NATIONAL FIRE PROTECTION ASSOCIATION
The leading information and knowledge resource on fire, electrical and related hazards

TECHNICAL COMMITTEE ON
Gas Process Safety

NFPA 56, *Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems*

First Draft Agenda
May 31, 2018 8:00 AM – 5:00 PM Central Time

1. Call to Order. Franklin Switzer, Chair
2. Introductions.
3. Approval of Pre-First Draft Continuation Meeting Minutes from March 8, 2018. (Attachment A)
4. Staff Updates. Lisa Hartman, NFPA Staff
   - Committee membership update. (Attachment B)
   - Fall 2019 revision cycle schedule. (Attachment C)
   - Overview of NFPA Process
5. AGA Purging Document, Forth Edition, July 2018 Draft (See NFPA 56 Document Information website available to technical committee only)
6. Public Inputs (PIs) review (Attachment D)
7. Task Group reports and discussion:
   - Onshore Gathering Lines, Task Group Chair: John Puskar
     - Status: Met in late February. *From J. Puskar email dated 2/22/2018: We concluded that the 3 pubic inputs regarding gathering lines do indeed NOT advocate for the inclusion of gathering lines to the standard. In fact, they advocate to not include gathering lines.*
   - References. Task Group Chair: Christopher Buehler
   - De Minimus Quantities. Task Group Chair: Michael Bethany
   - Emergency Plan. Task Group Chair: Denise Beach
8. New Business.
9. Next Meeting. Second Draft meeting must be scheduled between 11/15/2018-5/16/2019.
10. Adjournment.

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TECHNICAL COMMITTEE ON
Standard for Fire and Explosion Prevention during Cleaning And Purging of Flammable Gas Piping Systems (GPS-AAA)

NFPA 56

Pre-First Draft Continuation Meeting Minutes
March 8, 2018 2:00 PM – 3:00 PM Eastern Time
Web Meeting/Teleconference

Attendees

Committee Members (GPS-AAA):

Franklin Switzer	S-afe, Inc.
Hocine Ait Mohamed	Saudi Aramco
Chris Buehler	Exponent, Inc.
Paul Cabot	American Gas Association (AGA)
Larry Danner	GE Power & Water
John Doucette	State of CT, Department of Administration
Robert Naper	ANSI Gas Piping Technology Committee
John Puskar	Prescient Technical Services LLC
Bruce Swiecicki	NPGA
Brett Wheelock	OGE/Enogex
Scott Neil (A)	DCP Midstream LLC
Sam Pagadala (A)	AIG
Lisa Hartman, Staff Liaison	National Fire Protection Association, MA

Guests:

Robert Early CGA

Agenda

1. **Call to Order**. Franklin Switzer called the meeting to order at 2:00 P.M.

2. **Introductions**. Lisa Hartman, Staff Liaison, took attendance and asked if there are any changes to contact information. It was announced that Alan Rice (P), AIG, had retired.

3. **Staff Updates.** L. Hartman provided an overview of the Fall 2019 revision cycle schedule.

4. **Task Group Reports/Public Inputs (PIs) review, as applicable**
   - Onshore Gathering Lines, Task Group Chair: John Puskar
     - Status: Met in late February. *From J. Puskar email dated 2/22/2018: We concluded that the 3 pubic inputs regarding gathering lines do indeed NOT advocate for the inclusion of gathering lines to the standard. In fact, they advocate to not include gathering lines.*
   - References , Task Group Chair: Christopher Buehler
     - Status: Has not met yet.
   - De Minimus Quantities, Task Group Chair: Michael Bethany
     - Status: Has not met yet.
   - Emergency Plan, Task Group Chair: Denise Beach
     - Status: in progress

5. **Next Meeting**. For the First Draft meeting, the TC has decided on a 1-day meeting in Chicago IL on Thursday, May 31, 2018. Prior to FD meeting, the TC should review ANSI GPTC Z380.1 Guide for Gas Transmission, Distribution, and Gathering Piping Systems, especially page 17- definition of gathering lines, as well as the revised referenced AGA document.

6. **Adjournment**. The meeting adjourned at 2:50 P.M.

