

**PROFESSIONAL ENGINEERS and LAND SURVEYORS  
SECTION MEETING AGENDA  
NOVEMBER 6, 2019**

**9:00 a.m.** – Board Room 2

**Department of Professional & Occupational Regulation  
9960 Mayland Drive  
Richmond, Virginia 23233  
(804) 367-8514**

1. Call to Order
2. Emergency Evacuation Procedures
3. Approval of Agenda
4. Public Comment Period\*
5. Signing & Sealing of BMP As-Built Plans Language and DEQ Discussion
6. Virginia SCC PE Exemption - Email from Virginia State Corporation Commission October 7, 2019
  - NTSB Public Meeting of September 24, 2019 Abstract
7. PE Application Process Meeting
8. Right of Entry, Property, Prescriptive Right of Easements, & Metes and Bounds Update
9. NCEES Updates
10. NCEES Resolution Review
11. Other Business
12. Conflict of Interest / Travel Vouchers
13. Adjourn

**NEXT MEETING SCHEDULED FOR PROFESSIONAL ENGINEERS and LAND  
SURVEYORS – February 4, 2020**

\*Agenda materials available to the public do not include disciplinary case files or application files pursuant to §54.1-108 of the Code of Virginia.

\*Five-minute public comment, per person, with the exception of any open disciplinary or application files. Persons desiring to participate in the meeting and requiring special accommodations or interpretative services should contact the Department at (804) 367-8514 at least ten days prior to the meeting so that suitable arrangements can be made for an appropriate accommodation. The Department fully complies with the Americans with Disabilities Act.

# Call to Order

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# **Emergency Evacuation Procedures**

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# Public Comment

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# **Signing and Sealing of BMP As-Built Plan Language and DEQ Discussion**

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**Fwd: FW: VA SCC PE Exemption**

1 message

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**Nosbisch, Kathleen** <kate.nosbisch@dpor.virginia.gov>  
To: Bonnie Davis <bonnie.davis@dpor.virginia.gov>

Mon, Oct 7, 2019 at 2:13 PM

Hi Bonnie,  
Email and attachment for the full board meeting on 11/6, please.

----- Forwarded message -----

From: **Steven Bradley** <Steven.Bradley@scc.virginia.gov>  
Date: Mon, Oct 7, 2019 at 10:55 AM  
Subject: FW: VA SCC PE Exemption  
To: [kate.nosbisch@dpor.virginia.gov](mailto:kate.nosbisch@dpor.virginia.gov) <kate.nosbisch@dpor.virginia.gov>

Kate,

Good morning. Thanks again for taking my call.

I have attached the abstract from the NTSB's meeting in September. The exemption recommendation in question is at the top of page 4.

The exemption language in Virginia is shown below.

§ 54.1-401. Exemptions.

The following shall be exempted from the provisions of this chapter

7. Practice of engineering solely as an employee of a corporation engaged in interstate commerce, or as an employee of a public service corporation, by rendering such corporation engineering service in connection with its facilities which are subject to regulation by the State Corporation Commission; provided, that corporation employees who furnish advisory service to the public in connection with engineering matters other than in connection with such employment shall not be exempt from the provisions of this chapter.

<https://law.lis.virginia.gov/vacode/title54.1/chapter4/section54.1-401/>

I look forward to hearing from you following your November board meeting. In the meantime, I will forward other information as it becomes available.

Steve

Steven Bradley

Director – Division of Utility and Railroad Safety

Virginia State Corporation Commission

804 371-9751

804 387-2783 (cell)



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*Kate Nobsch, Hon. ALA Virginia*

Kathleen R. Nobsch

Executive Director

Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects (APELSCIDLA)

Board for Branch Pilots

Board for Professional Soil Scientists, Wetland Professionals, and Geologists

Board for Professional and Occupational Regulation

Auctioneers Board

Boxing, Martial Arts and Professional Wrestling Advisory Board

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 Merrimack Valley NTSB Rec 9-24-2019 abstract only.pdf  
47K

