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December 14, 2018

By E-Mail Only: correspondence@ntsb.gov

Hon. Robert Sumwalt, Chairman
National Transportation Safety Board
490 L'Enfant Plaza E, S.W.
Washington, D.C. 20594

Re: NiSource Response to NTSB Urgent Safety Recommendations P-18-006, 007, 008
& 009 Overpressurization of Natural Gas Distribution System in Merrimack
Valley, MA (NTSB PLD 18MR003)

Hon. Chairman Sumwalt:

On November 14, 2018, the NTSB issued four urgent safety recommendations to NiSource Inc. based upon the NTSB's investigation thus far of the September 13, 2018, gas overpressurization in Merrimack Valley, Massachusetts.

NiSource is committed to taking necessary actions to avoid reoccurrence of an event like the tragic event on September 13th in the Merrimack Valley. First and foremost, although not specifically included in the urgent recommendations, NiSource is accelerating the deployment of API RP 1173 (Safety Management System) across its seven state operating companies to strengthen our overall safety culture and processes. With specific regard to the safety recommendations:

P-18-006 Engineering Plan & Constructability Review Process

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.

NiSource will review our Engineering and Construction Gas Standards and our Constructability Review processes and implement changes to ensure that all internal operations departments are required to participate in Constructability Reviews and sign off that all documents used for construction are accurate and complete.

NiSource will have a third party firm with gas industry expertise review and validate the above modified engineering and construction standards.

All relevant construction documents and plans for construction work that could pose a material risk to public safety will be sealed by a professional engineer prior to commencing construction work. This work would include new or replacement mains involving multiple tie-ins, new or replacement of major components of a point of delivery, district regulator stations or large volume customer measurement and regulation station. For routine main extensions involving a standard tie-in, emergency main replacements requiring standard tie-ins and new and replacement service lines, NiSource will develop standard designs and construction procedures and have them reviewed and approved by a professional engineer.

P-18-007 Records & Document Traceability, Reliability & Completeness

Review and ensure that all records and documentation of your natural gas systems are traceable, reliable, and complete.

Only 12 of NiSource's 2,072 low pressure regulator station control lines (sensing lines) remain to be mapped, marked and protected. We are working to complete these remaining lines.

NiSource, with assistance from third party experts, will define the assets required to safely operate its low pressure gas systems and ensure that such assets have records that are traceable, reliable and complete. NiSource will develop a plan to remediate any deficiencies identified.

NiSource will conduct a similar review for all of its other gas systems as part of its Safety Management System implementation.

P-18-008 Management of Change Process

Apply management of change process to all changes to adequately identify system threats that could result in a common mode failure.

NiSource will engage third party experts to conduct gas system risk review with NiSource subject matter experts and key executives. The review will focus on risk identification, latent system risks, risk analysis, failures and failure sequences (cut set), risk end states, fault tree development, failure modes and effects analysis, event trees, dominant risk drivers, failures and failure combinations, risk mitigation /management options, risk register development and population, risk reduction action plan development and actions options, assessment of low probability- high consequence events and common mode failure threats.

NiSource will strengthen its Management of Change (MOC) procedures with the adoption of API RP 1173 and developing and implementing a Pipeline Safety Management System in 2019.

Identified system threats that can result in a common mode of failure and high consequence events will be integrated into work risk reviews and procedures enhancements.

P-18-009 Control Procedures During Gas Main Modifications

Develop and implement control procedures during modifications to gas mains to mitigate the risks identified during management of change operations. Gas main pressures should be continually monitored during these modifications and assets should be placed at critical locations to immediately shut down the system if abnormal operations are detected.

As previously announced, NiSource will be installing automatic pressure control equipment, referred to as “slam-shut” devices, on every low-pressure system across our seven-state operating area. These devices provide another level of control and protection, in that when they sense operating pressure that is too high or too low, they immediately shut down gas to the system.

As an additional layer of protection, NiSource will install remote monitoring devices on all low-pressure systems so that our gas control center will see an alarm should the monitoring device indicate a high or low pressure alarm. In the event a system is shut down by the slam-shut devices described above, the remote monitors will enable us to respond more quickly to restore service to customers.

NiSource will develop project-specific risk reviews and plans detailing accountability and responsibility for activities during the construction process. This will include individual responsibility for system operation, configuration and monitoring during the construction and “tie-in/gas up” process. The plans will identify the specific tasks (operating valves, monitoring pressure, notifying first responders) required to mitigate risk during critical steps. The plans will also identify follow up actions to be taken in an abnormal condition including identifying critical locations to place assets for immediate shut down if needed.

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We welcome any comments or questions about these plans for implementation.

Thank you very much once again for allowing NiSource and Columbia Gas of Massachusetts to participate in the NTSB’s investigation.

Very truly yours,



Joe Hamrock

Copy to: Mr. Robert Hall
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Mr. Roger Evans
Investigator-in-Charge
Overpressurization of Natural Gas Distribution System in Merrimack
Valley, MA (NTSB PLD 18MR003)