Percentage Summary

05/17/2018

GPS-AAA Gas Process Safety

Class	Voting Number	Percent
E	1	6%
I	3	17%
IM	2	11%
M	4	22%
SE	6	33%
U	2	11%

Total Voting Number 18

Fall 2019 Revision Cycle

Process Stage	Process Step	Dates for TC	Dates for TC with CC
Public Input Stage (First Draft)	Public Input Closing Date*	1/04/2018	1/04/2018
	Final Date for TC First Draft Meeting	6/14/2018	3/15/2018
	Posting of First Draft and TC Ballot	8/02/2018	4/26/2018
	Final date for Receipt of TC First Draft ballot	8/23/2018	5/17/2018
	Final date for Receipt of TC First Draft ballot - recirc	8/30/2018	5/24/2018
	Posting of First Draft for CC Meeting		5/31/2018
	Final date for CC First Draft Meeting		7/12/2018
	Posting of First Draft and CC Ballot		8/02/2018
	Final date for Receipt of CC First Draft ballot		8/23/2018
	Final date for Receipt of CC First Draft ballot - recirc		8/30/2018
	Post First Draft Report for Public Comment	9/06/2018	9/06/2018
Comment Stage (Second Draft)	Public Comment Closing Date*	11/15/2018	11/15/2018
	Notice Published on Consent Standards (Standards that received no Comments) Note: Date varies and determined via TC ballot.		
	Appeal Closing Date for Consent Standards (Standards that received no Comments)		
	Final date for TC Second Draft Meeting	5/16/2019	2/07/2019
	Posting of Second Draft and TC Ballot	6/27/2019	3/21/2019
	Final date for Receipt of TC Second Draft ballot	7/18/2019	4/11/2019
	Final date for receipt of TC Second Draft ballot - recirc	7/25/2019	4/18/2019
	Posting of Second Draft for CC Meeting		4/25/2019
	Final date for CC Second Draft Meeting		6/06/2019
	Posting of Second Draft for CC Ballot		6/27/2019
	Final date for Receipt of CC Second Draft ballot		7/18/2019
	Final date for Receipt of CC Second Draft ballot - recirc		7/25/2019
	Post Second Draft Report for NITMAM Review	8/01/2019	8/01/2019
Tech Session Preparation (& Issuance)	**Notice of Intent to Make a Motion (NITMAM) Closing Date**	8/29/2019	8/29/2019
	Posting of Certified Amending Motions (CAMs) and Consent Standards	10/10/2019	10/10/2019
	Appeal Closing Date for Consent Standards	10/25/2019	10/25/2019
	SC Issuance Date for Consent Standards	11/04/2019	11/04/2019
Tech Session	Association Meeting for Standards with CAMs	6/17/2020	6/17/2020
Appeals and Issuance	Appeal Closing Date for Standards with CAMs	7/08/2020	7/08/2020
	SC Issuance Date for Standards with CAMs	8/14/2020	8/14/2020

TC = Technical Committee or Panel
CC = Correlating Committee

As of 2/3/2017

Public Input No. 7-NFPA 56-2018 [Section No. 1.1.1 [Excluding any Sub-Sections]]

This standard shall apply to fire and explosion prevention during cleaning and purging activities for new and existing flammable gas piping found in electric-generating plants, exploration and development well pads operations post completion to custody transfer, gas distribution facilities and in industrial, institutional, and commercial applications.

Statement of Problem and Substantiation for Public Input

I am on API 54 standard for well pad drilling safety and have also been on a task force regarding this topic with scott neil from DCP midstream. The new API 54 has recognized that they have nothing related to purging and NFPA 56 is now referenced in this document as a result of my committee input. It makes no sense that they recognize the need to have them in, but we don't in our own document that they reference. This was a substantial number of people on their committee who saw the need and approved them being included. In the case of gas distribution facilities there are numerous LDC take stations operated by gas utilities throughout the US and the world that take gas at 1000 psig to about 500 psig. These are the people would would benefit greatly with our document and its tools because frankly, they have the hazard and are the biggest daily interfacers with the hazard.These take stations are often in very populated urban areas. My experience with working in this industry for the past couple of years and being at many of these sites and observing operations is that they can benefit from the guidance the document provides. It would serve humanity to call them out directly so they understand they need to be part of this.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jan 02 19:18:51 EST 2018

Public Input No. 3-NFPA 56-2017 [Section No. 1.1.1.1 [Excluding any Sub-Sections]]

Coverage of fuel gas piping systems shall extend from the point of delivery or source valve to the gas-consuming equipment isolation valve.
[*For oil & gas wellhead operations, the point of delivery shall be considered the wellhead. Piping systems considered a part of this standard would include from the wellhead to the gathering pipeline point of custody transfer isolation valve.*]

Statement of Problem and Substantiation for Public Input

Justification:
“This clarifies the inclusion of Oil and Gas production facilities while being consistent with the exclusion of Gas Gathering Pipelines and Natural Gas Processing Facilities.”

Submitter Information Verification

Submitter Full Name: Scott Neil
Organization: DCP Midsteam LLC
Affilliation: Gas Processors Association and DCP Midstream LLC
Street Address:
City:
State:
Zip:
Submittal Date: Tue Dec 12 10:19:37 EST 2017

Public Input No. 8-NFPA 56-2018 [Section No. 1.1.1.1 [Excluding any Sub-Sections]]

Coverage of fuel gas piping systems shall extend from the point of delivery or source valve to the gas-consuming or processing equipment isolation valve.