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**NATIONAL TRANSPORTATION SAFETY BOARD**  
**Public Meeting of September 24, 2019**  
**(Information subject to editing)**

**Overpressurization of Natural Gas Distribution System, Explosions, and Fires**  
**in Merrimack Valley, Massachusetts**  
**September 13, 2018**  
**NTSB/PAR-19/02**

This is a synopsis from the NTSB's report and does not include the Board's rationale for the conclusions, probable cause, and safety recommendations. NTSB staff is currently making final revisions to the report from which the attached conclusions and safety recommendations have been extracted. The final report and pertinent safety recommendation letters will be distributed to recommendation recipients as soon as possible. The attached information is subject to further review and editing to reflect changes adopted during the Board meeting.

### **Executive Summary**

On September 13, 2018, about 4:00 p.m. local time, a series of structure fires and explosions occurred after high-pressure natural gas was released into a low-pressure natural gas distribution system in the northeast region of the Merrimack Valley in the Commonwealth of Massachusetts. The natural gas distribution system was owned and operated by Columbia Gas of Massachusetts, a subsidiary of NiSource, Inc. Columbia Gas of Massachusetts delivers natural gas to about 325,000 customers in Massachusetts. One person was killed and 22 individuals, including three firefighters, were transported to local hospitals due to injuries; seven other firefighters incurred minor injuries. The fires and explosions damaged 131 structures, including at least 5 homes that were destroyed in the city of Lawrence and the towns of Andover and North Andover. Most of the damage occurred from fires ignited by natural gas-fueled appliances; several of the homes were destroyed by natural gas-fueled explosions. Fire departments from the three municipalities were dispatched to the fires and explosions. First responders initiated the Massachusetts fire-mobilization plan and received mutual aid from neighboring districts in Massachusetts, New Hampshire, and Maine. Emergency management officials had National Grid United States (the electric utility) shut down electrical power in the area, the state police closed local roads, and freight and passenger railroad operations in the area were suspended. Columbia Gas of Massachusetts shut down the low-pressure natural gas distribution system, affecting 10,894 customers, including some outside the area who had their service shut off as a precaution.

The accident investigation focused on the following safety issues:

- Adequacy of natural gas regulations
- Project documentation
- Constructability review
- Project management
- Risk assessment

- Safety management systems
- Licensed professional engineer approval of natural gas projects
- Emergency response

## Findings

1. None of the following were factors in this accident: the training and qualification of the construction crew, the use of alcohol or other drugs, or the condition and operability of the regulators at the Winthrop Avenue regulator station.
2. The multiple overpressurization accidents investigated by the National Transportation Safety Board over the past 50 years demonstrate that low-pressure natural gas distribution systems that use only sensing lines and regulators as the means to detect and prevent overpressurization are not optimal to prevent overpressurization accidents.
3. A comprehensive and formal risk assessment, such as a failure modes and effects analysis, would have identified the human error that caused the redundant regulators to open and pressurize the system.
4. Columbia Gas of Massachusetts' inadequate planning, documentation, and recordkeeping processes led to the omission of the relocation of the sensing lines for the South Union Street project.
5. The abandonment of the cast iron main without first relocating the sensing lines led to the system overpressurization, fires, and explosions.
6. The delay between the development of the initial project work order and its execution had no impact on this accident.
7. The Columbia Gas of Massachusetts constructability review process was not sufficiently robust to detect the omission of a work order to relocate the sensing lines.
8. NiSource's engineering risk management processes were deficient.
9. Requiring a licensed professional engineer to stamp plans would illustrate that the plans had been approved by an accredited professional with the requisite skills, knowledge, and experience to provide a comprehensive review.
10. The municipal public safety answering points had available and ready resources to handle the large number of distress calls requesting emergency services.
11. The field radio communications used across fire departments on September 13 lacked adequate interoperability and availability to ensure that emergency responders had efficient means of interdepartmental and intradepartmental communications.

