



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 19-140

October 25, 2019

Investigation by the Department of Public Utilities on its own Motion into Bay State Gas Company d/b/a Columbia Gas of Massachusetts' responsibility for and response to the September 13, 2018 Merrimack Valley Incident, pursuant to 49 U.S.C. § 60105, G.L. c. 164, § 76, G.L. c. 164, § 105A, and 220 CMR 69.00.

VOTE AND ORDER OPENING INVESTIGATION

I. INTRODUCTION

On September 13, 2018, Bay State Gas Company d/b/a Columbia Gas of Massachusetts (“Bay State” or “Company”) experienced an overpressurization¹ of Bay State’s low-pressure distribution system serving the city of Lawrence and the towns of Andover and North Andover in the Merrimack Valley. The overpressurization allowed gas from a high-pressure distribution system to enter the low-pressure distribution system.² This resulted in the damage or destruction of 131 homes and businesses, the hospitalization of 22 individuals, and the death of one person (“incident”).

II. BACKGROUND

The National Transportation Safety Board (“NTSB”) conducted an investigation into the incident and issued its preliminary report, PLD 18MR003, on October 11, 2018.³ The NTSB held a board meeting on September 24, 2019, to review and approve its findings, and issued its final report, NTSB/PAR-19/02 (NTIS No. PB2019-101365), adopted September 24, 2019, on October 24, 2019.⁴

¹ Overpressurization occurs when gas pressure enters a distribution system of a lower pressure causing the downstream system to exceed its maximum allowable operating pressure (“MAOP”).

² A low-pressure distribution system is one where the gas pressure in the main is substantially the same as the pressure provided to the customer, while a high-pressure distribution system is one where the gas pressure in the main is higher than the pressure provided to the customer. 49 C.F.R. Part 192, § 192.3.

³ The Preliminary Report is available at <https://www.nts.gov/investigations/AccidentReports/Pages/PLD18MR003-preliminary-report.aspx>.

⁴ The Final Report is available at <https://www.nts.gov/investigations/AccidentReports/Reports/PAR1902.pdf>

The NTSB concluded that Bay State had caused the overpressurization by failing to include a significant step in the work package⁵ used to perform a natural gas main replacement project on South Union Street in Lawrence. Specifically, when Bay State developed and approved the work package used to tie a new plastic main into the distribution system and abandon the old cast iron main, the Company failed to verify that the work package (1) identified the location of the sensing lines or (2) required their relocation to ensure that the regulators were sensing actual system pressure.⁶ On September 13, 2018, a field crew performed the work on South Union Street in Lawrence in accordance with the steps laid out in the work package. Because the work package did not address the sensing lines, the field crew did not relocate the sensing lines from the old main being abandoned to the new main being tied into the system. Once the crew disconnected the old main from the distribution system, the section containing the sensing lines began losing pressure, and the regulators at that location responded by opening further, increasing pressure in the distribution system. Since the regulators no longer sensed the correct system pressure, they fully opened, allowing the full flow of high-pressure gas to be released into the distribution system and causing an overpressurization.

⁵ A work package is a detailed outline of a project that breaks down and defines the specific tasks necessary to complete the particular project.

⁶ Sensing lines are used to detect pressure in the distribution system and provide input to the regulators to control the system pressure. The low-pressure distribution system in the affected area relied on certain regulator stations to control gas at the required pressure into structures serviced by the system. Each of the regulator stations reduced the pressure from about 75-pounds per square inch gauge (psig) natural gas main pipeline to twelve inches of water column (about 0.5 psig) for delivery to customers.

According to the NTSB Report, after receiving notification of the overpressurization, Bay State had to locate the regulators at issue to shut them down, which it did at about 4:30 p.m. Bay State closed critical valves by 7:24 p.m. but was unable to shut the entire system down until 6:30 a.m. the following morning because it had difficulty with one or more of the critical valves necessary to obtain a complete shutdown of the system. NTSB also found that Bay State did not follow its emergency response procedures and did not provide timely updates of its response activities to state and local officials.

