6.1(l)]. Initial testing is required as soon as practical after installing the system and then the verification test is required approximately 12-18 months after the initial testing was done. The time periods for the initial and verification tests are allowed to be adjusted to accommodate installations that, due to inclement weather, unsuitable soil conditions or other environmental conditions, cannot be tested immediately.

If the initial test and verification test are successful, a suitable period for follow-up testing of the system should be established. A review of available standards, federal and state regulations and recommended practices indicates that a maximum time period of 3 years is an acceptable interval for periodic testing. Should a test of the installation not achieve the required results, the sacrificial anode system must be repaired and the testing program begun again.

Training material on the installation and testing of cathodic protection systems can be found in the following...
Substantiation:
With the introduction of a requirement to cathodically protect all new underground container installations, the proposed text is written to clarify that only new underground installations are required to be provided with cathodic protection systems. Underground containers have been provided for many years by the manufacturer with a coating that protects the container from corrosion. The changes proposed to Section 6.6.6.1 will also address the issue regarding the periodic inspection requirement for cathodic systems. Currently, Section 5.2.1.11(3) (see Comment 58-54) requires that cathodic protection systems must be monitored annually. Although committee members agree that monitoring the cathodic protection system is needed, a review of various codes, standards, federal and state requirements indicate that an annual testing requirement is more frequent than what is needed for cathodic protection systems utilizing sacrificial anodes. The following government enforced regulations are in effect:

A.6.6.6.1(L) Impressed current cathodic protection systems are typically engineered systems that must be maintained and inspected according to a more frequent schedule. The requirements contained in this section are based on information published in the NACE documents referenced in A.6.6.6.1(I). In 6.6.6.1(L)(1), evidence of proper functioning may be current output, normal power consumption, or a signal indicating normal operation. In 6.6.6.1(L)(2), a preventive maintenance program to minimize in-service failure is necessary. Inspections should include a check for electrical shorts, ground connections, meter accuracy, efficiency, and circuit resistance. The effectiveness of isolating devices and continuity bonds should be evaluated during the periodic surveys. This can be accomplished by on-site inspection or by evaluating corrosion test data.

3. Add new text as follows:

14.3.1.4 The written procedures shall address the following requirements, where applicable:

(8) Underground containers (See 6.6.6.1 (J) through (L)).

Substantiation: With the introduction of a requirement to cathodically protect all new underground container installations, the proposed text is written to clarify that only new underground installations are required to be provided with cathodic protection systems. Underground containers have been provided for many years by the manufacturer with a coating that protects the container from corrosion.

The change to 5.2.1.11 is needed because the text is more appropriately located in Chapter 6, which contains the installation requirements of the code. Since most underground ASME containers are not shipped with a cathodic protection system attached to the container, the cathodic system will be installed at the job site by the installer and therefore paragraph 6.6.6.1 contains requirements for those systems.

The changes proposed to Section 6.6.6.1 will also address the issue regarding the periodic inspection requirement for cathodic systems. Currently, Section 5.2.1.11(3) (see Comment 58-54) requires that cathodic protection systems must be monitored annually. Although committee members agree that monitoring the cathodic protection system is needed, a review of various codes, standards, federal and state requirements indicate that an annual testing requirement is more frequent than what is needed for cathodic protection systems utilizing sacrificial anodes. The following government enforced regulations are in effect:

a. The State of Colorado Liquefied Petroleum Gas (LPG) Rule 7 CCR 1101-15 specifies that propane containers with cathodic protection systems must be tested upon installation and every three years afterwards.

b. The Environmental Protection Agency, in Title 40 of the Code of Federal Regulations, Part 280.31, requires all underground steel storage systems with cathodic protection systems to be tested within 6 months of installation and every three years thereafter.

c. The Department of Transportation, in its requirements for gas pipelines in Title 49 of the Code of Federal Regulations, Part 192.465, states that short sections of main or transmission pipelines (not in excess of 100 feet), or separate service lines, may be tested as follows: “At least 10 percent of these protected structures, distributed over the entire system must be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10–year period.” (Note that the overwhelming majority of propane systems installed in accordance with NFPA 58 would fall into this category.)

To address these concerns, the TIA proposes to introduce a requirement for initial testing in 6.6.6.1(K) (1) to establish that the system is functioning after it has been installed. In addition, testing must be documented to permit confirmation by the authority having jurisdiction. Verification testing is done at 12-18 months after the initial test to ensure the system is still functioning after the ground around the installation has settled. Further testing is required at intervals to be established by the owner, based on factors such as soil composition, climate, environmental conditions and local experience, with a maximum interval between tests of 36 months. The 36 month interval was chosen based on consideration of the documents referenced in A.6.6.6.1(I) and of the state and federal regulations referred to above.