Statement of Problem and Substantiation for Public Input

Not all equipment that needs purging or that is involved in a purge consumes gas. Tale for example a combustion turbine with a gas filter. These filters need changed occasionally. They don't consume gas. They are a process vessel.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
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Submittal Date: Tue Jan 02 19:22:06 EST 2018

Public Input No. 9-NFPA 56-2018 [Section No. 1.1.1.2]

1.1.1.2*

Coverage of flammable gas piping systems other than fuel gas piping systems shall extend from the source valve serving the gas supply system to the gas-consuming or processing equipment isolation valve.

Statement of Problem and Substantiation for Public Input

Same as previous comment, not all equipment to be purged or that is part of a purge project actually consumes it, some are just process vessels.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jan 02 19:28:04 EST 2018

Public Input No. 1-NFPA 56-2017 [New Section after 1.1.2]

TITLE OF NEW CONTENT

Type your content here ...

New section in 1.1.2 Non-Application of Standard

(xx) Gas gathering infrastructure downstream of gas custody transfer meter to the upstream of a gas processing facility is exempt from the Maintenance requirements(Chapters 7and 8) of this Standard. _

Statement of Problem and Substantiation for Public Input

Justification:
Gas gathering line systems are best addressed by AGA Purging Principles and Practices and the proprietary processes that many companies/contractors have in place. The NFPA 56 processes including leak checking, and purging with an inert gas is not be practical with buried pipe that can be many miles long without purge points and frequent isolation valves, plus condensed hydrocarbons that cannot be removed to a point of meeting the level of hydrocarbons NFPA requires in the vent effluent. Following AGA gives the end users appropriate Hot Work procedures to safely work under those conditions.

It is proposed however that addendum materials be added to address safe work practices within NFPA 56 that can be applied to these systems as non-mandatory information that may assist those performing this work.

AGA Purging Principles and Practices have a specific process to calculate rates of flow to safely remove hydrocarbons and then remove the air while minimizing mixing, keeping pressures below auto-ignition point and have been used successfully for many years. And it is recommended NFPA recognize the AGA method of purging as equally safe for servicing pipelines.

AGA does not recommend the use of natural gas to clean the pipelines of construction debris. This provision of NFPA 56 is still applicable and should be followed.

Submitter Information Verification

Submitter Full Name: Scott Neil
Organization: DCP Midsteam LLC
Affilliation: Gas Processors Association and DCP Midstream LLC
Street Address:
City:
State:
Zip:
Submittal Date: Tue Dec 12 10:16:09 EST 2017

Public Input No. 2-NFPA 56-2017 [New Section after 1.1.2]

TITLE OF NEW CONTENT

Type your content here ...

New section in 1.1.2 Non-Application of Standard

(yy) Facilities covered by Process Safety Management of Hazardous Chemicals 29 cfr 1910.119 regulations for the purposes of maintenance activities only. (C leaning facility piping of construction debris with natural gas is still prohibited .)

Statement of Problem and Substantiation for Public Input

Justification:
"PSM regulations have a defined process for work with Hazardous Chemicals similar to NFPA 56 in that the Owner/Operator is required prepare, evaluated and approved Maintenance procedures, Hot work, Pre-Startup and Safety Review (Commissioning), Training, and Verification through a rigorous process. Strictly mandating one single procedure for removing from and returning a piece of pipe into service precludes the use of an alternative, vetted, and planned procedures that are equally safe or have introduced no additional safety risks.

Facility piping should not be cleaned of construction debris by introducing natural gas at high rates and should not be discharged in an unsafe location. All discharges should be controlled or monitored. Chapters 1-6 inclusive of NFPA 56 are still applicable."

Submitter Information Verification

Submitter Full Name: Scott Neil
Organization: DCP Midsteam LLC
Affilliation: Gas Processors Association and DCP Midstream LLC
Street Address:
City:
State:
Zip:
Submittal Date: Tue Dec 12 10:17:37 EST 2017

Public Input No. 10-NFPA 56-2018 [Section No. 1.1.2]

1.1.2 Nonapplication of Standard.

This standard shall not apply to the following items:

(1) * Piping systems covered by NFPA 2

(2) * Piping systems covered by NFPA 51

(3) Fuel-dispensing facilities covered by NFPA 52

(4) * Piping systems covered by NFPA 54

(5) * Piping systems covered by NFPA 55

(6) * Piping systems covered by NFPA 58

(7) * LP-Gas (including refrigerated storage) at utility gas plants *(seeNFPA 59)*

(8) * LNG facilities covered by NFPA 59A

(9) * Vehicle fuel dispensers

(10) ~~Commissioning and maintenance of equipment~~

(11) Vent lines from pressure relief valves or devices unless such vent lines are also used for purging of flammable gas piping systems

(12) * Systems regulated by U.S. Department of Transportation (DOT) 49 CFR ~~100–199~~ ~~100 - 199~~

