



Funding doesn't get more flexible than this.



NTSB report: Overpressurized gas lines caused Lawrence-area explosions, fires



SCOTT EISEN FOR THE BOSTON GLOBE

Firefighters battled a blaze in Lawrence after an outbreak of fires on Thursday, Sept. 13.

By [Milton J. Valencia](#), [Matt Rocheleau](#) and [Shelley Murphy](#)

GLOBE STAFF OCTOBER 11, 2018

Federal investigators on Thursday said Columbia Gas of Massachusetts failed to relocate an underground pressure sensor from an abandoned pipe during construction work in Lawrence in September, triggering a gush of gas into the local network that erupted into explosions and fires that rocked the Merrimack Valley.

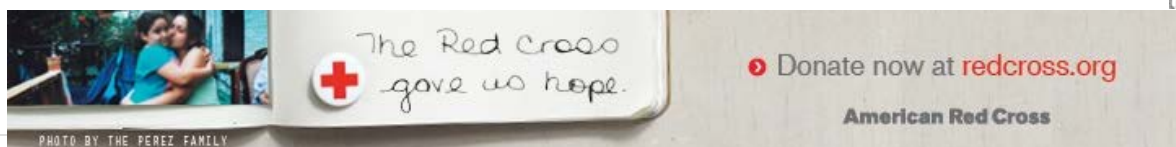
The construction work involved replacing aging pipes in the area with plastic lines. But the National Transportation Safety Board said the utility failed to tell the construction crew about disconnecting or relocating the sensor, allowing the device to detect a drop-off in pressure in the abandoned line and signal to a nearby control station to increase the flow of gas into the system.

ADVERTISING

[inRead](#) invented by Teads

That elevated gas pressure to dangerously high levels, overwhelming the system and setting off fires across Lawrence, North Andover, and Andover. Five homes exploded and 125 structures were damaged by fire. One person was killed when a collapsing chimney fell on him, and two dozen others were injured.

ADVERTISEMENT



The preliminary report by the NTSB said Columbia was responsible for the construction plans for the work crew and had an inspector at the job site, at the intersection of South Union and Salem streets.

Get **Metro Headlines** in your inbox:

The 10 top local news stories from metro Boston and around New England delivered daily.

[Sign Up](#)

Industry analysts said the report also raises concerns about safety protocols during the replacement of gas pipelines, and whether an inspector or a contractor involved in such work should have known enough to check the sensors.

“It left a lot of questions to be answered,” said Mark McDonald, president of NatGas Consulting, a Boston-based company that investigates gas explosions and is representing some victims of the incident. “There were other stopgaps that should have been in place to stop this from happening.”

Richard Kuprewicz, a pipeline safety specialist and adviser to the federal Pipeline and Hazardous Materials Safety Administration, said the NTSB report is preliminary and was expected to be incomplete, but added, “There are some important details missing.”

He expects a final report to look at other factors, including “what should the contractor have known.”

RELATED LINKS



Read the NTSB report on the Merrimack Valley gas fires, explosions

The preliminary findings on the Sept. 13 explosions and fires, which hit Lawrence, Andover, and North Andover, were released Thursday by the National Transportation Safety Board.

ADVERTISEMENT



What is clear, Kuprewicz said, is that “a low-pressure system got hit with very high pressure and for quite a while.” Since the Sept. 13 disaster, Columbia Gas has upgraded its policies and procedures related to this type of pipe replacement work. And on Thursday, the state Department of Public Utilities, which regulates the industry, mandated new safety protocols for Columbia and other local utilities to guard against overpressure situations. The companies were ordered to cease all work involving connections between high- and low-pressure systems to review their procedures, and take additional steps, such as verifying the location of sensing equipment during construction.

Columbia Gas said in a statement following the NTSB report that it could not speculate or comment on the final cause of the disaster, because the investigation is ongoing. But the utility noted it suspended all similar work and enhanced procedures for work on low-pressure systems after the disaster occurred.

“We saw these as responsible steps to take in the aftermath of the incident and while the facts were being gathered,” Joe Hamrock, chief executive of NiSource Inc., the utility’s parent company, said.

The NTSB report did not name the Columbia Gas contractor in its report, but the Dorchester-based Feeny Brothers has previously acknowledged it was working at the Lawrence site that day.

ADVERTISEMENT



Feeny Bros. denied any culpability, saying it was carrying out Columbia’s designs.

“All of Feeny Brothers’ work was done with Columbia Gas’ oversight and according to written procedures provided to our crew by Columbia Gas, as confirmed” by the NTSB report, the company said in a statement Thursday.

Senator Edward J. Markey, who has pushed Columbia for more explanation of the Lawrence disaster, said the NTSB report raises more questions than it answers.

“For the most part, the report is not telling us anything that local residents don’t already know. They know that Columbia Gas company did not respond quickly enough. What we don’t know is how could the catastrophe have occurred. Could it have been prevented?” he said.

The work involved the replacement of a cast-iron, low-pressure distribution system that was installed in the early 1900s. Gas

pressure to the affected area was controlled by 14 regulator stations.

The NTSB report lays out the immediate sequence of events of Sept. 13. At 4:04 p.m., a Columbia Gas monitoring center in Columbus, Ohio, received the first of two alarms indicating high pressure in the Lawrence system; the second came a minute later.