12. The communications issues during the September 13 overpressurization illustrate the need for emergency planning for a multi-jurisdictional response.
13. The Columbia Gas of Massachusetts incident commander faced multiple competing priorities, such as communicating with affected municipalities, updating the emergency responders, and shutting down the natural gas distribution system, which adversely affected his ability to complete his tasks in a timely manner.
14. Columbia Gas of Massachusetts was not adequately prepared with the resources necessary to assist emergency management services with the response to the overpressurization.

## **Probable Cause**

The National Transportation Safety Board determines that the probable cause of the overpressurization of the natural gas distribution system and the resulting fires and explosions was Columbia Gas of Massachusetts' weak engineering management that did not adequately plan, review, sequence, and oversee the construction project that led to the abandonment of a cast iron main without first relocating regulator sensing lines to the new polyethylene main. Contributing to the accident was a low-pressure natural gas distribution system designed and operated without adequate overpressure protection.

## **Recommendations**

### **New Recommendations**

As a result of this investigation, the National Transportation Safety Board makes the following new safety recommendations:

### **To the Pipeline and Hazardous Materials Safety Administration:**

1. Revise Title 49 *Code of Federal Regulations* Part 192 to require overpressure protection for low-pressure natural gas distribution systems that cannot be defeated by a single operator error or equipment failure.
2. Issue an alert to all low-pressure natural gas distribution system operators of the possibility of a failure of overpressure protection; and the alert should recommend that operators use a failure modes and effects analysis or equivalent structured and systematic method to identify potential failures and take action to mitigate those identified failures.

**To the States of Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Iowa, Kentucky, Louisiana, Maine, Maryland, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New York, North Carolina, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, and Wyoming:**

3. Remove the exemption so that all future natural gas infrastructure projects require licensed professional engineer approval and stamping.

**To the Commonwealth of Massachusetts Executive Office of Public Safety and Security:**

4. Develop guidance that includes a component for effective communications when deploying mutual aid resources within the first hours of a multi-jurisdictional incident.

**To NiSource, Inc.:**

5. Review your protocols and training for responding to large-scale emergency events, including providing timely information to emergency responders, appropriately assigning NiSource emergency response duties, performing multi-jurisdictional training exercises, and participating cooperatively with municipal emergency management agencies.

**Classified Recommendations**

**To the Commonwealth of Massachusetts:**

1. Eliminate the professional engineer licensure exemption for public utility work and require a professional engineer's seal on public utility engineering drawings. (P-18-5)

This recommendation is classified *Closed—Acceptable Action*.

**To NiSource, Inc.:**

2. Revise the engineering plan and constructability review process across all of your subsidiaries to ensure that all applicable departments review construction documents for accuracy, completeness, and correctness, and that the documents or plans be sealed by a professional engineer prior to commencing work. (P-18-6) (Urgent)

This recommendation is classified *Closed—Acceptable Action*.

3. Review and ensure that all records and documentation of your natural gas systems are traceable, reliable, and complete. (P-18-7) (Urgent)

This recommendation is classified *Closed—Acceptable Action*.

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# **PE Application Process**

## **Meeting**

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# **Right of Entry, Property, Prescriptive Right of Easements, & Metes and Bounds Update**

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# **NCEES**

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From: **Heather Richardson (Basecamp)** <[notifications@3.basecamp.com](mailto:notifications@3.basecamp.com)>

Date: Fri, Aug 23, 2019 at 1:29 PM

Subject: (MBA Link) Resolution of Cooperation

To: <[kate.nosbisch@dpor.virginia.gov](mailto:kate.nosbisch@dpor.virginia.gov)>

As we discussed at the 2019 NCEES Annual Meeting in Washington, D.C., the MBA Committee has been working on a Resolution of Cooperation (ROC) for all Boards. *Please see the attached Draft ROC.*

In 1920, NCEES was created by state licensing boards to facilitate professional licensing mobility and promote uniformity of the licensure process. The MBA Committee of NCEES has sought an agreement between all states, which would communicate that state engineering and surveying boards are working together to eliminate licensure barriers and encourage mobility of licensure between states. The committee understands that not all state boards license in the same way with the same qualifications; therefore, the ROC was written broadly and it is the desire of the committee that it is a non-binding document that attempts to show uniformity by licensure boards.