(13) Gathering lines from well pads to gas processing facilities

(14) Natural gas processing plants collecting natural gas from gathering lines

Statement of Problem and Substantiation for Public Input

I wanted to submit this as two separate items and hope it would be considered that way. I did not see how to do this within the software,
Item #1 was the removal of 10) commissioning and maintenance activities, In my opinion this would be one of the primary places that one would be doing purging of piping facilities. NFPA 54 does not make such a distinction regarding its purging activities and applicability, why should this document?
Item #2 was the comments related to gas gathering lines and processing facilities. These gathering lines are typically in very rural areas and are such that they are miles of piping very similar to what the DOT standards apply to. Likewise, natural gas processing facilities are usually addressed with standards from DOT, API, and other organizations and practices. In addition to this, in many cases the gathering lines and gas in these process plants is not above 125 psig.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jan 02 19:33:08 EST 2018

Public Input No. 11-NFPA 56-2018 [Section No. 1.2 [Excluding any Sub-Sections]]

This standard provides minimum safety requirements for the cleaning and purging of flammable gas piping systems, including cleaning new or existing piping systems, and purging piping systems into or out of service~~, from the point of delivery or source valve to the equipment isolation valve~~ .

Statement of Problem and Substantiation for Public Input

Why the emphasis on point of delivery to isolation valve. What if the intent is to purge a part of a system, somewhere in the middle of the system. We should not be suggesting that the standard may not apply unless we are doing the entirety of the system.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jan 02 19:52:27 EST 2018

Public Input No. 12-NFPA 56-2018 [New Section after 1.3]

***A1.3 Coordination**

Design teams can benefit greatly by generating preliminary purging plans, (for out of service and into service conditions), during the design process. This can help to identify the need for important purging system related components like purge points, line blind spacers, and purged gas venting lines so that gas is not released indoors.

Statement of Problem and Substantiation for Public Input

It's kind of tough to understand exactly what the pint of the coordination section is trying to communicate. I thought it would be helpful to spell it out in a new annex note.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jan 02 19:57:20 EST 2018

Public Input No. 13-NFPA 56-2018 [Section No. 1.4.2]

~~1.4.2~~ –

~~The retroactive requirements of this standard shall be permitted to be modified if their application clearly would be impractical in the judgment of the authority having jurisdiction and only where it is clearly evident that a reasonable degree of safety is provided.~~

Statement of Problem and Substantiation for Public Input

The authorityhaving jurisdiction already has the right to accept whatever they want to accept. The second part of this is ridiculous because it basically says, if you think this is too hard you don't have to do anything. This second part is clearly not enforceable.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
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Zip:
Submittal Date: Tue Jan 02 20:04:58 EST 2018

Public Input No. 19-NFPA 56-2018 [Chapter 3]

Chapter 3 Definitions

3.1 General.

The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary,* 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved.

Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ).

An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled.

Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed.

Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall.

Indicates a mandatory requirement.

3.2.6 Should.

Indicates a recommendation or that which is advised but not required.

3.2.7 Standard.

An NFPA Standard, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase "standards development process" or "standards development activities," the term "standards" includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides.

3.3 General Definitions.

3.3.1* Cleaning Media.

Materials used to clean piping systems.

3.3.2 Closed Piping System.

Interconnected piping that is designed to contain the flammable gas under pressure during normal operations and incorporates provisions for controlled release of contents.

3.3.3* Competent Person.

One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. **[29 CFR 1926.32(f)]**

3.3.4* Detection Equipment.

Monitoring equipment necessary for detecting and/or measuring the concentration of flammable gas or oxygen present in air.

3.3.5 End Point.

Attainment of concentration (percent by volume) of inert substance in the closed system being purged such that subsequent admission of air, if purging out of service, or admission of gas or vapor, if purging into service, will not result in formation of a flammable mixture.

3.3.6 Equipment Isolation Valve.

A manual shutoff valve for shutoff of the flammable gas to each piece of equipment.

3.3.7* Flammable Gas.

A material that is a gas at 68°F (20°C) or less at an absolute pressure of 14.7 psi (101.3 kPa), that is ignitible at an absolute pressure of 14.7 psi (101.3 kPa) when in a mixture of 13 percent or less by volume with air, or that has a flammable range at an absolute pressure of 14.7 psi (101.3 kPa) with air of at least 12 percent, regardless of the lower limit. [**55,** 2016]

3.3.8* Inert Gas.

A nonreactive, nonflammable, noncorrosive gas such as argon, helium, krypton, neon, nitrogen, and xenon. [**55,** 2016]

3.3.9 Pig.

A device that is inserted into a pipeline to perform a specific task within the pipeline and that travels freely through the pipeline pulled by a cable; propelled by air, water, or another medium; or driven by the product flow.

3.3.10 Purge.

To free a gas conduit of air or gas, or a mixture of gas and air. [**54,** 2015]

3.3.10.1 Purge into Service.

To replace the air or inert gas in a closed system by a flammable gas.

3.3.10.2 Purge out of Service.

To replace the normal flammable content of a closed system by inert gas, air, or water.

