

# **OGA 2011 Technical Seminar**

**New NFPA 54 Purging Section Roundtable  
April 1, 2011**

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# New NFPA Purging Section Roundtable

## Agenda

- Reasons Leading to Purging Code Revisions
  - **ConAgra Accident**
  - **Kleen Energy Accident**
- Review of Proposed Changes
- Panel Members Discuss How Their Company is Responding
  - **Dominion**
  - **Duke Energy**
  - **NiSource**
  - **Vectren**
- Closing Remarks
- Questions & Answers

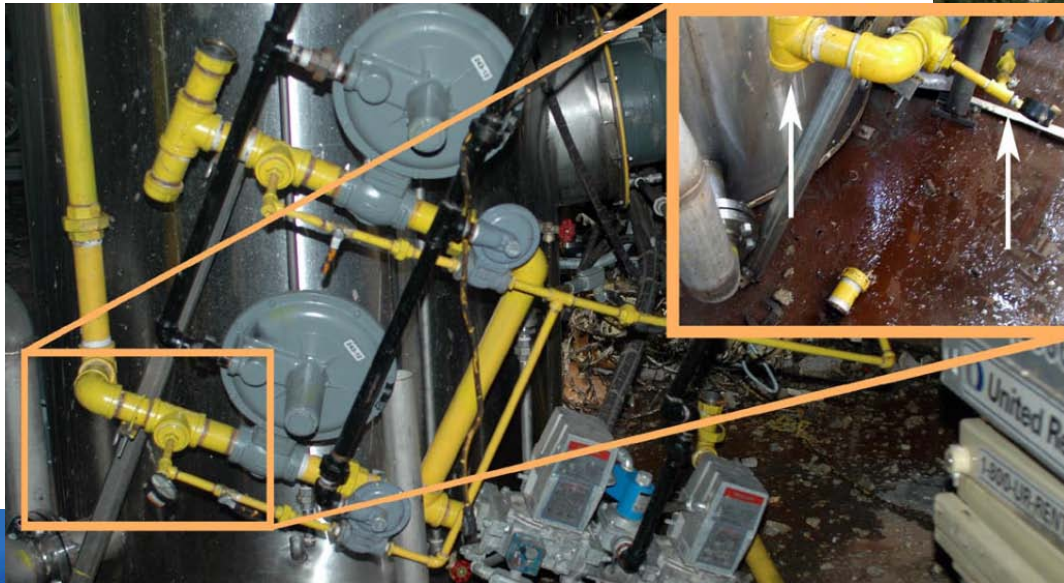


# Reasons Leading to Purging Code Revisions

## ConAgra Accident



- ConAgra Accident – June 9<sup>th</sup> 2009
  - **4 Fatalities/67 Hospitalized**
  - **Factors Contributing to the Accident:**
    - *Periodic purging of 120' fuel line over 2 ½ hours in a confined space.*
    - *No combustible gas indicator used. Employee relied on sense of smell.*
    - *Odor fade/desensitization.*
    - *Failed to remove ignition sources.*



# Reasons Leading to Purging Code Revisions

## Kleen Energy Accident



- Kleen Energy Accident – February 7<sup>th</sup> 2010
  - **6 Fatalities/50 Workers Injured**
  - **Factors Contributing to the Accident:**
    - *2 MMcf of gas was “blown” from the pipe over a 4 hour period.*
      - **2 MMcf could supply an average home for 25 years!**
    - *The intent was to remove debris from the pipe. They could have used; Nitrogen, Pigs, or Air.*





# Review of Proposed Changes

## Purging Requirements

- 8.3 Purging

**Refer to National Fire Protection Association (NFPA) Publication 54 – National Fuel Gas Code.**

- Tentative Interim Amendment

- 8.3.1 Piping Systems Required to be Purged Outside**

- 8.3.1.2 Placing in Operation**

- 8.3.1.3 Outdoor Discharge of Purged Gases**

- 8.3.1.4 Combustible Gas Indicator**

- 8.3.2 Piping Systems Allowed to be Purged Indoors or Outdoors**

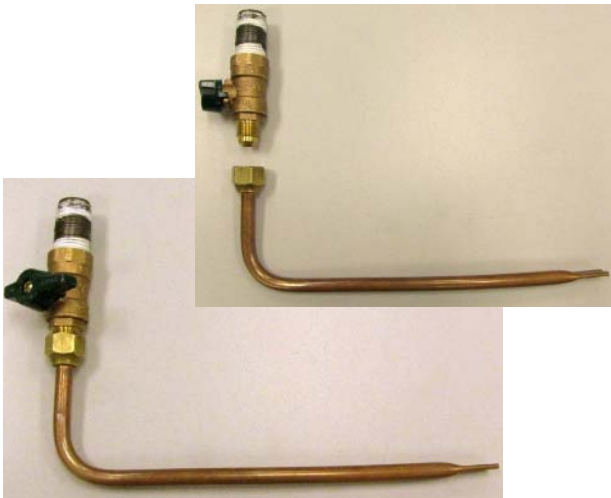
- 8.3.2.1 Purging Procedure**



# Dominion

## Response to New Purging Requirements

- Safe Purging Techniques
  - Use of a Purge Burner or Purge Hose
  - Wind Resistant Lighter