Since the 100th year anniversary of NCEES is in 2020, the MBA Committee thought it would be a good time to renew the individual board's agreement with the original mission of NCEES.

The committee is requesting that MBAs please submit any board comments and concerns regarding the ROC to me at the email address below by December 2019. It is the committee's desire to present the ROC at the 2020 Joint Zone Meeting in Houston, TX and a finalized ROC for the 100-year anniversary of NCEES at the 2020 Annual Meeting in Chicago, IL.

I look forward to your board responses.

Heather Richardson  
MBA Committee, Chair

[Heather.Richardson@Arkansas.gov](mailto:Heather.Richardson@Arkansas.gov)

office: (501) 682-2826

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**RESOLUTION OF COOPERATION**  
*to Facilitate Interstate Licensure for*  
*Professional Engineers and Professional Surveyors*

WHEREAS, The National Council of Examiners for Engineering and Surveying (NCEES) is a national organization created by state licensing boards in 1920 to facilitate professional licensing mobility and promote uniformity of the U.S. licensure processes through services for its member licensing boards and licensees; and

WHEREAS, The NCEES' members are the engineering and surveying licensure boards from all 50 states, the District of Columbia, Guam, Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands; and

WHEREAS, The mission of NCEES is to advance licensure for engineers and surveyors in order to safeguard the health, safety, and welfare of the public; and

WHEREAS, The NCEES Model Law, Model Rules, and Manual of Policy and Position Statements are publications adopted by the membership of NCEES; and

WHEREAS, The adopted model licensure concepts within these publications set a common standard for licensure mobility and portability among its member boards to facilitate an efficient, streamlined, expedited administrative procedure and approval process; and

WHEREAS, Alignment of licensure processes and requirements is imperative to facilitate portability of licenses between member boards of NCEES; and

WHEREAS, Increased licensure portability aligns with government initiatives to diversify economies and support economic growth; and

WHEREAS, In the absence of licensure portability efforts, barriers to licensure can remain in variable state laws, rules, administrative procedures and approval processes; and

WHEREAS, Barriers to licensure, whether perceived or real, threaten the health, safety and welfare of the public by the potential for legislative action that erodes professional licensing regulation and may also perpetuate or introduce unnecessary bureaucratic processes that an applicant must undertake, which potentially could become barriers to employment; and

WHEREAS, It is recognized that some member boards may have challenges, such as staffing or obtaining authority to revise statutes and rules which may impede streamlined processes; and

WHEREAS, The NCEES will commemorate 100 years of advancing licensure through the licensing of professional engineers and land surveyors in 2020; therefore, be it

RESOLVED, That the following signatories agree to license a NCEES Model Law comity applicant that meets national standards in the most expeditious manner available within the scope of current state licensing laws and rules; and furthermore be it

RESOLVED, That signatory boards are committed to identifying and working to remove barriers to licensure portability and mobility which are not in the best interest of the public and not required to fulfill the mission of safeguarding the health, safety, and welfare of the public; and furthermore be it

RESOLVED, That signatory boards are committed to work towards revising current licensing laws, rules, and policies to allow for more streamlined approval processes for NCEES Model Law applicants and other qualifying applicants in my state or jurisdiction; and furthermore be it

RESOLVED, That signatory boards are committed to minimizing or eliminating unnecessary state or jurisdiction specific licensure requirements.

The undersigned hereby certifies that he/she is the duly qualified member board representative to serve as signatory of this Resolution of Cooperation and resolves to complete these efforts by 2020 to coincide with the 100<sup>th</sup> anniversary of NCEES at its annual meeting.

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## **Other Business**

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# **Conflict of Interest / Travel Vouchers**

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# Adjourn

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