However, the monitoring center had no ability to remotely control the pressure valves, which required manual work. A controller in Ohio instead reported the alarms to local Columbia Gas officials in Lawrence at 4:06 p.m. The first 911 call by a resident in Lawrence was at 4:11 p.m.

The regulator station at issue was shut down by 4:30 p.m. And the critical valves for the distribution network were shut off by 7:24 p.m.

By midnight, crews began to shut off meters at individual homes and businesses, to isolate them from the distribution system. All meters were shut off by the following morning.

McDonald, the industry analyst, said he expects the final NTSB report will look at the official cause of the disaster, but also reflect on state policies and protocol, as well as the state of an aging gas distribution system, among the oldest in the country.

The sensor left on an abandoned line, McDonald said, "was not the only failure here."

The disaster has left thousands of homes and businesses without gas heat or hot water as cold weather arrives, while Columbia Gas races to replace 45 miles of pipeline that were damaged by the over-pressurization. The company, which tapped retired Navy Seabee commander Joseph Albanese to lead the response effort, has said it is far ahead of a Nov. 19 deadline it set to replace the pipeline.

But the effort has been complicated by the need to replace gas appliances and meters in many homes. Albanese has said that no property will be reconnected until it is deemed "house ready," with safely connected appliances.

That effort has moved more slowly, though officials are optimistic about hitting the Nov. 19 deadline.

Columbia has said it will reimburse residents and businesses for all expenses and incurred losses. By Thursday, more than 3,000 people had been placed in temporary housing, such as hotels, apartments, and trailers.

"We are working to restore gas service as quickly as possible and are committed to taking the steps needed to re-earn the trust of our customers, communities, and public officials," Hamrock, the company executive, said in a statement.

Paul Oleksa, a pipeline safety consultant based in Ohio, said the NTSB report leaves open many questions about the incident. But he said the response plan was impressive.

"This new system will have a pressure regulator at each individual house, each individual customer, and it's a much better system," he said. "It should give a great deal of relief to individual customers and to the public."

Travis Andersen of the Globe staff contributed to this report. Milton J. Valencia can be reached at milton.valencia@globe.com. Follow him on Twitter [@miltonvalencia](https://twitter.com/miltonvalencia). Matt Rocheleau can be reached at matthew.rocheleau@globe.com. Follow him on Twitter [@mrochele](https://twitter.com/mrochele) Shelley Murphy can be reached at shmurphy@globe.com. Follow her on Twitter [@shelleymurph](https://twitter.com/shelleymurph).

Show 97 Comments

SPONSORED BY ALWAYS HEALTH PARTNERS



How Do Copays, Deductibles, and Out-of-Pocket Maximums Work?

By AllWays Health Partners - Here's a helpful guide to the terms for costs you may encounter as you receive care.

[More](#)

Top 10 Trending Articles

Viewed	Commented	Shared
--------	-----------	--------

People in open-concept homes are realizing the walls were there for a reason

Ideas | Linda Rodriguez McRobbie: Too old to be president? Science says yes.

The backyard mechanic who is taking on Tesla

Here's what NFL free agent market looks like ahead of league's legal tampering period

Mass. authorities face steep hurdles in shutting down sex trafficking

Sharon principal placed on administrative leave

Road to Recovery: Drugs took their children, but not their hope that others might be saved

This week in watching: The fall of 'Arrested Development,' the return of 'Billions,' and the power of punk

Maybe we need to just let Kyrie be Kyrie and enjoy the ride

Julia Ruth Stevens, Babe Ruth's last surviving child, dies at 102

Blind date: 'I was ... fishing to have him ask to see pictures of my dog'

3-alarm fire breaks out at under-construction high rise near TD Garden

Centrists squirm as 2020 Democrats swerve left

Feeling that DIY impulse? Try taking a nap instead

Boston-set 'SMILF' canceled by Showtime after two seasons

There's a disturbing new theory about what happened to Malaysia Airlines Flight 370

The Patriots' biggest offseason needs — and how to fill them

Here's what Tom Brady eats on an 'average day,' as outlined in 'The TB 12 Method'

Electric dreams: Boston to New York in a Tesla, for \$99

Massachusetts police forces lag in racial diversity

Trump will seek more money for border wall

In N.H., Bernie Sanders says now 'Democratic candidates all across the board' support his ideas

Kyrie Irving, Celtics finish off Lakers this time

Baseball News, Scores, Analysis, Schedules & More

'SNL' tackles R. Kelly sex assault accusations with parody of CBS interview, Pete Davidson monologue

David Krejci's goal with 45 seconds left rallies Bruins

157 people, including 8 Americans, are believed dead in Ethiopian Airlines crash

Dana LeVangie the 'heart and soul' of Red Sox pitching staff

Merrimack, N.H., man allegedly impersonated police officers, first responders

Turbulence injures 30 on flight from Istanbul to New York

Most Popular In Metro →

Subscribe Now

Digital Access

Home Delivery

Gift Subscriptions

My Account

Manage my Account

Mobile Customer Service

Sign Up For Newsletters

Contact

Help

FAQs

Globe newsroom

Advertise

Order back issues

Social

Facebook

Twitter

[Google+](#)

More

[ePaper](#)

[News in Education](#)

[Archives](#)

[Privacy policy](#)

[Terms of service](#)

[Terms of purchase](#)

[Work at Boston Globe Media](#)

© 2019 Boston Globe Media Partners, LLC