Note that if the system fails any test, it must be repaired immediately or within 180 days of the test. A time-frame for repairing the system is needed so that gas can still be delivered to the container in the event that climactic or soil conditions cause a delay in the repair. It may not be possible to repair a system in winter, with frozen ground/snow pack, etc. Once a corrosion protection system has been repaired, it must then begin the test monitoring cycle from the beginning.
Emergency Nature: The proposed TIA constitutes an emergency as described in Section 5.2 of the “Regulations Governing Committee Projects” for the following reasons:

1. Comment 58-54 introduces as mandatory referenced standards, documents that contain non-mandatory language and therefore are not in compliance with Section 3.3.7.1 of the “Regulations Governing Committee Projects.” This error satisfies criterion (a).

2. In accordance with criterion (a), the document contains an error because the acceptance of Comment 58-54 would result in a duplication of text between sections 5.2.1.11 (2) and A.6.6.6.1 (I) (see Proposal 58-96). In 5.2.1.11(2), the referenced documents are mandatory referenced standards; in A.6.6.6.1(I), the same documents are referenced in the non-mandatory Annex A.

3. The TIA will correct a circumstance in which an adverse impact has been imposed on the use of underground containers due to the acceptance of Comment 58-54. This will satisfy criterion 5.2 (f) of the NFPA Regulations Governing Committee Projects. The adverse impact is unwarranted and is the result of underground containers being subjected to more stringent testing and monitoring requirements than what is required by any code, standard or regulation. For example, NACE, API and ULC publications all permit the time period for testing sacrificial anode systems to be extended beyond one year where conditions warrant. There is no such allowance in the language proposed in Comment 58-54.

Committee Meeting Action: Accept

58- Log #CP2  Final Action: Accept
(5.2.5.4)

Submitter: Technical Committee Liquefied Petroleum Gases

Recommendation: 5.2.5.4* ASME containers of 125 gal through 2000 gal (0.5 m3 through 7.6 m3) water capacity in other than bulk plant and industrial occupancies shall be provided with an opening for an actuated liquid withdrawal excess-flow valve with a connection not smaller than 3/4 in. (19 mm) national pipe thread (NPT).

Substantiation: The changes remove the conflict between 5.2.5.4 and table 5.7.4.1. The liquid withdrawal valve is not applicable to bulk plants and industrial applications.

Committee Meeting Action: Accept
58-     Log #4
(5.7.2.2.1, 5.7.2.3, and 5.7.2.3.1)

Final Action:

Note: This Proposal originates from Tentative Interim Amendment 58-11-2 (TIA 1008) issued by the Standards Council on March 1, 2011.

Submitter: Steven T. Gentry, Worthington Cylinder Corporation

Recommendation: Add a new 5.7.2.2.1 to read as follows:

5.7.2.2.1 The rated flow capacity of the pressure relief valve (CG-7) shall meet the minimum flow requirements for a liquefied gas as defined in CGA Publication S-1.1.

2. Revise 5.7.2.3 and add a new 5.7.2.3.1 to read as follows:

5.7.2.3 Composite cylinders shall not be equipped with fusible plugs. Cylinders shall not be solely equipped with C-2 or CG-3 fusible plugs as defined in CGA Publication S-1.1.

5.7.2.3.1 A combination device containing a pressure relief valve (CG-7) with 212°F fuse metal (CG-3) shall be permitted.

Substantiation: Paragraph 5.7.2.2 clearly states that the cylinder will be equipped with pressure relief valve as required by DOT regulations. DOT specifically references CGA Publication S-1.1. Therefore, CGA Publication S-1.1 is a requirement for pressure relief devices used on cylinders that are commercially transported.

CGA Publication S-1.1, Table 3 states that the pressure relief device for propane shall be a pressure relief valve (CG-7). The Table further states that a fusible metal device (CG-3) may be used in addition to the CG-7 device but the CG-7 pressure relief valve must meet the requirements for the minimum flow rate.

The modification of this paragraph would remain consistent with CGA Publication S-1.1 which is incorporated by reference by 49 CFR.

Emergency Nature: The committee approved Paragraph 5.7.2.3 to be included into NFPA 58 without realizing that an application currently exists today using a combination CG-7 pressure relief valve and fuse metal for a cylinder. As such, this proposed TIA is an emergency because it complies with the following section from the NFPA Rules Governing Committee Projects:

5.3 Evaluation of Emergency Nature. Determination of an emergency nature shall include but not be limited to one or more of the following factors:

(f) The proposed TIA intends to correct a circumstance in which the revised document has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process, or was without adequate technical (safety) justification for the action.