3.3.11 Source Valve.

A shutoff valve on the piping system serving a gas supply system where the gas supply, at service pressure, first enters the supply line.

3.3.12 Venting (depressurizing)

To bleed off the gas to be removed from the pipe (purged) from some beginning pressure to a pressure that is near atmospheric pressure, (0 psig), for the purposes of being able to begin a purge out of service procedure.

Statement of Problem and Substantiation for Public Input

The way the standard is written ignores one of the more dangerous parts of a purge out of service which is the release of pressurize gases to get the system pressure down to near 0 psig so that inert materials can be inserted for a slug purge. This release of the initial charge can present a considerable hazard.

Submitter Information Verification

Submitter Full Name: John Puskar

Organization: PuskarCo

Street Address:
City:
State:
Zip:
Submittal Date: Wed Jan 03 06:46:27 EST 2018

Public Input No. 20-NFPA 56-2018 [New Section after 3.3.10]

A 3.3.10 Purge

Purging out of service processes usually start with venting of the piping system to remove the flammable materials down to a near 0 psig state. In many cases this is followed by a slug purge or a pressure purge. Slug purges include a considerable amount of flow introduced continuously from one end of the pipe sweeping through with turbulent flow to the other end. In addition to this purging can include pressure purge processes where the piping system is pressurized with an inert after venting and then the mixed materials released to a safe place. Pressure venting usually requires a number of pressurizations and releases.

Statement of Problem and Substantiation for Public Input

Thought it would help to explain purging out of service processes in the context of venting

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jan 03 06:51:08 EST 2018

Public Input No. 14-NFPA 56-2018 [Section No. 4.1.2 [Excluding any Sub-Sections]]

Prior to cleaning or purging a new system that has not been in service , piping systems shall be inspected and pressure tested according to ASME B31.3 to determine that the materials, design, fabrication, and installation practices comply with the requirements of this standard and the intended application.

Statement of Problem and Substantiation for Public Input

There is a distinction provided to remind the user that this section applies to new equipment that has not yet been in service. The addition of the asme B31.3 comment is all about making sure the reader understands this is not a leak check, but a pressure test with specific criteria.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jan 02 20:09:49 EST 2018

Public Input No. 15-NFPA 56-2018 [New Section after 4.1.2.1]

A. 4.1.2.1 Pressure Testing and Inspection

Pressure testing has specific criteria. Be cautious of testing pneumatically. Pneumatic testing can be very dangerous and is infact prohibited at certain pressures in ASME B31.3 without an owners approval. Inspections of piping systems prior to purging should include things like reviewing threaded bolted connections for integrity, hanger loadings and spacings, and valve functionality.

Statement of Problem and Substantiation for Public Input

We say nothing about what the heck an inspection is or what someone would be looking for. I thought some annex material would help here. I also wanted to provide a warning about pneumatic testing.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jan 02 20:18:50 EST 2018

Public Input No. 16-NFPA 56-2018 [New Section after 4.3]

4.3 Notification of Hazards

Affected areas can include threat zones from releases of inerts and flammable gases. Models are available like ALOHA for identifying the likley path of plumes from the EPA website. Hazards that can impact large areas also include the possibility of pressure release explosions and debris from pneumatic testing.

Statement of Problem and Substantiation for Public Input

Users should know about the potential to model plumes and understand the concept. It's also important to continue to reinforce how dangerous pneumatic testing can be.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jan 03 04:55:26 EST 2018

Public Input No. 18-NFPA 56-2018 [New Section after 4.4.1]

(8) Management of inerts

a) Review of the form of inerts that will be used for purging, (bottles, tube trailer, vaporizers) to understand the benefits, limitations, and safety aspects of each.

b) Training of all staffs on inert handling including asphyxiation hazards and temperature issus with liquid nitrogen.

c) Valdiation that hoses used for interts are rated properly with inert materials service pressures

d) Consideration for whip checks to be used for all inert hose connections

e) Consideration for inerting regulators required and pressure drops to ensure the proper amount of flow can be established to purge successfully

Statement of Problem and Substantiation for Public Input

There is not enough coverage regarding considerations for inerts. The use of inerts and mishandling of inerts can be very dangerous.

Submitter Information Verification

Submitter Full Name: John Puskar
Organization: PuskarCo
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jan 03 06:40:56 EST 2018

Public Input No. 17-NFPA 56-2018 [Section No. 4.4.1]

4.4.1*

The written procedure for each cleaning and purging activity shall address, as a minimum, the following items:

(1) Scope of work and site-specific purge procedure development

(2) Cleaning and purging method

(3) Piping and instrument diagrams (PIDs)

(4) Chemical and physical properties of flammable gas, cleaning media, purge media, and discharge gas

(5) Determination of purge end point introducing flammable gas, inert gas, or air

(6) Assessment and control of purge inlet and discharge locations

(7)* Mitigation or capture strategies

(8) Temporary piping system design

(9) Management review and approval

(10) Restoration of service

(11) Target design, launcher/receiver venting review for pigging operations

(12) Regulatory permits

(13) Evaluation of engineering controls that allow gases from depressurization to be consumed in a controlled manner instead of vented (e.g., flaring or controlled combustion in process equipment).