Governor Charlie Baker declared a state of emergency,⁷ and thousands of residents were ordered to evacuate, and electrical and natural gas services to residences and businesses were interrupted. Residents were gradually allowed to return to their homes beginning on September 16, 2018, after gas utility officials had checked and cleared all gas meters and electrical utility officials had restored electrical service. Thousands of residents remained without gas service after returning to their homes. Schools resumed classes on September 18, 2018. Governor Baker executed a Governor's Declaration of Continuing Emergency on October 4, 2018, extending the state of emergency.⁸

In the months that followed, Bay State undertook efforts to replace approximately 45 miles of mains and over 5,000 services throughout the affected territory. During the

⁷ Governor's Declaration of Emergency, dated September 14, 2018 at 3:00 p.m., available at: <https://www.mass.gov/files/documents/2018/09/14/StateOfEmergency-09142018.pdf>.

⁸ Governor's Declaration of Continuing Emergency, dated October 4, 2018 at 7:30 a.m., available at: <https://www.mass.gov/files/documents/2018/10/09/Signed%20Declaration%20of%20Continuing%20Emergency.pdf>.

restoration efforts, the Department's Pipeline Safety Division ("Division") monitored and inspected Bay State's work.

On May 23, 2019, the Division issued an exit letter to Bay State asserting that the Company had failed to follow federal pipeline safety regulations, 49 C.F.R. Part 192 ("Part 192") and failed to follow its own procedures regarding the incident. Bay State responded to the letter on June 24, 2019. On August 28, 2019, the Division issued a set of information requests to Bay State. Bay State provided its first responses to the information requests on September 10, 2019, and provided further responses thereafter.

III. INVESTIGATION

By this Order, the Department opens a public investigation into Bay State's responsibility for and response to the September 13, 2018 overpressurization incident, as well as its restoration efforts following the incident.⁹ The Department conducts this investigation pursuant to our general supervisory authority over natural gas distribution companies, G.L. c. 164, § 76, and our authority pursuant to 49 U.S.C. § 60105, G.L. c. 164, § 105A, and 220 CMR 69.00 to investigate a natural gas distribution company's compliance with the federal and state pipeline safety laws and regulations. The Department has docketed this proceeding as D.P.U. 19-140.

The Department will review all information regarding Bay State's role in the overpressurization incident, including the NTSB final report and Bay State's responses to discovery. The Department's inquiry into these matters will focus on Bay State's compliance

⁹ As a party to the NTSB's investigation, the Department was prohibited from making public statements on these matters until the NTSB's final report was released.

with federal minimum safety regulations, 49 C.F.R. Part 192, and with the Department's pipeline safety regulation, 220 CMR 101.00.

The Department will, at a later date, issue and publish notice of a procedural schedule for this proceeding. That schedule will include opportunity for written public comment as well as a public hearing in the Merrimack Valley to solicit input and comments from those most affected by the incident.

Finally, Bay State has already provided to the Division a response to the May 23, 2019 letter and responses to the information requests. The Department intends to transfer those materials into this docket to be posted on the website. If Bay State seeks protective treatment for any of the materials previously provided, the Company should file a motion for protective treatment by 5:00 p.m. on November 1, 2019, along with appropriately redacted versions of any documents for which it seeks protective treatment.

IV. ORDER

Accordingly, the Department

VOTES: To open an investigation into Bay State Gas Company d/b/a Columbia Gas of Massachusetts' responsibility for and response to the September 13, 2018 overpressurization incident; and it is

ORDERED: That the Secretary of the Department shall serve this Order on Bay State Gas Company d/b/a Columbia Gas of Massachusetts, the Massachusetts Attorney General, the Mayor and City Council of the City of Lawrence, the Board of Selectmen of the Town of Andover, and the Board of Selectmen of the town of North Andover; and it is

FURTHER ORDERED: That Bay State Gas Company d/b/a Columbia Gas of Massachusetts shall comply with all directives in this Order.

By Order of the Department,

/s/

Matthew H. Nelson, Chair

/s/

Robert E. Hayden, Commissioner

/s/

Cecile M. Fraser, Commissioner