58-     Log #12
(5.7.3.3)

Final Action: Accept in Principle

Submitter: Bill Mahre, Propane Technical Services

Recommendation: Revise text to read as follows:

5.7.3.3 No cylinder shall be filled unless it is Cylinders required to have an overfilling protection device (OPD) shall not be filled unless they are equipped with an overfilling protection with this device and a fixed maximum liquid level gauge. The length of the fixed maximum liquid gauge dip tube shall be in accordance with Section 7.4.3.2 or Table 5.7.3.2.

Substantiation: The statement 'No cylinder shall be filled' is incorrect. The new wording will retain the intent of the paragraph.

Committee Meeting Action: Accept in Principle

5.7.3.3 No cylinder shall be filled unless it is Cylinders required to have an overfilling prevention device (OPD) shall not be filled unless they are equipped with an overfilling prevention with this device and a fixed maximum liquid level gauge. The length of the fixed maximum liquid gauge dip tube shall be in accordance with Section 7.4.3.2 or Table 5.7.3.2.

Committee Statement: The committee corrected the proposal to reflect OPD as the overfilling prevention device.
58- Log #CP3 Final Action: Accept
(5.7.5.10)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 5.7.5.10 Gauging devices requiring bleeding that vent of product to the atmosphere when used to vent the atmosphere, such as fixed liquid level, rotary tube, and slip tube gauges, shall be designed so that the bleed vent valve maximum opening to the atmosphere is not larger than a No. 54 drill size.

Substantiation: The list of gauging devices was deleted because it is not exhaustive and does not belong in the code. The additional language changes are more descriptive of the use of the gauging devices.

Committee Meeting Action: Accept

58- Log #CP4 Final Action: Accept
(5.7.8.4)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 5.7.8.4 Connections to ASME containers installed underground shall be located within a substantial dome, housing, or manhole and shall have a cover.

Substantiation: The word "substantial" is struck because it is unenforceable. The requirement for protection of valves can be found in 6.6.1(C).

Committee Meeting Action: Accept

58- Log #CP5 Final Action: Accept
(5.8.1.2 & 6.19.2.2)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 5.8.1.2 Regulators over 500,000 BTUH capacity shall be recommended by the manufacturer for use with LP-Gas.

6.19.2.2 Only regulators recommended by the manufacturer for use with LP-Gas shall be used.

Substantiation: The requirement applies to regulators over 500,000 BTUH and restates what was previously in 6.19.2.2.

Committee Meeting Action: Accept

58- Log #13 Final Action: Reject
(5.9.6)

Submitter: Joseph M. Bloom, Chris Bloom, CJB Fire Consultant, Bloom Fire Investigation
Recommendation: Add new text to read as follows:
All LP-gas interior tubing and piping connections in Recreational Vehicles shall be painted after assembly and after a successful pressure test has been completed. The paint will be of a consistency that will visibly crack whenever the connection is broken or opened. In the event of repairs, accessory replacement or other reason, the connection shall be cleaned and repainted with paint containing the same properties as OEM paint.

Substantiation: In numerous past fires and explosions that both firms have investigated, manufacturers are routinely blamed for loosened connections, which were opened and improperly re-connected by owners, untrained repair personnel, or others. The paint coating of joints will demonstrate the integrity of the system when the unit left the factory.

Committee Meeting Action: Reject
Committee Statement: The scope of NFPA 58 specifically excludes manufacturing requirements for recreational vehicles. The submitter should forward this proposal to the technical committee on recreational vehicles, the committee responsible for NFPA 1192.
58- Log #CP9
(6.4.5.8 and Table 6.4.5.8)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 6.4.5.8* The minimum separation between LP-Gas containers and oxygen or gaseous hydrogen containers shall be in accordance with NFPA 55, Compressed Gases and Cryogenic Fluids Code, Table 6.4.5.8.

Delete Table 6.4.5.8.

A.6.4.5.8 Also see NFPA 51, Standard for the Design and Installation of Oxygen–Fuel Gas Systems for Welding, Cutting, and Allied Processes, for oxygen systems, and NFPA 55, Compressed Gases and Cryogenic Fluids Code, for gaseous hydrogen systems.

Substantiation: The table was originally derived from NFPA 50 and 50A. However, these documents have since been withdrawn and absorbed into NFPA 55. The current requirements of NFPA 55 are much different from those shown in table 6.4.5.8. In the case of separation from gaseous hydrogen containers and systems, the minimum separation distance is based not only on volume, but also on system pressure and pipe size of the GH2 system. Rather than attempting to extract the NFPA 55 methodology into NFPA 58, the paragraph is modified to direct users to NFPA 55 for a complete treatment of the determination of separation distances for oxygen and hydrogen systems.

Committee Meeting Action: Accept

58- Log #CP8
(6.18.2.5)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 6.18.2.5* Bulk plant liquid inlet system piping shall be designed to prevent debris from impeding the action of valves and other components of the piping system. This requirement shall be effective for existing installations on July 1, 2011.