(14) Written stand-down instructions to stop activity in a controlled manner

(15) Precautions for gases that have toxic, highly toxic, unstable reactive, corrosive, or other deleterious properties beyond

~~flammability~~

(a) flammabi

(b) Validation that purged or vented gases will not be released into a building.

(c) Consideration for venting of piping systems to release pressure.

(16)* Environmental conditions and work locations

(17) Establishment and clear identification of exclusion zones where flammable gas–air mixtures are likely to

~~exist~~

(a) exi

(b) Consideration for plume release threat zone modelling

(c) Limited access for personnel not directly involved with purge operations

(d) Assessment of potential for gas migration (e.g., building openings, adjacent structures)

(e) Prohibition of hot work within exclusion zones

(f) Lockout/tagout

(g) Impact of environmental conditions (e.g., wind speed and direction, temperature, barometric pressure) on purge operations

(h) Vehicular and air traffic, if applicable

(i) Topography

(j) Noise control/monitoring

(18) Communication plans

(19) Pre-job briefings

(20) Work permits

(21) Roles and responsibilities

(22) Emergency response plan

(23) Facility alarm, alert and warning systems

(24) General facility notification prior to start of purge operations

(25) General facility notification at the conclusion of purge operations

(26) Notification of regulatory authorities as required (local emergency responders, utility operators, community officials, environmental authorities, etc.)

(27) Control of ignition sources

(28) Bonding and grounding considerations

(29) No smoking or spark-producing work within exclusion zones

(30) Elimination of hot work within exclusion zone

(31) Static electricity ignition sources at discharge point

(32) Non-conductive piping, hose, or fittings in temporary piping assemblies

(33) Pre-purge and pressure testing piping system assessment

(34) Assessment of piping system for trapped liquids, pyrophoric solids, and other flammable or combustible deposits within the piping system

(35) Ensuring that the piping system is properly isolated

(36) Limiting site conditions that impact the safety of the

~~activity~~

(a) a

(b) Verification that no isolation valves are seized in position.

(c) On-site tools and sealants for trunion mounted ball valves

(d) Review of piping for mechanical integrity including fasteners grade, type, condition and external corrosion of fasteners and piping systems

(e) Servicing of lubricated plug valves according to manufacturers instructions.

(f) Review of previous temporary repairs that could include fiberglassing, wraps, or mechanical clamps

(g) Review of hanger integrity and spacing

(37) Purge monitoring and instrumentation

(38) Ensuring that monitoring instruments are appropriate for gas being purged

(39) Training

(40) Calibration

(41) Monitoring frequency and reporting

(42) Appropriate selection of sample point(s)

(43) General atmosphere checks in vicinity of purge gas release

(44) Protection and Rescue of Personnel

(45) Training requirements for personnel involved in the work efforts

(46) Personal protective equipment

(47) Selection of fire-resistant clothing (FRC) shall be based on a hazard analysis in accordance with NFPA 2113

~~Rescue~~

(a) Provision of rescue equipment, including self-contained breathing apparatus and breathing air escape packs , where this equipmentmight be needed

(b) Standby rescue personn

(c) Standby purge operations personnel to take on tasks that were not expected in the plan

(d) Primary and secondary assembly areas

(e) Assignment of personnel for alerting and accounting of personnel

Statement of Problem and Substantiation for Public Input

There are a number of items that should also be considered that I have added

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Public Input No. 22-NFPA 56-2018 [Section No. 4.4.1]

4.4.1*

The written procedure for each cleaning and purging activity shall address, as a minimum, the following items:

(1) Scope of work and site-specific purge procedure development

(2) Cleaning and purging method

(3) Piping and instrument diagrams (PIDs)

(4) Chemical and physical properties of flammable gas, cleaning media, purge media, and discharge gas

(5) Determination of purge end point introducing flammable gas, inert gas, or air

(6) Assessment and control of purge inlet and discharge locations

(7)* Mitigation or capture strategies

(8) Temporary piping system design

(9) Management review and approval

(10) Restoration of service

(11) Target design, launcher/receiver venting review for pigging operations

(12) Regulatory permits

(13) Evaluation of engineering controls that allow gases from depressurization to be consumed in a controlled manner instead of vented (e.g., flaring or controlled combustion in process equipment).

(14) Written stand-down instructions to stop activity in a controlled manner

(15)* Precautions for gases that have toxic, highly toxic, unstable reactive, corrosive, or other deleterious properties beyond

~~flammability~~

(a) flammability

(b) Prepare a valve line-up table or chart to show the condition of critical valves during each state of the purge.