# Dominion

## Response to New Purging Requirements

- Using the Purge Burner with Gas Detector

*CGI*

*Used to monitor the  
atmosphere*





# Dominion

## Response to New Purging Requirements

- Using A Purge Hose



*A valve is used at the piping system indoors and a valve at the end of the purge hose outdoors. Remain outdoors controlling purge rate and monitor gas %*





# Dominion

## Response to New Purging Requirements

- Safe Purging Techniques
  - **For More Information Contact**

***Don MacBride***

***Dominion East Ohio Gas***

***216-736-6697***

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# Duke

## Response to New Purging Requirements

- Impact on Duke Energy
  - Gas Procedures updated to reflect new code
  - Training Documentation and OQ Tasks and Tests updated
  - Revise or amend bids to contractor to include use of gas detector
  - Notification to contractors of this change
  - Updating the “Gas Installers Manual” to include information concerning the issue of odor fade when purging house piping
  - Purchase of Gas Detection Equipment
  - Purging natural gas and odor fade issue
  - Scheduled Vendor demonstrations for gas detector equipment for contractors
- Impact on Contractors Performing Work on Behalf of Duke Energy
  - Purchase of Gas Detection Equipment
  - Training Documentation
  - Operator Qualification (Task / Tests)
  - Calibration of instruments and record keeping





# Duke

## Response to New Purging Requirements

- Safe Purging Techniques
  - **For More Information Contact**

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# NiSource

## Response to New Purging Requirements

- Training dept. immediately issued a notice of the change
- Training content was changed to the TIA
- Require to monitor with a CGI when purging
  - outdoors (8.3.1 and 8.3.2)
  - indoors (8.3.2) when not through an open burner
- “Safety Burner” available when needed



**NOTICE:** To all employees who purge houselines

### Important Amendment to NFGC Purging Requirements

The National Fuel Gas Code § 8.3 Purging Requirements, has been revised in its entirety to improve safety during purging. The new code provides one set of requirements for large volume piping and separate purging requirements for small volume. The new purging requirements become effective August 25, 2010.

At a Glance...

Large Volume (over 2" pipe and/or greater than 2 psig)	Small Volume (2" or smaller pipe and 2 psig or less)
<ul style="list-style-type: none"> <li>• Shall be purged to the outdoors away from building openings and ignition sources; <b>and</b></li> <li>• Shall be controlled at the point of discharge with a valve; <b>and</b></li> <li>• Shall be monitored with a CGI</li> </ul>	<ul style="list-style-type: none"> <li>• Shall be purged to the outdoors; <b>or</b></li> <li>• Shall be purged to an open burner (range top); <b>or</b></li> <li>• Shall be monitored with a CGI</li> </ul>

\* See the following pages for the full amendment



For additional information or guidance, contact the Technical Trainer who supports your location.

Updated 08.17.2010

# NiSource®

Rich Losey, NiSource



# NiSource

## Response to New Purging Requirements

- Safe Purging Techniques
  - **For More Information Contact**

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# Vectren

## Response to New Purging Requirements

- Safe Purging Techniques
  - **Our current procedures meet the requirements.**
    - *We purge in accordance with the two purging procedures outlined in 8.3.2.1 listed below:*
      - **The piping shall be purged with fuel gas and shall discharge to the indoors or outdoors through an appliance burner not located in a combustion chamber. Such burner shall be provided with a continuous source of ignition.**
      - **The piping shall be purged with fuel gas that is discharged to the indoors or outdoors, and the point of discharge shall be monitored with a listed combustible gas detector in accordance with 8.3.2.2. Purging shall be stopped when fuel gas is detected.**
      - **If necessary fuel gas will be discharged to outdoors.**
    - *Vectren Customer Service Policy states that “when activating or reactivating large commercial or industrial customers, the customer is responsible for purging and activating their appliances.*





# Vectren

## Response to New Purging Requirements

- Safe Purging Techniques
  - **For More Information Contact**

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**Questions?**