Substantiation: The original intent was to require strainers on liquid piping only, but the use of the term "system" was being interpreted to mean all piping. The proposed modification limits the application of the requirement to the piping where debris is likely to be introduced.

Committee Meeting Action: Accept

58- Log #CP6
(6.21.1)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 6.21.1 Non-application. Section 6.21 shall not apply to engine fuel vaporizers or to integral vaporizing burners such as those used for weed burners or tar kettles.

Substantiation: Paragraph 6.21.1 is really a statement of non-application, not application.

Committee Meeting Action: Accept
58- Log #11
(6.23.7.11 (New) )
Final Action: Accept

Submitter: Bill Mahre, Propane Technical Services
Recommendation: Add new text to read as follows:
6.23.7.11 Gas-fired heating appliances and water heaters shall be equipped with automatic devices designed to shut off the flow of gas to the main burner and the pilot in the event the pilot flame is extinguished.
Substantiation: This paragraph appears in Section 5.20.7(A) Chapter 5 which describes LP-Gas Equipment and Appliances. This new text will place the same wording in Chapter 6 which describes the Installation of LP-Gas Systems. This addition will provide clear instruction for the installation and operation of LP-Gas burner assemblies.
Committee Meeting Action: Accept

58- Log #3
(6.24.3.14 )
Final Action: Accept in Principle

Submitter: Wade Stanley, North Carolina Department of Agriculture and Consumer Services
Recommendation: An identified and readily accessible switch or circuit breaker shall be installed outside at a location less than 20 ft (6.1 m) or more than 100 ft. (30.5 m) from the dispensing device(s) to shut off the power in the event of a fire, an accident, or other emergency.
Substantiation: Change provides a safer location for switch or circuit breaker.
Committee Meeting Action: Accept in Principle
An identified and readily accessible switch or circuit breaker shall be installed outside at a location not less than 20 ft (6.1 m) or more than 100 ft. (30.5 m) from the dispensing device(s) to shut off the power in the event of a fire, an accident, or other emergency.
Committee Statement: The committee accepted in principle to restore the original language "not less than" in front of the separation distances.

58- Log #10
(7.2.3, 7.2.3.2(A), and 3.3.64 )
Final Action: Reject

Submitter: Bill Mahre, Propane Technical Services
Recommendation: Revise text to read as follows:
7.2.3.2 Sources of ignition shall be turned off during transfer operations, while connection or disconnections are made, or while LP-Gas is being vented to the atmosphere.
(A) Internal combustion engines, including exhaust systems, within 15 ft. (4.6 m) of a point of transfer shall be shut down while such transfer operations are in progress, with the exception of the following:
Substantiation: This addition will clear the point of measurement for ignition points. The exhaust system may be of more concern for ignition where temperatures may be above 950°F. Refer to Section 3; paragraph 3.3.64.
Committee Meeting Action: Reject
Committee Statement: Exhaust systems can not be shut down. While the committee understands the concern, the revision as written is unenforceable. In addition, 7.2.3.2 (D) addresses materials that have been heated above the ignition temperature of LP-Gas.
58- Log #CP7 Final Action: Accept (8.3.2)

Submitter: Technical Committee Liquefied Petroleum Gases
Recommendation: 8.3.2 Storage Within Buildings Frequented by the Public and in Residential Occupancies.
Substantiation: 58-178 of the Fall 2000 Report on Proposals had originally struck the phrase "and in residential occupancies" from the title 8.3.2, but the proposal was not reflected in the final version of the document. This proposal renews the action.
Committee Meeting Action: Accept

58- Log #2 Final Action: Accept (A.6.15)

Note: This proposal appeared as Comment 58-143 (Log #121) which was held from the Annual 2010 ROC on Proposal 58-108.
Submitter: Timothy J. Myers
Recommendation: Add new text to read as follows:
A.6.15 Gas leaks have resulted from snow or ice accumulations on gas systems, and snow or ice shedding from roofs onto gas systems. In these incidents, external fires have occurred and in some cases gas has migrated into or under buildings, resulting in interior fires or explosions.
Selection of appropriate methods of protection should be based upon the installation and anticipated snow and ice loading. Possible methods of protection include:
1) Minimizing the extent of above-ground piping.
2) Locating above-ground piping, regulators, and meters above anticipated snow accumulations.
3) Locating above-ground piping, regulators and meters on the gable end of buildings, rather than under eaves, to prevent damage from snow or ice shedding off of roofs.
4) Protecting above-ground piping, regulators, and meters with extended roof overhangs or dedicated covers.
5) Adding additional support above-ground piping, regulators and meters to withstand anticipated snow or ice loading.
Substantiation: Further information related to section 6.15 should be provided to the user of the standard, describing how previous incidents have occurred and protection methods used in some areas.
Note: Supporting material is available for review at NFPA Headquarters.
Committee Meeting Action: Accept