(16)* Environmental conditions and work locations

(17) Establishment and clear identification of exclusion zones where flammable gas–air mixtures are likely to exist

(18) Limited access for personnel not directly involved with purge operations

(19) Assessment of potential for gas migration (e.g., building openings, adjacent structures)

(20) Prohibition of hot work within exclusion zones

(21) Lockout/tagout

(22) Impact of environmental conditions (e.g., wind speed and direction, temperature, barometric pressure) on purge operations

(23) Vehicular and air traffic, if applicable

(24) Topography

(25) Noise control/monitoring

(26) Communication plans

(27) Pre-job briefings

(28) Work permits

(29) Roles and responsibilities

(30)* Emergency response plan

(31) Facility alarm, alert and warning systems

(32) General facility notification prior to start of purge operations

(33) General facility notification at the conclusion of purge operations

(34) Notification of regulatory authorities as required (local emergency responders, utility operators, community officials, environmental authorities, etc.)

(35) Control of ignition sources

(36) Bonding and grounding considerations

(37) No smoking or spark-producing work within exclusion zones

(38) Elimination of hot work within exclusion zone

(39) Static electricity ignition sources at discharge point

(40) Non-conductive piping, hose, or fittings in temporary piping assemblies

(41) Pre-purge piping system assessment

(42) Assessment of piping system for trapped liquids, pyrophoric solids, and other flammable or combustible deposits within the piping system

(43) Ensuring that the piping system is properly isolated

(44) Limiting site conditions that impact the safety of the activity

(45) Purge monitoring and instrumentation

(46) Ensuring that monitoring instruments are appropriate for gas being purged

(47) Training

(48) Calibration

(49) Monitoring frequency and reporting

(50) Appropriate selection of sample point(s)

(51) General atmosphere checks in vicinity of purge gas release

(52) Protection and Rescue of Personnel

(53) Training requirements for personnel involved in the work efforts

(54) Personal protective equipment

(55) Selection of fire-resistant clothing (FRC) shall be based on a hazard analysis in accordance with NFPA 2113

(56) Rescue equipment, including self-contained breathing apparatus and breathing air escape packs

(57) Standby rescue personnel

(58) Primary and secondary assembly areas

(59) Assignment of personnel for alerting and accounting of personnel

Statement of Problem and Substantiation for Public Input

Valve line-up charts are a critical part of any complex piping safety protocol.

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Submittal Date: Wed Jan 03 07:37:35 EST 2018

Public Input No. 21-NFPA 56-2018 [Chapter 5]

Chapter 5 Training Requirements

5.1 Training.

Persons whose duties fall within the scope of this standard shall be provided with training that is consistent with the scope of their job activities and assigned tasks for the cleaning or purging work to be performed. Evidence of knowledge transfer shall be included as part of the training program. Training efforts shall include compliance with ANSI Z490.1 - 2009 Criteria for accepted practices in health, safety and environmental training.

5.1.1

Topics covered by such training shall include hazards of flammable gas, hazards of compressed gases used for cleaning or purging, safe handling practices of flammable gas and compressed gas as applicable, and company emergency action plans and procedures and all other relevant topics introduced in chapter 4 as considerations for a complete purging plan .

5.1.2

Personnel training shall be conducted by a competent person knowledgeable in the subject matter and shall be documented.

5.1.

~~3~~

~~Training~~ 3

Training shall include demonstration of skills and a witness check off system to validate skills transfer and capabilities. Skills validation shall include at least the following:

a) Demonstration of proper use of necessary meters and sampling techniques.

b) Demonstration of proper connection of inerting hose sections.

c) Demonstration of proper monitoring of inert flows

d) Demonstration of operating critical valves

e) Demonstration of using emergency communications equipment

f) Demonstration of proper use of personal environmental monitors

g) Demonstration of use of SCBA equipment if part of the project

5.1.4

Training records, including dates of training, name of instructor(s), content or curriculum covered, and evidence of knowledge transfer, shall be maintained for a period not less than 5 years from the date of completion of the activity.

Statement of Problem and Substantiation for Public Input

ANSI Z490 is a well known safety training standard that addresses training needs analysis. In addition to this we should make sure that all of the items requested of a purging plan are within the scope of training.
It is usual and customary in industrial safety training to document both knowledge and skill transfer. Nothing to day in the standard addresses hands on skills vital for safety of purges.

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Public Input No. 23-NFPA 56-2018 [New Section after 6.6]

6.7 Consideration for discharged debris

Consideration will be given in the cleaning plan to debris that might be discharged from a piping system being cleaned.

Statement of Problem and Substantiation for Public Input

Pipe blows can discharge metallic objects like welding slag great distances and cause harm to persons and property.

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Submittal Date: Wed Jan 03 07:41:12 EST 2018

Public Input No. 24-NFPA 56-2018 [Section No. 7.1.2 [Excluding any Sub-Sections]]

~~If the electric generating plant is owned or operated by the serving natural gas supplier, natural gas piping between the point of delivery or source valve and the plant shall be permitted to be purged into service in accordance with the serving natural gas supplier's written procedures.~~

Statement of Problem and Substantiation for Public Input

This makes no sense. There is no guarantee of safety or protecting the public that accrues from having a group that may not have adequate plans or protections to avoid this standard. There for sure are some competent and capable gas utilities, but not all of them are consistent in their level of competence.

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Submittal Date: Wed Jan 03 07:44:38 EST 2018

Public Input No. 25-NFPA 56-2018 [Sections 7.1.2.1, 7.1.2.2]

~~**Sections 7.1.2.1, 7.1.2.2**~~

~~**7.1.2.1**~~ –

~~The natural gas supplier's written procedures shall include a safety validation in accordance with Section 4.5 .~~

~~**7.1.2.2**~~ –

~~The natural gas supplier's written procedures and process shall be coordinated with the plant operational personnel.~~

Statement of Problem and Substantiation for Public Input

Goes with previous comment

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Submittal Date: Wed Jan 03 07:46:37 EST 2018

Public Input No. 26-NFPA 56-2018 [Section No. 8.2.1]

~~**8.2.1** * –~~

~~If the electric generating plant is owned or operated by the serving natural gas supplier, natural gas piping between the point of delivery or source valve and the plant shall be permitted to be purged out of service in accordance with the serving natural gas supplier's written procedures.~~

~~**8.2.1.1** –~~

~~The natural gas supplier's written procedures shall include a safety validation in accordance with Section 4.5 .~~

~~**8.2.1.2** –~~

~~The natural gas supplier's written procedures and process shall be coordinated with the plant operational personnel.~~

Statement of Problem and Substantiation for Public Input

I do not agree that all gas utilities have great plans and processes for purging. This allowance for all of them is too broad and does not protect the public or the employees.

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Submittal Date: Wed Jan 03 07:48:39 EST 2018

Public Input No. 27-NFPA 56-2018 [Section No. 8.3.1]

8.3.1*

Pressurized flammable gas systems shall be vented (depressurized) prior to being purged out of service in accordance with the written purge procedure. The final vented pressure shall be such that only a residual flammable gas remains and the piping system is kept at a positive pressure with respect to the ambient environment to prevent oxygen migration into the piping system.

Statement of Problem and Substantiation for Public Input

Wanted to add key issues such as the term venting and the need to identify a final safe status for the depressurized or vented line.

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Submittal Date: Wed Jan 03 07:49:59 EST 2018

Public Input No. 6-NFPA 56-2017 [New Section after A.1.1.2(4)]

TITLE OF NEW CONTENT

Type your content here ...

A 1.1.1.1

"This standard is intended to include oil and gas production facilities in as much as no existing standards provide worker protection during maintenance activities"

Statement of Problem and Substantiation for Public Input

Clarifies and delineates Oil and Gas Production facilities from downstream pipeline facilities and indicates NFPA 56 was intended to include such facilities.

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Submittal Date: Tue Dec 12 10:28:31 EST 2017

Public Input No. 4-NFPA 56-2017 [New Section after A.1.1.2(5)]

TITLE OF NEW CONTENT

Type your content here ...

A 1.1.2 (xx)

"AGA Purging Principles and Practices incorporates the same flammability indexes as NFPA 56 but allows the purging (not cleaning) with air in a controlled, Engineering designed procedure that still requires proper venting and monitoring.

When purging gas piping into or out of service procedures are to include positive isolation of piping systems, training for employees, and careful planning for any releases including consideration of ignition sources. For guidance regarding purging procedures and planning for purging piping systems where flammable gas may exist, see NFPA 56: Standard for Fire and Explosion Protection during Cleaning and Purging of Flammable Gas Piping Systems, Chapters 1-6.

Pipelines should not be cleaned of construction debris by introducing natural gas at high rates and discharging in an unsafe location without control or monitoring. Chapters 1-6 inclusive of NFPA 56 are still applicable."

Statement of Problem and Substantiation for Public Input

Clarify which portions of NFPA 56 are applicable in gas gathering operations and maintenance

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Submittal Date: Tue Dec 12 10:23:06 EST 2017

Public Input No. 5-NFPA 56-2017 [New Section after A.1.1.2(5)]

TITLE OF NEW CONTENT

Type your content here ...

A 1.1.2 (yy)

"PSM incorporates the all work be conducted with an approved Engineering designed procedure in a controlled manner that still requires proper venting and monitoring. Some inerting procedures utilize steam or air using AGA purging procedures as discussed for pipelines."

Statement of Problem and Substantiation for Public Input

Clarifies and allows procedures vetted and approved in the PSM process for operations and maintenance activities in PSM regulated facilities.

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Submittal Date: Tue Dec 12 10:26:05 EST 2017